WELL-BEING IN PRISON:
The Case of Serbia

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INTRODUCTION

Ancient Reflections on the Good Life

> About the gods, I am not able to know whether they exist or do not exist, nor what they are like in form; for the factors preventing knowledge are many: the obscurity of the subject, and the shortness of human life (Protagoras of Abdera). (De Romilly, 1998, p. 104).

Every examination of the quality of life, from ancient philosophers to the present day, involves the fundamental question of "What constitutes a good life?" The response to this query has consistently been intricate, ambiguous, and interwoven with ethical and value perspectives, encompassing both individual and societal dimensions.

When we delve into the ancient reflections on the concept of the good life, the precursor to the idea of the quality of life, we encounter a fascinating exposition by Alex Michalos. In his work, Michalos takes us on a journey to the origins of various approaches to this concept, which we can discover either fragmentarily or comprehensively in the works of ancient philosophers.

Homer, for instance, provides contrasting yet positive models – Odysseus emphasises happiness, while Achilles places moral virtue at the centre of what constitutes the quality of life. Hesiod's poems echo familiar themes of the good life: thriving and prosperous communities inhabited by good people who live in peace and enjoy the fruits of their labour, as well as the antitheses of the good life marked by scarcity and wrongdoing (Michalos, 2015, p. 7). "In contemporary terms, one might say that Hesiod's bad society is one in which the institution of morality has been totally undermined, including people's sense of justice, resulting in the total destruction of everyone's social capital." Heraclitus, captivated by the diversity of the world observed from various perspectives and subject to different standards, embraced descriptive and evaluative relativism in defining 'the good life'. Nevertheless, amidst this diversity and variability, Heraclitus underscores 'right thinking' as the supreme virtue – thinking with "wisdom to speak the truth and act in accordance with nature, while paying attention to it" (McKirahan, 1994, p. 120, as cited in Michalos, 2015, p. 14).

Sceptical relativism regarding what constitutes a good life, what is just or unjust, beautiful or ugly, or true and false, finds expression in Protagoras's belief that "man is the measure of all things – of things that are, that they are, and of things that are not, that they are not" (McKirahan, 1994, p. 374, as cited in Michalos, 2015, p. 18). In his ongoing exploration, Michalos introduces Democritus' teachings on the components of a good life. By implication and explicit assertion, Democritus's metaphysics and epistemology offer a plausible foundation for his perspectives on the good life and the ideal type of person. During his era, it was commonly accepted among medical scientists that mental functioning was partly contingent on bodily functioning, influenced by external physical and social conditions, as well as internal individual conditions (Michalos, 2015, p. 23).

In examining Hippocrates' emphasis on medicine and the differentiation between well-being and ill-being, Michalos expounds that the assessment of an individual's or society's quality of life or well-being must commence with the identification of its components, relationships, and determinants (Michalos & Michalos, 2017). After recognising the fundamental elements of human beings (i.e., the four elements – earth, air, fire, and water – translating into the four

humours), certain Hippocratic writers proceeded to delineate health and illness, well-being and ill-being based on these constituents. "Sometimes, these constituents were combined with environmental concepts regarding the impacts of geography, seasons, diets, exercise, and the structure of human bodies, and sometimes they not" (Michalos, 2015, p. 30). Many concepts encountered in modern ideas of life and living have roots in the philosophies of ancient thinkers.

> The ideas that people are not born virtuous but can become virtuous with the right sort of training (ASKESIS) and self-control (KARTERIA); that so far as virtue is concerned, actions are more important than words; that friendship, love and marriage are good, and that virtue is the same for men and women are ideas that still have considerable, though not universal, attraction today. For Antisthenes' contemporaries, the idea of gender equality would have been quite radical. Self-sufficiency (AUTARKEIA) or independence was a common theme of many schools of Greek philosophy, with some affinity to our current notions of individuals who are hardy, resilient, self-assured and relatively self-sustaining. For reasons that will become clear as our discussion proceeds, the idea that virtue is sufficient for happiness is probably as controversial now as it was in Antisthenes' lifetime. (Michalos, 2015, p. 30)

The question of virtue and its significance in determining the 'good life' completely prevails with Socrates, often referred to as the "founder of classical Greek moral theory" (Kahn, 1998, p. 48), who did not use the word 'moral' but the term "virtue" (Dodds, 1959).

> Morality for Socrates is concerned about how one should deal and interacts with oneself, those around him or her, and the environment in which one lives so that one can have a good life that is not only good for the agent, but also the interacting partners. (Dodds, 1959, p. 32, as cited in Xie, 2015, p. 1).

Socrates, Plato, and Aristotle are moral philosophers who viewed philosophy as a way of life, spiritual exercise, and a continual undertaking of moral self-development. "The *eudaimonic* happiness is not a passing mood or a fleeting feeling of elation but rather an abiding state of felicity emanating from leading a life that is worth living – a life of virtue or moral excellence" (Dhiman, 2021). Eudemonia represents a broader form of happiness than the feeling of pleasure; it implies well-being stemming from activities that are inherently good for individuals, linked to long-term and enduring prosperity, rather than the sense of well-being derived from experiences of simple pleasures, which likely diminish in the short term (Steger et al., 2008). In particular, *eudaimonic theories* posit that numerous pleasurable outcomes may not necessarily be beneficial for the individual, and consequently, they may not contribute to overall well-being (Ryan & Deci, 2001).

The questions posed by Plato revolve around the choice between living the life of a just person and a life most advantageous from one's own self-interest. "The problem became moral because 'the life of the just man' implied some concern for others, a concern that as conventionally understood might be not only beyond but directly opposed to one's own self-interest. The problem of reconciling such concerns (for others and self) was undoubtedly at least as difficult in the fourth century BCE as it is now" (Michalos, 2015, p. 51).

In the context of the good life, as perceived by Socrates and Plato, the enjoyment of it stems from possessing the good. The amalgamation of pleasure and wisdom forms a complex blend

encompassing a theoretical understanding of unchanging reality, practical knowledge, self-awareness, truth, music, genuine and pure pleasures, and those intertwined with health and self-control (Michalos, 2015). Two philosophers agreed that this 'mixture' or 'compound' brought them to 'the vestibule of the good and of the dwelling of the good' (Plato, 1925, p. 289, as cited in Michalos, 2015, p. 50). The significance of justice for a good life, both individual and communal, is not just a mere concept, but a pillar that upholds harmony and cooperation in a community, as defended by Socrates through the argumentum of philia, 'where justice is established as a necessary condition for establishing harmony and cooperation in a community' (Deretić, 2015, p. 37). In contrast to the power attributed to injustice by Socrates's opponent Thrasymachus, true strength and well-being lies in justice – constructiveness in relation to injustice's destructiveness. Plato's Socrates speaks of the 'power' of justice, its cohesive force, and its role in harmonising different needs and interests from more minor to more significant levels of community life. "The just person is happy, and an unjust one wretched" (Plato, 1925, p. 354a, as cited in Deretić, 2015, p. 62).

Exploring the relationship between justice and conventional laws is a topic under discussion, with the most intriguing insights emerging from a relatively unknown ancient thinker known as the Anonymous Iamblichi (Michalos, 2015, p. 55).

Granting that laws are necessary for communities, the Anonymous believed that good rulers should be guided by ARETE and in his view, "Power, prestige, material well-being, and moral excellence are all involved in ARETE" as well as "eloquence, bravery, strength and cleverness" that is, "the excellence of the statesman, not the autonomous individual" (Cole 1961, pp. 135, 143, as cited in Michalos, 2015, p. 55). Thus, the problem the Anonymous tried to solve was "how the man who seeks ARETE may acquire personal power and prestige without losing the good will and respect of the rest of society", and the solution he offered was the idea that a ruler displaying ARETE would rule according to good laws serving the interests of justice such that "all individuals attain to maximum satisfaction of their wants by helping others attain the same satisfaction" (Cole 1961, p. 137, as cited in Michalos, 2015, p. 55).

This less-known author challenges the idea that power derived from pursuing personal advantage constitutes virtue and that obedience to laws equates to cowardice. Morality, trust, and restraint aligned with societal norms are essential for fostering social harmony, whereas their opposites result in a life where citizens bear the weight of suspicion and enmity. A peaceful society is characterised by the observance of laws, while upheaval stemming from conspiracies and political machinations driven by personal interests paves the way to tyranny.

> The Anonymous believed that the implications of living in communities that have good laws and law-abiding people (i.e., communities characterised by EUNOMIA) are quite different from those characterised by the opposite qualities (i.e., by ANOMIA). (Michalos, 2015, p. 56).
>
> An atmosphere of trust is the first result of the observation of law. It benefits all men greatly and may be classed among those important things which are called good. (Anonymous Iamblichi. Translated by Margaret Reesorcited, 2001, as cited in Groarke, 2005, p. 137).

If we revisit the initially posed question of what constitutes a good life, perhaps, after this brief overview of the diverse perspectives of ancient philosophers on the matter, a general answer could be that a good life is one lived in happiness[1] – understood in the conjunction of virtue and enjoyment. Such a life is attainable in a community that nurtures trust and upholds laws expressing wisdom, justice and virtue within the context of the common good. Ancient discussions on the role of morality and virtue in happiness and the good life did not provide definitive answers about the extent of that relationship. As Julia Annas observes, this debate extends to modern times, and parallels can be drawn with contemporary ethical theories with varying demands on human intuition and reason. "Aristotle's position on this may indicate the limits of ethical theory, at least of theory that aims to stand in a realistic relation to people's ethical views" (Annas, 1993, p. 424).

> "Let us assume", Aristotle wrote, "good to be whatever is desirable for its own sake, or for the sake of which we choose something else; that which is the aim of all things, or of all things that possess sensation or reason;… and that whose presence makes a man fit and also independent; and independence in general; and that which produces or preserves such things… The virtues… must be a good thing; for those who possess them are in a sound condition, and they are also productive of good things and practical… Pleasure also must be a good; for all living creatures naturally desire it. Hence it follows that both agreeable and beautiful things must be good;… Happiness [EUDAIMONIA], since it is desirable in itself and self-sufficient… justice, courage, self-control, magnanimity, magnificence, and all other similar states of mind, for they are virtues of the soul. Health, beauty, and the like, for they are virtues of the body and produce many advantages;… Wealth… A friend and friendship… honour and good repute… Eloquence and capacity for action… natural cleverness, good memory, readiness to learn, quick-wittedness, and all similar qualities… the sciences, arts, and even life, for even though no other good should result from it, it is desirable in itself. Lastly, justice, since it is expedient in general for the common weal. (Aristotle, 1926, p. 59–63, as cited in Michalos, 2015, p. 64).

Considering the importance he attributed to knowledge and excellence (arête) in achieving a good or happy life, Aristotle sees knowledge and understanding as necessary for the complete life of essentially self-realised human beings. Life as a whole represents the most prominent characteristic of ancient theories about the good life. Wholeness also implies social indicators of the quality of life. "Since the most frequently studied and measured aspect of people's lives in the social indicators movement over the past 30 years has been satisfaction or happiness with life as a whole" (Michalos, 2005, as cited in Michalos, 2015, p. 67). However, there is a difference

[1] "… ancient [ethical] theories are all more or less revisionary, and some of them are highly counter-intuitive. They give an account of happiness which, if baldly presented to a nonphilosopher without any supporting arguments, sounds wrong, even absurd. This consequence is frequently evaded because it is assumed that ancient ethical theories are morally conservative, concerned to respect and justify ancient ethical intuitions without criticising or trying to improve them. But this assumption is false, all the ancient theories greatly expand and modify the ordinary non-philosophical understanding of happiness, opening themselves to criticism from non-philosophers on this score" (Annas, 1993, p. 331).

in the connotation of 'life as a whole' between ancient philosophers and today's understanding of that concept. "For the ancients, the phrase 'life as a whole' is used to provoke reflection on the whole of one's life from birth to death, while for us, it is used primarily to provoke reflection on all the salient domains or features of one's life as currently lived. For ancients working in the eudaimonic tradition, the quantity of life is an important constituent of the quality of life" (Michalos, 2015, p. 67). Regardless of the differences in the ancient and contemporary connotations of 'life as a whole', an ordinary human being cannot flourish outside of a city-state. Aristotle's requirement for a self-sufficient, sound, and happy life is not absolute but relative to a community that would be completely self-sufficient. "... man is by nature a social being, and one who, by his nature and not by chance, is without a state or law or home is either a bad or superior to other people, as Homer reproaches him – without kindred, without law, without hearth" (Aristotle, 1984, p. 5).

> All things considered, Aristotle's characterisation of a good or happy life is the clearest example we have from the ancients of the view that the quality of a person's or of a community's life is a function of the actual conditions of that life and what a person or community makes of those conditions. (Michalos, 2015, p. 69).

Encouraged by this extraordinary, wise, and humane light of ancient thought, which suggests, reflects, and debates various elements of human potentials and limitations in the realisation of the good life, we will now turn our attention to the problem that hovers over the teachings of these remarkable thinkers – the unequal value of all human lives.

Good Life – A Life worth Living

> My question is not: how are we living? Or how should we live? But rather: what value do we attach to human life as an abstract concept? And how do we evaluate human lives as concrete realities? Any discrepancy or any contradiction between the evaluation of life in general and the devaluing of certain lives in particular then becomes indicative of [tensions in the] moral economy of life in contemporary societies. (Fassin, 2018, p. 4).

The question of quality of life involves various material and immaterial dimensions that can be considered when assessing and judging what can be termed a 'good life'. "From ancient Greece to today, and around the globe, most people's understanding of a good life, or a good quality of life is very similar" (Michalos, 2006, p. 4).

However, what constitutes a 'good life' must consider the changes that have occurred in the concept of life. "Life is an old problem, redefined in contemporary philosophy by authors such as Arendt, Canguilhem, Foucault and Agamben, as well as by anthropology, which examines this issue using various methodologies" (Pitrou, 2020). The vertical and horizontal entanglements of life, encompassing both biological and social aspects, are explored in diverse "theorisations of life", often conceiving life as a form of creation. The challenge then lies in contemplating various ways to conceptualise this activity (Pitrou, 2015, as cited in Pavićević et al., 2020, p. 25).

> The entry of life into politics was historically conditioned by new experiences of existential insecurity associated with the European Enlightenment. The 'death of God' brought about by, inter alia, the Reformation, the colonial encounter, and subsequent struggles against absolutist rule endowed European modernity and its subjects with a newfound freedom, the freedom of life in a world without deep or essential meaning. This freedom is also the source of insecurity about a future no longer determined by divine order and rigid hierarchies. (Dillon, 1996; Foucault 1989[1966], as cited in Grove, 2014).
>
> This radically uncertain future forms a core problem of biopower. Suffering, loss, and even death is no longer part of a divinely ordained plan that culminates in salvation and eternal life; instead, they are contingencies to be avoided in order to prolong and improve the quality of life. (Grove, 2014).

Life as the centre of political strategies, for Foucault, represents a complete discontinuity in political practice; the process of life is no longer the object or foundation of politics. This transformation reshapes its core by reformulating the concepts of political sovereignty and subordinating them to new forms of political knowledge (Lemke, 2011). Foucault's genealogy demonstrates how diverse techniques and strategies for improving populations' health, security, and productivity operate outside the sovereign state to create and sustain what he calls a 'regulatory society' (Grove, 2014). The continuity of Foucault's approach, which views life from the perspective of behaviour, biopower in terms of disciplining individuals, and biopolitics as a normalising population technology, overlooks the content of life corresponding to governance as a political practice (Fassin, 2009).

Focusing on the "life as form and power and living as the treatment of the relationship between the concept and life" (Canguilhem, 1968, p. 335, as cited in Fassin, 2009, p. 47), Fassin proposes alternative pathways related to life as a series of "events which occurs from birth to death, which can be shortened by political or structural violence" and extended by health and social policies – this further involves cultural interpretations and moral decisions (Fassin, 2009, p. 48). Life lived through the body (not just through cells) and through society (not just as a species), Fassin calls 'life itself' (2009). The whole meaning of life is not confined to a biological phenomenon, just as living beings are not reduced to the concept of population. The homogenising statistical categories manipulated by biopolitical governance overlooks lived life inequality. In this sense, one of the crucial dimensions of biopolitics is the question of biological inequality that can be interpreted as biological value. It is not just about normalising human life; it is about deciding what kind of life people can or cannot live (Fassin, 2009, p. 49).

"Unlike the concept of the ethical life inherited from Greek philosophy, ethics of life extend Walter Benjamin's reflection on the sacralisation of life as supreme good" – transitioning from an inquiry into what constitutes a good life to questioning how life has become the supreme good in contemporary societies. That is a conceptual shift that involves moving from a normative study of ethical life to a critical analysis of the ethics of life (Fassin, 2018). Values of life have replaced life values; the goal is no longer to lead life according to specific ethical values but to choose values that will serve life and enhance its maintenance, duration, and quality in how one lives. Political and non-political governance and action increasingly focus on the vital harm and suffering of individuals and groups and their 'vital' civil rights (biocitizenship) (Rose &

Novas, 2004). Responsibility is no longer just about the prudence of an individual shaping their life course through the act of choice (Novas & Rose, 2000). However, self-responsibility implies 'bodily' and 'genetic' – managing one's own health and physical ailments (Rose & Novas, 2004).

> The inquiry reveals that the actual evaluation of lives contradicts the abstract valuation of life since one puts different monetary value on human existences depending on social categories, and since one considers that some deserve to live more than others… One theme underlies this reflection: inequality. (Fassin, 2018, p. 26).

The choice of criteria is based on values that serve as differential points in determining what life is worth living. Consequently, life undergoes normative evaluation, distinguishing between higher, privileged forms of proper living and lower, degraded, and excluded forms of inappropriate lives (Campbell, 2011). Values assigned to specific forms of life influence the differential distribution of individual and social care, concern, and respect directed toward the well-being of particular categories of life. These values ultimately determine which lives are worth protecting, whose rights should be respected, and for whom one should mourn. The forms of violence and insecurity that characterise contemporary life no longer manifest as unequal relations of production. However, as a degraded mode of existence – it is a "critique of capitalism as a form of life" (Jaeggi, 2013, as cited in Fassin, 2018, p. 2).

Fassin's critique is directed at the fact that human lives are unevenly valued, and the vulnerability and insecurity of many people's lives represent a political and intellectual scandal of inequality in which the suffering of specific individuals is valued less than the suffering of others. The 'moral economy of life' that governs individual and collective actions is formed around three key concepts: 'forms of life', 'ethics of life', and 'politics of life' (Fassin, 2018). Moral economy represents a social configuration that can serve in describing the moral state of the world: the way life is perceived and how lives are treated. It is an analytical tool for uncovering contradictions in how life is valued in the abstract and how concrete lives are evaluated. "A critical approach consists precisely in giving evidence to the processes through which certain facts are rendered visible and others invisible, and for the ethics of life in particular, through which biolegitimacy is rendered undisputable whereas legal protection and social justice are more and more easily called into question" (Fassin, 2018, p. 68).

The inequality of human lives, the fact that all lives are not equally treated because they are not assigned the same value, contradicts the foundation of the ethics of life, which is based on the sacredness of life as a supreme and inalienable good – a value that is supposed to be equal for all human beings. This tension between the politics of life that produces inequalities and the ethics of life points to social disparities that shape moral hierarchies in the valuation of human lives. Therefore, the politics of life are directly related to the ethics of life (Fassin, 2018, p. 92).

The unequal treatment of human lives represents a challenge rooted in structural inequality, where the differing value attributed to life and living stems from the unequal positioning of individuals within society and the global landscape. Vulnerable and precarious lives, shielded in the pursuit of sustaining life or ensuring survival, do not mitigate the social realities that contribute to their suffering and adversity. It's important to recognise that the act of saving lives and easing suffering, while essential, does not eradicate the underlying circumstances that place lives at risk in the context of wars, disasters, famine, or epidemics, often fuelled by capitalist

production. “The object of vital systems security is not sovereignty or a population’s well-being, but the physical, technological, and cybernetic infrastructure that sustains flows of goods, people and information on which capitalist societies depend for growth and development” (Grove, 2014).

The concept of the quality of life and well-being, both individual and collective, can be seen as a category within the politics of life, biopower, and the methods by which individuals are evaluated and their lives governed. However, the notion and measurement of the quality of life can also be a tool for comprehending inequalities in treating specific lives. It should be noted that even critically oriented anthropologists, who consider political and social life as undoubtedly more valuable than biological life, may fall into the trap pointed out by Fassin.

> *The ‘simple fact of being alive’ for Benjamin, ‘life itself’ or Arendt, and ‘bare life’ for Agamben, are obviously, from their perspective, lower forms of life, to which human beings should not be debased. They oppose to it ‘just existence’, ‘the idea of freedom’ and ‘qualified life’, respectively, all concepts that elevate human beings above other living beings. This terminology and the conceptualisation that underlies it were meant to account for the way human lives were treated by the authorities or society, and not, as they have often been mistakenly interpreted, to account for the way human beings actually live. (Fassin, 2018, p. 81)*

The actual, tangible lives of individuals belonging to various vulnerable population categories should be regarded as a quest for dignity and meaning, transcending bare biological existence and survival. The values denied to their lives, such as dignity and integrity, do not suggest the absence of these values within the individuals themselves.

When discussing lives worthy of regret, Judith Butler introduces an evaluative interpretative framework that implicitly distinguishes between populations on which an individual’s life and existence depend and those that pose a direct threat to their life and existence (Butler, 2016). The prison population, our area of focus, is a segment of society that occupies a unique position, both at the individual experiential and the perceptual social level in terms of life valuation. This issue necessitates research attention in the pre-penal, penal, and post-penal stages of the inmate experience. The low individual valuation of one’s own life before and upon entering prison, along with the moral aversion that inmates potentially encounter in the social environment after release, presents a significant challenge for theorists, researchers, and practitioners dedicated to issues related to the prison population.

The extreme circumstances of life in prison lead to the assumption that the dominant value of life in such conditions can be reduced to the criterion of “will to live regardless of circumstances” (Janning, 2013). However, the idea that prison treatment can establish conditions and criteria for a life worth living beyond the concept of mere survival is the focal point of research dedicated to improving the quality of prison life. Creating a prison atmosphere dedicated to enhancing the sense of value of inmates’ offers a different formulation of a life worth living. It is a concept that implies a gradual improvement of personal capabilities as an end in itself. The emphasis is on the process of overcoming, rather than on the final determination of the meaning and form of what can be called ‘a good life’ (Janning, 2013).

Building on the insights provided by contemporary theory and practice, we can conclude that a good life is a life worth living. Hannah Arendt stressed the crucial distinction between the desire to live and the desire to live well, more precisely, the desire to live the good life (Arendt, 1981, as cited in Butler, 2012, p. 12).

If we were to define such a life following ethical values, we would encounter a problem of "deep tension concerning what could be called 'ethical life'" (Fassin, 2018, p. 56). Fassin raises the question of whether this life is defined according to local reasoning, translated into moral codes specific to each society, or according to universal principles, which determine the ideals toward which moral subjects strive. As a solution to this contradiction, Fassin proposes Honneth's 'experience of recognition', which enables self-confidence, self-respect, and self-esteem, constituting the three components of self-realisation through interaction with others (Fassin, 2018).

The diagnosis that "something is wrong", as discussed by Jenkins in his formulation of ethics as seeking answers to the problems people face in their lives, affirms human efforts to envision and realise better worlds (Jenkins, 2013, p. 4). The ways in which they can act differently after diagnosing what is wrong and what is incorrect lead to ethics as a discourse dealing with what constitutes a good life. Furthermore, the question of how to live a good life must consider human vulnerability in relation to others, mutual interconnectedness within the broader social life connected to other living beings, and critical judgment of mutual engagement. As we enter life vulnerable and exposed, care from others for our survival is needed, making us constitutively vulnerable to care for others and their care for us (Butler, 2012).

The feeling of hopelessness or, in a Derridean sense, lack of integration produces two equally adverse effects: one is giving up on one's own life, and the other is aggression towards the lives of others – crime and suicide share common causes, as well as common preventive mechanisms. Accordingly, deficiencies and dissatisfaction caused by them, such as indifference, humiliation, intentional ridicule, inactivity, injustice, and unpredictability, stem from feelings of hopelessness, despair, and powerlessness. Their opposites, such as dignity, recognition, respect, humanity, and kindness, can potentially protect individuals from harmful and destructive feelings (Liebling, 2012a). The need for trust, protection, and acceptance constitutes the constitutional vulnerability of human beings, which can be a source of violence and harm but, at the same time, an opportunity to develop an awareness of mutual interconnectedness as the basis for achieving a good life.

THE CONCEPT OF QUALITY OF LIFE

Quality and Inequality

> Nevertheless, for some of the ancients and their modern followers, it is apparently supposed that people's personal assessments of the quality of their lives are not only privileged, but ultimately definitive. So, for example, it seems to be supposed that if some people are satisfied living in unsanitary environments, breathing polluted air and drinking polluted water, abusing and being abused by family members and strangers, suffering imposed restrictions on opportunities for personal achievement and development, and generally facing an array of life chances promising a life that is relatively nasty, brutish and short rather than pleasant, elegant and long, then that is acceptable. It seems to be supposed, wittingly or not, that however constrained the perceptions, beliefs and so on of the people living in such conditions and assessing them as satisfactory, their assessments are paramount. (Michalos, 2007).

A brief acquaintance with the thoughts and concepts that form a continuity of research related to the contemporary concept of quality of life leads us to conclude that quality of life implies a good life or living a high-quality life. The notion of a good life can be observed from the perspective of both objective and subjective quality of life, and their connection is undeniable. We have also seen that various philosophical concepts assess elements of what constitutes a good or quality life in different ways, highlighting different factors from a multitude of subjective, existential, and objective parameters (Ventegodt et al., 2003) that contribute to well-being, life satisfaction, happiness, meaning in life, the realisation of life chances, capability and potential.

Furthermore, we have also considered the question Judith Butler posed: "Can one lead a good life in a bad life?" (Butler, 2012). In this context, the 'good life' definition must be broadened to avoid presupposing or implying inequality. Alternatively, the 'good life' concept needs to be harmonised with other normative values (Butler, 2012). This side of view implies that, for a life to be considered good, it is insufficient to live in economic prosperity and security, mainly when these are achieved through exploitation and inequality. Any theorising related to the concept of life inevitably involves biopolitics and biopower as regulatory mechanisms of power in contemporary capitalism.

Once again, we will use the questions posed by Judith Butler to illustrate the significance of the context in which the quality of life is conceptualised as an indication of the complexity and profound themes of social and individual life in which this concept is immersed.

> The biopolitical management of the ungrievable proves crucial to approaching the question, how do I lead this life? And how do I live this life within the life, the conditions of living, that structure us now? At stake is the following sort of inquiry: whose lives are already considered not lives, or only partially living, or already dead and gone, prior to any explicit destruction or abandonment? (Butler, 2012, p. 10).

Ultimately, the significance of the other encompasses moral dimensions of the quality of life, prompting the question of how to lead a good life. "Ethical conduct or moral and immoral conduct is always a social phenomenon – in other words, it makes absolutely no sense to talk

about ethical and moral conduct separately from relations of human beings to each other, and an individual who exists purely for himself is an empty abstraction" (Adorno, 2000, as cited in Butler, 2012, p. 9). In this context, we reference Debord's "Society of the Spectacle", where he replaced 'wealth' with 'life' and 'commodities' with 'spectacles' (Debord, 2000, as cited in Busk, 2016, p. 523).

> Today, we could contribute to this theme by stating that the psychological or emotional well-being of the world in which the capitalist mode of production prevails appears as an immense collection of 'happy' individuals. The entire institutionalised apparatus of mass-produced happiness amounts to an ideological mechanism that functions to sanctify the status quo and stifle dissent. (Busk, 2016, p. 523).

The discourse of the commercialisation of needs within the framework of consumer culture values and the corresponding commercialisation of feelings of happiness and life satisfaction is a broad and particularly significant topic for the subjective assessment of the quality of life.

When we set aside the moral and political questions related to the quality of life concept, its complexity can be found in the diversity of values conditioned by cultural and social differences in which socialisation processes occur. "Perhaps the most straightforward way to describe socialisation is as the acquisition of socially sanctioned values as one's own, along with the acquisition of skills necessary to live in accordance with those values. This process has cognitive, emotional and deeper bodily and intuitive aspects, all of which are at play when an individual becomes integrated into one's value community" (Fatić et al., 2023, p. 84).

Collective consensus on prevailing values is achieved through mutual adjustment, resulting in collective agreement on the fundamental values that form the basis for assessing the quality of life. Even when the assumption is met that a person has integrated values and attitudes arising from them, personal integrity is achieved through both the relative positioning of these values in the individual's hierarchy of values (Fatić et al., 2023) and the positioning of the individual in a social structure that enables actions by those values. According to some authors, personal integrity and the dignity of the individual are conditioned by institutional integrity[2] (Margalit, 1996; Six & Huberts, 2008, as cited in Fatić et al., 2023, p. 87).

Definition of Concept

As an academic discipline, the quality of life emerged in 1970 and was confirmed and considered in 1974 by the scientific journal Social Indicators Research (Ilić et al., 2010, p. 52). The complexity and ambiguity of the quality of life concept make it difficult to define it in a way that encompasses all relevant aspects in both theoretical and practical applications. We have observed that life is a concept that undergoes various anthropological, political, and biopolitical interpretations. The quality component involves numerous aspects that could be considered

[2] "The routines typical of all institutions can be understood as crystallizations of patterns of recognition" (Honneth, 2012, p. 84, as cited in Fatić et al., 2023, p. 90).

when operationalising and measuring the quality of life. This lack of specificity and consistency in determining what quality of life represents has led to circling around 100 definitions of this concept (Schalock, 2004, as cited in Ilić et al., 2010, p. 52). Given the impossibility of fully comprehending and, to an even lesser extent, unifying the purpose of life, the concept of quality of life involves interpreting the characteristics that emerge in the dynamics of the relationship between personal and social life, along with their interdependence with the physical environment. Initially, quality of life was associated with a social standard, and in the mid-20th century, it became a subject of examination within the field of economic sciences (Pavićević et al., 2024).

Subsequently, needs and life satisfaction were integrated into measuring quality of life. As the concept expanded, objective and subjective quality of life parameters diverged. Towards the end of the last century, a third dimension of quality of life was introduced, focusing on the quality of the living environment, particularly the natural environment. In recent times, scientific and technological development has emerged as the fourth dimension of quality of life, playing a significant role in its evaluation (Milivojević et al., 2012, p. 14, as cited in Pavićević et al., 2024).

The concept of quality of life is highly complex, based on the idea of a good life. It represents a combination of philosophical, social, ethical, political, cultural, and psychological frameworks for achieving a quality life at the individual and societal levels. In addition to implementing corresponding conceptual ideas, specific material, health, environmental, and technological (living) conditions are required for the quality of life to meet standards such as expected lifespan and satisfactory physical and mental health.

Simultaneously, it is necessary to develop and nurture a functional institutional, political, and social environment that enables people to interact with each other within moral categories established based on relative consensus on what constitutes good mutual behaviour.

Mulligan et al. (2004) broadly interpret the quality of life as the satisfaction that a person receives from surrounding human and physical conditions, conditions that are scale-dependent and can affect the behaviour of individual people, groups such as households and economic units such as firms (Marans & Stimson, 2011, p. 1).

The difference between objective and subjective assessments of the quality of life involves a variation in focus and incorporates different evaluation indicators.

According to Marans and Stimson (2011), two basic approaches have been used by researchers to examine the quality of life:

> (a) The first has involved monitoring QOL/QOUL[3] through a set of indicators – usually over time-derived from aggregated spatial data using official sources – such as the census – that are said to be related to perceived QOL/QOUL (for example, level of household income, crime rates, pollution levels, housing costs, and so-on).

[3] abbr. *Quality of Life/Quality of Urban Life*.

(b) The second has involved modeling relationships between characteristics of the urban environment and measures of peoples' subjective assessments of QOL domains, including their satisfaction with specific phenomena and with life as a whole. This approach typically involves data collected through survey research methods and analyzed using techniques such as regression analysis or structural equation models. (Marans & Stimson, 2011, p. 5).

Different models of quality of life perceive the interactions between objective and subjective factors of quality of life differently. On the one hand, there is a danger that by neglecting the importance of objective factors for the quality of life, the possibility and the need for adequate protection of the poor and vulnerable people may be reduced (Cummins, 2005, as cited in Ilić et al., 2010, p. 54). Mental well-being and outcomes related to mental health have shown a strong correlation with objective socio-economic factors – respondents who reported being least satisfied with their lives more frequently reported psychiatric problems, were divorced or widowed, had lower education and lower incomes and exhibited negativity (Bowling & Gabriel, 2004, as cited in Ilić et al., 2010, p. 54).

However, if initial approaches to measuring quality of life were dominated by economic and material factors, with the development of the concept, subjective factors became increasingly included. Subjective well-being in line with individual values (Haas, 1999), individual cognitive capacities (Tartar et al., 1988), cognitive assessments of individuals (Rejeski & Mihalko, 2001), and personal perception of one's own quality of life (WHO, 1995) come into focus (as cited in Ilić et al., 2010, p. 55).

Limitations in assessing the quality of life based on individuals' subjective perceptions do not solely arise from the level of their life expectations, which are determined by what is given to them as possibilities in the context of social inequalities[4]. Individual standards and assessing one's own quality of life can be constrained. They must be taken with caution due to the possibility of being at odds with the objective conditions of life due to ignorance, disability, disease, substance abuse, or some form of duress. Often, what is assessed as an objective condition of life is not as it seems, even when well-informed individuals conduct the assessment (Michalos, 2004)… "the good life that we must want and achieve for all people is not just a life in which people feel good, no matter how terrible their real life conditions are, but one in which they feel good with the best of all reasons, because the objectively measurable conditions of their lives merit a positive assessment by any reasonable person" (Michalos, 2004, p. 5308).

The attempt to connect objective and subjective factors of quality of life in a more research-innovative way is represented by the concept of life domains "states that life can be approached as a general construct of many specific domains, and that life satisfaction can be understood as

[4] Scandinavian experts on social indicators consider that subjective indicators of quality of life, such as life satisfaction, reflect people's aspirations and represent a measured adaptation to current living conditions rather than measurements of the living conditions themselves (Barofsky, 2003, as cited in Ilić et al., 2010, p. 57).

the result of satisfaction in the domains of life" (Cummins, 1996, 1998, 2003; Headey et al., 1984; Headey & Wearing, 1992; Meadow et al., 1992; Rampichini & D'Andrea, 1998; Salvatore & Muñoz Sastre, 2001; Saris & Ferligoj, 1996; Sirgy et al., 1995; Veenhoven, 1996, as cited in Rojas, 2007, p. 469). In this regard, life domains such as money, health, work and employment, social relationships, leisure, housing, environment, job satisfaction and education are being investigated. The main findings in the Mexican study imply that: "Life satisfaction is not just a weighted average of domain satisfactions; the relationship happens to be complex. There are some domains that in general are much more important for life satisfaction than others. For working people with close family (partner and children) satisfaction in the family domain is crucial for life satisfaction; while satisfaction in the health, personal and job domains is important. Satisfaction in the economic domain is just relevant. Satisfaction in the friendship and community domains seems to be irrelevant for these people. However, the relative importance of each domain of life is not independent of what is happening in the other domains" (Rojas, 2007, p. 491).

Although the field of study and research focus do determine the indicators and measures of quality of life, proponents of a multidimensional structure for measuring quality of life emphasise its comprehensiveness and predictive power (Bramston et al., 2005; Matarrita-Cascante, 2010; Perry & Felce, 1995, as cited in Potter et al., 2012, p. 782). Some factors consistently demonstrate significance in assessing quality of life. According to some authors, this group of factors can include control, autonomy, pleasure, self-realisation, a sense of purpose or role, support networks, income and wealth, health, time, and a sense of independence (Grewal et al., 2004).

The significance of personal relationships, trust, and participation underscores the link between quality of life and prevailing social values, challenging the predominant economic model employed by political institutions. Shifting the focus from maximising well-being solely through economic principles aims to prioritise cultural values and standards embodied in the institutional environment. Recognising the importance of social values and decisions embedded in public policies contributes to avoiding the evaluation of well-being as a simplistic aggregation of numerous and diverse aspects of life or reducing it to administratively convenient parameters (Pavićević et al., 2024).

The assessment of an individual's or society's life situation and path can encompass multiple dimensions established based on various research focuses. This observation involves a spectrum of different perspectives that can be considered: variations regarding which aspects of being and life we want to include in the assessment – which values support the interpretation of well-being or quality of life; which research instruments are used (observation or measurement methods); about what goals (goal selection determines the evaluation); what perspective the evaluator holds (individuals, members of specific social groups), whether they are doing it for themselves or others; on which theoretical frameworks the assessment is based (Gasper, 2010, p. 5, as cited in Pavićević et al., 2024).

Diverse and relevant interpretations of both concepts have led to different approaches in their evaluation. They can be viewed as measuring subjective states and circumstances of individuals; values can be seen as private choices or values supported through public discourses and practices; well-being can be a result of self-reporting or a result obtained by external observers

(Gasper, 2010, as cited in Pavićević et al., 2024). However, neither well-being nor quality of life are determined or definitive categories that we classify into subjective or objective well-being. They encompass different criteria that do not allow for a final, unchanging, and authoritative way of assessment. Indeed, the quality of life cannot be reduced to a material standard of living (Pavićević et al., 2024).

The fundamental dimensions of quality of life form a set that is intended to capture the essence of the quality of life concept most effectively. The quantity and scope of these dimensions determine the quality of life, and their abundance and diversity preclude a fixed and standardised operationalisation. Alongside theoretical variations in conception, it is essential to consider the dynamic nature of these components, cultural disparities, as well as ethical and political challenges associated with favouring and 'imposing' specific dimensions of quality of life over others (Ilić et al., 2010, p. 57).

The World Health Organisation defines quality of life as "an 'individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" (The WHOQOL Group, 1998).

The relationship between objective and subjective dimensions of quality of life must be viewed in a dynamic interdependence represented as a whole in integrative theories of quality of life, which include three subgroups: the subjective quality of life, the existential quality of life and objective quality of life. The most pronounced dimension of subjective quality of life is well-being (Ventegodt et al., 2003).

Well-Being

The Ambiguity of the Term

> The criteria of well-being that I propose, therefore, do not work according to a specific end goal but rather according to a long-term goal that essentially ends all goals. It is an ongoing process of learning to live. (Janning, 2014, p. 26)
>
> The inventive and creative processes are part of the ongoing process of enhancement of one's capabilities, which, as shown, requires perseverance, willpower and self-discipline. It is hard work to get involved with life. (Janning, 2013, p. 11)

The concept of well-being is extensively explored in diverse literature. In everyday usage, it often denotes the recognition that we experience a positive and satisfying state when assessing our own lives. The terms 'quality of life' and 'well-being' share meanings, as a good and high-quality life is essentially synonymous with well-being – "well-being is the most natural aspect of the subjective quality of life" (Ventegodt et al., 2003, p. 1031).

The intricate nature of well-being as a state and an assessment of human life has prompted various conceptual approaches. When measured within economic parameters, well-being has been confined to the domain of material standards, diminishing its multifaceted character. Gross National Product per capita still holds its position as an indicator of a country's living standard (Dasgupta, 2001, p. 53). Only recently has human well-being been considered in relation to income and consumption levels (McGillivray & Clarke, 2006). "Composite indicators,

such as the human development index (HDI) (UNDP, 1990) and its forerunner, the physical quality of life index (Morris, 1979), were designed to challenge the hegemony of income as the representative measure of human well-being and overcome these weaknesses. The HDI is a function of life expectancy, adult literacy, school enrolments and GDP per capita. Its purpose is to extend consideration of human development of well-being away from the economic-centric nature suggested when simply using income" (McGillivray & Clarke, 2006, p. 4).

The need to prevent the economisation of the idea of human well-being and expand the monetary and financial source of human happiness has led to the introduction of interdisciplinary well-being indicators that include social, political, psychological, and other approaches in conceptualising well-being. Participation and balance in selecting indicators are crucial for creating public policies, as they determine the principles, rules, and decisions according to which criteria the assessment of the level of well-being will be established (Michalos, 2008). However, neither well-being nor quality of life are defined or definitive categories that can be classified into subjective or objective well-being. They encompass different criteria that do not permit a final, unchanging, and authoritative mode of assessment (Pavićević et al., 2024).

While assessing well-being solely in terms of material wealth may not capture its whole essence, poverty and inequality undoubtedly diminish human well-being and, in that sense, must be at the centre of public policies. This observance is particularly crucial when addressing the poorest parts of the world and social communities (Cooper & Stewart, 2013, 2015). Poverty manifested in various life domains, including poor quality and insecure housing, unhealthy air, expensive warmth, food insecurity, restrictive benefits, and insecure work, creates a vicious circle of compromised physical and mental health. Additionally, there is a lack of health and social and political resources to overcome such conditions caused by poverty. Material poverty and lack of income and wealth are significant but not the only forms of poverty. They are most commonly associated with other dimensions of poverty, such as lack of dignity, feelings of humiliation, helplessness, and inability to participate in one's community. These dimensions of poverty vary independently of material poverty (Gasper, 2004). The ability to participate and voice is not merely a subjective perception. "What is striking, however, is the extent to which dependency, lack of power and lack of voice emerge as core elements of poor people's definitions of poverty" (Narayan 2000, p. 64, as cited in Gasper, 2004, p. 14).

Considering well-being in such circumstances cannot be solely a matter of individual perception. Standards, expectations, and criteria by which individuals self-assess their well-being are formed based on objective factors determining their comprehension of well-being. In this sense, well-being is related to education, upbringing, care, cultural and social capital, knowledge, and lifestyle, all products of life circumstances.

Living in poverty and challenging life conditions must be assessed from the perspective of the impact of such conditions on people's well-being beyond their subjective perception of whether they feel good or not. Subjective feelings can result from various pathologised conditions, insufficient information, and low standards regarding one's well-being. Whether a person optimistically ignores warnings about global warming is genuinely serene or whether the peace resulting from particular medications or misguided education is indeed the peace of a happy person (Michalos, 2007).

Accepting and empathising with inequality, exploitation, and oppression in the context of 'accepting one's fate' cannot be accepted as relevant criteria for an individual, let alone objective well-being. Therefore, it is not just essential but our ethical responsibility to consider happiness in the broader context of social justice, ethical values, and moral responsibility.

Reducing well-being indicators to economic measures is equally insufficient, just as psychologising and subjectivising well-being indicators are reduced to the feeling of personal happiness and satisfaction regardless of these conditions.

> A challenge for researchers and practitioners alike is the education of society on the determinants of health and well-being and the linkages among them. Without the knowledge and understanding of these broad determinants and their interrelatedness: without the appreciation that factors such as housing, unemployment, poverty and lone-parent family status predict rates of smoking, teen pregnancy, crime, disease, hospitalisation and premature mortality communities will be limited in the programs and policies they have in their arsenal to sustain or improve on current levels of health and well-being… *Indeed, knowledge is the crucial first step in planned approaches to enhancing community health… As long as there are major discrepancies between a community's perceived health issues and the actual health issues, the sustainability and enhancement of well-being can be jeopardized.* (Vingilis & Sarkella, 1997, pp. 163–164, as cited in Michalos, 2007, p. 7; emphasis added by Michalos).

Living a good life in the Aristotelian tradition involves acquiring knowledge and learning about what constitutes a good life. Considering various philosophical, religious, cultural, and other diversities, education emerges as a distinct factor with its complex and often not immediately apparent significance for achieving well-being.

Education, understood in a broader sense, holds great significance for the well-being of individuals and communities. Alex Michalos explains what constitutes education and how it is connected to happiness. Education, understood broadly, is not just a prerequisite but a transformative force for a happy and fulfilling life. This comprehensive understanding of education and its importance for well-being, as stated by Michalos (2007, p. 2), includes all forms of informal education facilitated through media, social, and cultural channels within the community to achieve overall well-being. Therefore, knowledge, awareness, and education acquired through formal and informal sources constitute the foundation for well-being, representing the basis for establishing personal and social standards for assessing and realising a high quality of life or well-being.

Individual and social development in line with well-being implies a comprehensive set of indicators that includes questions related to economic, social, values, ethical, and political priorities correlated with satisfaction with life, happiness, meaning in life, realising life potential, fulfilment of needs, personal autonomy, self-esteem and intra- and inter-societal links and identities, and personal growth.

Subjective Well-Being

Subjective well-being, which primarily pertains to an individual, is usually seen as a psychological construct arising from how people experience the quality of their lives. It consists of a person's cognitive and affective evaluations of their life (Bulatović, 2014, p. 106). Cognitive and affective components are incorporated into the multidimensional evaluation of life, which essentially constitutes subjective well-being (Diener, 1984; Argyle, 1987; Diener & Larsen, 1993; Eid & Diener, 2003, as cited in McGillivray & Clarke, 2006, p. 4).

It is important to note that understanding and interpreting individual well-being are complex, involving objective and subjective indicators. Various approaches exist in interpreting states of happiness or life satisfaction, mainly when assessed from a psychological and subjective standpoint. Relevant questions include whether the experience is related to short-term satisfaction or the achievement of long-term goals if happiness and satisfaction are influenced by individual states and social circumstances deemed justifiable, and whether individuals have established criteria for understanding their own well-being.

Two approaches have emerged from separating concepts that view well-being as hedonistic pleasure versus the *eudaimonic* understanding of well-being as thoughtful fulfilment (Ryan & Deci, 2001).

> The hedonic tradition, which accentuated constructs such as happiness, positive affect, low negative affect, and satisfaction with life (e.g., Bradburn, 1969; Dienern, 1984; Kahneman, Diener, & Schwarz, 1999; Lyubomirsky & Lepper, 1999); and the eudaimonic tradition, which highlighted positive psychological functioning and human development (e.g., Rogers, 1961; Ryff, 1989a; 1989b; Waterman, 1993). However, despite the differences in approach, most researchers now believe that wellbeing is a multi-dimensional construct (e.g., Diener, 2009; Michaelson, Abdallah, Steuer, Thompson, & Marks, 2009; Stiglitz, Sen, & Fitoussi 2009). (Dodge et al., 2012, p. 222).

The nature of happiness, understood in the sense of well-being, does not imply what happiness represents in everyday speech – a state of satisfaction, good mood, or pleasant affect. Referring to the ancient tradition, the modern concept of well-being is closer to the ancient interpretation of happiness than the modern notion of pleasure.

> Moral philosophers working in the eudaimonist tradition (e.g., Socrates, Plato and Aristotle) agreed that people should reflect on their lives as a whole, discover what is most important or valuable (i.e., life's final end or TELOS), and plan and live their lives to achieve that end. (Micahlos, 2007, p. 9).

Eudaimonia presupposes happiness is achieved through a good life, good conduct, and good actions. Aristotle sees wisdom as a condition for achieving such fulfilling, enduring, and prosperous happiness.

> Every craft and every line of inquiry, and likewise every action and decision, seems to seek some good; that is why some people were right to describe the good as what everything seeks… Suppose, then, that the things achievable by action have some end that we wish for because of itself, and because of which we wish for the other things, and that we do not choose everything because of something else – for if we do, it will go

> on without limit, so that desire will prove to be empty and futile. Clearly, this end will be the good, that is to say, the best good… What is the highest of all the goods achievable in action? As far as the name goes, most people virtually agree; for both the many and the cultivated call it happiness [EUDAIMONIA], and they suppose that living well and doing well are the same as being happy. But they disagree about what happiness is, and the many do not give the same answer as the wise. (Aristotle, 1999, p. 3, as cited in Michalos, 2007, p. 9).

Aristotle's conception of happiness as close to well-being presupposes well-being combined with virtue, independence, and a pleasant life combined with security – the unity of internal and external goods.

> To summarise, Aristotle was clearly not concerned with the subjective states of feeling happy. Rather, his conception of the highest good towards which we all should be reaching was the task of self-realisation, played out individually, each according to his or her own disposition and talent. (Ryff & Singer, 2008, p. 17).

Independence, as a condition for well-being, continues to evolve in psychological concepts of well-being, such as the assumption of free will, which enables people to make decisions that promote their well-being and provide the opportunity for personal development and growth.

Aristotle's understanding of well-being as a life lived by virtue and wisdom in the pursuit of fulfilling one's full potential is developed by Ryff and Singer (2008) through ideas from developmental psychology, existentialism, and humanistic philosophy. These perspectives define virtue as utilising one's talents and capacities, self-realisation through personal growth and development at different life stages, and thriving in challenging, sometimes unbearable, life circumstances. In addition to these psychological theoretical concepts, Ryff and Singer (2008) highlight the influence of two utilitarian philosophers, John Stuart Mill and Bertrand Russell. Mill (1839[1989], as cited in Ryff & Singer, 2008, p. 19) reflects on happiness not being an end in itself but rather directing the mind toward other goals, including the happiness of others, while Russell (1930, as cited in Ryff & Singer, 2008, p. 19) views happiness as something for which we must strive and work, aspiring to achieve it through meaningful bonds of love with others..

An integrative approach (Ryff & Singer, 2008, pp. 20–23) that includes six dimensions as conditions for achieving individual well-being are:

1. *Self-acceptance* – This is not only self-awareness and a striving for an accurate perception of one's actions, motivations, and feelings but also the need for positive self-regard. "The process of individuation (Jung) further underscored the need to come to terms with the dark side of one's self (the shadow). Thus, both Erikson's formulation of ego integrity and Jungian individuation emphasised a kind of self-acceptance that is notably richer than standard views of self-esteem. It is a long-term self-evaluation that awareness and acceptance of personal strengths and weaknesses" (Ryff & Singer, 2008, pp. 20–21).
2. *Positive relations with others* – The central characteristic of a positive, well-lived life includes love as a source of happiness. Warm relationships and close connections with others are criteria for maturity (Allport, Erikson), and the primacy of love, empathy, and affection enables healthy, satisfying, warm love and social relationships: an active lifestyle filled with work and optimism.

3. *Personal growth* – This dimension of well-being involves the individual's self-realisation, encompassing a continuous process of developing one's potential. It signifies ongoing growth where a person remains open to new experiences and challenges at different stages of life.
4. *Purpose in life* – The search for meaning, especially in relation to life difficulties, involves seeking meaning and purpose in all life trials and sufferings. The will to meaning in the face of what is absurd and dreadful in life implies a turn away from darkness, a reflective attitude toward life with a zest for life and its purpose in line with creative and productive phases of life, as well as emotional integration in later stages of life.
5. *Environmental mastery* – The ability of an individual to choose and create an environment that suits their psychological requirements, navigate and control complex environments, and act on and change the surrounding world through mental and physical activities is essential. Allport's criteria for selfhood include the ability to 'extend the self', signifying active participation in significant spheres of one's social life. This perspective on well-being implies integrated personality functioning, control, and self-confidence.
6. *Autonomy* – The qualities underlying the multidimensional model of well-being include self-determination, independence, and internal regulation. This aspect involves a developed internal locus of evaluation that is not dependent on the approval of others but is guided by personal standards. It enables freedom of living and independent and self-determined thinking concerning collective beliefs, dogmas, fears, and conventions. Authentic living is inherent to an autonomous personality that freely realises its choices, attitudes, and actions, independently of the commands of others and even the norms that govern everyday life.

Such a psychological profile of a 'happy person' represents 'mental capital' that constitutes personal well-being in light of life circumstances and activities (Bulatović, 2014). In a 'happy', flourishing society, individuals have access to many encouraging opportunities to pursue choices directly linked to their well-being. Amartya Sen's capability theory suggests that the presence of social opportunities for individual efforts toward well-being contributes to society's overall well-being (Bulatović, 2014).

> A happy person is likely to have low levels of fear, hostility, tension, anxiety, guilt and anger; high degrees of energy, vitality and activity; a high level of self-esteem and an emotionally stable personality; a strong social orientation; healthy, satisfying, warm love and social relationships; an active lifestyle with meaningful work; and to be relatively optimistic, worry-free, present-oriented and well-directed. Although one would be hard-pressed to condemn the life of someone with this sort of psychological profile, it is just that, a psychological profile. (Michalos, 1991, pp. 20–28, as cited in Michalos, 2007, p. 5).

WELL-BEING IN PRISON

Towards Humane Prison Environments

In recent decades, the number of studies promoting the importance of creating humane and generative spaces in prisons has been increasing (Moran et al., 2020). Additionally, at a broader, global level, there is an increasing recognition of the need for a more intensive focus on the health of prisoners.

The positive conceptualisation of health extends beyond mere physical well-being to include the improvement of prisoners' overall well-being (Woodal & Freman, 2020), which has long been marginalised or overlooked (Baybutt et al., 2018). At the international level, through the recommendations of the World Health Organisation (Enggist et al., 2014), there is an emphasis on the need for a comprehensive approach to prisons, encompassing health promotion and the impact of the environment on health, structural issues, specific physical conditions within the institution, and the policy governing the facility. This complex approach to prisons fundamentally underscores the notion that the health of prisoners is the responsibility of the entire system, not just the healthcare services and personnel within the prisons.

For years, researchers, policymakers, and prison officials have recognised the significant impact that prisoner well-being has on their behaviour and the success of rehabilitation programs (Cullen et al., 2011). Specifically, by discerning how psychological factors intersect with the inmate environment, practitioners can gain valuable insights into the psychological needs of inmates when making decisions about classification and rehabilitation. For instance, while some inmates may exhibit positive emotional outcomes in a stimulating environment, for others, such an environment can be stressful and exacerbate emotional and behavioural issues (Toch, 1977; Vuk, 2017).

Research indicates that a stressful and uninspiring environment diminishes the effectiveness of implemented rehabilitation programs (Cullen et al., 2011). Considering the mentioned data, for more effective planning of rehabilitation, release, and social reintegration programs for inmates, it is essential to understand the emotional factors at the personality level and the factors in the immediate environment that shape an individual's behaviour in prison.

What is Well-Being in Prison?

A review of the literature reveals that there is no singular definition of what constitutes and is implied by the well-being of prisoners. It has been operationalised in various ways, depending on the perspective from which it is analysed. However, there is a consensus that psychological well-being strongly influences the mental health of individuals.

One definition of well-being states that it is the "combination of feeling good and functioning well" (Huppert, 2009, p. 137). Literature further informs us that the "term subjective well-being is synonymous with positive mental health" (Ruggeri et al., 2020, p. 1). The World Health Organisation report states that the "concept of mental health includes subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence, and self-actualisation of one's intellectual and emotional potential, among others" (WHO, 2001, p. 5). As

noted by Ruggeri et al. (2020, p. 1), “conceptualisation of well-being is more than just the absence of illness, as it also includes the perception that life is going well”.

Benefits of well-being are visible across various aspects of life. Positive outcomes are identified in three different areas: professional, personal, and interpersonal levels. In other words, people with high well-being at work tend to be more productive. They might also learn more effectively and be more creative. Additionally, well-being can lead to more positive social behaviours and stronger relationships (Diener, 2012; Netten & Gibson, 2023). As Netten and Gibson (2023, p. 21) noted, psychological well-being can be defined as the “experience of positive psychological states, functioning well within one’s environment, personal growth, and positive relationships”.

Ryff and Keyes (1995, p. 719, as cited in Vuk, 2017, p. 8) stated that “the study of psychological well-being relies on two primary conceptions of positive functioning. The first of these, based on Bradburn’s work (1969), distinguishes between positive and negative affect and, in that context, defines happiness as a balance between these effects. Further conceptual and methodological refinements built upon this early operationalisation of well-being”. Moreover, “positive affects encompass an individual’s self-evaluation of emotions such as happiness, life satisfaction, accomplishment, and optimism, while negative affect includes feelings of loneliness, depression, anger, anxiety, and unhappiness”. In the given context, an individual has a higher level of well-being if the intensity of positive affect is dominant. In short, the level of well-being depends on the dominance of pleasure over the experience of suffering (Bradburn, 1969, as cited in Vuk, 2017, p. 8).

The most common, in correctional literature, to operationalise well-being is by utilising measures of negative affect, typically focusing on depression, anxiety, or stress, without incorporating any assessment of positive affect (Vuk, 2017). The focus on analysing negative effects in the context of inmate populations can also be explained by the fact that identifying needs and types of treatment in prison, as well as reducing recidivism, relies precisely on predicting negative behavioural and emotional outcomes. The second reason, as noted by Vuk (2017, p. 9), is that “factors associated with positive affect include a high degree of social participation, sociability, companionship with significant others, exposure to life situations that introduce a degree of variability and autonomy, and adoption of multiple social roles. Because prison experience includes limited satisfaction, pleasure, social participation, and autonomy, the argument can be made that there is little variability in positive affect among prison inmates”.

The prison environment is inherently restrictive and induces numerous deprivations (Ilijić, 2014). Prisoners have limited autonomy and are separated from their family, friends and support networks (Netten & Gibson, 2023). Prison is a potentially important stressor in either the formation or exacerbation of prisoners’ psychological problems, such as low levels of psychological well-being (Ghazanfari et al., 2023). Considering those observations, as mentioned earlier, that the prison experience involves limited satisfaction, deprivations, strict social participation, and autonomy, it is not surprising that in criminological and penological research, the well-being of inmates is observed from the perspective of measuring its negative impacts. Negative effects, such as anxiety, depression, a tendency towards aggression, and self-harm, are associated with social isolation and limited social roles – typical prison conditions and limitations imposed by prison life (Thoits, 1983). This argument is further reinforced by the

finding that “negative affect is more prevalent in the offender population than in the general population” (Boothby & Durham, 1999; Vuk, 2017, p. 10).

Summarising the above, Vuk (2017) identified two opposing perspectives in the literature on how incarceration affects inmate well-being. Relying on the works of Gullone et al. (2000) and Wooldrege (1999), Vuk (2017, p. 10) highlighted that the concept of the well-being of inmates can be seen as a stable psychological response to incarceration. Conversely, Vuk (2017, p. 11) noted that research by Adams (1992), Andersen et al. (2003), and O’Keefe et al. (2010) suggested that well-being changes over time. These studies align with the deprivation model (Goodstein & Wright, 1989, as cited in Vuk, 2017, p. 11), highlighting the prison environment’s negative impact on psychological outcomes.

Research suggests a positive correlation between well-being and success across various life domains. Individuals with higher well-being tend to experience greater success at personal, interpersonal, and professional levels. These positive outcomes include stronger prosocial skills, increased productivity at work, and more positive relationships (Diener, 2012; Huppert, 2009; Oishi et al., 2007; Rugerri et al., 2020). Furthermore, higher well-being is linked to improved physical health and longevity (Diener et al., 2017; Rugerri et al., 2020, p. 2).

Overall, it is important to acknowledge that well-being is a complex, multidimensional construct (Rugerri et al., 2020) that cannot be defined and measured through the analysis of individual items about life satisfaction and happiness or individual items related to the quality of life. As Ruggeri and colleagues state, “assessing well-being using a single subjective item approach fails to offer any insight into how people experience the aspects of their life that are fundamental to critical outcomes” (Rugerri et al., 2020, p. 2).

Why it is Important to Work to Improve Well-Being in Prisons?

Prison procedures and practices impact the tolerability of the prison experience and the well-being of inmates, which is crucial for achieving the fundamental objectives of imprisonment, which are incapacitation, punishment, and rehabilitation (Tartarini, 2021). In recent decades, research has emphasised the importance of the connection between the well-being of inmates and rehabilitation.

Improving well-being in prisons has several key reasons.

Firstly, well-being can enhance the rehabilitation process. Providing adequate support for developing and improving emotional and social well-being can help inmates recognise and change critical antisocial behaviour patterns. Secondly, increasing the well-being of inmates can positively impact recidivism prevention. Additionally, mastering and adopting appropriate coping mechanisms for stress, effectively resolving conflicts, and enhancing positive prosocial skills increase inmates’ chances for successful social reintegration after leaving prison. Thirdly, improving the well-being of inmates can contribute to better behaviour within the institution, as it can lead to a more positive and peaceful environment. In this way, the potential for disciplinary infractions among inmates is also reduced. Next, improving well-being in prisons contributes to respecting fundamental human rights. Finally, improving well-being also has a positive social impact. In general, by enhancing prison well-being, society can gain benefits such

as reduced crime, increased safety, and improved overall social morale. In turn, this opportunity can create better conditions for all community members.

According to advocates of the Good Lives Model, rehabilitation interventions should also promote the flourishing of individuals to foster positive life changes (Laws & Ward, 2011). This theoretical framework emphasises the importance of adopting a critical psychosocial approach in research with marginalised populations. This approach centres on understanding the experiences of individuals affected by a broad range of issues, including but not limited to discrimination, psychophysical health, and social deprivation. The person and the environment are intricately interdependent, and studying their mutual relationships has long been considered fundamental for understanding individual behaviour (Lewin, 1936). The psychosocial approach is, therefore, essential for understanding the psychological and social dynamics of lived experiences in the light of their specific context and intersubjective relationships (Woodward, 2015, as cited in Tartarini, 2021). This epistemological framework should provide information on interventions that support the well-being of inmates as one of the critical goals of rehabilitation.

The Good Lives Model is a concept focused on rehabilitating offenders, surpassing the limitations of approaches focused on the control and risk assessment of offenders. The positive approach of this model is based on the idea that it is desirable to emphasise and develop the positive potentials and strengths of individual offenders to reduce the risk of recidivism. Accordingly, activities undertaken for this purpose, in terms of treatment and programs for dealing with inmates, should enrich the aspects of individual functioning rather than simply addressing or managing problems. It rejects the notion that restricting someone's activities for life is the only way to prevent the recurrence of criminal behaviour (The Good Lives Model of Offender Rehabilitation – Information, n.d.)[5] In other words, the Good Lives Model emphasises respect for basic human rights and focuses on human agency.

Levels of health and well-being for each individual are influenced by personal factors and vulnerabilities (such as previous suicide or self-harm attempts or psychiatric disorders) (Liebling, 1999), as well as by factors like traumas and deprivation experienced in prison, rendering everyone inside vulnerable (Sim, 2018, as cited in Tartarini, 2021).

The prison environment can have detrimental effects on individuals who were previously healthy. Various factors within the prison environment, such as overcrowding, lack of privacy, and inadequate medical and health care, among others, can compromise the mental health of inmates. Additionally, it is important to note that forced idleness and a lack of positive stimulation can further deteriorate the mental well-being of inmates, triggering a spiral of violence and self-harm (Garland et al., 2010).

[5] More details on: https://www.goodlivesmodel.com/information.shtml

Research on well-being and happiness indicates a connection between an individual's subjective well-being and the quality of life within institutions (Helliwell, 2011, p. 255). However, questions frequently arise in the literature about the causal relationships and what can be done at the institutional level to enhance well-being.

As mentioned by Helliwell (2011), prisons are often considered as institutions that contribute to the advancement of criminal activities rather than places that enhance the well-being of individuals. The author emphasises that the social context of well-being is frequently underestimated, providing real-life examples that demonstrate how the social context can be changed to increase the level of well-being. Public institutions can modify their structures or modes of operation, subsequently improving the social context in which individuals live, work, and function. In his work, Helliwell (2011) illustrates five fundamental, often overlooked findings of well-being research, each relating to a specific aspect of the social context of well-being.

First, *the process is important*.

The way something is done (implemented or applied) has a more significant impact on well-being than the mere fact of what has been done or implemented. Institutions of closed types, such as prisons, often focus exclusively on achieving specific goals, with their performance being evaluated based on the extent to which these goals are accomplished. This focus is characteristic of the "new penology", which holds less ambitious expectations regarding the execution of criminal sanctions and prison sentences. Instead of aiming to adhere to social norms, eliminate crime, reintegrate individuals into the community, or ensure public safety, these institutions have started to view their outcomes as indicators of performance (Feeley & Simon 1992, p. 455, as cited in Pavićević et al., 2023, p. 601). On the contrary, research on subjective well-being suggests that it depends much more on improving the social context than providing specific services.

Second, *collective engagement directed towards positive activities aimed at other people represents a greater sense of benevolence*.

Studies have consistently demonstrated that spending time with others is generally associated with higher subjective well-being (Helliwell, 2011). For instance, Helliwell and Putnam (2004) found that frequent interactions with friends and other people are closely related to higher subjective well-being. On a more basic experimental level, engaging in synchronised physical activities with others enhances our sense of well-being. It provides a higher level of satisfaction and well-being than the same activities done alone (Cohen et al., 2010).

Third, *routine assessments of the trust individuals can have in others lead to a decline in social engagement and a weakening of social norms*.

Trust in other people is crucial for subjective well-being, but unfortunately, trust is often underestimated in research on human relationships and well-being. Research indicates that trust and social connections are interrelated and conditional. In a climate of trust among individuals or within a community, they are more inclined to establish interpersonal connections (Putnam, 2000). Additionally, individuals are more likely to have trust in those people with whom they have regular social interactions. These findings suggest the conclusion that the unjustified presence of mistrust adversely affects well-being in two ways. First, it reduces an

individual's willingness to engage with others, and such interaction inherently contributes to well-being. Second, lower perceptions of trust also lead to lower levels of subjective well-being (Helliwell, 2011).

Next, *individuals and institutions could enhance well-being by intensifying their focus on creating positive outcomes rather than exclusively concentrating on damage control and risk avoidance (mitigation)*.

As Helliwell (2011) observes, the policy focuses on repairing adverse outcomes and punishing individuals responsible for criminal behaviour (criminal justice model), which, at best, can bring the system back to equilibrium by repairing the damage and reducing the risk of future criminal behaviour. In other words, laws and regulations intended to address actual and potential crime typically increase the perception of threats from negative events, reduce trust, and decrease individual engagement in mutual assistance and lack mechanisms for finding ways to build better lives.

Finally, *shared activities have multiple benefits for all participants*. The level of well-being is conditioned by the extent of shared values and a sense of collective engagement around a common goal.

The reform of the Singapore Prison System, as mentioned by Helliwell (2011), provides the best example of transformation and improvement of the well-being of all members of the prison community. Although facing similar problems encountered by other prison systems worldwide (such as overcrowding, staff shortages, low work motivation, and high recidivism rates), the Singapore Prison Service has gone a step further in addressing these issues. Transitioning from a system focused on protection and custody, it has become a leader in the rehabilitation of offenders.

Rehabilitation has always been set as the ultimate goal of serving a prison sentence, with the responsibility for its achievement assigned to the treatment providers in prison. It was based on inmate employment, education, and religious counselling but without a systematic assessment of effectiveness. Firstly, collaboration was established among inmates, staff, and the broader community to enhance the lives of all stakeholders. As stated by Leong (2010), the prison service illustrates a transition from the traditional role of a guardian to that of a facilitator, encouraging and enabling positive changes. Radical reforms required transformation across several key segments. The first step towards this change involved a clearly defined shared purpose and goals, followed by creating channels for empowering all stakeholders (inmates, staff, and the broader community) (Leong, 2010).

The key to the transformation of the Singapore Prison System lay in the idea and necessity of moving beyond mere custody and security. This shift in philosophy involved a re-evaluation of the roles and significance of all staff in the prison service, aspiring to do much more to guide the offenders entrusted to the system on the path to becoming responsible members of the societal community.

The reform introduced a new way of managing prison units (pavilions) and increased the involvement of inmates but in a meaningful and purposeful manner. Prison officers, organised into teams, were assigned to manage and oversee all activities related to individual pavilions.

Guards no longer had only the role of custodians; they were required to take on the responsibilities of disciplinarians, mentors, and advisors. In order to eliminate security issues and manipulation by inmates, training sessions were organised for the staff, emphasising teamwork and adherence to ethical standards (Leong, 2010). Results were noticed very quickly. Officers discovered the value of a housing unit management system. In addition to rehabilitating prisoners, she helped officers gather intelligence, which raised the level of security, discipline, and control in prisons. They experienced the power of teamwork: working and learning together really improved the quality of decisions and outcomes (Helliwell, 2011).

After that, new treatment programs were implemented that directly involved inmates. This approach brought multiple benefits, as it reduced the workload and professional burden on the prison staff and improved the existing interpersonal relationships between inmates and professional staff. Furthermore, procedural changes were introduced in how operations are conducted, such as tele-visits and virtual court sessions for inmates in remand (Helliwell, 2011). The implemented reforms increased the level of mutual trust and further empowered the professional staff in the prison. As Leong (2010, p. 4) states, they also gave the professional staff "the confidence to explore new solutions beyond the prison walls". The most innovative segments of the reform involved efforts to break down the barriers existing in the societal community when former offenders are to return to a community not ready to accept them. One of the critical realisations was that integrated care and coordinated support are not separate phases but that the reintegration of offenders must begin on the first day of their arrival in prison. It was essential to establish meaningful connections between the prison system and the community to enable this. The prison system opened its doors to the public, highlighting success stories of reformed former inmates. Positive media coverage influenced a change in public opinion and attitudes towards prisons and prison work, leading to increased employment and volunteer engagement success. The results of the implemented reforms are significant at all levels. The recidivism rate decreased from 44% in 1998 (pre-reform) to 27.3% in 2008. Job satisfaction among prison officers within the prison management increased from 70% in 2001 to 84% in 2005. Additionally, from the perspective of inmates, there was a noticeable increase in respect towards prison officers, rising from 58% in 2002 to 92% in 2006 (Helliwell, 2011, p. 261).

In conclusion, it can be deduced that the success of the reform in the Singaporean prison system stems from dismantling the model of opposing identities – namely, the identity of inmates contrasting with that of prison staff or the formal system. The agents of reform actively sought and identified a comprehensive set of objectives that could be embraced by both staff and inmates (Helliwell, 2011). This process facilitated the development of a shared identity with the common goal of improving the lives of all involved parties. Systems and regimes that encourage increased mutual engagement and individuality for inmates and professional staff produce positive outcomes.

(Positive) Prison Environments: Impacts on the Well-Being of Inmates

Research conducted in total institutions indicates that positive psychological interventions help individuals with a history of suicidal behaviour (Huffman et al., 2014, as cited in Tartarini, 2021). Individuals in healthcare institutions are more inclined to expand/enhance their coping strategies and resilience when more engaged in therapies focused on developing positive mental states rather than focusing on deficit reduction or risk factor mitigation. The effectiveness of such interventions depends on successfully translating positive mental health into more positive emotions, as positive emotions can lead to personal growth, development, and the expansion of personal capacities (Teismann et al., 2019, as cited in Tartarini, 2021). Furthermore, it is crucial to strengthen the sense of self-determination – the belief that an individual is in charge of their own life, possesses autonomy, and has a support system.

The literature indicates that a significant number of inmates experience "pains of imprisonment" (Sykes, 1958), meaning that prison conditions contribute to the development of deprivations (freedom, material goods and services, autonomy, security, and heterosexual relationships). Deprivations inflict pain, pose challenges, and disrupt the inmate's sense of personal worth, self-esteem, and identity (Ilijić, 2014). Furthermore, the "pains of imprisonment" are associated with depression, lower levels of self-esteem, and an increased risk of suicide (Liebling, 1999; Perin & Blagden, 2014). Typically, research focused on evaluating interventions for offenders has primarily examined programs designed to address criminal behaviour. Such programs target empirically based criminogenic needs and have been found to reduce recidivism rates (Lösel & Schmucker, 2005).

However, Perrin and Blagden (2014, p. 903) noted that these programs are often criticised for exclusively "focusing on negative risk factors, thereby neglecting the engagement with positive factors". As previously noted, the special value of the Good Lives Model lies in its emphasis on "good", positive qualities, states, or experiences that can be developed through legitimate means (Perrin & Blagden, 2014; Ward & Stewart, 2003). In other words, it enables offenders to develop positive skills based on prosocial activities and behaviours. This focus on prosocial development undoubtedly contributes to "enhancing their psychological well-being as it intensifies their individual sense of autonomy, purpose, and friendship" (Ward et al., 2007, as cited in Perrin & Blagden, 2014, p. 904). The presence of opportunities for personal growth and development, security and harmonious relationships make "prison environments more survivable than some others" (Liebling, 2011, p. 535). This supportive environment, in turn, can lead to a more rehabilitative culture and provide space for self-reflection and personal development (Perrin & Blagden, 2014).

The nature of imprisonment itself implies a certain degree of deprivation, restriction, denial, and loss (of quality) of those needs that an incarcerated individual could otherwise satisfy. In this context, we can state that the prison experience is, to a greater or lesser extent, painful for all inmates. Additionally, numerous psychological phenomena delve into the challenges of life within the prison community (Ilijić, 2014).

Extensive research has documented the negative effects of imprisonment, with studies indicating the potential psychological harm resulting from being incarcerated (Clemmer, 1958; Howard, 1999, p. 3; Sykes, 1953, as cited in Ilijić, 2012). Research on the prison environment

suggests that “prisons themselves are harmful, characterised by a disregard for basic human rights and needs, contributing to the development of mental, physical, and social deprivations among inmates, rendering them helpless and powerless” (Clemmer, 1958; Cohen, 1979; Cohen & Taylor, 1981; Foucault, 1977; Goffman, 1961; King & Elliott, 1977; Richards, 1978; Sim, 1990; Sykes, 1958, as cited in Ilijić, 2012, p. 354). This perspective on the prison environment in the studies by Clemmer (1958) and Sykes (1958) presents two crucial arguments: first, that incarceration is synonymous with deprivation, and second, that prison deprivations have significant psychological, physical, emotional, and social consequences on the personality of inmates. Sykes (1958, pp. 65–77) argued that prison conditions contribute to the emergence of deprivations (which he termed “pains of imprisonment”). These inflict pain, pose challenges, and disrupt the sense of personal worth, self-esteem, and identity. The individual’s self-image as a person with values and moral qualities is most frequently lost in prison conditions, along with their strength and will for achievements (Sykes, 1958, p. 79).

Furthermore, the loss of freedom and arrival in prison constitute a psychological and emotional shock for the convicted individual. Numerous authors often describe the loss of freedom as a double deprivation. Firstly, the inmate is separated from the society in which they lived before entering the institution. Secondly, rigorous control over movement and freedom exists within the institution itself. It is considered that the mere deprivation or restriction of freedom, in and of itself, is not as frustrating or depriving as the negative consequences it brings, such as the abrupt loss of emotional relationships, loneliness, loss of contact with the external environment, and other adverse social and emotional effects.

Additionally, inmates find it challenging to endure a state of isolation precisely because they are prevented from influencing events in family and social life outside the prison. Moreover, “life in prison, governed by numerous rules and regulations down to the smallest details, leads to automatism, loss of autonomy, and personal initiative. Many authors argue that the psychological aspect for inmates also involves their personal sense of humiliation and degradation” (Ilijić, 2014, p. 138).

Goffman (1961), in his book “Asylums”, revealed the research results on the psychological atmosphere prevailing in total institutions. In such institutions, Goffman argues, there is an inflation of regulations that govern the complete activity of individuals and promote their inferior position. All activities are strictly programmed and under official regulations. Every detail of these institutionalised activities is conceived to serve the official goals of the institution. Although Goffman acknowledges that these goals vary depending on the nature of the institution, he argues that all total institutions share a hidden, common goal, which boils down to the destruction of the individual’s previous identity and its modification into forms that the institution deems desirable. Entry into any total institution is marked by a “humiliating ceremony”: individuals are stripped of their clothing and personal belongings and forced to perform their personal and intimate activities publicly. They are given identical uniforms in cut, material, and colour, symbolically destroying their previous identity and establishing a new group identity – an identity of the labelled and deviant. Goffman refers to this process, along with many similar ones like bathing, haircutting, and name replacement with a number, as reification. Reification denotes the process of transforming personality into nameless individuality – and identity-less objects (Goffman, 1961, as cited in Ilijić, 2014, p. 140). Their

identity is undermined through the highly structured rituals of punishment, which strip them off and attack their sense of self (Goffman, 1961; Maruna, 2011, as cited in Tartarini, 2021, p. 111); its architecture; and the shattering of the 'web of meaning' prisoners built around themselves with the social identities created around work, family, and other social relationships (Tartarini, 2021, p. 111).

Almost every total institution exhibits commendable creativity in inventing various depersonalising procedures, but some regularities apply to all total institutions, regardless of their nature. These include the following: (1) complete regulation of every action by rules (related to appearance, clothing, meal consumption, receiving visitors, mail, methods of greeting and addressing superiors); (2) the inability to be alone anywhere; (3) complete deprivation of freedom and privacy (Vučinić et al., 1993, p. 94, as cited in Ilijić, 2014, p. 140).

Numerous studies indicate that imprisonment is painful for many inmates (Ilijić, 2014; Liebling assisted by Arnold, 2004; Sykes, 1958). Inmates are a vulnerable category, and many restrictions in prison contribute to these problems due to various limitations and deprivations (Ghazanfari et al., 2023). They suffer from poor relationships and social rejection due to norms and subcultures in prison and separation from their families. Such issues diminish their personal and social adjustment, as well as their mental health and security. Prison can be a significant stressor in the development or exacerbation of psychological problems among inmates, such as low levels of psychological well-being.

Unlike past perspectives, contemporary understandings of prison punishment are more based on the idea that imprisonment does not have to be harmful and should not be. Creating a humane and effective prison environment involves the development of mechanisms to mitigate the negative effects of deprivation of liberty (Howard, 1999, as cited in Ilijić, 2012).

In the context of contemporary approaches to studying the quality of prison life, explicitly focusing on well-being and welfare as important sub-dimensions, the authors in this monograph rely on the views of Liebling assisted by Arnold (2004). Further, these authors define well-being and welfare in prisons as a condition of contentment and mental health involving the creation of an atmosphere or environment in which the well-being and adaptation of prisoners are achievable (Liebling assisted by Arnold, 2004, p. 307).

Indeed, the concept of well-being is a complex and controversial one, encompassing much more than the simple absence of illness or pathology (Dodge et al., 2012; Moran et al., 2022). This dimension also pertains to the stress, tension, and psychological fear experienced by prisoners (Liebling assisted by Arnold, 2004, p. 304).

Well-being and development, as a facet of the quality of prison life, gauges the subjective well-being of convicted individuals. In turn, this subjective well-being is greatly influenced by the overall quality of life in prison and the social and moral atmosphere that prevails within it. The dimension of *Well-being and Development* encompasses various sub-dimensions, such as *Personal Development* (an environment that helps prisoners with offending behaviour, preparation for release and the development of their potential), *Personal Autonomy* (prisoners' feelings of agency and self-determination), *Well-being* (feelings of pain, punishment and tension experienced by prisoners), and *Distress* (feelings of pain, punishment, and tension experienced by convicts). Its significance cannot be overstated, as enhancing the well-being and

development of individuals emerges as a fundamentally crucial factor for their future post-incarceration, as noted by Pavićević et al. (2024, p. 70). Improving well-being and development allows the transformation of convicted individuals, transitioning from a criminal self-concept to a non-criminal identity. This shift involves moving from survival strategies to strategies focused on personal growth and development. By fostering self-esteem, autonomy, responsibility, and trust, individuals in prison adopt prosocial values and embrace a positive identity. Renouncing criminal choices and embarking on paths of education and professional training are achieved through the specific quality of the moral climate within the prison. The progress of convicted individuals depends on well-established ethical relationships and an ethical life characterised by the recognition and acknowledgement of individuals. Recognising individuals and their personalities, along with their moral capacities for personal transformation, means granting them a positive status and an opportunity to form a positive identity. Authority effectively functions when it has moral significance, and the most successful prison officers become achievers not just as keepers of peace but as creators of peace (Liebling, 2019, as cited in Pavićević et al., 2024, p. 71).

IMPRISONMENT PENALTY IN THE REPUBLIC OF SERBIA

Introductory Considerations

Punishing offenders with imprisonment for committing criminal acts is stipulated in all legal systems as a means of protecting societal values and preventing their infringement by other potential perpetrators (Jovanić & Petrović, 2019, p. 338). The execution of criminal sanctions serves the general and individual purpose of successfully reintegrating the convicted individuals into society (Law on the Execution of Criminal Sanctions – LECS, 2019, Art. 2). The purpose of punishment encompasses elements of both general and special prevention in other words, aiming to have an educational impact on others to deter them from committing criminal acts, strengthen moral values, solidify the obligation to respect the law, and prevent offenders from recommitting crimes while influencing their rehabilitation (Marković & Bogojević, 2013).

Execution practices of imprisonment sentences in our region have changed over the past two and a half centuries, evolving from a system of collective execution through the system of cellular isolation and silence towards the Philadelphia and Auburn models with predominantly expressed disciplinary-isolation objectives. In the 19th century, the Auburn system achieved self-sustainability by exploiting the labour of the convicted. However, in many cases, communication deprivation and strict discipline contributed to the devastation of the personalities of the convicted instead of the expected behavioural correction (Jovanić, 2017; Jovanić & Petrović, 2019). Later on, the English and Irish progressive systems, as well as eclectic systems, sought to introduce individualisation, stimulation, and motivation through incentives, conditional release, and modifications in the diagnostic and treatment phases of the execution of imprisonment sentences (Jovanić & Petrović, 2019, p. 342). These systems aimed to influence the convicted to engage in the process of active positive self-change. The conceptual background of these systems forms the basis for most current prison practices worldwide, including in our region, with varying degrees of modification (Jovanić & Petrović, 2017; Jovanić & Petrović, 2019).

Jurisdiction for the Execution of Imprisonment Sentences and Types of Institutions

The state authority responsible for the execution of criminal sanctions in the Republic of Serbia is the Administration for the Execution of Criminal Sanctions, an organ within the ministry responsible for judicial affairs (hereinafter: Administration). The procedure for executing criminal sanctions against adults and the rights and obligations of individuals subject to these sanctions is primarily regulated by the provisions of the LECS.

The Administration organises, implements, and supervises the execution of prison sentences, juvenile imprisonment, community service sentences, conditional sentences with protective supervision, measures of compulsory psychiatric treatment and custody in a healthcare institution, compulsory treatment of drug addicts, compulsory treatment of alcoholics, as well as educational measures directing individuals to correctional institutions.

The Administration is involved in the processes of social reintegration and the acceptance of convicted individuals, establishing collaboration with relevant institutions, associations, and organisations dealing with issues related to the execution of criminal sanctions (Art. 12 LECS).

The law prescribes several types of institutions in the Republic of Serbia. Correctional institutions and district prisons are designated for the execution of imprisonment sentences and detention measures for adults. District prisons are for convicted individuals whose imprisonment duration, after accounting for pre-trial detention and other deprivation of liberty related to a criminal offence, does not exceed one and, exceptionally, two years. On the other hand, correctional institutions are for individuals sentenced to imprisonment over one year. These institutions differ in capacity, security levels, and their programs and services (Ćopić, Stevanović et al., 2023, pp. 11–12).

Furthermore, the LECS envisions the existence of several types of institutions, namely:

1. Correctional Institution and District Prison – for the execution of imprisonment sentences and detention measures;
2. Women's Correctional Institution – for the execution of imprisonment sentences and juvenile imprisonment;
3. Juvenile Correctional Institution – for the execution of juvenile imprisonment sentences;
4. Special Prison Hospital – for the treatment of convicted and detained individuals, for the execution of measures involving compulsory psychiatric treatment and custody in a healthcare institution, compulsory treatment of alcoholics, and compulsory treatment of drug addicts;
5. Correctional and Educational Institution – for the execution of educational measures directing individuals to a correctional and educational institution (Art. 13 LECS).

The classification of types of institutions is also based on the level of security, as clearly specified by the law. According to Article 13 of the LECS, institutions can be categorised as open, semi-open, closed, and closed-type with special security. In open-type institutions, there are no physical-technical barriers to escape (Art. 14, para. 2, LECS), while in semi-open institutions, security staff constitute the main obstacle to escape (Art. 14, para. 3, LECS).

In closed-type institutions, in addition to security staff, there are other physical-technical barriers to prevent escape. Closed-type institutions with special security feature physical-technical barriers that achieve the highest level of security (Art. 14, para. 4, LECS). Women's Correctional Institution, District Prisons, and Correctional and Educational Institutions are classified as semi-open, while the Special Prison Hospital and Juvenile Correctional Institution are classified as closed-type (Art. 15, LECS).

According to the text of the Regulation on the Establishment of Institutions for the Execution of Criminal Sanctions in the Republic of Serbia from 2022 (hereinafter: Regulation), open-type correctional institutions in Serbia include examples such as the Correctional Institution in Belgrade–Padinska Skela, the Correctional Institution in Sombor, the Correctional Institution in Ćuprija, and the Correctional Institution in Šabac (Art. 1 of the Regulation). According to Article 2 of the Regulation, closed-type correctional institutions in Serbia include the Correctional Institution in Niš, the Correctional Institution in Sremska Mitrovica, the Correctional Institution in Pančevo, and the Correctional Institution in Kragujevac. Examples of closed-type correctional institutions with special security ward (supermax) in Serbia include the Correctional Institution in Požarevac–Zabela and the Correctional Institution in Belgrade (Art. 3 of the Regulation). The Women's Correctional Institution is located in Požarevac and is of a semi-open type (Art. 4 of

the Regulation). The Juvenile Correctional Institution is located in Valjevo and is of a closed type (Art. 6 of the Regulation). The Special Prison Hospital is located in Belgrade and is of a closed type (Art. 7 of the Regulation). In Serbia, district prisons are semi-open, including examples such as the District Prison in Belgrade, Vranje, Zaječar, Zrenjanin, Kraljevo, Kruševac, Leskovac, Negotin, Novi Pazar, Novi Sad, Prokuplje, Smederevo, Subotica, Užice, Čačak, and others (Art. 5 of the Regulation) (Pavićević et al., 2024, p. 168).

Departments in Institutions for the Execution of Criminal Sanctions

The Regulation provides that in institutions for the execution of criminal sanctions, there can be open, semi-open, and closed departments or wards. In open-type institutions, there are semi-open and open wards, and there may also be closed wards (Art. 10, para. 1 of the Regulation). In closed-type institutions, there are closed, semi-open, and open wards (Art. 10, para. 2 of the Regulation). In district prisons, there are closed, semi-open, and open departments (Art. 10, para. 3 of the Regulation). In the Correctional Institution for Women in Požarevac, there are closed, semi-open, and open wards, as well as a special department for serving sentences in juvenile detention (Art. 12 of the Regulation).

The Purpose of the Execution of a Prison Sentence, Classification, and Subsequent Reclassification of Convicts

The primary purpose of serving a prison sentence is for the convict, through the implementation of appropriate treatment programs, to adopt socially acceptable values during the execution of the prison sentence. The aim is to facilitate their integration into societal conditions after serving a sentence, preventing them from committing future criminal acts (Art. 43). Following identified capacities, needs, and risk levels, convicts are treated in a manner that best corresponds to their personality to achieve the treatment program's objectives.

Classification and treatment of offenders based on risk and needs represent significant aspects of penological practice today. The proper use of risk assessment tools also allows for the repeated classification of offenders, with interventions aimed at reducing recidivism rates, enhancing public safety, and reducing costs. Initially implemented in England and Wales, risk assessment instruments are now integral to intervention programmes across Western Europe and the United States, routinely used in correctional facilities to classify offenders and determine the most suitable treatment interventions (Ilijić, 2016).

One of the widely used tools is the Offender Assessment System (OASys), initially developed in England and Wales by the Home Office (2002). OASys has been adapted for use in Serbian prisons based on Ministry of Justice and Public Administration directives in 2013 (Ilijić, 2016). Within the Serbian prison system, this system serves as a uniform risk assessment tool used by prison treatment staff to evaluate offenders' risks, capacities, and needs, guiding the formulation of sentence plans at regular intervals. Furthermore, the OASys assessment helps analyse offenders' psychological, pedagogical, criminological, and social functioning, facilitate risk assessment, and identify specific needs for each individual.

The OASys, renamed the Risk, Needs, and Capacity Assessment Questionnaire, consists of fourteen sections covering various aspects such as criminal history, family relationships, education, employment, substance abuse, psychological factors, and behaviour towards others. In Serbia, two versions of this risk assessment questionnaire are used: one for offenders serving sentences over three years and another for those serving shorter sentences, both aimed at comprehensive evaluation and intervention planning. Individuals are classified into risk categories based on their last recorded scores of risk assessment, which include low, middle, and high risk for up to three years of imprisonment and low, middle, high, and very high risk for more than three years of imprisonment (Ilijić, 2016).

To implement individual treatment programs, convicts are classified into prison wards and treatment groups. Convicts generally serve their sentences together (Art. 46, LECS). Exceptionally, based on the treatment program requirements, the convict's health condition, or as stipulated by the law, it may be determined that a convict serves the sentence separately from others. Furthermore, according to the provisions of the LECS, women serve prison sentences separately from men.

A convicted woman is assigned to a semi-open correctional facility for women, where the primary obstacle to escape is the security service. The LECS itself is generally a gender-neutral law, meaning that all rules regarding the position and treatment of convicted individuals are the same for both genders. However, it is observed that only some provisions are explicitly directed at women and their specific needs. These provisions primarily concern the situation of pregnant women, mothers giving birth, and mothers with children during their stay in prison. According to the LECS, pregnant women and those who have recently given birth have the right to nutrition as prescribed by a doctor. Additionally, a convicted woman has the right to leave work due to pregnancy, childbirth, and maternity. Moreover, a convicted woman who has a child can keep the child until the completion of her sentence, but no longer than the child's second birthday. She also has the right to professional assistance if the child remains with her (Ćopić, Stevanović et al., 2023, p. 11).

When a convicted person arrives at the institution, they are initially placed in the admission department, where they can stay for a maximum of 30 days (Art. 74, para. 1, LECS). In this department, by taking into account the individual's personality, that is, the individual's character, traits, behavioural tendencies, and other factors, this comprehensive evaluation is conducted: the level of risk is assessed, along with the capacity for change and individual needs. This comprehensive assessment determines an individualised treatment program and categorises the person into a closed, semi-open, or open department or ward (Art. 74, para. 2, LECS). The classification of the convicted individual is based on the assessed level of risk, the type of criminal offence, the length of the sentence, health condition, and the individual's attitude towards the criminal act, the form of guilt, prior convictions, and other criteria specified by the Regulation of the minister responsible for judicial affairs. This Regulation covers treatment, treatment programs, classification, and subsequent reclassification of convicted individuals (Art. 74, para. 3, LECS). In this case, it refers to the Rulebook of the treatment, treatment programs, classification, and subsequent reclassification of convicted individuals (2015). When making decisions about the treatment program, various parameters are considered, primarily based on elements contained in risk assessment instruments. Appropriate

procedures have been established, and the content of the treatment program is more detailed and regulated by this Rulebook (Ćopić, Stevanović et al., 2023, p. 13).

During the execution of a prison sentence, depending on the degree of compliance with the treatment program, the treatment program can be modified, and the convicted individual can be subsequently reclassified into a group with a higher or lower level of special rights and privileges (Art. 74, para. 4, LECS). From the content of the treatment program itself, as well as all decisions on subsequent reclassification, it follows that the LECS and the Rulebook of the treatment, treatment programs, classification, and subsequent reclassification of convicted individuals take into account all parameters significant for the quality of life in the prison environment.

The decision on the treatment program includes information about the group, department, and accommodation determined based on the assessed level of risk, professional development and education, group and individual activities, work engagement, use of free time, special procedures (treatment for addiction, psychological, psychiatric, medical, and social assistance), as well as special protective measures. Cultural and other activities, religious rights, and the consideration of convicted individuals' physical and mental health are in line with the rules (Ćopić, Stevanović et al., 2023, p. 10).

In the open ward of the correctional institution, convicted individuals with preserved capacities for change and a low level of risk are classified and assigned to category (group) A1 or A2. This classification is based on the individuals' personality traits, the type and severity of the committed criminal offence, their previous lifestyle, and the established treatment program. Those in categories A1 or A2 are considered to have preserved capacities for change and a low level of risk and are expected to undergo successful reintegration into society. Convicted individuals classified into either of these two categories can enjoy all the extended rights and privileges granted by the LECS. The only difference between these two groups lies in the duration of leave during visits to family and relatives on weekends and holidays and the duration of annual leave outside the institution.

In the semi-open ward of the correctional institution, convicted individuals with partially preserved capacities for change and a moderate level of risk are classified, and they are assigned to a category (treatment group) B1 or B2. This classification is based on the individuals' personality traits, the type and severity of the committed criminal offence, their previous lifestyle, and the established treatment program. Those in categories B1 or B2 are deemed to have partially preserved capacities for change and a moderate level of risk. Similar to convicted individuals in the open ward, those assigned to the semi-open ward can enjoy all the extended rights and privileges provided by the LECS. However, these rights are of a narrower scope, meaning the possibility of obtaining specific (individual) privileges within a given month or year or the duration of absence from the institution is limited (Ćopić, Stevanović et al., 2023, p. 13).

In the closed ward of the correctional institution, convicted individuals are classified based on these specific criteria: expected problematic adaptation, danger to others, and diminished capacity for change with high risk. Those who meet these high-risk criteria are placed in the closed ward. Additionally, individuals with a low or moderate risk level may also be classified in the closed ward if they are under criminal proceedings for an offence carrying a prison sentence

of three years or more, if they have received a new final prison sentence of three years or more if they are serving a prison sentence of five years or more, or if they have been brought in for execution of a sentence by warrant or transferred from pre-trial detention. These individuals are assigned to groups V1 or V2, indicating that they are restricted from enjoying privileges outside the institution. These individuals exhibit personality traits, a history of serious crimes, and a concerning lifestyle, all contributing to their high-risk classification. This risk is further amplified by their limited capacity for change, making the closed ward the most appropriate placement (Ćopić, Stevanović et al., 2023, p. 13).

A convicted individual can be subsequently reclassified into a group with a higher level of special rights and privileges if they successfully achieve the treatment program and individual goals or if a lower level of risk is determined afterwards (Art. 74, para. 5, LECS). Conversely, a convicted individual can be reclassified into a group with lower special rights and privileges based on the imposed disciplinary penalty for a severe disciplinary offence or a subsequently determined increased level of risk. Additionally, reclassification can occur based on a disciplinary penalty for a minor disciplinary offence, the initiation of a new criminal proceeding, or the imposition of a new prison sentence (Art. 74, para. 6, LECS).

To summarise, individuals convicted to a prison sentence are classified into treatment groups based on the security classification levels within the prison system. The assessment for classification considers various factors like the length of the sentence, the prisoner's behaviour history and needs, their risk of re-offending and personal circumstances and capacities. Serbian prisons classify prisoners using a tool called OASys. The purpose of classification is to identify and manage the potential risk each prisoner poses (e.g., escape attempts, violence) and monitor sentence progression, assist with reintegration and potentially offer opportunities for less restrictive settings as the risk is reviewed. The classification system also considers factors that could help with a prisoner's successful reintegration back into society after release. The classification also determines access to rehabilitation programs or other services offered within the prison, which is crucial for creating personalised treatment plans.

The Position and Rights of the Convicted

The LECS regulates the position and basic rights of convicts. In contrast, the detailed regulations of these rights are specified in the Rulebook on the treatment, treatment programs, classification, and subsequent reclassification of convicted individuals. According to the LECS, convicts have the right to humane treatment, and it is emphasised that everyone must respect the dignity of the convict and that the convict's physical and mental health must not be compromised (Art. 76, LECS).

Apart from the introductory provisions regarding convicts' rights concerning accommodation, food, clothing, and contact with family, the law also regulates convicts' rights to work and rights based on employment, healthcare protection, treatment, and religious rights.

The convicted person has the right to accommodation that corresponds to modern hygiene conditions. The classification of the convict into shared living and sleeping areas must be carried out with careful consideration of all circumstances and data recorded in the admission

department, especially taking into account age, personal characteristics, inclinations, and other qualities that influence mutual interaction and the risk of mutual physical and psychological harm. A convicted person with a disability has the right to accommodation appropriate to the type and degree of their needs (Art. 77 of the Criminal Code of the Republic of Serbia, 2019; hereinafter: Criminal Code). Every convicted person has the right to a separate bed. The rooms where the convicted persons live and work must be clean, ventilated, heated, and sufficiently illuminated. The sleeping area must be spacious enough to provide at least eight cubic meters and four square meters per convict. The rooms must have appropriate sanitary facilities and personal hygiene items (Art. 79 of the Criminal Code).

The convicted person has the right to spend at least two hours daily outdoors in the fresh air during their free time (Art. 80 of the Criminal Code). Convicts must maintain personal hygiene as well as the hygiene of their clothing and the premises in which they reside.

A convicted person has the right to nutrition suitable for maintaining their good health and strength, with three meals a day whose total value must not be less than 12,500 joules. A convict working in strenuous jobs, a patient, a pregnant woman, and a woman in childbirth have the right to nutrition prescribed by a doctor. Considering their religious beliefs, the convict's nutrition is provided to the extent possible for the institution (Art. 82 of the Criminal Code).

Convicts have the right to free laundry, clothing, and footwear adapted to local climatic conditions. If required by their job, they have the right to special work clothing, footwear, and equipment (Art. 84 of the Criminal Code). The convict's clothing must not be demeaning or humiliating. The law allows convicts in open and semi-open institutions to wear their own clothing and footwear.

The convicted person is encouraged to actively prepare for release, especially by maintaining relationships with family and establishing and maintaining contacts with institutions and individuals involved in the reintegration of convicts into society (Ćopić, Stevanović et al., 2023, p. 10).

The law stipulates that, regarding contact with family and the community, the convicted person has an unrestricted right to correspond, submit applications, have telephone conversations (at their own expense following the institution's rules), receive legal assistance, and have visits.

In terms of visits, in addition to the provisions prescribed by the Criminal Code, which state that the convicted person has the right to visit their spouse, children, parents, adopted children, adoptive parents, and other relatives twice a month (Art. 90 of the Criminal Code), the regulations further specify the extent of rights depending on the group or department in which the convicted person is placed.

In addition to the rights guaranteed to all convicted individuals, there is the possibility of granting extended rights and privileges, both institutional and extramural, to encourage acceptance of treatment programs. These extended rights and privileges significantly contribute to improving the quality of prison life. They serve as a reward for the convict who behaves exceptionally well, actively engages, and makes progress in the prescribed treatment program. The type and extent of using these privileges are determined based on the convict's affiliation with a specific treatment group (Ćopić, Stevanović et al., 2023, p. 10).

The Criminal Code provides the following institutional privileges: the extended right to receive packages; the extended right to the number of visits; the extended right to a broader circle of individuals who can visit the convict (distant relatives, friends, and others); the extended right to receive visits without supervision in visitation rooms; the extended right to receive visits in special rooms; and the extended right to more comfortable accommodation.

For convicts classified in open and semi-open wards of the correctional institution, they may also be eligible for certain extramural privileges: the extended right to receive visits outside the institution; Free outings to the city; visits to family and relatives on weekends and holidays; reward leave from the institution for up to seven days per year; and use of annual leave outside the institution. In exceptional cases, a convict may be granted extraordinary outings or absences from the institution for up to seven days.

Mandatory Measures for Maintaining Order and Security

During the execution of a prison sentence, the convict is obligated to behave by following the law and regulations derived from the law, as well as following the orders of official authorities, unless complying with such orders would be unlawful. In order to maintain order and security within the institution, only those measures prescribed by law and regulations can be applied to the convict, and only to the extent necessary. Additionally, the application of measures for maintaining order and security should not be more stringent than absolutely necessary, considering the circumstances of their application and the content of the measure. These measures encompass coercive measures and special measures.

Coercive measures that can be applied to the convicted person include physical force, restraints, isolation, rubber batons, water sprays, chemical agents, and firearms.

The least life-threatening and health-endangering measure is employed when implementing coercive measures, effectively overcoming resistance and proportionate to the imminent danger (Art. 143 of the Criminal Code). These measures can only be applied when necessary to prevent the escape of the convict, physical assault on another person, avoiding injury to others, self-harm, causing material damage, and active or passive resistance from the convict.

The law specifies that if there is a risk of escape, violent behaviour, self-harm, or other threats to order and security that cannot be otherwise eliminated, exceptional and special measures can be ordered. Special measures include the following: Confiscation and temporary retention of items that are otherwise allowed; Placement in a specially secured room without dangerous objects; Placement under enhanced supervision; Solitary confinement; Testing for infectious diseases or psychoactive substances; Multiple special measures can be applied to the convicted person simultaneously, if necessary (Art. 149 of the Criminal Code).

In addition to the mentioned measures, for committed disciplinary offences, the convicted person may face one of the following disciplinary measures: Reprimand; Restriction or prohibition of receiving packages for up to three months; Revocation of granted extended rights and privileges for up to three months; Restriction or prohibition of handling money in the institution for up to three months; Placement in disciplinary isolation during free time or throughout the day and night.

In accordance with international standards, precise specifications are provided for behaviours constituting minor and major disciplinary offences, the types and duration of disciplinary measures, the authority responsible for conducting the proceedings and imposing these measures, and the procedure for disciplinary proceedings. The convicted person is guaranteed the right to professional assistance and the opportunity to appeal against the decision on disciplinary punishment. In addition to these forms of accountability, there is also the material responsibility of the convicted person, who is obliged to compensate for damage intentionally or through gross negligence caused within the institution (Ćopić, Stevanović et al., 2023, p. 11).

Overview of Serbia's Prison System, Statistics and Research Trends

At the end of January 2021, Serbia had 10,540 prisoners and a prison population rate of 153.4 inmates per 100,000 inhabitants (Aebi, Cocco, et al., 2022). As a result, Serbia is among the European countries with a very high prison population rate. The average European prison population rate was 116.1 inmates per 100,000 inhabitants in the same period (Aebi, Cocco, et al., 2022) and 103.2 one year earlier (Aebi & Tiago, 2021). Serbia is also among the European countries with a very high ratio of inmates per one staff member (2.5 at the end of January 2021). At the European level, there were 1.4 inmates per one member of prison staff (Aebi, Cocco, et al., 2022) and 1.6 the year earlier (Aebi & Tiago, 2021).

Prisons in Serbia are overcrowded; Serbia is among the European countries with high prison density (93.9 inmates per 100 detention places) (Aebi, Cocco, et al., 2022). Data from a year before indicate that prison density was 107.3, with an average of 4.4 inmates per one cell (Aebi & Tiago, 2021). At the European level, the average prison density was 82.5 inmates per 100 detention places on 31st January 2021, with roughly 1.5 inmates per cell (Aebi, Cocco, et al., 2022). One year earlier, the average prison density was 90.3, with 2.5 inmates per cell (Aebi & Tiago, 2021).

According to the Council of Europe, state spending per convict is significantly lower in Serbia than in European prisons (Aebi, Cocco, et al., 2022; Aebi, Tiago, et al., 2022). The total budget spent by the prison administration in Serbia in 2020 was 104,387,304.00 Euros (Aebi, Cocco, et al., 2022), and the estimated cost of imprisonment was 27 Euros per day. At the European level, each inmate costs 77 Euros per day (Aebi, Cocco, et al., 2022).

During the year 2020, the rate of admissions into penal institutions was 287.2 per 100,000 inhabitants, which is higher than the European average rate of 143.7 admissions per 100,000 inhabitants and puts Serbia in second place after Türkiye (334.0/100,000) (Aebi, Cocco, et al., 2022). However, Serbia was among the European countries with very high rates of both admissions and releases per 100,000 habitants in 2019 (Aebi, Cocco, et al., 2022). Next, Serbia is among the countries with the lowest length of imprisonment in 2019 and 2020 (5.8 and 6.4 months, respectively) in comparison to the European average (10.1 and 12.4 months, respectively) (Aebi, Cocco, et al., 2022; Aebi & Tiago, 2021)

Furthermore, Serbia was among the European countries with a very low rate of escapes per 10,000 inmates (0.0 in 2020, 0.1 in 2019) (Aebi, Cocco, et al., 2022; Aebi & Tiago, 2021). The European median rate was 2.2 escapes per 10,000 inmates in 2020 (Aebi, Cocco, et al., 2022), a

significant decrease compared to 2019 when the median rate was 8.2 (Aebi & Tiago, 2021). This trend was explained partially by the fact that the measures introduced to control the spread of COVID-19 also restricted the movements of inmates and partially by the decrease in the number of admissions (Aebi, Cocco, et al., 2022)

Serbia had one of the highest prison mortality rates in Europe in 2020 (55/10,000 inmates) (Aebi, Tiago, et al., 2022). The European prison mortality rate in 2020 was 29 inmates per 10,000 inmates (Aebi, Cocco, et al., 2022). The mortality rate per 10,000 inmates in Serbia in 2019 was 56.9, while in Europe, it was 27.2 for the same year (Aebi & Tiago, 2021). The European prison suicide rate in 2020 was 5.7 per 10,000 inmates (Aebi, Cocco, et al., 2022). For the year 2020, Serbia was among the European countries with a very high suicide rate, which was 7.6 per 10,000 inmates (Aebi, Cocco, et al., 2022). The suicide rate per 10,000 inmates in 2019 in Europe was 5.2 (Aebi & Tiago, 2021). On the other hand, in 2019, Serbia was among the European countries with a low suicide rate (4.5 per 10,000 inmates) (Aebi & Tiago, 2021)

Serbia is among the European countries with a medium percentage of inmates aged 50 or over in the prison population (16.6%). Serbia is among the European countries with a low percentage of female inmates in the prison population (4.3%) and a very low percentage of foreign inmates in the prison population (3.7%) (Aebi, Cocco, et al., 2022).

In general, during 2020 and 2021, the prison population rate decreased in Serbia by 4.1%, which falls in line with the overall decreasing trend related to the consequences of crime and punishment of the restrictions on movement introduced to control the spread of COVID-19 (Aebi, Cocco, et al., 2022). When the trends in the European prison population rates from 2011 to 2021 were explored, Serbia was one of the six countries with a stable situation and an increase of 1.5% (Aebi, Cocco, et al., 2022).

Regarding staffing levels in the Serbian prison system, there were 2,341 prison guards in 2019, resulting in a guard-to-prisoner ratio of 1 guard per 4.7 prisoners. There were also 450 socio-educational workers, which made up 10.9% of the total prison staff (Aebi & Tiago, 2020).

In summary, Serbia exhibits several significant trends and characteristics regarding its prison system. Firstly, it has a notably high prison population rate compared to other European countries, with overcrowded prisons and a high ratio of inmates per staff member. Despite the lower state spending per convict, Serbia experiences higher admissions rates into penal institutions, alongside a relatively short length of imprisonment. Furthermore, Serbia has achieved a relatively low rate of escapes and, unfortunately, a high prison mortality rate, particularly concerning suicide.

However, it has a relatively low percentage of female and foreign inmates and a moderate percentage of older inmates in its prison population. While Serbia has shown some improvements, such as a recent decrease in the prison population rate, it still faces challenges related to overcrowding, resource allocation, and inmate well-being, particularly in terms of mortality and suicide rates.

Latest Data from 2022

At the end of January 2022, Serbia had 10,557 prisoners, including pre-trial detainees, and a prison population rate of 155.3 inmates per 100,000 inhabitants (Aebi et al., 2023). The average European prison population rate was 106.4 inmates per 100,000 inhabitants. Serbia continued to have a very high prison population rate compared to other European countries.

Serbia maintained a low percentage of inmates aged 50 or over (13.3%), a low percentage of female inmates (4.1%), and a very low percentage of foreign inmates (3.8%). The prison density was 92.2 inmates per 100 detention places, which is considered medium compared to other European countries. The ratio of inmates per staff member remained high at 2.5.

The admissions rate into penal institutions was 297.2 per 100,000 inhabitants, placing Serbia second after Türkiye (417.0). The rate of releases was also high at 180.0 per 100,000 inhabitants. The suicide rate among inmates in Serbia was 6.6 per 10,000 inmates, lower than in previous years but still higher than the European average. The average length of imprisonment in Serbia remained low at 6.3 months, compared to the European average of 11.2 months. The total budget spent by the prison administration in 2021 was 123,228,130 Euros.

Comparison and Changes

Comparing the data, Serbia's prison system in 2022 shows some continuity and some changes.

Prison Population and Density: The overall prison population rate remains very high compared to the European average, slightly increasing from 153.4 to 155.3 inmates per 100,000 inhabitants. Despite the increase in prison population from 10,540 to 10,557 inmates, the prison density slightly decreased from 93.9 to 92.2 inmates per 100 detention places.

Staffing: The ratio of inmates per staff member remains very high at 2.5, indicating persistent staffing shortages.

Admissions and Releases: The rate of admissions increased from 287.2 to 297.2 per 100,000 inhabitants, solidifying Serbia's second place behind Türkiye. The rate of releases remained high, reflecting a dynamic prison population.

Suicide Rate: The suicide rate decreased significantly from 7.6 to 6.6 per 10,000 inmates, placing Serbia among European countries with a very low suicide rate and suggesting some improvements in mental health interventions.

Inmate Demographics: The percentage of inmates aged 50 or over decreased from 16.6% to 13.3%. The percentages of female and foreign inmates remained low and stable.

Budget: The prison administration's budget significantly increased from 2020 to 2021.

Length of Imprisonment: The average imprisonment length remained consistently low.

In summary, while Serbia's prison system continues to face challenges such as high prison population rates, staffing shortages, high admission rates, and high inmate-to-staff ratios, some positive changes have occurred. These include a slight decrease in prison density, a reduction in the suicide rate, and increased funding for prison administration.

A Review of Prison Research in Serbia

Historical Development and Inmate Treatment: The development of penitentiary practices in Serbia dates back to the mid-19th century and "the appearance of the first prisons and the adoption of the first Serbian Criminal Code in 1860" (Lakobrija, 2021, p. 212). With imprisonment established as punishment (classical criminal law), scholars across disciplines have investigated the realities of prison life in this region. Empirical research has focused on key aspects of inmate treatment and daily experience. Empirical research has covered the most prominent aspects of inmate treatment and life. Early research in correctional institutions explored prison society (Špadijer-Džinić, 1973), the integration of inmates into the prison social system (Radovanović, 1992), the characteristics of inmates and prison treatment (Radovanović, 1988). Later, studies have explored deprivations experienced by inmates (Jovanić et al., 2020), the negative consequences of imprisonment (Jovanić, 2007; Jovanić & Petrović, 2018) and the impact of personality traits on how inmates experience deprivation (Ilijić, 2014).

Education and Rehabilitation: A significant research focus was directed on the education of inmates as one of the most significant segments of rehabilitative treatment (Knežić & Savić, 2013; Knežić & Ilijić, 2016; Ilijić, 2016, 2022). Research has examined the educational needs of inmates (Jovanić & Ilijić, 2015; Ilijić et al., 2016) and educational treatments (Jovanić & Ilijić, 2015) and explored the impact of education and training on reducing recidivism (Ilijić, 2016) and improving treatment outcomes (Jovanić, 2011).

Specific Inmate Populations: Research has addressed the experiences of distinct inmate groups within the Serbian prison system. Female inmates, as a unique category serving prison sentences in the only one correctional facility for women in Serbia (Požarevac Correctional Institution), have received particular attention, with studies examining their status, rights, and experiences (Ilijić & Pavićević, 2019; Savić & Knežić, 2019; Špadijer-Džinić et al., 2009), treatment programs (Nikolić-Ristanović & Ćopic, 2015), quality of life (Batrićević et al., 2023; Ćopić, Milićević et al., 2023), and the gender perspective on well-being (Milićević, Ilić, & Pavićević, 2023). The ageing prison population is another emerging topic, with research focusing on health status, treatment needs, and reintegration challenges of older adult offenders (Milićević & Ilijić, 2022a; Milićević, 2023; Ilijić, 2023). Similarly, studies have presented challenges that inmates with developmental disabilities face while serving sentences in different countries (Milićević & Ilijić, 2022b).

Conditional Release: Studies have investigated conditional release practices, focusing on the conditional release of convicted individuals (Jovanić & Ilić, 2009), the decisions by courts (Vujičić et al., 2017) and the experiences of prisons and courts during the process (Jovanić & Petrović, 2017).

Contemporary Issues: Recent research has broadened the scope, investigating the consequences of social inequality and mass incarceration (Pavićević & Ilijić, 2022), changes in penal policy arising as part of the neoliberal governance paradigm and their implications for the prison system (Pavićević et al., 2021), prisoners' perceptions of the quality of treatment they receive in Serbian prisons (Bobić et al., 2022), and prison privatisation (Pavićević et al., 2023).

Media, Public Perception and Digital Environment: Studies have examined how prison life is portrayed in the media (Milićević & Drndarević, 2023) and the role of technology in the lives of inmates and their families (Vujičić & Drndarević, 2022).

Focus on Quality of Prison Life: Building upon this foundation, recent studies by the PrisonLIFE project have begun to explore the prison social climate, quality of life, and factors that influence them. A recent research focused on the quality of prison life in Serbia in general (Milićević, Ilić, Pavićević et al., 2023; Ćopić, Stevanović et al., 2023). Other studies presented instruments for measuring prison social climate (Ilijić et al., 2022), theoretical analyses of factors shaping prison environments and prison moral and social climate (Pavićević et al., 2024), and practices for improving quality of life (Ćopić et al., 2024). Several studies explore how various factors influence experiences within the prison system, including prior prison experience (Stevanović et al., 2024), the dark tetrad personality traits (Međedović, Drndarević, & Ilijić, 2024), and the overall moral and social climate (Međedović, Drndarević, & Milićević, 2024; Milićević & Stevanović, 2024).

In summary, these studies highlight the importance of ongoing research to understand the experiences of incarcerated individuals and improve prison conditions. As mentioned, numerous studies in recent decades have explored various aspects of prison life, including inmate treatment, social dynamics, educational programs, and the impact of incarceration. Research has also focused on specific inmate populations and the effects of global trends like social inequality, mass incarceration, and prison privatisation. Additionally, research examines prison life and its moral and social climate, particularly the quality of prison life concept as a measure of 'moral performance' in prisons.

METHOD

Research Aim, Question and Rationale

To promote the treatment of convicts, achieve social rehabilitation and reduce recidivism rates, it is essential to understand the various factors that contribute to the prison experience of convicted persons. These include specific elements within the prison environment, such as the prison regime, social dynamics, and institutional practices that, together with individual characteristics and life experiences, can influence the well-being and development of convicted persons in prisons. By studying these different elements, policymakers, prison authorities, and researchers can develop targeted, informed and evidence-based programs, policies, and specific measures to support the rehabilitation and reintegration of convicted individuals into society upon release. The shared long-term goal should be enhancing the quality of prison life as a measure of the 'moral performance' of prisons (Liebling assisted by Arnold, 2004).

This study aimed to help us understand the complex and multifaceted nature of the experiences of convicted individuals within the prison system.

The following overarching research question was posed: *How do the overall well-being and development of prisoners vary based on various factors, including individual characteristics, prison environment, institutional practices, and life experiences?*

Procedure, Design and Ethical Considerations

This cross-sectional observational study is part of a larger national three-year research project entitled PrisonLIFE, supported by the Science Fund of the Republic of Serbia (No. 7750249). The PrisonLIFE project aims to identify and understand the key factors, various forms, and aspects that shape the quality of life in Serbian prisons. It sought to establish methods for measuring, monitoring, and enhancing the quality of prison life to improve our understanding of contemporary imprisonment experiences and promote objective assessment and improvement. The project focused on the criminological, penological, psychological, sociological, legal, and security dimensions of prison life in Serbia.

The author of the original instrument, Professor Alison Liebling, provided formal authorisation for the cross-cultural adaptation of the Measuring the Quality of Prison Life (MQPL) survey into Serbian (personal communication, January 8, 2020). Colleagues from the Cambridge Institute of Criminology's Prisons Research Centre provided support and guidance for the project on request. The authors are grateful to the World Health Organization for providing them with WHOQOL-BREF and permission to use it in this research (personal communication, June 9, 2020). All procedures followed the Ethical approval of the Institute for Criminological and Sociological Research (No. 103/2020, 38c/2022, 274/2022, 119/2024) and with the principles outlined in the 1964 Helsinki Declaration and its subsequent revisions.

The study collected data from five major correctional institutions in Serbia using convenience sampling. An invitation to engage in the research, accompanied by detailed information about the project's objectives, was displayed on each prison's notice board for two weeks to recruit participants.

The general inclusion criteria were specified: prisoners who were literate, proficient in the official Serbian language, had already served at least 30 days of their prison sentences, and voluntarily agreed to participate in the research. Interested individuals were instructed to apply through the treatment service staff members.

Data collection occurred during a single session in the prison's common dining area, employing the traditional paper-and-pencil method. Researchers assisted and clarified participants' queries regarding the survey items. Upon completion, prisoners placed their filled-out questionnaires in the provided envelopes and handed them to the researchers.

All prisoners were required to provide written informed consent before participating in the study. They were briefed about the study's objectives, their right to withdraw from participation at any time, and the voluntary and anonymous nature of their involvement. Furthermore, they were assured that the collected data would be strictly used for research purposes, with no disclosure of personally identifiable information.

Data was gathered from two primary sources to construct a profile of the prison population. Firstly, self-reported information provided by the participants covered aspects such as age, number of children, and duration of imprisonment, among others. Secondly, additional data was collected from documentation, records, and administrative documents, primarily utilising correction files or prison records. A document analysis method was employed for this purpose. The secondary data included education, marital status, prison ward, sentence length, criminal offence, and the current risk factor level determined by the latest scoring under the standardised OASys. The data collection took place between May 2022 and January 2023.

Instruments

Measuring the Quality of Prison Life Survey (MQPL)

The Measuring the Quality of Prison Life (MQPL) survey, developed by the Prisons Research Centre at the Institute of Criminology, Cambridge University (Liebling et al., 2012), assesses prisoners' experiences in correctional facilities. In this study, the Serbian version of the MQPL evaluated prisoners' perceptions of their quality of life (Milićević et al., 2024).

The MQPL survey is designed to offer researchers, policymakers, and prison administrators an insight into the conditions within prisons and the lived experiences of imprisoned individuals. The survey covers a wide range of prison life topics, including respect, staff-prisoner relationships, humanity, fairness, professionalism, organisation and consistency, policing and security, personal development, and well-being. It delves into how prisoners are treated by staff and peers, the quality of interactions between prisoners and staff, and whether prisoners receive dignified and compassionate treatment. Additionally, it evaluates the fairness of treatment and access to justice, the competence and conduct of prison staff, the predictability and fairness of prison rules and procedures, and the level of safety and security within the prison environment. Furthermore, the survey assesses opportunities for prisoners to learn and grow and the physical and mental health of individuals within the prison population (Liebling et al., 2012). Overall, it is a valuable tool for understanding and improving the lives of prisoners.

The cross-cultural adaptation process of the Serbian version of the MQPL survey, as detailed by Milićević et al. (2024), ensured content validity, while pre-testing confirmed the comprehensibility and relevance of the Serbian version. Additionally, the Serbian MQPL version demonstrated reliability ranging from acceptable to good, with Cronbach's α coefficients between .60 and .97 (Međedović, Drndarević, & Milićević, 2024). Similarly, the original English and other language versions, including adapted ones, have previously demonstrated good psychometric properties, with reliability scores ranging from .56 to .89 (Barquín et al., 2019; Harding, 2014; Johnsen et al., 2011; Liebling et al., 2012; Rodríguez Menés et al., 2018; Sanhueza & Pérez, 2019; Weinrath & Ricciardelli, 2023).

The MQPL consists of a total of 127 items. Participants rated their level of agreement with each of the 126 statements using a five-point scale (1 = strongly disagree, 5 = strongly agree). Survey items are grouped into five main thematic categories, encompassing 21 dimensions that reflect the treatment and physical conditions experienced by prisoners: *Harmony*, *Professionalism*, *Security*, *Conditions and Family Contact*, and *Well-being and Development*. Detailed information regarding the conceptual foundation and evolution of the MQPL survey is available from other sources (Liebling et al., 2012; Liebling assisted by Arnold, 2004). Moreover, Liebling et al. (2012) described the validation of the 21 dimensions as a combination of conceptual and statistical approaches, with reliability assessed through principal components analysis.

To reduce acquiescence bias, 72 MQPL items are formulated positively (where agreement with the statement indicates a positive response, e.g. *In the admission ward, I got familiar with the prison routine, as well as with what to expect and when*). On the other hand, 55 items are formulated negatively (where agreement with the statement suggests a negative perception, e.g. *Upon arriving at this prison, I felt worried and confused*). In the scoring process, ratings are transformed into positive ones to ensure that a higher level of agreement represents a more positive response. Six stand-alone items and one global question assessing prisoners' overall rating of the quality of prison life were excluded from the analyses for this study.

Mean scores are calculated for each dimension and for the whole category. Higher scores represent a better quality of prison life, while a lower score suggests a less favourable assessment of the specific aspect of the prison. Additionally, it is crucial to note that *Distress* is the only reversely coded dimension, with higher scores indicating lower levels of distress. In this context, a higher *Distress* score reflects a more positive outcome or higher quality regarding this aspect of prison life.

Following the authors' guidance, scores above 3.00 are considered positive/good, while scores below that threshold indicate areas needing improvement (Liebling et al., 2021). Analysing MQPL data from 2009 to 2020, Auty and Liebling (2024) established more precise thresholds for all 21 dimensions regarding violent outcomes in prisons in England and Wales. According to their findings, all 'safer' (higher) thresholds, indicative of well-performing prisons with lower violence incidence rates, exceeded 3.00, with exceptionally high thresholds observed in the *Harmony* and *Security* dimensions. On the other hand, prisons below the lower threshold showed a strong link with severe violence, including assaults, self-harm incidents, and homicides; for example, a well-being score of 2.30 correlates with nearly six times the risk of prison suicide.

The **Harmony dimensions** of the MQPL survey encompass various aspects of the treatment and environment within the prison setting. There are seven dimensions included in the Harmony category:

Entry into Prison dimension evaluates feelings and experiences upon arrival (5 items, e.g. *I felt extremely lonely during the first three days in this prison*);

Respect and Courtesy dimension estimates staff's positive and courteous attitude towards inmates (8 items, e.g. *In this prison, I am encouraged to respect other people*);

Staff-Prisoner Relationships dimension examines the mutual trust, fairness, and support between employees and convicts (7 items, e.g. *When I need to get something done in this prison, I can usually achieve it directly by talking to one of the employees*);

Humanity dimension reflects an environment fostering respect and care for individuals' values and humanity (8 items, e.g. *Sometimes I am treated humiliatingly in this prison*);

Decency dimension assesses the reasonableness and appropriateness of staff and prison regime (5 items, e.g. *This prison is fair (decent)*);

Care for the Vulnerable dimension evaluates the support provided to prisoners at risk of self-harm, suicide, or bullying (5 items, e.g. *Bullying behaviour by prisoners is not tolerated in this prison*); and

Help and Assistance dimension focuses on the assistance and encouragement provided to convicts facing health issues, addiction problems, and progressing through treatment (6 items, e.g. *It is clear to me what I need to do in this prison in order to progress in treatment and get prepared for court (parole)*).

The **Professionalism dimensions** cover several key aspects through four dimensions, which are the following:

Staff Professionalism refers to the self-confidence and expertise of staff in using authority (9 items, e.g. *Employees behave fairly when applying prison rules in this prison*);

Bureaucratic Legitimacy pertains to the transparency, openness, and moral regard for individuals within the prison or prison system (7 items, e.g. *In this prison, they only care about my 'risk factors' and not about what kind of person I am*);

Fairness involves the perceived impartiality, proportionality, and legality of disciplinary sanctions and procedures (6 items, e.g. *Generally speaking, I think that the disciplinary system here is not fair*); and

Organisation and Consistency dimension relates to the clarity, predictability, and reliability of prison operations (6 items, e.g. *The plan of appointed activities is not respected in this prison*).

The **Security dimensions** refer to various aspects of the prison environment. This MQPL category also includes four distinctive dimensions:

Policing and Security is a dimension that includes maintaining order and security through professional supervision and control of the prison environment (9 items, e.g. *The employees of this prison pretend not to see when the convicts violate the prison rules*);

Prisoner Safety considers ensuring the safety of convicts. It involves providing a sense of safety and protection from harm, threat or danger (5 items, e.g. *I have no problem with other convicts here*);

Prisoner Adaptation relates to their integration into informal prison groups and the pressures associated with it, including being involved in trade and allegiances (3 items, e.g. *In order to make ends meet in this prison, I have to buy and sell things*); and

Drugs and Exploitation dimension addresses issues such as drug use, bullying, and victimisation, which are crucial for ensuring overall security and well-being within the prison setting (5 items, e.g. *Many use drugs in this prison*).

The **Conditions and Family Contact dimensions** encompass prison living conditions and opportunities for maintaining family relationships.

Conditions refers to the extent of decency in prison living conditions (4 items, e.g. *The quality of my living conditions is poor in this prison*).

Contact with Family assesses the availability of opportunities for inmates to maintain connections with their families (3 items, e.g. *The length of time for each visit is long enough*).

The **Well-being and Development dimensions** cover various aspects of prison moral and social climate: *Personal Development*, *Personal Autonomy*, and *Well-being* and *Distress*. This MQPL subscale, representing a distinct aspect of prison life, will be elaborated on in detail as it serves as the primary focus of this study. As reported by Auty and Liebling (2024), lower and 'safer' (higher) thresholds were as follows: 2.75 and 3.40 for *Personal development*, 3.00 and 3.60 for *Personal autonomy*, 2.30 and 3.30 for *Well-being*, and 3.00 and 3.75 for *Distress*, respectively.

The ***Personal Development*** subscale consists of eight items. It evaluates how effectively the prison environment supports prisoners in addressing their offending behaviour, prepares them for release, and fosters their potential. This includes assessing whether prisoners feel their needs are being met and if they are encouraged to work towards goals/targets. Additionally, it evaluates if they receive support in leading law-abiding lives post-release and if efforts are made to prevent re-offending. It involves programs, activities, and resources for rehabilitation and reintegration into society. Finally, it examines whether the prison regime is constructive, if prisoners perceive their time as an opportunity for change, and if they feel they are serving time passively rather than actively engaging in constructive activities. To operationalise these dimensions, the *Personal Development* subscale includes the following items:

My needs are taken into account in this prison.

In this prison, I am encouraged to work towards my goals.

I get help from employees so that I can lead a life in accordance with the law after release.

In this prison, all employees make efforts to prevent convicts from re-offending after release.

The regime in this prison encourages me to make positive changes and progress.

I see the time spent in this prison as a chance to change.

The prison regime here encourages me to think about plans for life after release.

Generally speaking, I am just 'doing' the sentence time, instead of using that time qualitatively.

The ***Personal Autonomy*** subscale reflects prisoners' sense of agency and self-determination within the prison environment. It includes items such as feeling in control of their day-to-day life, maintaining their personality despite imprisonment, assessing whether the prison regime allows independent thinking, and determining if they still feel like prisoners regardless of their location within the facility. Overall, this dimension reflects their perceived ability to make choices, exercise autonomy, and have some level of control over their circumstances. This MQPL subscale has four items:

I have no control over my daily life in this prison.

You can keep your personality in this prison.

The regime in this prison allows me to think for myself.

Wherever I am in this prison, I still feel like a prisoner.

The ***Well-being*** subscale, comprising four items, evaluates prisoners' emotional well-being within the prison context. It assesses prisoners' emotional experiences, encompassing sensations of pain, the perception of punishment, feelings of tension, and stress. Furthermore, it seeks to capture prisoners' perception of imprisonment itself, considering it a form of punishment, commonly referred to as the "pains of imprisonment". To operationalise these experiences, the *Well-being* subscale includes the following items:

My experience in this prison is painful.

I feel tense in this prison.

My experience with being held in this prison is stressful.

The time spent in this prison largely feels as a punishment.

Finally, ***Distress*** captures feelings of significant emotional disturbance experienced by prisoners. A total of three items within this subscale inquire about suicidal thoughts, emotional coping abilities, and sleep disturbances. In the MQPL framework, a higher score in *Distress* reflects a more positive outcome or higher quality of prison life. This subscale focuses on specific indicators of emotional distress:

I was thinking about a suicide in this prison.

I feel like I can manage my emotions here.

I have trouble sleeping at night.

A number of studies researchers have investigated prison life and the contemporary experience of imprisonment. The MQPL survey has been used in previous research to investigate different aspects of prison life in various countries, including Norway, Spain, Belgium, Canada and the UK.

In Norway, Johnsen et al. (2011) examined the influence of prison size and culture on the quality of prison life in Norwegian closed prisons. In Spain, Barquín et al. (2019) assessed whether re-education and social rehabilitation goals align with perceptions of prison conditions in five specific prisons. In Belgium, Favril et al. (2017) explored correlates of suicidal ideation in male prisoners from Flemish prisons, using the MQPL alongside other measures, and pointed out the role of both vulnerability factors and prison-specific stressors. In the UK, Kyprianides and Easterbrook (2020) found that strong social ties and group memberships among prisoners were associated with higher well-being, highlighting the importance of addressing psychological needs and group contact for improving prisoner outcomes. Weinrath and Ricciardelli (2023) adapted the MQPL and evaluated the quality of prison life in correctional institutions across Canada's Atlantic Provinces, revealing significant variations between prison locations.

The MQPL survey has been used in various studies to assess different aspects of prison life. For example, this survey has been used to analyse the relationship between prison moral and social climate and reoffending and found that a higher moral quality of life in prisons was associated with better outcomes for prisoners upon release (Auty & Liebling, 2020). Auty and Liebling (2024) further support this by demonstrating that prisons meeting certain MQPL thresholds experience fewer violent incidents, indicating a safer and more legitimate environment. Also, the MQPL survey was used to examine the relationships between prison climate and health services, including the satisfaction of and access to health care in correctional environments (Ross et al., 2011). Skar et al. (2019) investigated the association between prison life quality, as measured by the MQPL, mental health, and violence among prisoners, finding that environments promoting respect, fairness, humanity, and positive staff-prisoner relations were linked with reduced violence. Moreover, the MQPL served as a basis for developing a questionnaire for measuring the quality of life in forensic hospitals (Büsselmann et al., 2021).

One study explored a paradox where highly rated prisons by inmates had staff with less favourable views on their quality of life and more negative perceptions of prisoners (Crewe et al., 2011). Another study examined the impact of prison privatisation on prisoners' daily experiences and highlighted differences in prison culture and quality between private and public sectors (Crewe et al., 2015). However, contradictions and interesting facts emerge when considering the broader application of MQPL. Međedović, Drndarević, and Milićević (2024), while confirming the reliability and validity of MQPL in Serbia, noted high intercorrelations between dimensions, suggesting informational redundancy. Johnsen et al. (2011) highlighted that smaller prisons in Norway report better quality of life and staff-prisoner relationships, which may challenge the scalability of 'moral performance' across different prison sizes.

In summary, these studies collectively underscore the relevance and applicability of the MQPL survey in evaluating the quality of life within prison settings, providing valuable insights into the experiences of incarcerated individuals. Yet, the tool's effectiveness may vary depending on the prison context, such as size and conditions like cell sharing (Johnsen et al., 2011; Molleman & Ginneken, 2014).

WHOQOL-BREF Quality of Life Assessment

The World Health Organization Quality of Life Brief Version (WHOQOL-BREF) is an abbreviated form of the WHOQOL-100, comprising 26 items (THE WHOQOL GROUP, 1998). Widely used and self-administered, it is a tool for evaluating the quality of life, distinguished by its brevity, cross-cultural validity, and availability in over 40 languages (Saxena et al., 2004; Skevington et al., 2004). During the development of the WHOQOL, quality of life has been acknowledged as a multidimensional concept. It is essential to highlight the definition of quality of life as "individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" (The WHOQOL Group, 1995, p. 1405).

The WHOQOL-BREF addresses subjective well-being in four domains: *physical health* (7 items), *psychological health* (5 items), *social relationships* (3 items), and *environmental health* (8 items). Additionally, two items measure *overall quality of life* and *general health* perception.

The ***Physical Health*** domain captures perceptions of one's physical state, covering activities of daily living, dependence on medicinal substances and medical aids, energy levels, mobility, pain and discomfort, sleep quality, and work capacity. The ***Psychological domain*** delves into cognitive and affective states, including bodily image and appearance, negative and positive feelings, self-esteem, spirituality, and cognitive functions such as thinking, learning, memory, and concentration. The ***Social Relationships*** domain evaluates interpersonal relationships and social roles, encompassing personal relationships, social support, and sexual activity. Lastly, the ***Environment domain*** explores various environmental factors impacting well-being, such as financial resources, freedom and safety, accessibility and quality of health and social care, home environment, opportunities for learning and recreation, and physical environmental factors like pollution, noise, traffic, and climate. The item on respondent's satisfaction with transport is excluded from the analyses.

The scoring of each WHOQOL-BREF item is based on a 5-point Likert scale, which ranges from descriptors such as 'never' to 'always', 'not at all' to 'extremely/completely', 'very poor' to 'very good', or 'very dissatisfied' to 'very satisfied'. The WHOQOL-BREF items 1 (*Overall Rating of Quality of Life*) and 2 (*General Health Satisfaction*) are for separate analysis. To create a score comparable to WHOQOL-100 (ranging from 4 to 20), the average scores in each domain should be multiplied by 4. Although a second transformation, which converts domain scores to a 0–100 scale, is optional, it was not used for this study (except for a direct comparison with other studies). Higher scores in all domains indicate better quality of life.

The WHOQOL-BREF holds significant value in research and clinical settings, particularly for studies requiring a concise assessment of the quality of life (The WHOQOL Group, 1998). Its utility has been demonstrated across various contexts, including rehabilitation assessments, urban community surveys, and evaluations of professional athletes (Høegmark et al., 2021; Xia et al., 2012; Zelenović et al., 2023). Additionally, its psychometric properties have been rigorously evaluated in diverse populations, such as earthquake survivors, middle-aged and older adults with HIV, individuals undergoing methadone maintenance treatment for heroin dependence, and psychiatric outpatients, confirming its validity and reliability (Berlim et al., 2005; Chang et al., 2014; Pereira et al., 2014; Trompenaars et al., 2005; Valenti et al., 2013). It

has also been used in longitudinal studies to predict mortality risk (Gobbens & van der Ploeg, 2021) and to assess the impact of the COVID-19 pandemic on the quality of life of relatives of individuals with intellectual disabilities (Zonneveld et al., 2023). Furthermore, its applicability passes beyond cultural and linguistic boundaries, as evidenced by its use in diverse countries and regions worldwide (Araújo et al., 2020; Berlim et al., 2005; Kalonji et al., 2017; Seifu et al., 2023; Suárez et al., 2018; Valenti et al., 2013; Xia et al., 2012).

The WHOQOL-BREF has been used to evaluate prison officers' and inmates' quality of life (Araújo et al., 2020; De Smet et al., 2017; Kalonji et al., 2017). The tool has also been integrated into the WHO Prison Health Framework, which seeks to evaluate and enhance the performance of prison health systems (Alves Da Costa, 2022). Recent studies have confirmed the psychometric properties of the WHOQOL-BREF among older adults incarcerated in prison (Archuleta et al., 2023). Studies have utilised this tool to measure the quality of life among male prisoners based on age and education (Putri et al., 2020) and evaluate health-related quality of life and associated factors in specific prison settings (Seifu et al., 2023). Furthermore, WHOQOL-BREF was adapted to assess the quality of life of inmates across different sports groups (Obadiora, 2018a), assess inmates' perceptions of their physical health (Obadiora, 2018b), and measure the psychological well-being of prisoners (Obadiora & Adebayo, 2019).

The WHOQOL-BREF demonstrates several strengths: it is reliable and valid, as extensive testing has confirmed its accuracy and consistency across different populations (THE WHOQOL GROUP, 1998). Furthermore, its design reflects cultural sensitivity, enabling the capture of nuances in quality of life across diverse cultural contexts (Saxena et al., 2004). Its self-report format ensures ease of administration, facilitating efficient use in research and clinical settings (Skevington et al., 2004). Additionally, its availability at no cost for non-commercial use enhances its accessibility (The WHOQOL Group, 1998).

However, the WHOQOL-BREF is subject to various limitations, including its reliance on self-reported data (Skevington & McCrate, 2012). Moreover, its scope may lack depth in capturing specific concerns in individual cases and is not intended to diagnose medical or psychological conditions. Some concerns have been raised about its poor internal consistency, lower test-retest reliability, and reduced sensitivity to change noted in specific domains, such as the social domain, which consists of only three items (Chang et al., 2014; Muller et al., 2019; O'Carroll et al., 2000; Taylor et al., 2004). Nevertheless, the WHOQOL-BREF finds extensive applications in research, clinical settings, and public health initiatives, enabling the study of quality of life in diverse populations, monitoring treatment impact, tailoring interventions to individual needs, and identifying areas for improvement at a population level.

Data Analysis

Appendix 1 summarises the primary variables, including their operationalisation, indicators, scoring and interpretation.

Average MQPL scores are calculated for each *Well-being and Development* dimension (*Personal development*, *Personal autonomy*, *Well-being* and *Distress*) and for the global *Well-being and Development* category. Higher scores represent a better quality of prison life (range 1–5).

Mean WHOQOL-BREF scores are calculated for each domain (excluding items 1 & 2) by multiplying the average Likert scale responses (on a 1–5 scale) by 4, resulting in scores comparable to the WHOQOL-100 (range 4–20). Higher scores indicate better quality of life.

Table S1 presents the cases with missing data (n = 611) across 60 variables. The lowest percentages of missing data were found in the variables related to incentives and earned privileges utilisation (0.2%), drug use before prison (0.3%), and age and prison proximity to home (0.5%, both). Conversely, the highest percentages of missing data were found in the following variables: history of imprisonment (recidivists only, 19.4%), being a first-time prisoner or not (9.8%), special measures application (7.5%), and security measures imposition (5.7% each).

Various MQPL and WHOQOL-BREF items had missing data, ranging from 0.2% to 1.6% of cases. Among MQPL items, the lowest percentages of missing data were observed for aspects related to perceiving prison time as an opportunity for change and thinking about plans for life after release, experiencing stress, and feeling punished, ranging from 0.2% to 0.3%. On the other hand, higher percentages of missing data were noted for items concerning thinking about suicide in prison (1.5%) and feeling encouraged to work towards their own goal (1.6%). For WHOQOL-BREF, minimal missing data, ranging from 0.2% to 0.5%, are found for psychological and environmental domain scores and the general health item. However, higher percentages of missing data, around 0.5% to 0.8%, are observed for items related to overall quality of life, social relationships domain scores, and maintaining one's personality in prison.

The characteristics of participants and outcome variables were analysed using descriptive statistics. Data normality was assessed through the Kolmogorov-Smirnov test and visual inspection, including histograms and Q-Q plots for continuous variables. Skewness and kurtosis values falling within the range of -2 to +2 were considered indicative of a normal univariate distribution (George & Mallery, 2010). Floor or ceiling effects were considered present in subscale or single item scores when more than 15% of respondents achieved the lowest or highest possible score, respectively (Terwee et al., 2007). Reliability was evaluated using Cronbach's α coefficients and test-retest correlations, with α values greater than .7 or .8 considered reliable (Schweizer, 2011).

Chi-squared tests were employed to analyse categorical responses, with Fisher's Continuity Correction applied when necessary (e.g., gender, age, education). Measures of association, including the ϕ coefficient and Cramer's V, were reported, while effect sizes were also assessed using the r coefficient calculated with the formula $z/\sqrt{n}$. Effect sizes were interpreted as small (.10–.29), moderate (.30–.49), or large/strong (.50–1.00) based on Cohen's criteria (Pallant, 2007). For comparisons involving three or more subgroups on continuous variables, one-way

ANOVA and the Kruskal-Wallis test were utilised, followed by Tukey's HSD and Mann-Whitney *U*-tests conducted for post-hoc analysis. Independent samples *t*-tests were employed for comparisons between two subgroups. Effect sizes were assessed using Partial Eta squares (η^2_p) and interpreted according to Cohen's classification: small (.01–.05), moderate (.06–.13), or large (≥ .14). The relationship between variables was examined using Pearson's *r* for parametric data and Spearman's rank correlation (ρ) for skewed data, with effect sizes interpreted as small (.10–.29), moderate (.30–.49), or strong (.50–1.00), following established guidelines (Cohen, 1988).

Hierarchical regression analyses were conducted for each MQPL domain to assess if and to what extent prison regime, gender and social dynamics predicted various aspects of the prison experience. In our analyses, we entered the prison regime (coded as closed = 0, semi-open = 1) and gender (0 = female, 1 = male) as control variables in the initial block of predictors (Step 1). Subsequently, we introduced prisoners' self-ratings of their social dynamics, operationalised through two scores based on the MQPL survey and one based on the WHOQOL-BREF questionnaire in the second block of predictors (Step 2).

The first MQPL score included in regression analyses was *Staff-Prisoner Relationships*, a part of the *Harmony* category. This score focuses on the interactions between staff and prisoners, particularly regarding trust, fairness, support, and safety. The items in this scale inquire about the support received from staff, perceptions of fairness in treatment by staff, trust in prison officers, honesty and integrity displayed by staff, the level of trust placed in prisoners by the prison, feelings of safety from harm by staff, and the ease of getting things done through face-to-face communication with staff.

The second score included is *Prisoner Interactions with Other Prisoners*. Based on the MQPL data, it was designed to evaluate that particular aspect of the quality of the prison social climate, as reported in earlier studies (Kyprianides & Easterbrook, 2020). The following five items were selected: "I have no problem with other convicts here", "I feel safe and I am not afraid that I will be hurt, abused or threatened by other convicts in this prison", "The best way to spend time here is to mind your own business and have as little contact as possible with other convicts (reverse coded)", "In this prison, I have to be wary of everyone around me (reverse coded)" and "I can relax and be myself among the other convicts in this prison". More specifically, the *Prisoner Interactions with Other Prisoners* scale assesses the safety of prisoners within the prison environment and their interactions with other prisoners. The statements in this scale cover feelings of safety from harm by other prisoners, the level of vigilance required around both other prisoners and staff, the perception of the best way to spend time in prison to avoid conflict with other prisoners, and the ability to relax and be oneself among other prisoners. All five items were combined into a unified measure with acceptable reliability (α = .62) and a mean score of 3.11 (*SD* = 0.74).

The third score included was the previously mentioned *Social relationships* domain of the WHOQOL-BREF questionnaire. This scale evaluates prisoners' satisfaction with their personal relationships and support networks. It includes questions about satisfaction with personal relationships, satisfaction with sex life, and satisfaction with the support received from friends.

We assessed the linearity, homoscedasticity, and independence of residuals. Outliers beyond three standard deviations were removed (three cases in *Distress*). Mahalanobis distance values

were checked for each model. Pearson's and Spearman's coefficients were calculated for all variables to avoid collinearity, and the correlation matrices and collinearity statistics (tolerance, variance inflation factor) were inspected. Standardised regression coefficients (β) were presented to compare the relative contribution of each predictor variable, and unstandardized coefficients (*B*) were used to interpret their individual effects.

For all analyses, missing data were handled through pairwise exclusions. A significance level of .05 was applied across all analyses. However, to account for multiple comparisons, Bonferroni corrections were applied by dividing .05 by the number of comparison tests conducted for each set of analyses, if indicated.

Study Population and Response Rate

Considering the total prison population in each of the five prisons included in the research at the time of data collection (Directorate for the Execution of Criminal Sanctions, official communication, 2023), the response rates varied across the prisons (Table 1). Požarevac, as a prison for female convicts, exhibited the highest response rate at 40%, while all other four prisons for male convicts had a response rate of 12% (combined). More precisely, Sremska Mitrovica and Niš prisons had 11% and 13% response rates, respectively. Požarevac–Zabela prison reported the lowest response rate at 9%, and Beograd prison showed a response rate of 36%.

With an overall response rate of 13%, 656 questionnaires with signed informed consent were collected (Table 1). Forty-five respondents (6.86%) did not complete either of the two questionnaires, resulting in missing data, and they were excluded from further analysis. Specifically, 16 cases (2.44%) did not complete the MQPL, whereas 37 (5.64%) did not complete the WHOQOL-BREF.

Table 1

Response Rates of Collected Questionnaires across Five Prisons

Prison	Total prison population	Collected questionnaires	Response rate (%)
Požarevac	230	92	40.00
Sremska Mitrovica	1782	202	11.34
Niš	1500	196	13.07
Požarevac–Zabela	1517	136	8.97
Beograd	84	30	35.71
Total	5113	656	12.83

The response rates across prisons indicate varying degrees of willingness among the incarcerated population to participate in the survey or could reflect variations in the research process across the prison facilities. The higher response rate in Požarevac might indicate greater interest or cooperation from the female inmates. Conversely, the lower response rates in Požarevac–Zabela and Sremska Mitrovica, which are among the largest prisons in the country,

could be influenced by factors such as work engagement of inmates, survey administration logistics, or unique prison dynamics. Notably, the response rates could be influenced by various factors, including potential saturation due to the continuous implementation of various research initiatives within these two prisons.

Our final research sample included 611 convicted prisoners who served prison sentences in one of the five correctional institutions included in this study. The majority of participants were from Sremska Mitrovica (*n* = 190, 31.1%) and Niš (*n* = 181, 29.6%), followed by Požarevac (*n* = 86, 14.1%). Požarevac–Zabela and Beograd prisons accounted for 125 (20.5%) and 29 (4.7%) participants.

A subgroup of participants (*n* = 176) underwent a second administration of the MQPL survey after an eight-week interval. This additional step in our research design allowed for the calculation of test-retest correlations, enhancing the reliability of our findings. The retest subsample included 63 female prisoners and 113 male prisoners (Sremska Mitrovica *n* = 26, Niš *n* = 27, Požarevac–Zabela *n* = 60).

Study Sample

Table 2 provides an overview of the demographic characteristics of the sample, which consisted of 611 participants. This demographic includes characteristics that may be relevant to the study's context and research objectives, such as gender, age, education, marital status, the number of children, religious affiliations, place of residence, and citizenship.

Most of the sample was male (85.9%), while females accounted for 14.1%.

The average age of participants was 39 years 11 months (*SD* = 10 years 3 months), ranging from 20 to 74 years of age. The sample spans various age groups, with only 0.2% being 20 or younger. The most significant portions fall within the age categories of 21–30 years (18.3%), 31–40 years (38.8%), 41–50 years (27.0%), and 51 years or older (15.2%). Educational backgrounds varied, with 5.9% having unfinished elementary school, 22.9% completing elementary school, 61.9% having a high school education, and 6.5% holding vocational college or higher qualifications.

Approximately half of the sample (44.8%) had a partner or was married, while 37.8%, 12.6%, and 1.8% were single, divorced, or widowed, respectively. Regarding parental status, 23.2% of participants had one child, 18.7% had two children, and 13.7% had three or more children. Conversely, 42.1% of participants reported not having any children. Regarding religion, 4.6% reported none, 88.4% identified with Christianity, 4.3% with Islam, and 1.0% with other religions. Geographically, participants mainly resided in urban or suburban areas (77.6%) compared to rural areas (18.5%). The residence distribution was as follows: Belgrade region (24.4%), region of Vojvodina (29.1%), Šumadija and Western Serbia (19.5%), Southern and Eastern Serbia (21.6%), and foreign countries (1.8%). Concerning citizenship, the majority (93.1%) are from the Republic of Serbia, 1.6% are foreign citizens, and 1.1% hold dual citizenship (Table 2).

Table 2

Sample Demographic Characteristics (n = 611)

Variable		*n*	%
Gender	Male	525	85.9
	Female	86	14.1
Age (years)	*M* = 39.92, *SD* = 10.22		
Age (category range)	20–30 years	113	18.5
	31–40 years	237	38.8
	41–50 years	165	27.0
	51 years or older	93	15.2
Education	Unfinished elementary school	36	5.9
	Elementary school	140	22.9
	High school	378	61.9
	Vocational college or higher	40	6.5
Marital status	Single	231	37.8
	Married	121	19.8
	Extramarital union	153	25.0
	Divorced	77	12.6
	Widowed	11	1.8
Number of children	None	257	42.1
	One	142	23.2
	Two	114	18.7
	Three or more	84	13.7
Religion	None	28	4.6
	Christianity	540	88.4
	Islam	26	4.3
	Other	6	1.0
Type of community	Rural	113	18.5
	Urban/suburban	474	77.6
Region of residence	Belgrade region	149	24.4
	Region of Vojvodina	178	29.1
	Šumadija and Western Serbia	119	19.5
	Southern and Eastern Serbia	132	21.6
	Foreign countries	11	1.8
Citizenship	Republic of Serbia	569	93.1
	Foreign / Dual	10 / 7	1.6 / 1.1

Table 3 presents the demographic profile of participants, focusing on gender-related differences.

The average age for males was 40 years (*SD* = 10 years 2 months), and for females, it was 39 years 6 months (*SD* = 10 years 6 months). The difference in age between males and females was not statistically significant, $t(606) = 0.43$, $p = .665$, $\eta^2 = .00$. Furthermore, the analysis of age categories revealed similar percentages for males (18.6%) and females (18.6%) in the 20–30 years range, indicating a balanced representation of both genders in the early stages of adulthood. Additionally, the distribution demonstrated comparable percentages of males (15.5%) and females (14.0%) in the 51 years or older category, suggesting a similar representation of older participants across genders. In the 31–40 years age category, males had a slightly higher representation (39.3%) compared to females (37.2%), while females (30.2%) had a slightly higher percentage in the 41–50 years age category compared to males (26.6%).

Significant differences were observed in the distribution of education levels between males and females, $\chi^2(3) = 16.01$, $p = .001$, with a small effect size ($V = .16$). Notably, a higher percentage of females (15.3%) had vocational college or higher education compared to males (5.3%). Additionally, females exhibited a higher proportion of unfinished elementary school (9.4%) compared to males (5.5%), whereas a more significant proportion of males held a high school education (66.0%) compared to females (49.4%). Moreover, a significant difference in marital status was found between males and females, $\chi^2(4) = 30.18$, $p < .001$, yet with a small effect size ($V = .23$). A more significant proportion of males were single (41.3%), while a higher percentage of females were either married (19.0%) or in extramarital unions (28.6%).

Significant differences were observed in the distribution of the number of children between males and females, $\chi^2(3) = 8.75$, $p = .033$, with a small effect size ($V = .12$). As presented in Table 2, a higher percentage of males (45.0%) reported having no children compared to females (31.4%). Additionally, among those with children, females (29.1%) had a higher percentage of having two children compared to males (17.4%), while males (23.9%) had a higher percentage of having one child compared to females (23.3%). The percentage of those with three or more children was slightly higher among females (16.3%) than males (13.7%).

Next, a significant difference in religion distribution was found between males and females, $\chi^2(3) = 9.25$, $p = .026$, with a small effect size ($V = .12$). When examining the religious affiliations, a higher percentage of females (10.8%) reported having no religion compared to males (3.7%). Most males (91.3%) and females (81.9%) identified with Christianity. Islam was reported by 4.1% of males and 6.0% of females, while other religions were less common, accounting for 1.0% of males and 1.2% of females. While not statistically significant ($\chi^2(1) = 3.8$, $p = .058$, $\phi = -.08$), there was a trend suggesting a difference in the type of community between males and females. More males (88.2%) resided in urban/suburban areas than females (79.5%).

The distribution across regions of residence in Serbia showed no significant differences between males and females, $\chi^2(4) = 3.60$, $p = .462$, $V = .08$. Examining specific regions, there were comparable percentages of males and females in the Belgrade region (males: 24.9%, females: 30.9%), Vojvodina (males: 30.6%, females: 32.1%), Šumadija and Western Serbia (males: 21.3%, females: 16.0%), and Southern and Eastern Serbia (males: 23.1%, females: 21.0%). Additionally, a small percentage of males (1.6%) and females (3.6%) resided in foreign countries (Table 3).

Concerning citizenship, no significant differences were observed between males and females, $\chi^2(2) = 3.17$, $p = .205$, $V = .07$. The majority of both males and females held the citizenship of the Republic of Serbia (males: 97.2%, females: 96.4%). A small proportion had foreign citizenship (males: 1.4%, females: 3.6%), and no females in the sample had dual citizenship, while a negligible proportion of males held dual citizenship (1.4%).

Table 3

Demographic Profile of Participants: Gender-Related Characteristics

Variable	Males (*n* = 525)	Females (*n* = 86)	*p* [a] (ES)
Age (years), *M* (*SD*)	39.99 (10.18)	39.48 (10.56)	.665 (.000)
Age (category range)			
20–30 years	97 (18.6)	16 (18.6)	
31–40 years	205 (39.3)	32 (37.2)	
41–50 years	139 (26.6)	26 (30.2)	
51 years or older	81 (15.5)	12 (14.0)	
Education			
Unfinished elementary school	28 (5.5)	8 (9.4)	**.001**
Elementary school	118 (23.2)	22 (25.9)	(.164)
High school	336 (66.0)	42 (49.4)	
Vocational college or higher	27 (5.3)	13 (15.3)	
Marital status			
Single	210 (41.3)	21 (25.0)	**< .001**
Married	105 (20.6)	16 (19.0)	(.226)
Extramarital union	129 (25.3)	24 (28.6)	
Divorced	61 (12.0)	16 (19.0)	
Widowed	4 (0.8)	7 (8.3)	
Number of children			
None	230 (45.0)	27 (31.4)	**.033**
One	122 (23.9)	20 (23.3)	(.121)
Two	89 (17.4)	25 (29.1)	
Three or more	70 (13.7)	14 (16.3)	
Religion			
None	19 (3.7)	9 (10.8)	**.026**
Christianity	472 (91.3)	68 (81.9)	(.124)
Islam	21 (4.1)	5 (6.0)	
Other	5 (1.0)	1 (1.2)	
Type of community			
Urban or suburban	399 (79.5)	75 (88.2)	.073
Rural	103 (20.5)	10 (11.8)	(.078)

Table continues

Variable	Males (*n* = 525)	Females (*n* = 86)	*p* [a] (ES)
Region of residence			
Belgrade region	124 (24.9)	25 (30.9)	.462
Region of Vojvodina	152 (30.6)	26 (32.1)	(.078)
Šumadija and Western Serbia	106 (21.3)	13 (16.0)	
Southern and Eastern Serbia	115 (23.1)	17 (21.0)	
Foreign countries	8 (1.6)	3 (3.6)	
Citizenship			
Republic of Serbia	488 (97.2)	81 (96.4)	.205
Foreign / Dual	7 (1.4) / 7 (1.4)	3 (3.6) / 0 (0.0)	(.074)

Note. ES = Effect sizes are given as η^2, ϕ or Cramer's *V*, as appropriate. Values are *n* (%) or as otherwise indicated.
[a] *p* is based on independent samples *t*-test or chi-square analysis, as appropriate. *p* value of under .05 is bold. Pairwise exclusions of missing data were used.

Next table, Table 4, provides an overview of the distribution of participants across prisons, sentence length categories, prison regimes, treatment groups, risk categories, types of criminal offences, elements of violence, and time served. The participants are distributed across various prisons, with Sremska Mitrovica having the highest representation (31.1%), followed by Niš (29.6%), Požarevac–Zabela (20.5%), Požarevac (14.1%), and Beograd (4.7%).

Regarding sentence length categories, the majority of participants were sentenced to imprisonment for 3 to 10 years (51.6%), followed by over 1 to 3 years (22.4%), and 10 to 20 years (16.0%). The average prison sentence length was 7 years and 11 months (*SD* = 8 years 5 months), ranging from 2 months to 40 years.

The sample included prisoners from two types of prison wards: semi-open (25.4%) and closed (74.6%) facilities. Correspondingly, the treatment groups were distributed across the following categories: B1 (8.3%), B2 (15.7%), V1 (23.1%), and V2 (48.8%).

For sentences up to three years, participants were classified as low-risk (5.9%), middle-risk (50.8%), and high-risk (42.7%). For sentences over three years, risk categories included low-risk (2.9%), middle-risk (43.7%), high-risk (46.8%), and very high-risk (6.3%).

As presented in Table 4, criminal offences encompassed a range of categories, with against human health (30.6%), property (32.4%), and life and limb (20.8%) being the most prevalent. Other criminal offences, constituting 4.7% of cases, include offences against sexual freedom = 12 (2.0%); relating to marriage and family = 11 (1.8%); against road traffic safety = 4 (0.7%); against humanity and other right guaranteed by international law = 10 (1.6%); against freedoms and rights of man and citizen = 6 (1.0%); against government authorities = 3 (0.5%); against legal instruments = 2 (0.3%); against official duty = 2 (0.3%); Law on public order and peace / obstructing an official in discharging official duties in government authority = 2 (0.3%).

Elements of violence were present in the criminal offences of 46.2% of participants.

The average time served during data collection was 2 years and 8 months (*SD* = 2 years 11 months), ranging from 1 month to 20 years 4 months. The majority (53.2%) had served over two years. The sample consists of 43.7% first-time prisoners, while 46.5% have a history of incarceration.

Table 4

Sample Criminological and Penological Characteristics (n = 611)

Variable		*n*	%
Prison	Požarevac	86	14.1
	Sremska Mitrovica	190	31.1
	Niš	181	29.6
	Požarevac–Zabela	125	20.5
	Beograd	29	4.7
Sentence length (years, months)	*M* = 7 y 11 mo, *SD* = 8 y 5 mo, Min = 2 mo, Max = 40 y		
Sentence length (category range)	1 year or less	8	1.3
	Over 1 to 3 years	137	22.4
	Over 3 to 10 years	315	51.6
	Over 10 to 20 years	98	16.0
	More than 20 years	36	5.9
Prison regime	Closed	456	74.6
	Semi-open	155	25.4
Treatment group	B1 / B2	51 / 94	8.3 / 15.7
	V1 / V2	141 / 298	23.1 / 48.8
Risk category [a] (up to 3 years of imprisonment)	Low-risk	11	5.9
	Middle-risk	94	50.8
	High-risk	79	42.7
Risk category [a] (for more than 3 years of imprisonment)	Low-risk	12	2.9
	Middle-risk	179	43.7
	High-risk	192	46.8
	Very high-risk	26	6.3
Criminal offences	Against human health	187	30.6
	Against property	198	32.4
	Against life and limb	127	20.8
	Against public peace and order	17	2.8
	Against economic interests	15	2.5
	Other criminal offences [b]	52	8.5
Elements of violence	Violent crime	282	46.2
	Non-violent crime	312	51.1
Time served [c] (years, months)	*M* = 2 y 8 mo, *SD* = 2 y 11 mo, Min = 1 mo, Max = 20 y 4 mo		
Time served [c] (category range)	6 months or less	76	12.4
	Over 6 months to 1 year	93	15.2
	Over 1 year to 2 years	117	19.1
	Over 2 years	325	53.2
First-time prisoners	Yes	267	43.7
	No	284	46.5

[a] The last recorded scores of risk assessment of prisoners at the time of data collection. [b] against sexual freedom, road traffic safety, humanity and other right guaranteed by international law, freedoms and rights of man and citizen, government authorities, legal instruments, official duty, relating to marriage and family, Law on public order and peace / obstructing an official in discharging official duties in government authority. [c] At the time of data collection.

In summary, Table 5 presents an overview of participants' criminological and penological characteristics, focusing on gender-related differences. The average prison sentence length for males was 8 years 3 months (*SD* = 8 years 6 months), whereas females had an average sentence length of 6 years 4 months (*SD* = 7 years 5 months). The difference was statistically significant, with men being sentenced to a longer average prison term than women (males: *Mdn* = 21.00, *IQR* = 32.50 months, females: *Mdn* = 13.00, *IQR* = 22.50 months; *U* = 16379.00, *z* = -3.59, *p* < .001), however with a small effect size (*r* = .15). Female prisoners were more likely to be imprisoned for one year or less (8.2%) than males (0.2%). On the other hand, males had a higher representation in the over 3 to 10 years category (55.4%) compared to females (38.8%). A similar trend is observed in the over 10 to 20 years category, where 17.3% of males had sentences falling in this range, compared to 11.8% of females. Finally, for prison sentences longer than 20 years, male prisoners constitute 6.3%, and females represent 4.7%.

The distribution of male and female prisoners across closed and semi-open prison regimes did not show a significant difference, $\chi^2(1) = 0.24$, $p = .690$, $V = .02$. However, the distribution across treatment groups (B1/B2 and V1/V2) showed a significant difference between genders, $\chi^2(3) = 10.24$, $p = .017$, yet with a small effect size ($V = 0.13$). Females were more represented in the B2 (23.5%) and V1 (28.4%) groups compared to males (14.9% and 23.5%, respectively).

No significant gender difference was observed in the risk categories for sentences up to three years, $\chi^2(2) = 1.58$, $p = .454$, $V = .09$. Similarly, there was no significant difference in risk categories for sentences exceeding three years, $\chi^2(3) = 2.00$, $p = .572$, $V = .07$. However, the majority of all participants fall into the middle-risk and high-risk categories.

Analysis showed similar distribution of criminal offences against human health (36.1% for males, 38.9% for females), property (40.0% for males, 30.6% for females), or life and limb (23.9% for males, 30.6% for females), indicating no statistically significant gender difference, $\chi^2(2) = 2.67$, $p = .263$, $V = .07$. These three specific offence categories were selected and included into the statistical analysis due to the prevalence of participants, both male and female, being sentenced for crimes falling within these categories. The finding highlights the predominant nature of such criminal activities within the studied population.

When it comes to the elements of violence, no significant gender difference was found in the distribution of violent (48.5% for males, 41.2% for females) and non-violent crimes (51.5% for males, 58.8% for females), $\chi^2(1) = 1.58$, $p = .209$, $\phi = .05$.

At the time of data collection, male prisoners had a longer average time served (*M* = 2 years 9 months, *SD* = 3 years 1 month) than females (*M* = 1 year 10 months, *SD* = 2 years 2 months). This difference was statistically significant (males: *Mdn* = 42.00 months, *IQR* = 40.50, females: *Mdn* = 60.00 months, *IQR* = 79.00; *U* = 16748.50, *z* = -3.40, *p* = .001), with a small effect size (*r* = .14).Male prisoners had a higher representation in the 'over 2 years' category (54.9% vs. 43.0%), and lower percentages in the '6 months or less' (11.8% vs. 16.3%) and 'over 1 year to 2 years' categories (18.5% vs. 23.3%). However, these differences did not reach statistical significance, indicating a similarity in the distribution of time-served categories between genders, $\chi^2(3) = 4.34$, $p = .227$, $V = .08$. A significant gender difference was observed, with a higher proportion of females (81.0%) being first-time prisoners compared to males (42.6%; $\chi^2(1) = 41.90$, $p < .001$), with a small effect size ($\phi = .28$).

Table 5

Criminological and Penological Profile of Participants: Gender-Related Characteristics

Variable	Males (*n* = 525)	Females (*n* = 86)	*p* [a] (ES)
Sentence length (years), *M* (*SD*)	8.23 (8.54)	6.30 (7.45)	**< .001**
Sentence length (category range)			(.148)
1 year or less	1 (0.2)	7 (8.2)	
Over 1 to 3 years	106 (20.8)	31 (36.5)	
Over 3 to 10 years	282 (55.4)	33 (38.8)	
Over 10 to 20 years	88 (17.3)	10 (11.8)	
More than 20 years	32 (6.3)	4 (4.7)	
Prison regime			
Closed	390 (74.3)	66 (76.7)	.690
Semi-open	135 (25.7)	20 (23.3)	(.020)
Treatment group			
B1 / B2	50 (9.9) / 75 (14.9)	1 (1.2) / 19 (23.5)	**.017**
V1 / V2	118 (23.5) / 260 (51.7)	23 (28.4) / 38 (46.9)	(.132)
Risk category (up to 3 years of imprisonment)			
Low-risk	10 (7.0)	1 (2.4)	.454
Middle-risk	74 (51.7)	20 (48.8)	(.093)
High-risk	59 (41.3)	20 (48.8)	
Risk category (for more than 3 years of imprisonment)			
Low-risk	12 (3.3)	0 (0.0)	.572
Middle-risk	160 (43.8)	19 (43.2)	(.070)
High-risk	169 (46.3)	23 (52.3)	
Very high-risk	24 (6.6)	2 (4.5)	
Criminal offences			
Against human health	159 (36.1)	28 (38.9)	.263
Against property	176 (40.0)	22 (30.6)	(.072)
Against life and limb	105 (23.9)	22 (30.6)	
Elements of violence			
Violent crime	247 (48.5)	35 (41.2)	.241
Non-violent crime	262 (51.5)	50 (58.8)	(.052)
Time served [b] (years), *M* (*SD*)	2.76 (3.06)	1.84 (2.13)	**.001**
Time served [b] (category range)			(.139)
6 months or less	62 (11.8)	14 (16.3)	
Over 6 months to 1 year	78 (14.9)	15 (17.4)	
Over 1 year to 2 years	97 (18.5)	20 (23.3)	
Over 2 years	288 (54.9)	37 (43.0)	
First-time prisoners			
Yes	199 (42.6)	68 (81.0)	**< .001**
No	268 (57.4)	16 (19.0)	(.276)

Note. ES = Effect sizes are given as *r*, ϕ or Cramer's *V*, as appropriate. Values are *n* (%) or as otherwise indicated.
[a] *p* is based on the Mann-Whitney *U*-test or chi-square analysis, as appropriate. *p* value of under 0.05 is bold. Pairwise exclusions of missing data were used. [b] At the time of data collection.

Table 6 provides an overview of the penitentiary population across five prison locations. The data offers insights into the participants' experiences and different aspects of prison life, including visitation, contact with family, daily activities, disciplinary actions, and some psychosocial characteristics.

The majority (79.1%) of participants from Požarevac were first-time prisoners, indicating a relatively higher proportion of individuals entering the penal system for the first time. Beograd also had a considerable percentage of first-time prisoners (55.2%) in its subsample, while Požarevac–Zabela, Niš, and Sremska Mitrovica had varying proportions (ranging from 25.6% to 50.0%). When it comes to recidivism, the Niš subsample stands out with a higher percentage of recidivists who had been in prison more than three times (29.3%) and also the highest proportion of recidivists with only one previous incarceration (11.2%).

Beograd had the highest percentage of individuals who had spent more than 10 years in prison over their lifetime (79.3%), reflecting a subgroup with prolonged incarceration. Požarevac subsample showed the most significant proportion of individuals who spent less than one year in prison over their lifetime (19.8%).

The highest percentage of individuals who did not use drugs before coming to prison was in the Beograd subsample (75.9%). On the other hand, Sremska Mitrovica and Niš had a higher proportion of individuals who used drugs before imprisonment in their subsamples (52.1% and 51.2%, respectively).

In the context of the self-reported history of psychiatric treatment, security measures and compulsory treatments, as well as self-harm and suicide attempts, our study participants demonstrated notable variations across the five locations. These findings suggest that there are distinct patterns in self-reported psychiatric history, security measures, and mental health-related experiences among participants across the different prison locations. In summary, subsamples from Požarevac and Niš prisons had the highest percentages of individuals who self-reported staying in a psychiatric/mental hospital or unit for two days or more (22.1% and 14.9%, respectively). Sremska Mitrovica had a lower percentage (8.9%), indicating a relatively smaller proportion of individuals with such a history.

Next, Beograd and Sremska Mitrovica prison subsamples showed the highest percentages of individuals with no imposed security measure (86.2% and 80.5%, respectively). In contrast, the subsample from Požarevac had the highest proportion of individuals with imposed compulsory drug addiction treatment (22.1%). The Požarevac subsample reported the highest proportions of individuals who self-harmed (31.4%) or attempted suicide (24.4%) in the past. The other four prison subsamples exhibited lower percentages in self-harm and suicide attempts (Table 6).

A significant proportion in each prison reported that it was not close to their home, varying from 51.1% in Sremska Mitrovica to 75.6% in Požarevac. Despite this, the majority of participants in all prisons received visits and maintained regular contact with family members. The highest percentages of prison visitation were reported in the Beograd and Sremska Mitrovica subsamples (93.1% and 90.0%, respectively), while the lowest was confirmed in Niš (84.0%). Results regarding regular contact with family members ranged from 92.3% in Niš to 98.8% in Požarevac (Table 6).

Table 6

Profile of the Sample of Penitentiary Population (n = 611)

Variable	Požarevac	Sremska Mitrovica	Niš	Požarevac–Zabela	Beograd
First-time prisoners					
Yes	68 (79.1)	95 (50.0)	56 (30.9)	32 (25.6)	16 (55.2)
No	16 (18.6)	74 (38.9)	116 (64.1)	71 (56.8)	7 (24.1)
How many times in prison before this one? (recidivists only)					
1	2 (12.5)	19 (25.7)	13 (11.2)	12 (16.9)	0 (0.0)
2	2 (12.5)	13 (17.6)	27 (23.3)	22 (31.0)	1 (14.3)
3	4 (25.0)	11 (14.9)	21 (18.1)	12 (16.9)	1 (14.3)
More than 3	3 (18.8)	16 (21.6)	34 (29.3)	15 (21.1)	1 (14.3)
Time spent in prison over the lifetime					
Less than 1 year	17 (19.8)	18 (9.5)	13 (7.2)	9 (7.2)	0 (0.0)
1–2 years	18 (20.9)	45 (23.7)	26 (14.4)	20 (16.0)	0 (0.0)
3–5 years	22 (25.6)	60 (31.6)	41 (22.7)	32 (25.6)	1 (3.4)
6–10 years	10 (11.6)	38 (20.0)	53 (29.3)	26 (20.8)	5 (17.2)
More than 10 years	11 (12.8)	25 (13.2)	47 (26.0)	35 (28.0)	23 (79.3)
Use of drugs before coming to prison					
No	44 (51.2)	91 (47.9)	92 (50.8)	61 (48.8)	22 (75.9)
Yes	41 (47.7)	99 (52.1)	88 (48.6)	64 (51.2)	7 (24.1)
Ever stayed in a psychiatric/mental hospital or unit for 2 days or more					
No	66 (76.7)	165 (86.8)	151 (83.4)	105 (84.0)	26 (89.7)
Yes	19 (22.1)	17 (8.9)	27 (14.9)	15 (12.0)	3 (10.3)
Ever imposed to a security measure					
None	59 (68.6)	153 (80.5)	134 (74.0)	93 (74.4)	26 (86.2)
Drug addiction treatment [a]	19 (22.1)	14 (7.4)	27 (14.9)	20 (16.0)	1 (3.4)
Alcohol addiction treatment [a]	3 (2.5)	2 (1.1)	4 (2.2)	0 (0.0)	1 (3.4)
Psychiatric treatment in a medical institution [b]	6 (7.0)	8 (4.2)	8 (4.4)	5 (4.0)	1 (3.4)
Psychiatric treatment at liberty [a]	6 (7.0)	6 (3.2)	8 (4.4)	3 (2.4)	0 (0.0)
Ever self-harmed in the past					
No	59 (68.6)	169 (88.9)	147 (81.2)	104 (83.2)	23 (79.3)
Yes	27 (31.4)	20 (10.6)	32 (17.9)	19 (15.4)	6 (20.7)
Ever attempted suicide in the past					
No	65 (75.6)	180 (94.7)	163 (90.1)	120 (96.0)	23 (79.3)
Yes	21 (24.4)	9 (4.8)	16 (8.9)	4 (3.2)	6 (20.7)
Receives visits in this prison					
Yes	73 (84.9)	171 (90.0)	152 (84.0)	110 (88.0)	27 (93.1)
No	12 (14.0)	18 (9.5)	28 (15.5)	14 (11.2)	2 (6.9)

Table continues

Variable	Požarevac	Sremska Mitrovica	Niš	Požarevac–Zabela	Beograd
Prison close to home					
Yes	21 (24.4)	91 (47.9)	77 (42.5)	51 (40.8)	14 (48.3)
No	65 (75.6)	97 (51.1)	103 (56.9)	74 (59.2)	15 (51.7)
Regular contact with family members					
Yes	85 (98.8)	186 (97.9)	167 (92.3)	123 (98.4)	28 (96.6)
No	1 (1.2)	4 (2.1)	14 97.7)	2 (1.6)	1 (3.4)
Main daytime activity					
Education or training [c]	2 (2.3)	11 (5.8)	17 (9.4)	5 (4.0)	1 (3.4)
Work	58 (67.4)	91 (47.9)	81 (44.8)	65 (52.0)	22 (75.9)
Usually spends 6 or more hours locked in the cell					
Yes	38 (44.2)	57 (30.0)	71 (39.2)	47 (37.6)	11 (37.9)
No	44 (51.2)	130 (68.4)	105 (58.0)	74 (59.2)	18 (62.1)
Ever given any disciplinary action in this prison					
No	49 (57.0)	121 (63.7)	109 (60.2)	75 (60.0)	14 (48.3)
Yes	37 (43.0)	67 (35.3)	68 (37.6)	49 (39.2)	15 (51.7)
Ever being placed in isolation/solitary confinement					
No	63 (73.3)	145 (76.3)	138 (76.2)	103 (82.4)	24 (82.8)
Yes	23 (26.7)	43 (22.6)	41 (22.7)	20 (16.0)	5 (17.2)
Ever been subjected to control measures					
No	67 (77.9)	161 (84.7)	132 (72.9)	111 (88.8)	28 (96.6)
Yes	19 (22.1)	26 (13.7)	47 (26.0)	13 (10.4)	1 (3.4)
Ever been applied to a special measure					
No	53 (61.6)	120 (63.2)	89 (49.2)	79 (63.2)	18 (62.1)
Yes	26 (30.2)	50 (26.3)	81 (44.8)	40 (32.0)	9 (31.0)
Ever used any of the incentives and earned privileges					
No	34 (39.5)	53 (27.9)	85 (47.0)	53 (42.4)	6 (20.7)
Yes	52 (60.5)	137 (72.1)	96 (53.0)	71 (56.8)	23 (79.3)
Disciplinary measures [d]					
M (*SD*)	1.49 (0.84)	1.21 (0.54)	1.54 (0.87)	1.64 (0.90)	1.73 (1.16)
Min–Max	1–4	1–3	1–4	1–4	1–4
Special measures [e]					
M (*SD*)	2.42 (1.55)	1.71 (1.02)	1.84 (1.15)	1.50 (0.78)	1.78 (1.09)
Min–Max	1–5	1–5	1–5	1–4	1–4

Note. Values are *n* (%) or as otherwise indicated.

[a] Compulsory. [b] Full term = Compulsory psychiatric treatment and confinement in a medical institution. [c] Vocational training. [d] Only participants who self-reported being given any disciplinary action were included in the analysis (*n* = 237). [e] Only participants who self-reported being applied to a special measure were included in the analysis (*n* = 204).

Regarding the main daytime activity (Table 6), work engagement was the predominant daytime activity for participants across all prisons, with the highest percentage in the Beograd subsample (75.9%) and the lowest in the subsample from Niš (44.8%). The subsample from Niš also had the highest percentage of prisoners engaged in education or training during the day (9.4%).

Many prison respondents did not spend six or more hours locked in the cell (Table 6). More precisely, the Sremska Mitrovica subsample had the lowest percentage of prisoners spending six or more hours locked in their cells (30.0%).

There were differences observed among the five subsamples in the percentages of prisoners who experienced disciplinary action, were placed in isolation/solitary confinement, were subjected to control measures, or self-reported the application of special measures. The subsample from Sremska Mitrovica had the highest percentage of prisoners who had not received any disciplinary action (63.7%), as self-reported. Both Beograd and Požarevac–Zabela subsamples had the highest percentages of prisoners who had not been placed in isolation (82.8% and 82.4%, respectively). Furthermore, these two subsamples had the highest percentages of prisoners who had not been subjected to control measures (96.6% in Beograd and 88.8% in Požarevac–Zabela). Regarding the application of special measures, the Sremska Mitrovica and Požarevac–Zabela prison subsamples had the highest percentage of prisoners who did not self-report experiencing these measures for maintaining order and security (63.2%, both).

Similarly, the utilisation of incentives and earned privileges differed among prisons. Beograd had the highest percentage of prisoners who had used incentives and earned privileges (79.3%), whereas the lowest proportion was found in the Niš subsample (53.0%).

Finally, variations emerged in the self-reported numbers of disciplinary and special measures across five prison locations. Participants from the Beograd subsample self-reported the highest average scores (M = 1.73, SD = 1.16), indicating a relatively elevated frequency of disciplinary actions. Conversely, the subsample from Sremska Mitrovica exhibited the lowest average score (M = 1.21, SD = 0.54), suggesting a comparatively lower incidence of disciplinary measures compared to other locations.

Regarding special measures, the Požarevac prison subsample recorded the highest average score (M = 2.42, SD = 1.55), reflecting a greater prevalence of female prisoners self-reporting the application of special measures. In contrast, the Požarevac–Zabela subsample reported the lowest average score (M = 1.50, SD = 0.78), suggesting a relatively lower use of special measures in this prison setting.

TAKEAWAY NOTES

Research Sample Overview
Sample: 611 convicted prisoners from five correctional institutions
Majority from Sremska Mitrovica (31%) and Niš (30%)
Mostly male (86%), average age 40
62% had a high school education
About half of the sample (45%) had a partner or was married
Mainly resided in urban or suburban areas (78%)
Republic of Serbia citizenship: 93%

Demographic Differences Between Genders
Age: No significant differences
Education: More females with vocational college or higher
Marital Status: More single males; more married/extramarital females

Parental and Religious Differences
Female prisoners were more likely to have two or more children
Male prisoners often reported having no children
More females than males reported having no religion (11% vs. 4%)

Sentence Length, Types of Offences, Time Served, Recidivism and Risk Categories
Average sentence: 7 years 11 months
Majority sentenced to 3–10 years (52%)
Common offences: Against human health (31%), property (32%), life and limb (21%)
A similar distribution of criminal offences between genders
Average prison sentence is significantly longer for male prisoners (8 years 3 months) compared to females (6 years 4 months)
Males served longer on average (2 years 9 months) compared to females (1 year 10 months)
A higher proportion of females were first-time prisoners
Majority in middle/high-risk categories

Prison Life
Distinct patterns in self-reported mental health across prisons
Work engagement predominant
Despite the distance between prison and home, regular family contact is maintained

Incentives and Privileges, Self-Reported Disciplinary and Special Measures
Variation across prisons
The Beograd prison subsample reported the highest percentage of incentives and privileges and the highest number of disciplinary actions
The Požarevac prison had the highest reported number of special measures

RESULTS

MQPL Dimensions: Descriptives, Reliability and Normality

Table 7 provides descriptive statistics, reliabilities, and normality tests for the five main MQPL categories – *Harmony*, *Professionalism*, *Security*, *Conditions and Family Contact*, *Well-being and Development*. Table 8 presents a detailed analysis of the psychometric properties of MQPL's *Well-being and Development* dimensions: *Personal Development*, *Personal Autonomy*, *Well-being*, and *Distress*. These findings will answer the following research questions: What are the psychometric properties and normality tests for the five main MQPL dimensions?

Several key findings emerged when examining the MQPL scores across five dimensions (Table 7). The internal consistency, measured by Cronbach's α, indicates high reliability for all five scores, especially *Harmony* (α = .97) and *Professionalism* (α = .96), suggesting consistent measurement within these constructs. The test-retest reliability coefficients (*r*) were statistically significant for all dimensions, ranging from .81 for the *Security* test-retest scores to .87 for both *Professionalism* and *Well-being and Development* test-retest scores, thus confirming stability over time. Descriptive statistics reveal that prisoners rated *Conditions and Family Contact* (*M* = 3.43, *SD* = 0.90) the highest, followed by the *Security* score (*M* = 3.31, *SD* = 0.70), while *Professionalism* had the lowest mean (*M* = 2.90, *SD* = 0.84). Normality tests showed that most dimensions had or approximated a normal distribution, and the skewness and kurtosis of each distribution were acceptable (less than 2). Furthermore, no significant floor or ceiling effects were identified in any of them.

Table 7

Descriptive Statistics, Reliabilities, and Normality Tests of the Five Main MQPL Categories

MQPL Scores [a]	α	*r* [b]	*M*	*SD*	*Mdn*	Mode	Min	Max	% scoring Min	% scoring Max	Skewness	Kurtosis	K-S
Harmony	.97	.85	3.10	0.80	3.14	3.59	1.07	4.95	0.2	0.2	-0.18	-0.38	.04*
Professionalism	.96	.87	2.90	0.84	2.89	2.36	1.00	4.86	0.3	0.5	0.00	-0.57	.04
Security	.90	.81	3.31	0.70	3.32	3.05	1.27	5.00	0.2	0.2	-0.17	-0.23	.03
Conditions and Family Contact	.85	.82	3.43	0.90	3.57	3.71	1.00	5.00	0.8	3.8	-0.42	-0.20	.09**
Well-being and Development	.91	.87	3.08	0.76	3.11	2.95	1.11	5.00	0.3	0.2	-0.17	-0.27	.03

Note. MQPL = Measuring the Quality of Prison Life; K-S = Kolmogorov-Smirnov statistic.
[a] Theoretical range 1–5. [b] All test-retest correlation coefficients are statistically significant at the < 0.01 level.
* $p < .05$; ** $p < .01$.

The reliability coefficients for *Personal Development* (α = .89) and *Well-being* (α = .79) are indicative of satisfactory internal consistency, with *Distress* (α = .63) and *Personal Autonomy* (α = .65) exhibiting a slightly lower reliability (Table 8). Test-retest correlation coefficients (*r*) are notably significant for all dimensions, ranging from .68 for *Distress* to .86 for *Personal Development*. This result indicates that participants' responses on the MQPL categories tended

to remain consistent when measured on two separate occasions. Prisoners rated *Distress* (*M* = 3.88, *SD* = 0.90) the highest, followed by *Personal Autonomy* (*M* = 3.06, *SD* = 0.82) and *Personal Development* (*M* = 3.04, *SD* = 0.96), whereas *Well-being* had the lowest mean (*M* = 2.61, *SD* = 0.97). Statistically significant Kolmogorov-Smirnov *Z* statistics indicated deviations from the normal distribution in all MQPL's *Well-being and Development* dimensions. However, the skewness and kurtosis values for each distribution are within an acceptable range (less than 2), suggesting reasonably normal distributions. Regarding floor or ceiling effects, *Distress* stands out as the only dimension with more than 15% of respondents achieving the highest possible score (15.5%).

Table 8

Descriptive Statistics, Reliabilities, and Normality Tests of the Four MQPL's Well-Being and Development Dimensions

MQPL Well-being and Development [a]	α	*r* [b]	*M*	*SD*	*Mdn*	Mode	Min	Max	% scoring Min	% scoring Max	Skewness	Kurtosis	K-S
Personal Development	.89	.86	3.04	0.96	3.13	2.75	1.00	5.00	2.1	2.1	-0.05	-0.61	.06**
Personal Autonomy	.65	.71	3.06	0.82	3.00	3.50	1.00	5.00	1.5	1.5	-0.25	-0.08	.10**
Well-being	.79	.78	2.61	0.97	2.50	2.00	1.00	5.00	8.7	0.7	0.11	-0.79	.09**
Distress [c]	.63	.68	3.88	0.90	4.00	4.33	1.00	5.00	0.8	15.5	-0.83	0.30	.13**

Note. MQPL = Measuring the Quality of Prison Life; K-S = Kolmogorov-Smirnov statistic.
[a] Theoretical range 1–5. [b] All test-retest correlation coefficients are statistically significant at the < 0.01 level. [c] Higher scores indicate lower levels of distress.
** $p < .01$.

WHOQOL-BREF Domains: Descriptives, Reliability and Normality

Table 9 gives an overview of the psychometric properties and normality tests for the WHOQOL-BREF domains and the overall quality of life and general health satisfaction ratings. These findings address the research question regarding these psychometric properties and normality tests of the WHOQOL-BREF.

The reliability coefficients (α) for the WHOQOL-BREF domains ranged from 0.54 to 0.85, with the *Physical Health* domain achieving the highest reliability, followed by the *Psychological* domain, in contrast to the *Social Relationships* domain exhibiting the lowest reliability. The Kolmogorov-Smirnov tests revealed statistically significant results ($p < .01$) for all variables, suggesting deviations in the normality in the distributions. However, skewness and kurtosis values fell within an acceptable range (less than 2), indicating reasonably normal distributions for each variable.

Regarding participants' reported quality of life on a scale from 4 to 20, the highest average scores were noted in the *Psychological* domain (*M* = 14.71, *SD* = 3.24) and *Physical Health* domain (*M* = 14.16, *SD* = 3.58), with the *Environmental health* having the lowest mean (*M* =

12.85, *SD* = 3.52). None of the four WHOQOL-BREF domains exhibited floor or ceiling effects, with less than 15% of respondents achieving the highest or lowest possible scores.

The *Overall Quality of Life Rating* and *General Health Satisfaction*, measured on a 5-point scale in this study, offer valuable insights into participants' subjective well-being assessments. The mean score of 3.22 (*SD* = 1.10) for overall life quality suggests moderate perceived life satisfaction among the participants. The distribution, characterised by a negative skewness of -0.29 and kurtosis of -0.46, indicates a slightly right-skewed but generally symmetrical pattern. This finding suggests that while most participants may perceive their overall quality of life positively, a subset reports lower satisfaction. More precisely, 8.3% of participants scored at the minimum (1.00), suggesting a small but notable subset experiencing considerable dissatisfaction with their overall quality of life. On the other end, 11.8% scored at the maximum (5.00), indicating a meaningful proportion of participants reported the highest satisfaction level.

Similarly, participants' general health assessments, with a mean score of 3.25 (SD = 1.25), reflect a moderate level of perceived health satisfaction. The distribution exhibits a negative skewness of -0.27 and kurtosis of -0.92, suggesting a right-skewed but relatively symmetrical pattern. The negative skewness implies that a significant portion of participants rated their general health favourably, but a notable subgroup reported lower health satisfaction (11.1% scored at the minimum).

Furthermore, the general health rating includes 18.3% of respondents scoring at the maximum (5.00). This outcome indicates that a substantial proportion of participants expressed high satisfaction with their health.

Table 9

Descriptive Statistics, Reliabilities, and Normality Tests of the Four WHOQOL-BREF Domains and the Overall Rating of Quality of Life and General Health Satisfaction

WHOQOL-BREF domains [a]	α	*M*	*SD*	*Mdn*	Mode	Min	Max	% scoring Min	% scoring Max	Skewness	Kurtosis	K-S
Physical health	.85	14.16	3.58	14.86	16.00	5.14	20.00	0.3	4.9	-0.42	-0.59	.09**
Psychological domain	.79	14.71	3.24	16.67	14.00	4.00	20.00	0.5	2.9	-0.60	0.10	.08**
Social relationships	.54	14.25	3.49	14.67	14.67	4.00	20.00	0.5	9.5	-0.20	-0.42	.09**
Environmental health	.81	12.85	3.52	13.07	13.71	4.00	20.00	0.5	1.6	-0.12	-0.54	.05**
Overall Quality of Life Rating and General Health Satisfaction												
Overall Quality of Life	/	3.22	1.10	3.00	3.00	1.00	5.00	8.3	11.8	-0.29	-0.46	.19**
General Health	/	3.25	1.25	3.00	4.00	1.00	5.00	11.1	18.3	-0.27	-0.92	.19**

Note. WHOQOL-BREF = World Health Organization Quality of Life Brief Version; K-S = Kolmogorov-Smirnov statistic.
[a] Theoretical range 4–20, except for the Overall Quality of Life and General Health ratings with a theoretical range 1–5.
** $p < .01$.

Overall, both WHOQOL-BREF and MQPL demonstrate acceptable reliability and stability, provide valuable insights into various dimensions of prison life quality and contribute to understanding the well-being and individual quality of life of the study participants.

The limited number of items across the *Well-being and Development* dimensions may contribute to lower reliability scores. With its eight items, *Personal Development* exhibits a higher Cronbach's coefficient (α = .89), suggesting more robust internal consistency. In contrast, dimensions with fewer items, such as *Personal Autonomy* (4 items), *Well-being* (4 items), and *Distress* (3 items), show slightly lower α coefficients (.65, .79, .63, respectively).

Caution is advised when considering variations in distress levels among respondents due to a potential ceiling effect in the *Distress* dimension. With 15.5% of participants achieving the highest possible score, the measurement range for *Distress* may be limited and subtle differences in distress levels among individuals might not be accurately captured. Additionally, *Distress* has a unique scoring direction compared to the other dimensions, with higher scores indicating lower levels of distress, thus reflecting higher quality in this aspect of prison life.

The reliability coefficients (α) for the WHOQOL-BREF domains ranged from .54 to .85, with the *Physical Health* domain achieving the highest reliability, followed by the *Psychological domain*. In contrast, the domain of *Social Relationships* domain exhibited the lowest reliability. Despite deviations from normality, the skewness and kurtosis values fell within an acceptable range, indicating reasonably normal distributions for each variable. None of the WHOQOL-BREF domains exhibited floor or ceiling effects, suggesting a balanced distribution of scores.

TAKEAWAY NOTES

MQPL and WHOQOL-BREF

Generally, high reliabilities indicate consistency in measurement

Test-retest correlations are all statistically significant, suggesting stability over time

The normality tests vary, with some dimensions showing deviations from normality

Overall Perception of the Prison Life

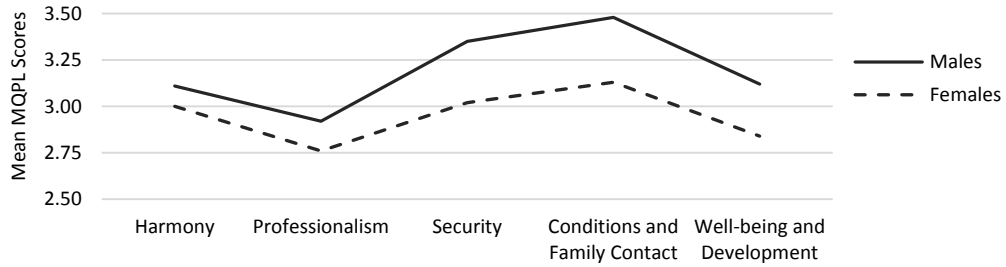
The first analysis was focused on understanding how prisoners perceive different aspects of prison life and how their perceptions of well-being and development within the prison environment compare with other aspects of prison life. The analyses were conducted separately from male and female perspectives. Two research questions were raised: How do prisoners, on average, rate different categories of prison life, as operationalised by the MQPL framework? In what ways does the perception of the *Well-being and Development* category differ or align with other MQPL categories?

Five specific categories within the MQPL framework were compared. Figure 1 illustrates the mean MQPL scores, while Tables 10 and 11 present a detailed analysis of MQPL scores, comparing perceptions across five overarching categories.

Overall, male prisoners rated *Conditions and Family Contact* and *Security* positively, while *Professionalism* scored the lowest. A similar trend is observed for females, with *Conditions and Family Contact* having the highest rating and *Professionalism* receiving the lowest. Both subgroups of prisoners place the *Well-being and Development* category in between (Figure 1).

Figure 1

Mean Scores on Five Overarching Categories of the Measuring Quality of Prison Life (MQPL) Survey: Male and Female Prisoners Perspectives



Among male participants, the highest average score is observed in the *Conditions and Family Contact* categories, with a mean of 3.48 (*SD* = 0.87, 95% CI: 3.41–3.56), indicating a relatively positive evaluation of the conditions within the prison setting and opportunities to maintain family relationships. On the other hand, the *Professionalism* category has the lowest average score among males, with a mean of 2.92 (*SD* = 0.87, 95% CI: 2.85–2.99), suggesting a comparatively lower level of perceived professionalism within the prison environment. Using a one-way repeated-measures ANOVA with post-hoc Bonferroni adjustments (Table 10), significant differences with a very large effect size were found across the five MQPL categories in the subgroup of male participants [Wilks' Lambda = .45, $F(4, 521) = 157.33$, $p < .001$, $\eta^2_p = .55$].

The highest average score for female participants is also found in the *Conditions and Family Contact* category, mirroring the trend observed in males. The mean score for this dimension is 3.13 (*SD* = 0.98, 95% CI: 2.93–3.34), indicating a positive perception of conditions and family interactions among female prisoners. Conversely, the *Professionalism* category has the lowest average score for females, with a mean of 2.76 (*SD* = 0.87, 95% CI: 2.58–2.95), aligning with the pattern observed in male participants. Confidence intervals were wider for females. *Professionalism* and *Well-being and Development* were rated the lowest. In the subgroup of female participants (Table 10), a repeated measures ANOVA determined that the scores of the five MQPL overarching categories varied significantly, as well [Wilks' Lambda = .52, $F(4, 82) = 19.09$, $p < .001$], with a very large effect size ($\eta^2_p = .48$).

Table 10

MQPL Scores: Analysing Five Categories across Male and Female Prisoners' Perspectives

				95% CI		
Subgroup	MQPL Scores [a]	*M*	*SD*	*LL*	*UL*	*p* (η^2_p) [b]
Male	Harmony	3.11	0.79	3.05	3.18	**< .001**
	Professionalism	2.92	0.87	2.85	2.99	(.547)
	Security	3.35	0.69	3.29	3.41	
	Conditions and Family Contact	3.48	0.87	3.41	3.56	
	Well-being and Development	3.12	0.74	3.06	3.19	
Female	Harmony	3.00	0.84	2.82	3.18	**< .001**
	Professionalism	2.76	0.87	2.58	2.95	(.482)
	Security	3.02	0.66	2.88	3.16	
	Conditions and Family Contact	3.13	0.98	2.93	3.34	
	Well-being and Development	2.84	0.81	2.66	3.01	

Note. MQPL = Measuring the Quality of Prison Life; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.
[a] Theoretical range 1–5. [b] *p* is based on the one-way repeated-measures ANOVAs. *p* value of under .05 is bold.

As presented in Table 11, the post-hoc comparisons revealed that male respondents tended to rate *Conditions and Family Contact* significantly higher than all other four MQPL categories, with mean differences ranging from 0.13 in comparisons to *Security* (*SE* = 0.03, *p* = .001) to 0.56 in comparisons to *Professionalism* (*SE* = 0.03, *p* < .001).

On the other hand, there is a consistent trend where *Professionalism* is rated significantly lower than other dimensions across the male subgroup. Comparisons revealed substantial negative differences in scores when *Professionalism* was contrasted to *Harmony* (*MD* = -0.20, *SE* = 0.01, *p* < .001), *Security* (*MD* = -0.43, *SE* = 0.03, *p* < .001), *Conditions and Family Contact* (*MD* = -0.56, *SE* = 0.03, *p* < .001), and *Well-being and Development* global score (*MD* = -0.21, *SE* = 0.02, *p* < .001).

Regarding the *Well-being and Development* category, the mean difference between male prisoners' scores on *Well-being and Development* and *Harmony* is not statistically significant (*MD* = -0.01, *SE* = 0.02, *p* = 1.000). This finding suggests a comparable evaluation of these two categories within the male subgroup.

However, significant differences emerged when comparing male prisoners' scores on *Well-being and Development* with the other three dimensions. Compared with *Professionalism*, male prisoners rated *Well-being and Development* significantly higher (*MD* = -0.21, *SE* = 0.02, *p* < .001). On the other hand, both *Security* and *Conditions and Family Contact* demonstrated significantly higher scores than the *Well-being and Development* score. The *MD*s for these comparisons are 0.23 (*SE* = 0.02) and 0.36 points on a scale from 1 to 5 (*SE* = 0.03), respectively, all statistically significant with *p* < .001 level.

These findings suggest that male prisoners' perceptions of *Professionalism*, *Security*, and *Conditions and Family Contact* significantly differ from the perceptions of *Well-being and Development* in the prison context.

Table 11

Comparative Analysis of MQPL Scores: Male and Female Prisoners' Perspectives

					95% CI for *MD*		
Subgroup	MQPL Scores	Comparison Score	*MD*	*SE*	*LL*	*UL*	*p* [a]
Male	Harmony	Professionalism	0.20	0.01	0.16	0.23	**< .001**
		Security	-0.24	0.03	-0.32	-0.16	**< .001**
		Conditions and Family Contact	-0.37	0.03	-0.44	-0.30	**< .001**
		Well-being and Development	-0.01	0.02	-0.06	0.04	1.000
	Professionalism	Security	-0.43	0.03	-0.51	-0.36	**< .001**
		Conditions and Family Contact	-0.56	0.03	-0.64	-0.49	**< .001**
		Well-being and Development	-0.21	0.02	-0.26	-0.15	**< .001**
	Security	Conditions and Family Contact	-0.13	0.03	-0.22	-0.01	**0.001**
		Well-being and Development	0.23	0.02	0.16	0.30	**< .001**
	Conditions and Family Contact	Well-being and Development	-0.36	0.03	0.28	0.43	**< .001**
Female	Harmony	Professionalism	0.23	0.03	0.14	0.33	**< .001**
		Security	-0.03	0.07	-0.23	0.18	1.000
		Conditions and Family Contact	-0.14	0.08	-0.36	0.08	0.747
		Well-being and Development	0.16	0.05	0.03	0.29	**0.007**
	Professionalism	Security	-0.26	0.07	-0.45	-0.07	**0.002**
		Conditions and Family Contact	-0.37	0.08	-0.60	-0.14	**< .001**
		Well-being and Development	-0.07	0.05	-0.21	0.06	1.000
	Security	Conditions and Family Contact	-0.11	0.09	-0.38	0.16	1.000
		Well-being and Development	0.19	0.07	-0.01	0.38	0.074
	Conditions and Family Contact	Well-being and Development	0.30	0.07	0.11	0.49	**< .001**

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Adjustment for multiple comparisons: Bonferroni. *p* value of under .05 is bold.

In the subgroup of female participants, the post-hoc comparisons highlighted distinct patterns in female prisoners' perceptions across different categories (Table 11).

Starting with *Harmony*, female prisoners rated *Well-being and Development* significantly lower, with a mean difference of -0.16 (*SE* = 0.05, *p* = .007). This result suggests that, from the female perspective, the dimension of *Well-being and Development* is perceived as less positive than the harmonious aspects of the prison environment.

Comparisons with *Professionalism* indicate a non-significant mean difference of 0.07 (*SE* = 0.05, *p* = 1.000), suggesting a comparable evaluation of *Well-being and Development* and *Professionalism* among female prisoners.

When examined in contrast to *Security*, female respondents also tended to rate *Well-being and Development* lower, with a mean difference of -0.19 (SE = 0.07, *p* = .074), without reaching statistical significance. *Professionalism* and *Conditions and Family Contact* had the highest mean difference, accounting for -0.37 (*SE* = 0.08, *p* < .001) points on a scale from 1 to 5.

The most distinct findings emerged in comparisons with *Conditions and Family Contact*. Female prisoners' evaluations of *Well-being and Development* significantly differ from *Conditions and Family Contact*, showcasing a mean difference of -0.30 points on a scale from 1 to 5 (*SE* = 0.07, *p* < .001). This finding implies that female prisoners perceived *Well-being and Development* more negatively than their assessments of conditions within the prison and family contact.

These findings suggest that female prisoners tended to perceive *Well-being and Development* less positively than *Harmony*, *Security*, and *Conditions and Family Contact*, but similar to *Professionalism*.

TAKEAWAY NOTES

Overall Perception of Prison Life Across MQPL Categories

Conditions and Family Contact rated highest, Professionalism lowest

Female prisoners showed a pattern of ratings similar to males, with comparable category rankings

Prisoners' Perception of Well-Being and Development within MQPL Framework

Male prisoners tended to rate Well-being and Development less positively than Conditions and Family Contact and Security but more positively than both Harmony and Professionalism

Female prisoners tended to view Well-being and Development less positively than Harmony, Security, and Conditions and Family Contact, but similar to Professionalism

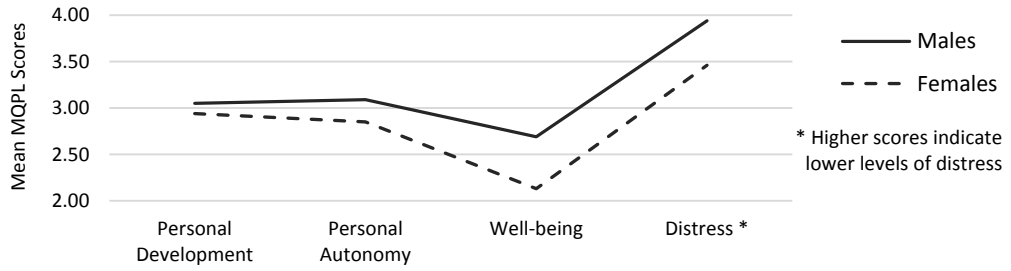
Overall Perception of the Well-being and Development in Prison

The following research question was raised to investigate the perceptions and experiences of prisoners regarding personal development, autonomy, well-being, and distress within the prison environment and determine the relative differences in their ratings. In other words, the study aimed to assess whether there were significant disparities among prisoners' perceptions of these aspects of the quality of prison life. Therefore, four *Well-being and Development* dimensions were the focus of our next analyses. Figure 2 illustrates the mean scores of these MQPL dimensions. Tables 12 and 13 present a detailed analysis of the MQPL's four *Well-Being and Development* scores from both male and female perspectives.

Overall, male prisoners tended to rate *Distress* the most positively, indicating lower levels of distress, while the dimension of *Well-being* received the lowest rating. A similar trend was observed among females, with *Distress* receiving the highest rating and *Well-being* the lowest. Both subgroups of prisoners rated *Personal Development* and *Personal Autonomy* dimensions between these extremes. Female prisoners rated *Personal Development*, *Personal Autonomy* and *Well-being* dimensions below the generally recommended threshold of 3, a trend not observed in the male subgroup (Figure 2).

Figure 2

Mean Scores on the Four Well-Being and Development Dimensions of the Measuring Quality of Prison Life (MQPL) Survey: Male and Female Prisoners Perspectives



As mentioned, among male participants, the highest average score is observed in the *Distress* dimension, with a mean of 3.94 (*SD* = 0.86, 95% CI: 3.87–4.02), indicating that male prisoners reported experiencing lower levels of distress, reflecting a greater sense of emotional well-being or stability. On the other hand, the *Well-being* dimension has the lowest average score, with a mean of 2.69 (*SD* = 0.96, 95% CI: 2.61–2.77), suggesting that male prisoners reported experiencing higher levels of pain, punishment, and "pains of imprisonment", reflecting a poorer quality of prison life in terms of their overall well-being. Using a one-way repeated-measures ANOVA with post-hoc Bonferroni adjustments (Table 12), significant differences with a very large effect size were found across the four MQPL's *Well-Being and Development* dimensions in the subgroup of male participants [Wilks' Lambda = .34, $F(3, 522) = 337.22$, $p < .001$, $\eta^2_p = .66$].

Among female participants, the highest average score is also found in the *Distress* dimension, mirroring the trend observed in males (Table 12). The mean score for this dimension is 3.46 (*SD* = 1.03, 95% CI: 3.24–3.68), indicating a positive perception of emotional well-being among female prisoners. Contrastingly, the *Well-being* dimension has the lowest average score for females, with a mean of 2.13 (*SD* = 0.90, 95% CI: 1.93–2.32), consistent with the trend noted in male participants. Only *Distress* was rated above the generally acceptable threshold of 3, while *Personal Development*, *Personal Autonomy* and *Well-being* were rated below the threshold. A repeated measures ANOVA determined that the scores of the four MQPL's *Well-Being and Development* dimensions also varied significantly in the subgroup of female participants [Wilks' Lambda = .34, $F(3, 83) = 53.11$, $p < .001$], with a very large effect size ($\eta^2_p = .66$).

Post-hoc comparisons from Table 13 present how prisoners perceived the MQPL's *Well-being and Development* dimensions.

Among male prisoners (Table 13), *Well-being* was rated significantly lower than *Personal Development* (*MD* = -0.36, *SE* = 0.04, $p < .001$) and also lower than *Personal Autonomy* (*MD* = -0.40, *SE* = 0.03, $p < .001$). Moreover, *Well-being* received significantly lower scores than *Distress*, with a mean difference of -1.25 points on a scale from 1 to 5 (*SE* = 0.04, $p < .001$).

Essentially, male prisoners evaluated their well-being less favourably compared to their perceptions of the prison environment's support for their personal growth and development, as well as their sense of agency and self-determination. At the same time, this finding suggests a relatively stronger perception of "pains of imprisonment", such as feelings of punishment and tension, compared to the experience of severe emotional disturbance or distress.

Table 12

MQPL Scores: Analysing Well-Being and Development Dimensions across Male and Female Prisoners' Perspectives

				95% CI		
Subgroup	MQPL Well-being and Development [a]	*M*	*SD*	*LL*	*UL*	*p* (η^2_p) [b]
Male	Personal Development	3.05	0.96	2.97	3.13	**< .001**
	Personal Autonomy	3.09	0.79	3.02	3.16	(.660)
	Well-being	2.69	0.96	2.61	2.77	
	Distress [c]	3.94	0.86	3.87	4.02	
Female	Personal Development	2.94	0.99	2.73	3.16	**< .001**
	Personal Autonomy	2.85	0.95	2.65	3.06	(.657)
	Well-being	2.13	0.90	1.93	2.32	
	Distress [c]	3.46	1.03	3.24	3.68	

Note. MQPL = Measuring the Quality of Prison Life; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.
[a] Theoretical range 1–5. [b] *p* is based on the one-way repeated-measures ANOVAs. *p* value of under .05 is bold. [c] Higher scores indicate lower levels of distress.

Continuing, it is important to note that no significant mean difference was observed between *Personal Development* and *Personal Autonomy* in the subgroup of male prisoners (*MD* = -0.04, *SE* = 0.03, *p* = 1.000). This finding could suggest that male inmates perceive their opportunities for personal growth, including addressing offending behaviour and preparing for release, as aligned with their feelings of agency and self-determination within the prison environment. The absence of a significant difference implies that male prisoners may perceive these two dimensions as interconnected aspects of their overall experience. In other words, as individuals engage in activities aimed at their rehabilitation and preparing for reintegration into society, they also experience a greater sense of control over their own lives and decisions.

The post-hoc comparisons among female prisoners highlighted some similarities to the patterns confirmed in male prisoners' perceptions across the same MQPL dimensions (Table 13).

Starting with *Well-being*, female prisoners rated this dimension significantly lower than both *Personal Development* and *Personal Autonomy*, with mean differences of -0.82 (*SE* = 0.10, *p* < .001) and -0.73 (*SE* = 0.08, *p* < .001), respectively (Table 13). This result indicates that female inmates perceived their feelings of pain, punishment, and tension associated with the "pains of imprisonment" to be more pronounced compared to their engagement in activities related to personal growth and preparation for release, as well as their sense of agency and self-determination within the prison environment.

Table 13

Comparative Analysis of MQPL's Well-Being and Development Dimensions Scores: Male and Female Prisoners' Perspectives

					95% CI for *MD*		
Subgroup	MQPL Well-being and Development	Comparison Score	*MD*	*SE*	*LL*	*UL*	*p* [a]
Male	Personal Development	Personal Autonomy	-0.04	0.03	-0.12	0.05	1.000
		Well-being	0.36	0.04	0.26	0.46	**< .001**
		Distress	-0.89	0.05	-1.02	-0.77	**< .001**
	Personal Autonomy	Well-being	0.40	0.03	0.31	0.48	**< .001**
		Distress	-0.86	0.04	-0.95	-0.76	**< .001**
	Well-being	Distress	-1.25	0.04	-1.36	-1.15	**< .001**
Female	Personal Development	Personal Autonomy	0.09	0.07	-0.10	0.28	1.000
		Well-being	0.82	0.10	0.55	1.09	**< .001**
		Distress	-0.52	0.11	-0.83	-0.21	**< .001**
	Personal Autonomy	Well-being	0.73	0.08	0.50	0.95	**< .001**
		Distress	-0.61	0.12	-0.92	-0.29	**< .001**
	Well-being	Distress	-1.33	0.11	-1.64	-1.03	**< .001**

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Adjustment for multiple comparisons: Bonferroni. *p* value of under .05 is bold.

Furthermore, female prisoners rated *Distress* significantly higher than *Well-being*, *Personal Development*, and *Personal Autonomy*, with mean differences of 0.52 (*SE* = 0.11, p < .001), 0.61 (*SE* = 0.12, *p* < .001), and 1.33 points on a scale from 1 to 5 (*SE* = 0.11, *p* < .001), respectively (Table 13). In summary, female inmates reported lower levels of severe emotional disturbance relative to their experiences of pain, punishment, and tension associated with imprisonment, as well as their engagement in personal development activities and sense of agency and self-determination within the prison environment.

TAKEAWAY NOTES

MQPL Well-Being and Development Dimension

Personal Development and Personal Autonomy rated the highest

Well-being and Distress lowest

Comparative Evaluation of Well-Being and Development Dimensions

Prisoners rated Distress the most positively, suggesting lower distress levels

Well-being received the lowest rating, indicating pronounced "pains of imprisonment"

Personal Development and Personal Autonomy were not significantly different, suggesting interconnected experiences related to personal growth and the feelings of agency and self-determination

Prisoners' Perspectives on Their Well-Being and Development

Tables 14, 15, 16, and 17, respectively, outline descriptive statistics, agreement levels, and prisoners' perceptions of aspects of the *Personal Development*, *Personal Autonomy*, *Well-being*, and *Distress* dimensions within the MQPL framework. The following main research question was raised: What are the descriptive statistics and agreement levels for various statements, as recorded in the MQPL survey?

Analysing the mean scores in the MQPL's *Personal Development* dimension, the statement "I see the time spent in this prison as a chance to change" has the highest rating of 3.56 (*SD* = 1.27), indicating a relatively favourable perception among prisoners regarding the transformative potential of their time served. This positive sentiment is further underscored by 25% of prisoners strongly agreeing and 38% agreeing that their time in prison is a valuable chance for personal change. Furthermore, the percentages of prisoners who strongly disagreed and disagreed are notably lower (10% and 13%, respectively), reinforcing the overall positive trend in perceptions (Table 14).

Next, the mean score of the statement "The prison regime here encourages me to think about plans for life after release" of 3.33 (*SD* = 1.34) suggests a moderately positive experience among prisoners regarding the extent to which the prison regime fosters their engagement in thinking about and planning for their release (Table 14). Approximately 21% of prisoners strongly agreed,

and 34% agreed with this statement, indicating that a significant proportion perceived that the prison regime fosters a constructive environment for contemplating and preparing for the post-release period. On the other hand, approximately 15% strongly disagreed, and 13% disagreed, suggesting that a notable subset hold a negative view regarding the regime's effectiveness in encouraging such contemplation.

Table 14

Personal Development in MQPL: Descriptive Statistics and Agreement Levels

MQPL Personal Development [a]	*M*	*SD*	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
My needs are taken into account in this prison.	2.89	1.25	10.0	26.8	20.1	26.5	15.7
In this prison, I am encouraged to work towards my goals.	3.10	1.29	16.2	25.4	21.9	22.1	12.8
I get help from employees so that I can lead a life in accordance with the law after release.	2.70	1.36	12.4	18.7	20.1	23.1	25.0
In this prison, all employees make efforts to prevent convicts from re-offending after release.	2.79	1.27	10.6	20.0	27.2	21.1	20.5
The regime in this prison encourages me to make positive changes and progress.	3.09	1.27	14.4	26.5	25.9	18.2	14.2
I see the time spent in this prison as a chance to change.	3.56	1.27	25.2	37.8	13.7	13.4	9.7
The prison regime here encourages me to think about plans for life after release.	3.33	1.34	20.8	33.9	17.3	12.6	15.1
Generally speaking, I am just 'doing' the sentence time, instead of using that time qualitatively.	2.81	1.29	19.1	25.2	21.1	22.3	11.1

Note. MQPL = Measuring the Quality of Prison Life. Values are percentages or as otherwise indicated.
[a] Theoretical range 1–5.

On the other end, the statement "I get help from employees so that I can lead a life in accordance with the law after release" has the lowest mean score of 2.70 (*SD* = 1.36), suggesting a less favourable view of the support provided for reintegration (Table 14). However, 25% of prisoners strongly disagreed, and 23% disagreed with this statement. In comparison, only 12% strongly agreed, indicating that a substantial portion of the sample expressed dissatisfaction with the assistance they perceived for transitioning to a law-abiding life post-release.

Similarly, the statement "In this prison, all employees make efforts to prevent convicts from re-offending after release" has a mean score of 2.79, with a similar variability (*SD* = 1.27). The percentages reveal that 31% of prisoners strongly disagreed with the statement, with an

additional 21% disagreeing, suggesting a significant proportion expressing doubt about the prison's efficacy in preventing recidivism. Conversely, 11% strongly agreed, and 20% agreed, indicating a smaller proportion endorsing the prison's efforts to stop offenders from committing offences upon release (Table 14).

When it comes to the prisoners' perceptions of *Personal Autonomy* within the MQPL framework, the statement "You can keep your personality in this prison" reached the highest average score (*M* = 3.60, *SD* = 1.14), demonstrating a relatively high agreement with the notion of maintaining one's personality within the prison environment (Table 15). The majority agreed (44%) or strongly agreed (21%) with that statement on the potential for individuals to maintain their identity in prison, whereas only 6% strongly disagreed and 13% disagreed.

The statement "I have no control over my daily life in this prison" received an average score of *M* = 3.33 (*SD* = 1.22), indicating moderate agreement. A notable proportion (32%) disagreed with this statement, suggesting a significant subset of prisoners confirmed having control over their daily activities. Conversely, 20% agreed, and 8% strongly agreed, indicating opposite opinions (Table 15).

Regarding "The regime in this prison allows me to think for myself", the average score was *M* = 3.27 (*SD* = 1.22), also suggesting a moderate level of agreement (Table 15). While 36% of participants agreed and 15% strongly agreed with the statement, a total of 18% of participants disagreed and 11% strongly disagreed. The range of responses indicates diversity in how prisoners perceived the opportunities for independent thought within the prison regime.

Finally, the statement "Wherever I am in this prison, I still feel like a prisoner" received the lowest average score (*M* = 2.01, *SD* = 1.11). Almost four in ten prisoners (39%) strongly agreed with this statement, highlighting a widespread perception of confinement. On the other hand, 10% of participants disagreed with this statement, while only 4% strongly disagreed, indicating that a significant portion of prisoners felt a sense of confinement (Table 15).

Table 15

Personal Autonomy in MQPL: Descriptive Statistics and Agreement Levels

MQPL Personal Autonomy [a]	*M*	*SD*	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I have no control over my daily life in this prison.	3.33	1.22	8.0	20.3	20.3	32.4	18.2
You can keep your personality in this prison.	3.60	1.14	20.5	44.0	16.0	12.6	6.4
The regime in this prison allows me to think for myself.	3.27	1.22	15.1	35.7	20.5	17.5	10.6
Wherever I am in this prison, I still feel like a prisoner.	2.01	1.11	38.8	37.5	9.3	9.8	3.8

Note. MQPL = Measuring the Quality of Prison Life. Values are percentages or as otherwise indicated.

[a] Theoretical range 1–5.

Table 16 presents the results of well-being perceptions among prisoners, as given in the MQPL survey, presenting both descriptive statistics and agreement levels on four items. The first statement ("My experience in this prison is painful") received the highest average score (*M* = 3.08, *SD* = 1.34), indicating a moderate level of agreement among participants. Approximately 16% of participants strongly agreed, and 16% strongly disagreed with this statement, which could imply a divergence in perspectives. Additionally, 20% agreed, and 19% neither agreed nor disagreed, suggesting a substantial portion of participants acknowledged varying degrees of discomfort. On the other hand, 28% disagreed, reflecting a subset of individuals who strongly rejected the notion that their prison experience was painful (Table 16).

Regarding tension levels, the statement "I feel tense in this prison" reached a mean score of 2.67 (*SD* = 1.29). Notably, a substantial portion of the respondents experienced heightened stress by agreeing or strongly agreeing with the statement (24%, both), while 23% disagreed and 8% strongly disagreed, emphasizing variability in tension perceptions (Table 16).

Similarly, the statement "My experience with being held in this prison is stressful" received a mean score of 2.70 (*SD* = 1.31). Here, 23% strongly agreed, and 26% of participants agreed with the statement, emphasizing substantial stress levels, while 21% disagreed and only 10% strongly disagreed, highlighting variability in stress perceptions (Table 16).

The most noteworthy contrast is observed in agreement levels to the statement "The time spent in this prison largely feels like a punishment", with the lowest average score of 2.01 (*SD* = 1.00). Approximately 35% of respondents strongly agreed, while 41% agreed with the statement, indicating a considerable proportion perceiving their time as overwhelmingly punitive. In contrast, only 3% strongly disagreed, and 6% disagreed, suggesting a limited number of participants viewed their time as not punitive (Table 16).

Table 16

Well-Being in MQPL: Descriptive Statistics and Agreement Levels

MQPL Well-being [a]	*M*	*SD*	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
My experience in this prison is painful.	3.08	1.34	16.2	19.6	18.7	28.3	16.0
I feel tense in this prison.	2.67	1.29	23.7	24.1	20.3	22.6	8.2
My experience with being held in this prison is stressful.	2.70	1.31	22.9	25.9	19.6	21.1	10.1
The time spent in this prison largely feels as a punishment.	2.01	1.00	34.7	41.1	15.2	5.7	2.9

Note. MQPL = Measuring the Quality of Prison Life. Values are percentages or as otherwise indicated.
[a] Theoretical range 1–5.

Distress levels among participants, recorded by the same name MQPL dimension, are presented in Table 17. *Distress* is a unique dimension in the MQPL, with a higher score indicating lower levels of distress or a more positive experience in this aspect of prison life. Firstly, the item "I was thinking about suicide in this prison" has the highest mean score (*M* = 4.43, *SD* = 1.01), indicating that this was the aspect where prisoners reported the lowest level of distress. Further analysis confirms this: 66% of participants strongly disagreed with this statement, while only 3% strongly agreed, revealing that suicidal thoughts appeared to be a significant concern for a minority of participants.

Next, the item "I feel like I can manage my emotions here" has a lower mean distress level of 3.84 (*SD* = 1.18). The majority (34%) strongly agreed with the statement, while 37% agreed, suggesting a relatively positive perception of emotional management among many participants. However, 11% reported neutrality, and 17% disagreed or strongly disagreed, indicating room for improvement in supporting emotional well-being (Table 17).

"I have trouble sleeping at night" demonstrates the lowest mean score (*M* = 3.37, *SD* = 1.36). The highest percentage is found in the disagreement category, with 30%, followed by 26% strongly disagreeing. However, 12% strongly agreed, and 21% agreed, indicating a notable proportion of participants experiencing sleep-related distress (Table 17).

Table 17

Distress in MQPL: Descriptive Statistics and Agreement Levels

MQPL Distress [a]	*M*	*SD*	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I was thinking about a suicide in this prison.	4.43	1.01	3.3	5.1	2.9	21.6	65.6
I feel like I can manage my emotions here.	3.84	1.18	34.4	36.8	11.3	11.8	5.2
I have trouble sleeping at night.	3.37	1.36	11.5	20.9	11.8	29.8	25.5

Note. MQPL = Measuring the Quality of Prison Life. Values are percentages or as otherwise indicated.

[a] Theoretical range 1–5. Higher scores indicate lower levels of distress.

TAKEAWAY NOTES

Personal Development (MQPL)

Positive perceptions regarding the chance for personal change in prison

Moderate positivity regarding the prison regime encouraging thoughts about life after release

Less positive view of assistance for reintegration and the prison's efficacy in preventing recidivism

Personal Autonomy (MQPL)

Perception of maintaining personality within the prison is relatively high

Moderate agreement regarding control over daily life and thinking for oneself in prison

The widespread experience of feeling like a prisoner, indicating a sense of confinement

Well-Being (MQPL)

Moderate agreement on prison experience being painful

Heightened stress levels were reported, especially in the context of being held in prison

A considerable proportion perceives time spent in prison solely as a punishment itself

Distress (MQPL)

The distress dimension indicates low distress levels in thinking about suicide but mixed responses on emotional management and night-time sleep issues

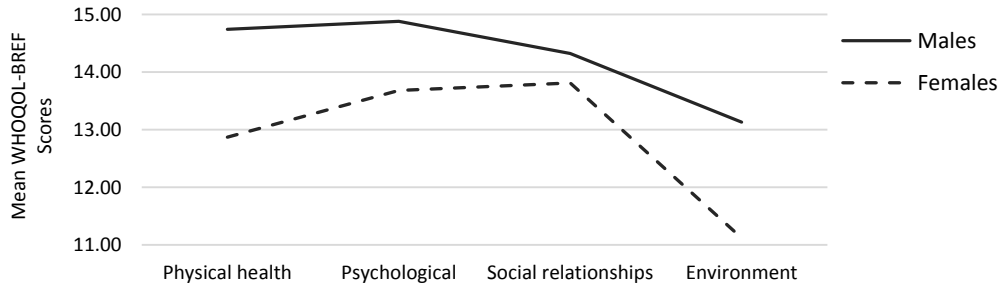
Individual Quality of Life of Prisoners

The following research question investigated prisoners' perceptions across various dimensions of individual quality of life. It described patterns or differences in their satisfaction levels with psychological health, physical health, social relationships, and environmental health within the prison setting. Figure 3 illustrates the mean scores of four WHOQOL-BREF domains, whereas Tables 18 and 19 present a detailed analysis of the WHOQOL-BREF scores from both male and female perspectives.

Overall, male prisoners tended to rate their *Psychological* and *Physical health* the most positively. On the other hand, a different trend was observed among females, with Social relationships receiving the highest rating. However, both subgroups of prisoners rated the Environmental health domain as the lowest (Figure 3).

Figure 3

Mean Scores on the Four WHOQOL-BREF Domains: Male and Female Prisoners' Perspectives on Their Individual Quality of Life



Among male prisoners (Table 18), the highest average score is observed in the *Psychological* domain (*M* = 14.88, *SD* = 3.15, 95% CI: 14.61–15.15), indicating a relatively positive psychological health assessment. This finding is followed by ratings in the *Physical health* domain (*M* = 14.74, *SD* = 3.47, 95% CI: 14.43–15.02), suggesting a generally favourable perception of their physical well-being. In contrast, *Social relationships* (*M* = 14.32, *SD* = 3.51, 95% CI: 14.02–14.62) and *Environmental Health* (*M* = 13.13, *SD* = 3.39, 95% CI: 12.84–13.42) domains received comparatively lower scores. When four WHOQOL-BREF scores were compared, significant differences were found [Wilks' Lambda = .70, $F(3, 519) = 73.92$, $p < .001$], with a large effect size ($\eta^2_p = .30$).

To some extent, female prisoners exhibited a different pattern in their assessments (Table 18). While the *Psychological health* domain still received a relatively high average score (*M* = 13.68, *SD* = 3.59, 95% CI: 12.91–14.45), the *Social relationships* domain was rated higher (*M* = 13.81, *SD* = 3.35, 95% CI: 13.09–14.52). Similarly to the subgroup of male prisoners, the *Physical health* domain (*M* = 12.87, *SD* = 3.80, 95% CI: 12.05–13.68) received a lower rating than the *Psychological* domain. Moreover, the *Environmental health* domain (*M* = 11.12, *SD* = 3.83, 95%

CI: 10.30–11.94) received the lowest average scores among female prisoners. A repeated measures ANOVA determined that scores varied significantly across domains of individual quality of life [Wilks' Lambda = .59, $F(3, 83) = 19.32$, $p < .001$], with a large effect size ($\eta^2_p = .41$).

Table 18

WHOQOL-BREF Domains: Analysing Perspectives on Individual Quality of Life across Male and Female Prisoners' Perspectives

				95% CI		
Subgroup	WHOQOL-BREF domains [a]	*M*	*SD*	*LL*	*UL*	*p* (η^2_p) [b]
Male	Physical health	14.74	3.47	14.43	15.02	**< .001**
	Psychological	14.88	3.15	14.61	15.15	(.299)
	Social relationships	14.32	3.51	14.02	14.62	
	Environmental health	13.13	3.39	12.84	13.42	
Female	Physical health	12.87	3.80	12.05	13.68	**< .001**
	Psychological	13.68	3.59	12.91	14.45	(.411)
	Social relationships	13.81	3.35	13.09	14.52	
	Environmental health	11.12	3.83	10.30	11.94	

Note. WHOQOL-BREF = World Health Organization Quality of Life Brief Version; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 4–20. [b] *p* is based on the one-way repeated-measures ANOVAs. *p* value of under .05 is bold.

Post-hoc comparisons from Table 19 present how prisoners perceived different aspects of their individual quality of life. The analyses revealed several significant findings regarding prisoners' perceived quality of life domains.

Among male prisoners, our analysis revealed no statistically significant differences between the *Physical health* and *Psychological well-being* domains (*MD* = -0.14, *SE* = 0.12, *p* = 1.000), indicating a comparable assessment level across these two domains (Table 19). Similarly, no statistically significant differences were confirmed between the *Physical health* and *Social relationships* domains (*MD* = 0.42, *SE* = 0.16, *p* = .060).

However, significant differences emerged when comparing the *Psychological* and *Environmental health* domains. *Environmental health* received lower ratings, with a mean difference of -1.75 points on a scale from 4 to 20 (*SE* = 0.12, *p* < .001). The finding implies that male prisoners perceive the environmental aspects of their prison life, which include financial resources, safety, and opportunities for recreation, among other things, less positively than their psychological well-being (Table 19).

Likewise, significant differences were observed between the *Physical health* and *Environmental health* domains, with male prisoners rating *Environmental health* significantly lower by -1.61 points (*SE* = 0.14, *p* < .001), suggesting a perception of better physical health in terms of activities of daily living, energy levels, and pain management, compared to environmental conditions (Table 19).

Moreover, *Social relationships* received significantly lower ratings than the *Psychological* domain (*MD* = -0.56, *SE* = 0.14, *p* = .001), indicating that male prisoners tend to prioritise aspects related to their psychological well-being, such as self-esteem and positive feelings, over their social relationships and support networks within the prison context (Table 19).

Lastly, male prisoners rated the *Environmental health* domain significantly lower than the *Social relationships* domain, with a mean difference of -1.19 points (*SE* = 0.15, *p* < .001). This result could suggest that despite potential challenges in their social interactions, inmates may still perceive their social relationships and support systems as relatively more satisfactory than environmental factors such as financial resources, safety, and opportunities for leisure activities within the prison setting.

Table 19

Comparative Analysis of WHOQOL-BREF Domains Scores: Male and Female Prisoners' Perspectives

					95% CI for *MD*		
Subgroup	WHOQOL-BREF domains	Comparison Score	*MD*	*SE*	*LL*	*UL*	*p* [a]
Male	Physical health	Psychological	-0.14	0.12	-0.47	0.18	1.000
		Social relationships	0.42	0.16	-0.01	0.85	.060
		Environmental health	1.61	0.14	1.24	1.95	**< .001**
	Psychological	Social relationships	0.56	0.14	0.18	0.94	**.001**
		Environmental health	1.75	0.12	1.43	2.08	**< .001**
	Social relationships	Environmental health	1.19	0.15	0.80	1.59	**< .001**
Female	Physical health	Psychological	-0.81	0.30	-1.61	-0.01	**.046**
		Social relationships	-0.94	0.47	-2.19	0.32	.282
		Environmental health	1.75	0.38	0.71	2.79	**< .001**
	Psychological	Social relationships	-0.13	0.44	-1.33	1.07	1.000
		Environmental health	2.56	0.36	1.58	3.53	**< .001**
	Social relationships	Environmental health	2.69	0.47	1.42	3.95	**< .001**

Note. WHOQOL-BREF = World Health Organization Quality of Life Brief Version; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Adjustment for multiple comparisons: Bonferroni. *p* value of under .05 is bold.

As mentioned, the *Social relationships* domain was rated the highest in the subgroup of female prisoners, followed by the *Psychological health* score (Table 18). Interestingly, the comparison between *Social relationships* and *Psychological* well-being did not yield a statistically significant difference (*MD* = 0.13, *SE* = 0.44, *p* = 1.000; Table 19), which could imply that female inmates rate their social relationships and psychological well-being similarly.

Furthermore, our analysis revealed no statistically significant differences between the *Social relationships* and *Physical health* domains, which ranked third in this subgroup (*MD* = 0.94, *SE* = 0.47, *p* = .282), which could indicate that female prisoners rate their social relationships and physical health comparably. This finding suggests that female inmates perceive their personal relationships, social support, and sexual activity with similar importance or satisfaction as their

physical and psychological health despite the associated challenges, such as issues related to sleep, activities of daily living, mobility, pain, and discomfort, bodily image and appearance, negative and positive feelings, self-esteem, spirituality, religion, personal beliefs, and cognitive difficulties affecting thinking, learning, memory, and concentration.

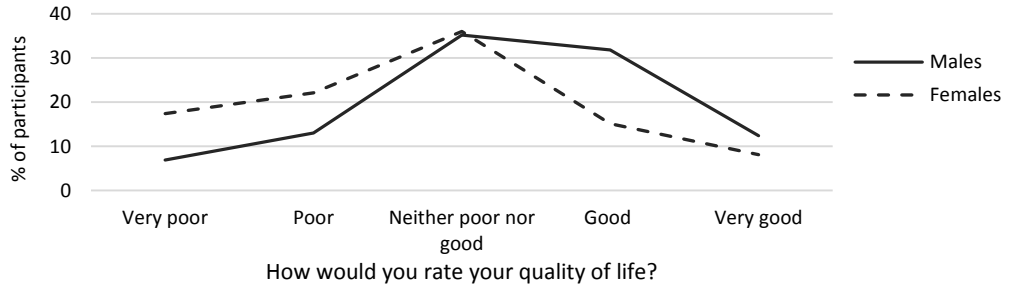
In contrast, *Environmental health* received the lowest rating among all domains. Comparisons revealed substantial negative differences in scores when contrasted with *Social relationships* (*MD* = -2.69, *SE* = 0.47), *Psychological health* (*MD* = -2.56, *SE* = 0.36), and *Physical health* (*MD* = -1.75, *SE* = 0.38), all statistically significant with $p < .001$ level. This finding suggests that female prisoners perceive aspects related to financial resources, safety and security, health and social care accessibility, opportunities for recreation and participation in leisure activities, availability of needed information, conditions of their living place and physical environment less favourably compared to other domains of quality of life.

Overall Ratings of Individual Quality of Life and General Health Satisfaction

To complete a description of the individual quality of life, average ratings and distributions of prisoners' responses to the WHOQOL-BREF's questions "How would you rate your quality of life?" and "How satisfied are you with your health?" were analysed. Figures 4 and 5 illustrate prisoners' ratings on a 5-point scale, whereas Tables S2 and S3 provide detailed data distributions. The following two questions were raised: How do prisoners generally rate their health on a 5-point scale, and what are the common responses? What are the satisfaction levels of prisoners regarding their health status?

Figure 4

Prisoners' Overall Rating of Quality of Life (WHOQOL-BREF item 1)



Approximately one-third (35.2%) of male participants who answered the WHOQOL-BREF's question "How would you rate your quality of life?" rated their quality of life neutrally. In comparison, another one-third (31.8%) rated it as 'Good' (Figure 4). A smaller proportion rated their quality of life as 'Very good' (12.4%). However, one-fifth of male participants rated their quality of life as 'Poor' or 'Very poor' (19.9%, combined). On a 5-point scale, the mean score in this subgroup was 3.30 (*SD* = 1.07, *Mdn* = 3.00, *IQR* = 1.00, range 1–5).

Female prisoners showed a different distribution, with a higher percentage rating their quality of life as 'Poor' or 'Very poor' (39.8% combined). The majority still rated their quality of life neutrally, similar to male prisoners, though with a slightly more significant proportion (36.5%). While 15.3% of female participants rated their overall life quality as 'Good', only 8.2% selected the maximum rating. On a 5-point scale, the mean score in this subgroup was 2.74 (*SD* = 1.17, *Mdn* = 3.00, *IQR* = 1.00, range 1–5).

In general, while a significant proportion of male participants tended to rate their quality of life neutrally or positively, female prisoners exhibited a more pronounced skew towards lower ratings, with almost 40% rating their quality of life as 'Poor' or 'Very poor'. This disparity suggests that female prisoners may face additional challenges or perceive their circumstances less favourably compared to the subgroup of male participants (Figure 4).

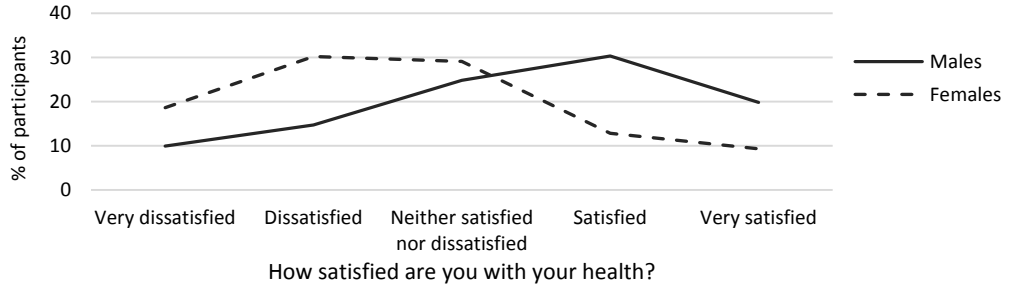
The analysis of responses to the WHOQOL-BREF's question "How satisfied are you with your health?" revealed distinct patterns (Figure 5). Among male respondents, approximately half reported being satisfied or very satisfied (50.1%, combined), while a considerable portion (24.8%) indicated neutrality, neither satisfied nor dissatisfied. A smaller proportion expressed dissatisfaction, with 9.9% being very dissatisfied and 14.7% dissatisfied. The mean score on the 5-point scale for this subgroup indicates a moderate level of general health satisfaction (*M* = 3.36, *SD* = 1.23, *Mdn* = 4.00, *IQR* = 1.00, range 1–5).

In contrast, female prisoners exhibited a different trend, with a higher proportion reporting dissatisfaction. Nearly half of female respondents (48.8%, combined) expressed dissatisfaction with their health, while 29.1% reported neutrality. A smaller percentage reported satisfaction, with 12.8% being satisfied and 9.3% very satisfied. The mean score for this subgroup was 2.64 (*SD* = 1.20, *Mdn* = 3.00, *IQR* = 1.00, range 1–5), indicating a lower level of general health satisfaction.

The obtained results showed that approximately every other male prisoner reported moderate to high levels of satisfaction with their health, with a considerable portion expressing neutrality. Conversely, the subgroup of female prisoners demonstrated a higher prevalence of dissatisfaction, with nearly half of the participants reporting low levels of health satisfaction.

Figure 5

Prisoners' General Health Satisfaction (WHOQOL-BREF item 2)



TAKEAWAY NOTES

WHOQOL-BREF Domains

Psychological and Physical Health domains rated highest, Environmental health lowest
Moderate level of satisfaction with the overall quality of life and general health

Prisoners' Quality of Life

Male prisoners rated Psychological and Physical health most positively

Female prisoners rated Social relationships as the highest

Environmental health received the lowest ratings, indicating dissatisfaction with aspects like safety, resources and recreation or leisure activities

Overall Rating of Quality of Life and General Health Satisfaction

Male prisoners tended to rate their quality of life neutrally or positively, with approximately every other male prisoner reporting moderate to high levels of health satisfaction

In contrast, female prisoners exhibited a skew towards lower ratings, with almost 40% rating their quality of life as low or very low

Female prisoners also showed a higher prevalence of health dissatisfaction, with nearly half reporting low levels of satisfaction regarding their general health

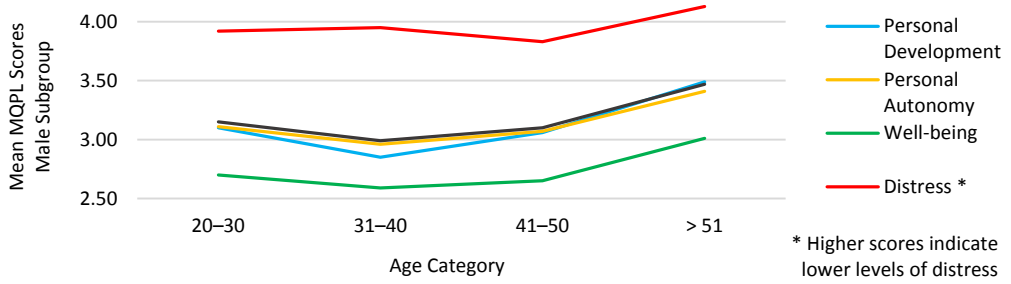
Age-Related Variations in Well-Being and Development

The following two questions were raised: How do perceptions of personal development, autonomy, well-being, distress, and global well-being and development vary across different age groups? Do older age groups of prisoners report higher levels of these dimensions than younger age groups? Figures 6 and 7 illustrate prisoners' scores recorded on MQPL's *Well-Being and Development Dimensions* across various age categories, whereas descriptive statistics and correlation coefficients are given in Table S4. These analyses provide insights into how perceptions of well-being and development vary across different age groups among prisoners.

In the subgroup of male prisoners (Table S4), the highest mean of the *Personal Development* score is observed in the > 51 age group (M = 3.46, SD = 0.92), while the lowest mean is found in those aged 31–40 (M = 2.85, SD = 0.95). Similarly, for *Personal Autonomy*, the highest mean is in the > 51 age group (M = 3.41, SD = 0.81), and the lowest mean is in the 31–40 age group (M = 2.96, SD = 0.78). Regarding *Well-being*, the highest mean is also in the > 51 age group (M = 3.01, SD = 1.06), and the lowest mean is in the 31–40 age group (M = 2.59, SD = 0.92). *Distress* scores show the highest mean in the > 51 age group (M = 4.13, SD = 0.77) and the lowest mean in the 31–40 age group (M = 3.95, SD = 0.89). Lastly, for the *Global Well-Being and Development* Score, the highest mean is in the > 51 age group (M = 3.47, SD = 0.73), and the lowest mean is in the 31–40 age group (M = 2.99, SD = 0.74).

Figure 6

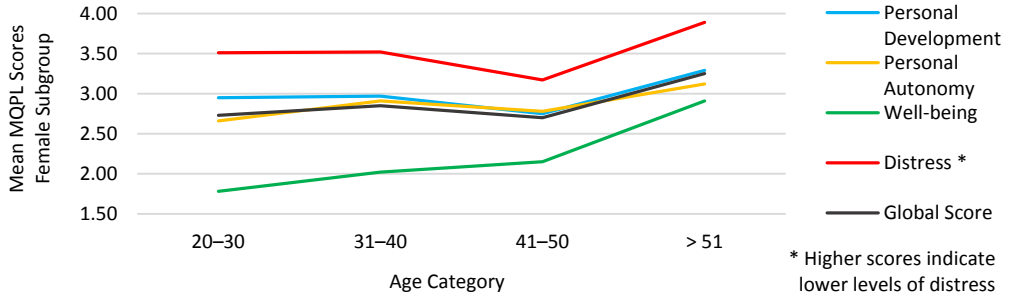
MQPL's Well-Being and Development Dimensions across Age Categories: Male Prisoners' Perspective



When it comes to the subgroup of female prisoners (Table S4), the highest mean of the *Personal Development* score is found in the > 51 age group (*M* = 3.29, *SD* = 0.80), while the lowest mean is in the 41–50 age group (*M* = 2.75, *SD* = 0.99). For Personal Autonomy, the highest mean is also in the > 51 age group (*M* = 3.13, *SD* = 0.73), and the lowest mean is in the 41–50 age group (*M* = 2.78, *SD* = 1.04). Regarding *Well-being*, the highest mean is in the > 51 age group (*M* = 2.81, *SD* = 0.87), and the lowest mean is in the 20–30 age group (*M* = 1.78, *SD* = 0.65). Furthermore, *Distress* scores show the highest mean in the > 51 age group (*M* = 3.89, *SD* = 0.74) and the lowest mean in the 41–50 age group (*M* = 3.17, *SD* = 1.20). Finally, for the *Global Well-Being and Development* Score, the highest mean is in the > 51 age group (*M* = 3.25, *SD* = 0.62), and the lowest mean is in the 41–50 age group (*M* = 2.70, *SD* = 0.88).

Figure 7

MQPL's Well-Being and Development Dimensions Across Age Categories: Female Prisoners' Perspective



Furthermore, among male prisoners, age demonstrated significant positive correlations with personal development (r = .172, p < .001), personal autonomy (r = .148, p = .001), well-being (r = .116, p = .008), and the global well-being and development score (r = .165, p < .001). Although weak, these associations suggest that older male prisoners generally reported higher levels of personal development, autonomy, and global well-being and development scores.

However, the age of male prisoners did not show a significant correlation with distress. In contrast, the results indicate that among female prisoners, age was significantly positively correlated with the *Well-being* score (r = .379, p < .001), suggesting that older female prisoners tended to report higher levels of well-being and this association could be interpreted as moderate.

On the other hand, the age of female prisoners did not show significant correlations with personal development, autonomy, distress, or the combined score (Table S4).

Overall, both male and female prisoners across different age groups exhibit variations in their perceptions of personal development, autonomy, well-being, distress, and global well-being and development (Table S4).

While older age groups tend to report higher mean scores in dimensions related to personal development, autonomy, well-being, and global well-being and development, the middle-aged group demonstrates higher levels of distress (Figures 6 and 7). This finding suggests that older prisoners generally perceive their quality of life more positively across multiple dimensions compared to their younger counterparts.

TAKEAWAY NOTES

Age and Prisoners' Perceptions of Well-being and Development

Older prisoners tended to report higher levels of personal development, autonomy, well-being, and global well-being compared to younger prisoners

Among females, older age correlates positively with well-being only

Among males, age correlates positively with personal development, personal autonomy, well-being, and the global score of well-being and development

Distress levels do not significantly correlate with age

Education and Prisoners' Well-being and Development

The study further investigated variations in perceptions of personal development, autonomy, well-being, distress, and global well-being and development across different education levels. Additionally, it examined whether there were statistically significant differences in the MQPL scores in relation to the prisoners' education level.

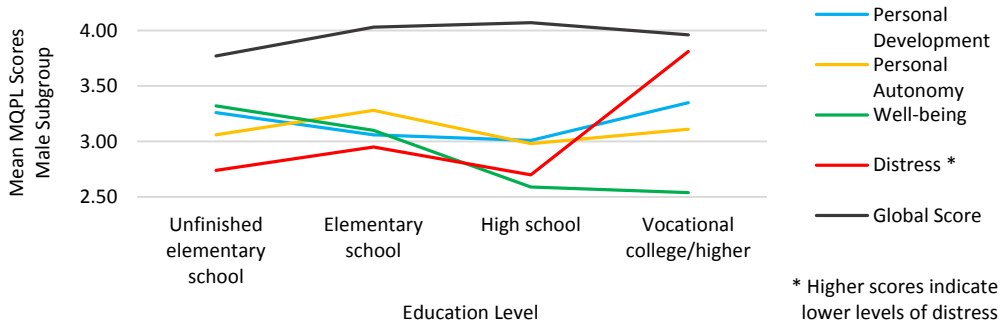
Figures 8 and 9 illustrate prisoners' scores on MQPL's *Well-Being and Development Dimensions* across different education levels. Table S5 provides descriptive statistics, comparative analyses, and post-hoc comparisons of well-being and development scores by education levels in males and females.

In the *Personal Development* dimension among male prisoners, the highest mean score (*M* = 3.35, *SD* = 0.93) is observed in the vocational college/higher education group. In contrast, the lowest mean score (*M* = 3.01, *SD* = 0.98) is found in the high school education group. Regarding the *Personal Autonomy* dimension, the highest mean score (*M* = 3.28, *SD* = 0.53) is reported by individuals with an elementary school education. In contrast, the lowest mean score (*M* = 2.98, *SD* = 0.77) is noted among those with a high school education.

Regarding *Well-being* in the subgroup of male prisoners, the highest mean score (*M* = 3.32, *SD* = 0.75) is found in the unfinished elementary school education group, while the lowest mean score (*M* = 2.54, *SD* = 0.88) is observed in the vocational college/higher education group. The highest *Distress* mean score (*M* = 3.81, *SD* = 0.87) is reported by individuals with a vocational college/higher education, and the lowest mean score (*M* = 2.70, *SD* = 0.95) is noted among those with a high school education. Finally, for the *Global Well-Being and Development* Score, the highest mean score (*M* = 4.07, *SD* = 0.90) is observed in the high school education group, while the lowest mean score (*M* = 3.77, *SD* = 0.85) is found in the unfinished elementary school education group (Figure 8).

Figure 8

MQPL's Well-Being and Development Dimensions Across Education Levels: Male Prisoners' Perspective



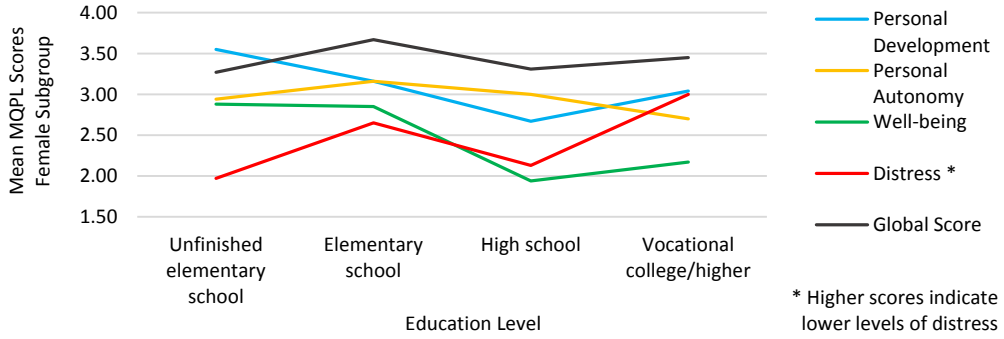
In the *Personal Development* dimension among female prisoners, those with an education level of unfinished elementary school have the highest mean score (M = 3.55, SD = 0.78). In contrast, those with a high school education have the lowest mean score (M = 2.67, SD = 1.00). For *Personal Autonomy*, prisoners with an elementary school education have the highest mean score (M = 3.16, SD = 0.76), and those with a vocational college/higher education level have the lowest mean score (M = 2.70, SD = 1.06).

In terms of *Well-being*, female inmates with an elementary school education exhibit the highest mean score (M = 2.85, SD = 0.96), whereas those with a high school education have the lowest mean score (M = 1.94, SD = 0.85). Regarding *Distress*, prisoners with a vocational college/higher education level report the highest mean score (M = 3.00, SD = 0.93), while those with an elementary school education have the lowest mean score (M = 1.97, SD = 0.85).

Finally, for the *Global Well-Being and Development* score, female inmates with an elementary school education demonstrate the highest mean score (M = 3.67, SD = 0.95), while those with an unfinished elementary school education have the lowest mean score (M = 3.27, SD = 1.12), as presented in Figure 9.

Figure 9

MQPL's Well-Being and Development Dimensions across Education Levels: Female Prisoners' Perspective



In terms of distress, there was a statistically significant difference (p = .024) among male prisoners, according to the one-way ANOVA. Minimal differences in mean scores across other dimensions were statistically non-significant (Table S5). In the *Personal Development* dimension, among female prisoners, a statistically significant difference in mean scores across education levels was found (p = .043), as indicated by the Kruskal-Wallis Test.

Post-hoc comparisons revealed significant differences among prisoners' education levels (Table S6). Specifically, female prisoners with unfinished elementary school education demonstrated a higher median value of the *Personal Development* score (Mdn = 3.63) than those with elementary school education, with a significant difference (p = .023). Regarding *Distress* scores,

statistically significant differences are observed between male prisoners with elementary and high school education levels (p = .023). The mean difference of -0.26 suggests a higher distress score for individuals with elementary school education.

TAKEAWAY NOTES

Education and Prisoners' Perceptions of Well-Being and Development

Highest mean scores are often noted in subgroups with lower levels of education, such as unfinished elementary school or elementary school education

Conversely, the lowest mean scores are frequently found in prisoners with higher levels of education, particularly vocational college/higher education or high school education

Statistical significance related to education was confirmed in a few scores only

Single and Partnered Prisoners' Well-Being and Development

Figure 10 presents the MQPL's *Well-Being and Development* scores across different dimensions based on marital status. Table S7 provides a comparative analysis of well-being and development scores between single and partnered prisoners.

Regarding *Personal Development* among male prisoners, those with a partner had a mean score of 3.18 (*SD* = 1.00), while single male prisoners had a slightly lower mean score (*M* = 2.95, *SD* = 0.90). Similarly, for *Personal Autonomy* and *Well-being* dimensions, individuals with a partner tended to have slightly higher mean scores than their single counterparts.

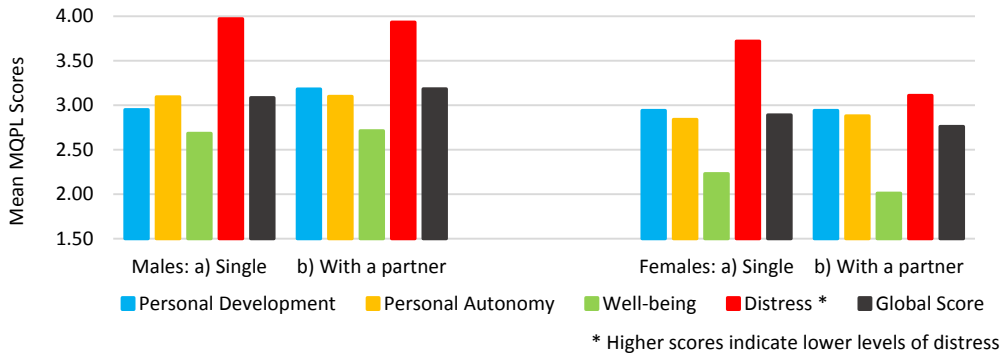
However, for *Distress*, single male prisoners have a slightly higher mean score on average (*M* = 3.97, *SD* = 0.84), indicating lower distress levels than those with a partner (*M* = 3.93, *SD* = 0.87). Interestingly, *the Global Well-Being and Development* Score was comparable between single (*M* = 3.09, *SD* = 0.72) and partnered (*M* = 3.18, *SD* = 0.77) male prisoners (Table S7).

Among female prisoners, in the *Well-being* dimension, single female prisoners report a higher mean score (*M* = 2.23, *SD* = 0.83) compared to those with a partner (*M* = 2.01, *SD* = 0.99). Conversely, in the *Distress* dimension, single female prisoners demonstrate a higher mean score (*M* = 3.72, *SD* = 0.96), indicating more positive experience of this aspect of quality of prison life compared to those with a partner (*M* = 3.11, *SD* = 1.00).

Similarly to male prisoners, the *Global Well-Being and Development* score did not exhibit a notable difference between single (*M* = 2.89, *SD* = 0.80) and partnered (*M* = 2.76, *SD* = 0.84) female prisoners (Table S7).

Figure 10

MQPL's Well-Being and Development Dimensions across Marital Status Categories: Male and Female Prisoners' Perspectives



The analysis revealed a slightly higher mean score in the *Distress* dimension among single female prisoners compared to those with a partner (3.72 vs. 3.11). The mean difference of 0.60 (*SE* = 0.21) on a range from 1 to 5 reached statistical significance (p = .006), with a medium effect size (η^2_p = .09). Conversely, in the *Personal Development* dimension, single male prisoners exhibited a lower mean score than those with a partner (2.95 vs. 3.18). This difference (*MD* = -0.23, *SE* = 0.08) was also statistically significant (p = .006), with a small effect size (η^2_p = .09). However, the differences in mean scores across other dimensions were not statistically significant (Table S7).

Descriptively, while there are slight variations (Figure 10), the differences in mean MQPL scores between single and partnered prisoners across most dimensions are not substantial (Table S7). These findings suggest that marital status may have a modest influence on specific aspects of perceived distress and personal development among prisoners. However, overall, it appears that single and partnered individuals perceive the quality of prison life similarly.

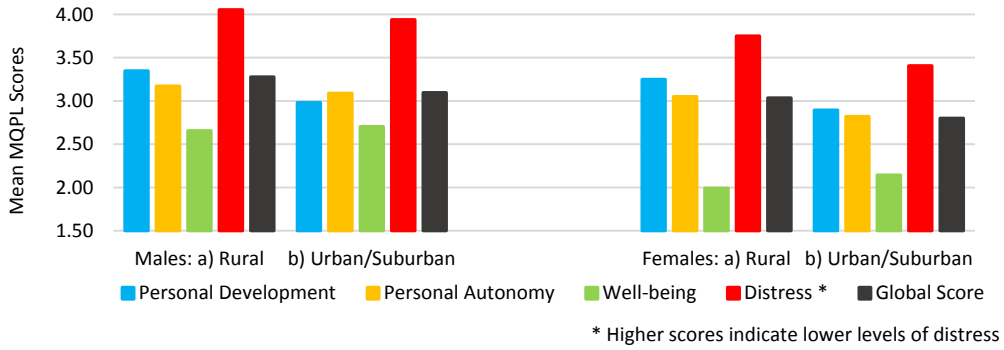
> ***TAKEAWAY NOTES***
>
> ***Comparing Well-Being and Development Among Single and Partnered Prisoners***
>
> *A significantly higher mean score in the Distress dimension, which indicates lower distress levels, was observed among single female prisoners compared to those with a partner*
>
> *In the Personal Development dimension, single male prisoners exhibited a significantly lower mean score than those with partners*
>
> *Marital status may modestly influence distress and personal development perceptions among prisoners, but overall, prison life quality appears similar for both single and partnered individuals*

Urban vs. Rural: Prisoners' Residency and Their Well-Being and Development

Figure 11 presents the MQPL's *Well-Being and Development* scores across different dimensions based on the type of community (urban/suburban vs. rural) among male and female prisoners. A comparative analysis is given in Table S8 to answer the following research questions: How do perceptions of well-being and development scores differ between prisoners residing in urban/suburban areas and rural communities? Are there statistically significant differences in these scores between prisoners from urban/suburban and rural communities?

Figure 11

MQPL's Well-Being and Development Dimensions by Community Type Categories: Male and Female Prisoners' Perspectives



For the *Personal Development* dimension (Table S8), the mean score is higher among male prisoners from rural communities (*M* = 3.35, SD = 1.02) compared to those who resided in urban/suburban communities (*M* = 2.98, *SD* = 0.91). In the *Personal Autonomy* dimension, the mean score is slightly higher among male prisoners from rural areas (*M* = 3.17, *SD* = 0.80) than among prisoners coming from urban/suburban communities (*M* = 3.09, *SD* = 0.77).

Furthermore, the *Distress* dimension shows a higher mean score in the rural subgroup of male prisoners (*M* = 4.05, *SD* = 0.80) than in the urban/suburban subgroup (*M* = 3.94, *SD* = 0.87). In contrast, for the *Well-being* dimension, the mean score is slightly lower among male prisoners in the rural subgroup (*M* = 2.66, *SD* = 1.04) compared to the urban/suburban subgroup (*M* = 2.70, *SD* = 0.92). Lastly, for the *Global* Score, the rural subgroup of male prisoners has a higher mean score (*M* = 3.28, *SD* = 0.80) than the urban/suburban subgroup (*M* = 3.10, *SD* = 0.71).

Among female prisoners, for the *Personal Development* dimension (Table S8), the mean score is higher for female prisoners in rural communities (*M* = 3.25, *SD* = 0.81) compared to those coming from urban/suburban areas (*M* = 2.89, SD = 1.02). Regarding *Personal Autonomy*, female prisoners who resided in rural communities have a higher mean score (*M* = 3.05, *SD* = 0.73) than those in urban/suburban areas (*M* = 2.82, *SD* = 0.98).

In the *Distress* dimension, female prisoners who resided in rural communities have a higher mean score (*M* = 3.75, *SD* = 1.25) than those in urban/suburban areas (*M* = 3.41, *SD* = 1.00). On the other hand, for *Well-being*, the mean score is lower among female prisoners who resided in rural communities (*M* = 1.99, *SD* = 0.97) compared to those from urban/suburban areas (*M* = 2.14, *SD* = 0.90). Regarding the *Global Score*, female prisoners from rural communities had a higher mean score (*M* = 3.04, *SD* = 0.52) than those from urban/suburban areas (*M* = 2.80, *SD* = 0.84).

The analysis in the *Personal Development* dimension revealed that the mean score is higher among male prisoners from rural communities compared to those who resided in urban/suburban communities (3.35 vs. 2.98). The mean difference of 0.37 (*SE* = 0.10) on a range from 1 to 5 reached statistical significance ($p < .001$), with a small effect size ($\eta^2_p = .02$).

Similarly, in the *Global Well-Being and Development* Score, male prisoners who resided in rural communities exhibited a higher mean score compared to those coming from urban/suburban areas (3.28 vs. 3.10). This difference (*MD* = 0.18, *SE* = 0.08) was also statistically significant ($p = .026$), with a very small effect size ($\eta^2_p = .01$).

However, differences in mean scores across other dimensions were not statistically significant (Table S8). Similarly, no differences in the subgroup of female prisoners reached statistical significance (Table S8).

Descriptive statistics suggest slight variations in perceptions of well-being and development dimensions among male and female prisoners based on their community type, with some dimensions showing higher mean scores in urban/suburban communities and others in rural areas (Figure 11). However, these differences between subgroups of prisoners in urban/suburban and rural communities are not substantial overall (Table S8), indicating relatively similar perceptions of prison life quality across both types of communities.

TAKEAWAY NOTES

Urban vs. Rural: Exploring Variations in Prisoners' Well-Being and Development

Male prisoners from rural areas tended to rate personal development and global well-being slightly higher than those from urban/suburban areas

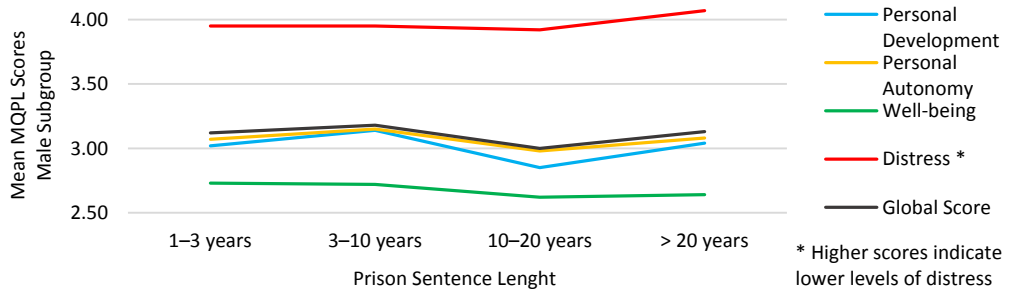
Prison life quality remains relatively similar for both male and female prisoners coming from urban/suburban and rural areas

Sentence Length and Prisoners' Well-Being and Development

Figures 12 and 13 illustrate prisoners' scores recorded on MQPL's *Well-Being and Development Dimensions* across categories of different prison sentence lengths, whereas descriptive statistics and correlation coefficients are given in Table S9. These analyses describe variations in this MQPL dimension among prisoners based on sentence length and provide an answer to the following research questions: How do prisoners' perceptions of personal development, autonomy, well-being, distress, and global well-being and development vary based on the length of their sentences? Are there statistically significant differences in well-being and development scores among prisoners with different sentence lengths?

Figure 12

MQPL's Well-Being and Development Dimensions across Sentence Lengths Categories: Male Prisoners' Perspective



Among male prisoners (Table S9), in the *Personal Development* dimension, the highest mean is observed in the 3–10 years sentence length category (*M* = 3.14, *SD* = 0.89), while the lowest mean is found in the 10–20 years category (*M* = 2.85, *SD* = 1.07). For *Personal Autonomy*, the highest mean is in the > 20 years category (*M* = 3.08, *SD* = 0.93), and the lowest mean is in the 10–20 years category (*M* = 2.98, *SD* = 0.82). Regarding *Well-being*, the highest mean is in the 1–3 years category (*M* = 2.73, *SD* = 0.95), and the lowest mean is also in the 10–20 years category (*M* = 2.62, *SD* = 1.06).

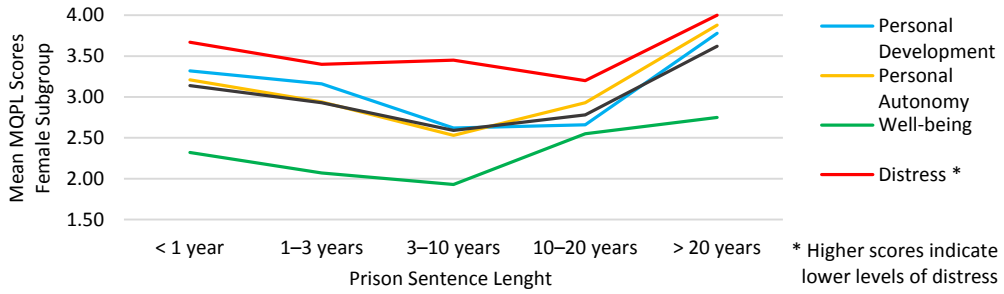
Distress scores show the highest mean in the > 20 years category (*M* = 4.07, *SD* = 0.81), indicating lower distress levels in ths subgroup of male prisoners. In comparison, the lowest mean was confirmed in the 1–3 years category (*M* = 3.95, *SD* = 0.79), indicating higher distress levels. Lastly, for the *Global Well-Being and Development* Score, the highest mean is in the 3–10 years category (*M* = 3.18, *SD* = 0.69), and the lowest mean is in the 10–20 years category (*M* = 3.00, *SD* = 0.81).

In the *Personal Development* dimension, the highest mean is observed in female prisoners serving sentences longer than 20 years (*M* = 3.78, *SD* = 0.34), while the lowest is found in the 3–10 years category (*M* = 2.62, *SD* = 0.98). For *Personal Autonomy*, the highest mean is in the > 20 years category (*M* = 3.88, *SD* = 1.03), and the lowest mean is in the 3–10 years category (*M* =

2.53, *SD* = 0.95). Again, the highest mean in the *Well-being* dimensions is noted in the > 20 years category (*M* = 2.75, *SD* = 0.79), and the lowest mean is in the 3–10 years category (*M* = 1.93, *SD* = 0.89). *Distress* scores show the highest mean in the > 20 years category (*M* = 4.00, *SD* = 1.59) and the lowest mean in the 10–20 years category (*M* = 3.20, *SD* = 0.88). Finally, for the *Global Well-Being and Development* Score, the highest mean is in the > 20 years category (*M* = 3.62, *SD* = 0.74), and the lowest mean is in the 3–10 years category (*M* = 2.59, *SD* = 0.78).

Figure 13

MQPL's Well-Being and Development Dimensions Across Sentence Lengths Categories: Female Prisoners' Perspective



Descriptive statistics suggest slight variations in prisoners' experiences and perceptions within the prison environment in relation to the sentence duration (Figures 12 and 13). The overall trend suggests that prisoners serving longer sentences report higher mean scores, indicating more positive perceptions of prison life quality. Specifically, in dimensions such as *Personal Development*, *Personal Autonomy*, *Well-being*, and the *Global Score*, prisoners with sentences 20 years and longer consistently exhibit the highest mean scores.

On the other hand, those serving sentences of shorter durations, particularly in the 3–10 years category, tend to report lower mean scores across these dimensions. Interestingly, *Distress* scores show a slightly different trend, with the highest mean scores observed in prisoners with sentences longer than 20 years, indicating lower levels of distress. In contrast, the lowest mean scores are often found in prisoners with sentences ranging from 1 to 3 years, indicating higher levels of distress.

However, the statistical analysis did not reveal significant correlations between sentence length and personal development, personal autonomy, well-being, distress, or the combined well-being and development dimensions (Table S9). In other words, none of the *Well-being and Developmen*t dimensions significantly correlated with sentence duration.

TAKEAWAY NOTES

Well-Being and Development Based on Sentence Length

Prisoners serving longer sentences tended to report higher mean scores across various dimensions of well-being and development

Prison life quality remains relatively similar for both male and female prisoners across different sentence durations

Closed vs. Semi-open Wards: Prison regimes and Their Effects on Well-Being and Development

Figure 14 illustrates the *Well-Being and Development* scores from the MQPL across various dimensions categorised by prison regime for both male and female prisoners, with a detailed comparison provided in Table S10. That way, the following research questions were answered: How do perceptions of well-being and development dimensions vary across different prison regimes? Do prisoners in closed prison wards exhibit lower mean scores in well-being and development than those in semi-open?

The analysis of well-being and development dimensions among male and female prisoners across different prison regimes reveals consistent variations in reported scores (Figure 14). For male prisoners, the highest scores across all dimensions consistently appeared in the semi-open regime.

Comparatively, male prisoners in the closed wards reported the lowest mean score of 2.54 (*SD* = 0.93) in the *Well-being* dimension, while those in the semi-open wards had the highest mean score of 4.23 (*SD* = 0.69), which was noted in the *Distress* aspect of prison life quality.

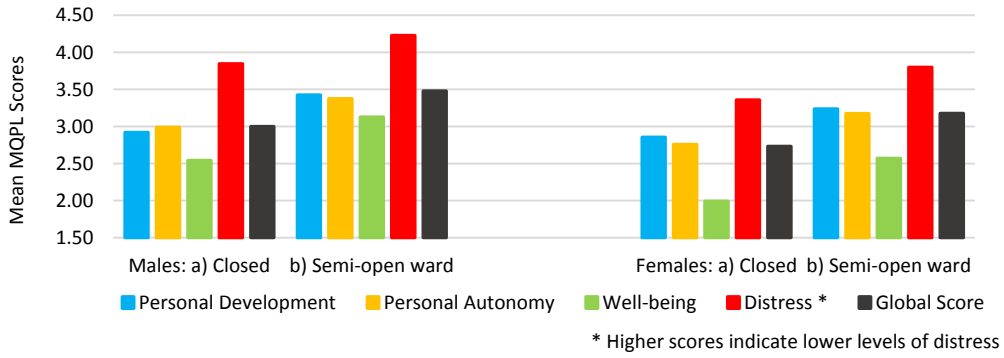
The *Global* Score also reflected this trend, with male prisoners in the semi-open regime perceiving their overall quality of life within the prison environment more positively (*M* = 3.48, *SD* = 0.68) than those in the closed regime (*M* = 3.00, *SD* = 0.73).

A similar trend is observed for female prisoners (Figure 14). More precisely, female prisoners in the semi-open wards reported higher mean scores compared to their counterparts in the closed regime. Female prisoners in the closed wards had the lowest mean score of 1.99 (*SD* = 0.84) in the *Well-being* dimension, whereas those in the semi-open wards had the highest mean score of 3.80 (*SD* = 0.74) in the *Distress* aspect of prison life quality.

In line with the findings from the subgroup of male prisoners, female prisoners in the semi-open wards perceived their overall quality of life within the prison environment more positively (*M* = 3.18, *SD* = 0.84) than those in the closed regime (*M* = 2.73, *SD* = 0.78).

Figure 14

MQPL's Well-Being and Development Dimensions in Closed and Semi-open Prison Regimes: Male and Female Prisoners' Perspectives



The analysis for male prisoners revealed significant differences between the closed and semi-open prison regimes across all dimensions. Notably, in the *Well-being* dimension, male prisoners in closed wards scored lower compared to those in semi-open prisons, with a mean difference of -0.50 (SE = 0.09, $p < .001$) on a 5-point scale, indicating a medium effect size ($\eta^2_p = .07$).

Similarly, in *Personal Development*, *Personal Autonomy*, *Distress*, and the *Global Well-Being and Development* Score dimensions, male prisoners in closed prison wards showed lower mean scores compared to those in semi-open prisons, with all differences being statistically significant ($p < .001$). The range of mean differences varied from -0.38 (SE = 0.07) in the *Distress* dimension to -0.50 (SE = 0.09) in the *Personal Development* dimension (Table S10).

The comparison between closed and semi-open prison regimes revealed significant differences for female prisoners in the *Well-being* and *Distress* dimensions, as well as *Global Score*. Specifically, female prisoners in closed prison wards scored lower on average than those in semi-open prisons in these dimensions. The effect sizes were moderate for *Well-being* (MD = -0.58, SE = 0.22, p = .011, $\eta^2_p = .07$) and small for both *Distress* (MD = -0.44, SE = 0.22, p = .046, $\eta^2_p = .03$) and the global score (MD = -0.44, SE = 0.20, p = .031, $\eta^2_p = .05$). However, no significant differences were found in the *Personal Development* and *Personal Autonomy* dimensions between the two prison regimes for female prisoners (Table S10).

These findings imply that prisoners in the semi-open regime generally perceive their overall quality of life within the prison environment more positively than those in the closed regime (Figure 14). Effect sizes varied, with moderate effects observed for some dimensions, such as *Well-being*, and smaller effects for others such as *Distress*, suggesting varying degrees of impact of the prison regime on prisoners' perceptions of well-being and development.

TAKEAWAY NOTES

Prison Regimes and Well-Being and Development: Closed vs. Semi-open Wards

Prisoners consistently reported significantly higher scores across all dimensions of well-being and development in semi-open prison regimes compared to closed wards

Male prisoners in closed wards reported lower mean scores compared to those in semi-open prisons across all dimensions

Female prisoners in closed wards scored lower in Well-being, Distress, and Global Well-Being and Development Score compared to those in semi-open prisons

Risk Factors and Prisoners' Well-Being and Development

We have conducted several comparative analyses to examine the variations in perceptions of well-being and development among prisoners with different risk levels. These analyses assessed the mean well-being and development scores across short-term and long-term sentence groups, stratified by low, medium, high, and very high-risk categories.

In Figures 15 and 16, descriptive statistics are provided for different *Well-Being and Development* dimensions among male and female prisoners with short-term and long-term sentences, categorised by risk levels. Comparative analyses based on the risk assessment and sentence length are given in Tables S11 and S12.

The research questions are: How do perceptions of well-being and development differ by risk levels among prisoners with short-term and long-term sentences? Do prisoners with lower risk levels tend to report higher perceived levels of well-being and development across all sentence lengths compared to those in higher risk categories?

In the category of *Personal Development*, male prisoners with up to three years of imprisonment demonstrated the highest score in the low-risk category (M = 3.39, SD = 0.84), while those with long-term sentences also scored highest in the low-risk category (M = 3.96, SD = 0.66). At the same time, the lowest scores were observed in the higher-risk categories for both groups (M = 2.67, SD = 0.80 for the high-risk category with short-term sentences, and M = 2.70, SD = 0.84 for the very high-risk category with long-term sentences).

The highest mean score for *Personal Autonomy* was found in the low-risk category for short-term (M = 3.43, SD = 0.86) and long-term sentences (M = 3.50, SD = 0.65). Conversely, the lowest scores were consistently noted in the high-risk and very high-risk categories for both groups (M = 2.82, SD = 0.84 for short-term, and M = 2.83, SD = 0.71 for long-term sentences).

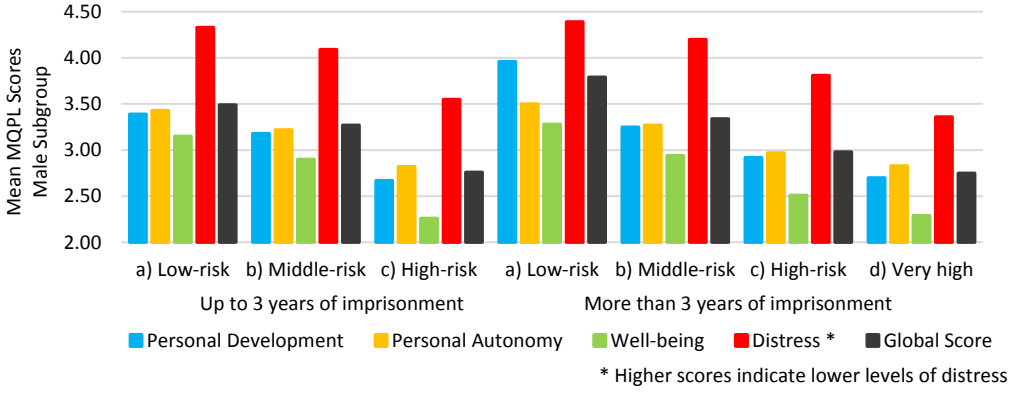
Regarding *Well-being*, the highest mean score in the subgroup of male prisoners was found in the low-risk category for both sentence length groups (M = 3.15, SD = 0.99 for up to three years of imprisonment, and M = 3.28, SD = 0.43 for more than three years of imprisonment). On the other hand, the lowest average scores were noted in the high-risk and very high-risk categories for both groups (M = 2.26, SD = 0.79 and M = 2.29, SD = 0.85, respectively).

Regarding *Distress* in the subgroup of male prisoners, the highest scores indicating lower distress levels were found in the low-risk category for both short-term (*M* = 4.33, *SD* = 0.68) and long-term sentences (*M* = 4.39, *SD* = 0.31). Conversely, the lowest scores were generally observed in both sentence length groups' high-risk and very high-risk categories (*M* = 3.55, *SD* = 0.94 for high-risk, and *M* = 3.36, *SD* = 0.85 for very high-risk).

Lastly, for the *Global Well-Being and Development* score, the highest mean scores in the subgroup of male prisoners were observed in the low-risk category for short-term (*M* = 3.49, *SD* = 0.73) and long-term sentences (*M* = 3.79, *SD* = 0.41). Contrarily, the lowest mean scores were noted in both groups' high-risk and very high-risk categories (*M* = 2.76, *SD* = 0.70 for high-risk, and *M* = 2.75, *SD* = 0.66 for very high-risk), as presented in Figure 15.

Figure 15

MQPL's Well-Being and Development Dimensions across Risk Categories in Male Prisoners: Short-Term vs. Long-Term Sentences



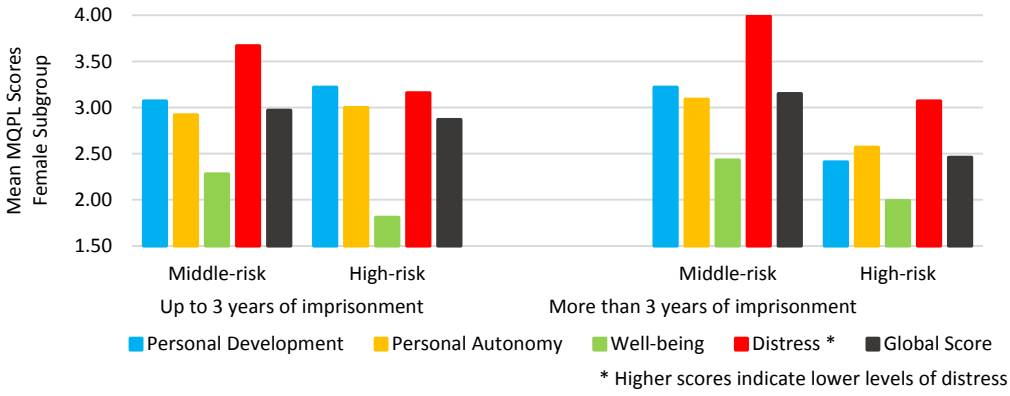
Our analysis revealed significant correlations between all well-being and development dimensions and global score and risk category among male prisoners with both short-term and long-term sentences (Table S11). Across all dimensions, there were negative correlations between the risk category and MQPL scores, indicating that higher risk levels were associated with lower well-being and development scores and vice versa. Specifically, in the *Personal Development* dimension, both short-term and long-term male prisoners showed negative correlations with increasing risk levels, with Pearson's correlation coefficients of -.23 and -.24 ($p < .01$), suggesting a weak negative association. Similarly, for *Personal Autonomy*, *Well-being*, *Distress*, and the *Global Well-Being and Development Score*, negative correlations were observed across risk categories in both groups, with coefficients ranging from -.24 to -.33 ($p < .01$).

In conclusion, weak and negative associations prevail between risk category and the MQPL dimensions related to well-being and development among male prisoners (Table S11).

A different trend was observed in the subgroup of female prisoners in the categories of *Personal Development* and *Personal Autonomy* (Figure 16).

Figure 16

MQPL's Well-Being and Development Dimensions across Risk Categories in Female Prisoners: Short-Term vs. Long-Term Sentences



First, female prisoners with up to three years of imprisonment demonstrated the highest *Personal Development* score in the middle-risk category (*M* = 3.07, *SD* = 0.97), while those with long-term sentences also scored highest in the middle-risk category (*M* = 3.22, *SD* = 1.09). Conversely, the lowest scores were observed in the high-risk category for both groups (*M* = 3.22, *SD* = 0.81 for up to three years of imprisonment, and *M* = 2.41, *SD* = 0.90 for more than three years of imprisonment).

For *Personal Autonomy*, the highest mean score in the subgroup of female prisoners was found in the middle-risk category for both short-term (*M* = 2.92, *SD* = 0.94) and long-term sentences (*M* = 3.09, *SD* = 1.20). The lowest scores were noted in the high-risk category for both groups (*M* = 3.00, *SD* = 0.83 for short-term sentences, and *M* = 2.57, *SD* = 0.80 for long-term sentences).

When it comes to *Well-being*, the highest mean score was consistently observed in the middle-risk category for both sentence length groups (*M* = 2.28, *SD* = 0.84 for up to three years of imprisonment, and *M* = 2.43, *SD* = 1.07 for more than three years of imprisonment). At the same time, the lowest scores were noted in the high-risk category for both groups (*M* = 1.81, *SD* = 0.74 for short-term sentences, and *M* = 1.99, *SD* = 0.90 for long-term sentences).

The highest mean *Distress* scores indicating lower levels of distress were found in the middle-risk category for both short-term (*M* = 3.67, *SD* = 0.77) and long-term sentences (*M* = 3.99, *SD* = 0.83). Next, the lowest scores in the subgroup of female prisoners were generally observed in the high-risk category for both sentence length groups (*M* = 3.16, *SD* = 1.15 for short-term sentences, and *M* = 3.07, *SD* = 1.09 for long-term sentences).

Finally, for *Global Well-Being and Development* (Figure 15), the highest scores in the subgroup of female prisoners were observed in the middle-risk category for both short-term (M = 2.97, SD = 0.73) and long-term sentences (M = 3.15, SD = 0.93). As in previous findings, the lowest scores were noted in the high-risk category for both groups (M = 2.87, SD = 0.72 for short-term sentences, and M = 2.46, SD = 0.72 for long-term sentences).

The analysis for female prisoners sentenced to more than three years of imprisonment revealed significant differences in three scores between the middle and the high-risk categories (Table S12, Figure 16). It should be noted first that low-risk and very high-risk categories were excluded from the analyses due to a small number of participants (n = 3, 6.9%). Second, the statistical significance of the differences in scores between female convicts concerning the risk level was not found in the subgroup of respondents sentenced to imprisonment for up to three years.

In the *Personal Development* dimension, female prisoners in the high-risk category showed a median score of 2.50, while those in the middle-risk category had a median score of 3.25, resulting in a statistically significant difference (p = .017). This difference was accompanied by a medium effect size (r = .37), and suggest to some extent higher levels of personal development among those in the middle-risk category.

Furthermore, significant differences with a medium effect size were noted in the *Distress* dimension between the middle and high-risk categories. Female prisoners in the high-risk category reported higher distress levels, with a median score of 3.00, compared to those in the middle-risk category, who had a median score of 4.33 (p = .006, r = .42). These results indicate lower levels of mental well-being among those in the high-risk category.

Lastly, significant differences with a medium effect size were confirmed in the *Global Well-Being and Development Score* between the middle and high-risk categories. Female prisoners in the high-risk category had a median score of 2.53. In contrast, those in the middle-risk category had a median score of 3.00 (p = .016, r = .37). This finding suggests lower perceived overall well-being and development among participants categorised as the high-risk prisoners.

In general, our findings suggest that female prisoners with long-term sentences (sentenced to prison for more than three years) categorised as high-risk prisoners tended to experience lower levels of personal development, higher distress, and lower overall well-being (Table S12).

TAKEAWAY NOTES

Risk Factors and Well-Being: A Comparative Analysis Among Prisoners

Higher risk levels were significantly associated with lower well-being and development scores among male prisoners, regardless of sentence length

Among female prisoners with long-term sentences, significant differences were noted between the middle and high-risk categories in the Personal Development, Distress, and Global Well-Being and Development Score dimensions, with lower scores in the high-risk category

Violent vs. Non-Violent Offenders: Variations in Prisoners' Well-Being and Development

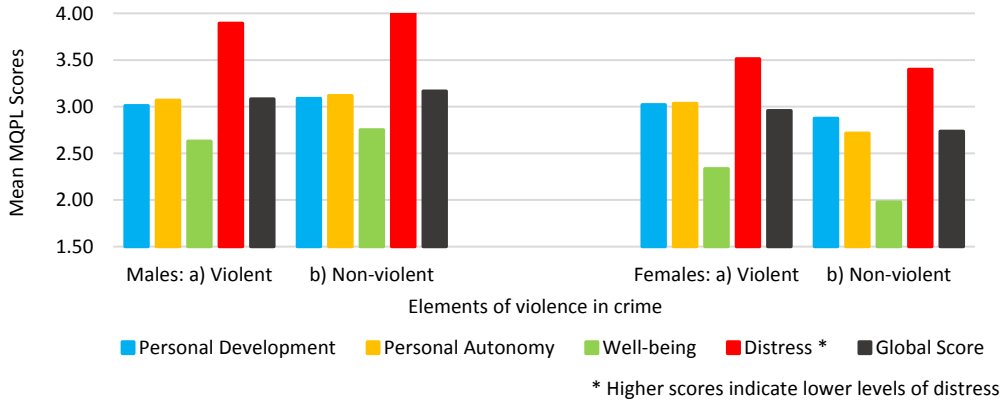
Figure 17 illustrates differences in the MQPL's *Well-Being and Development* scores based on the presence of violence in crimes for which prisoners were convicted. Table S13 provides a detailed comparative analysis. We examined whether there were statistically significant differences in well-being and development scores between prisoners convicted of violent crimes and those convicted of non-violent crimes.

Regarding *Personal Development* among male prisoners, those convicted of violent crimes had a mean score of 3.01 (*SD* = 1.00), whereas those convicted of non-violent crimes had a mean score of 3.09 (*SD* = 0.91). Similarly, for *Personal Autonomy* and *Well-being* dimensions, individuals convicted of violent crimes scored 3.07 (*SD* = 0.77) and 2.63 (*SD* = 0.96) on average, while those convicted of non-violent crimes scored 3.12 (*SD* = 0.79) and 2.75 (*SD* = 0.95), respectively.

Additionally, for *Distress*, male prisoners involved in violent crimes had a slightly lower mean score (*M* = 3.89, *SD* = 0.90) than those involved in non-violent crimes (*M* = 4.01, *SD* = 0.82). The *Global Well-Being and Development Score* was comparable among prisoners but lower in those convicted of violent crimes (*M* = 3.08, *SD* = 0.75) than in those convicted of non-violent ones (*M* = 3.17, *SD* = 0.73) crimes (Table S13).

Figure 17

Violence-Based Differences in MQPL's Well-Being and Development Dimensions: Male and Female Prisoners' Perspectives



Interestingly, among female prisoners, those convicted of violent crimes showed different trends. For *Personal Development*, individuals involved in violent crimes had a slightly higher mean score (*M* = 3.02, *SD* = 1.02) than those involved in non-violent crimes (*M* = 2.88, *SD* = 0.99). Next, for *Personal Autonomy* and *Well-being* dimensions, individuals convicted of violent crimes had mean scores of 3.04 (*SD* = 0.96) and 2.34 (*SD* = 0.93), respectively, which were slightly higher

compared to those convicted of non-violent crimes, with mean scores of 2.72 (*SD* = 0.94) and 1.98 (*SD* = 0.87), respectively. Furthermore, for *Distress*, female prisoners involved in violent crimes had a slightly higher mean score (*M* = 3.51, *SD* = 1.05) compared to those involved in non-violent crimes (*M* = 3.40, *SD* = 1.03). Once again, the *Global Well-Being and Development Score* was comparable between female prisoners convicted of violent (*M* = 2.96, *SD* = 0.84) and non-violent crimes (*M* = 2.74, *SD* = 0.78) crimes (Table S13).

Descriptively, while slight variations exist (Figure 17), the differences in mean scores among prisoners, based on the presence of violence in crimes for which they were convicted, were not statistically significant across all dimensions (Table S13). These findings suggest that the impact of violence-based differences on the perceived quality of prison life, as measured by the MQPL scores, is minimal among both male and female prisoners.

TAKEAWAY NOTES

Comparing Well-Being and Development Scores: Violent vs. Non-Violent Offenders

Male prisoners convicted of non-violent crimes tended to have slightly higher mean scores than those convicted of violent crimes

Conversely, female prisoners convicted of violent crimes tended to have slightly higher mean scores than those convicted of non-violent crimes

However, the violence-based differences in the perceived quality of prison life, as measured by the MQPL scores, were not statistically significant

Time Served and Prisoners' Perceptions of Well-Being and Development

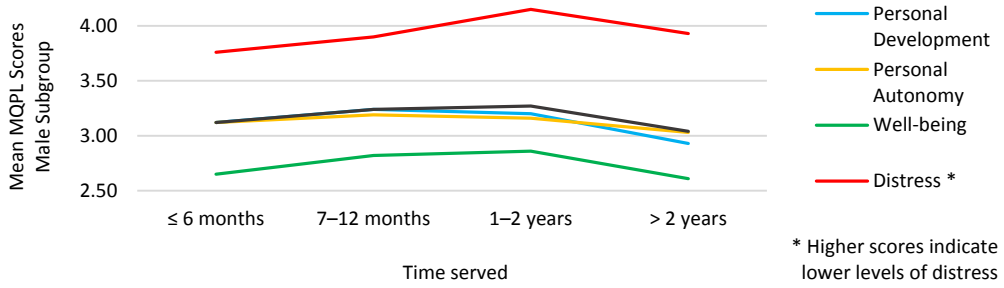
To examine how perceptions of well-being and development change with time served, we analysed mean MQPL scores across different durations of imprisonment in months. Figures 18 and 19 illustrate prisoners' scores on MQPL's *Well-Being and Development Dimensions* in relation to time served, with descriptive statistics and correlations provided in Table S14. These analyses help us explore the potential impact of time served on prisoners' experiences within correctional facilities.

In the *Personal Development* dimension among male prisoners, the highest mean score (*M* = 3.24, *SD* = 0.90) is observed for the 7–12 months served category, while the lowest mean score (*M* = 2.93, *SD* = 0.98) is found for those imprisoned for more than two years (Table S14). Regarding *Personal Autonomy*, the highest mean score of 3.19 (*SD* = 0.82) is reported for male prisoners with a duration of imprisonment between seven to 12 months, whereas the lowest mean score of 3.03 (*SD* = 0.81) is noted for those imprisoned for more than two years. In terms of *Well-being*, the highest mean score (*M* = 2.86, *SD* = 0.94) is found for male prisoners who were imprisoned between one to two years, while the lowest mean score (*M* = 2.61, *SD* = 0.97) is observed for those imprisoned for more two years. The highest *Distress* mean score (*M* = 4.15, *SD* = 0.74) is reported for the 1–2 years served category, and the lowest mean score (*M* = 3.76, *SD* = 0.84) is noted for those male inmates imprisoned for up to six months.

Finally, for the *Global Well-Being and Development Score*, the highest mean score of 3.27 (*SD* = 0.69) is observed for those male inmates who were between one and two years in prison at the time of the study, while the lowest mean score of 3.04 (*SD* = 0.76) is found for those imprisoned for more than two years.

Figure 18

Time Served-Related Differences in MQPL's Well-Being and Development Dimensions: Male Prisoners' Perspective



In the *Personal Development* dimension among female prisoners, the highest mean score (*M* = 3.52, *SD* = 0.77) is observed for those imprisoned for up to six months, while the lowest mean score (*M* = 2.71, *SD* = 1.03) is found for those imprisoned for more than two years (Table S14). Regarding *Personal Autonomy*, the highest mean score (*M* = 3.50, *SD* = 0.55) is again reported for females with a duration of imprisonment of up to six months, whereas the lowest mean score (*M* = 2.70, SD = 0.95) is noted for those imprisoned for more than two years.

In terms of *Well-being*, the highest mean score (*M* = 2.44, *SD* = 0.74) is found for female prisoners who were imprisoned for up to six months, while the lowest mean score (*M* = 1.83, *SD* = 0.61) is observed for those imprisoned between seven to 12 months. Next, the highest *Distress* mean score (*M* = 3.98, *SD* = 0.73) is reported for the up to six months served category, indicating lower distress levels.

At the same time, the lowest mean *Distress* score (*M* = 3.16, *SD* = 1.15) is noted for those female inmates imprisoned for more than two years, pointing to the high distress levels. Finally, for the *Global Well-Being and Development Score*, the highest mean score (*M* = 3.36, *SD* = 0.56) is observed for those who were imprisoned for up to six months, while the lowest mean score (*M* = 2.65, SD = 0.87) is found for those imprisoned for more than two years.

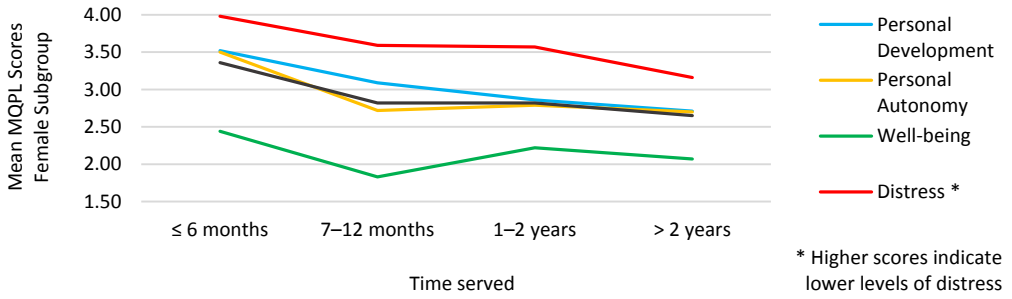
The analysis revealed no significant correlations between all well-being and development dimensions, global score, and duration of imprisonment among male prisoners at the time of the study (Table S14).

In contrast, in the subgroup of female prisoners, only the correlation between the *Well-being* score and time served did not reach statistical significance. Across all other dimensions, there were negative, small to medium correlations between the time served in months and MQPL scores, suggesting that more extended periods of imprisonment were associated with lower well-being and development scores. Specifically, in the *Personal Development* dimension, female prisoners showed a negative correlation with duration of imprisonment (ρ = -.30, p < .01), presenting a medium negative association.

Similarly, for *Personal Autonomy*, *Distress*, and the *Global Well-Being and Development Score*, negative and small correlations were observed, with coefficients ranging from -.22 to -.29 (p < .05). These Spearman's correlation coefficients indicate weak associations between time served in months and these MQPL dimensions among female prisoners (Table S14).

Figure 19

Time Served-Related Differences in MQPL's Well-Being and Development Dimensions: Female Prisoners' Perspective



TAKEAWAY NOTES

Time Served and Prisoners' Perceptions of Well-Being and Development

Male prisoners imprisoned for seven to 12 months and one to two years reported more positive perceptions of prison life, while those incarcerated for over two years expressed less favourable prison experiences

However, no significant correlations were confirmed for male prisoners

Female prisoners imprisoned for up to six months had more positive perceptions of prison life, while those imprisoned for over two years held less favourable views

Among female prisoners, negative correlations were found, confirming that longer periods of imprisonment were generally associated with lower scores

The Well-being dimension of female prisoners remained consistently rated, regardless of how long they had been imprisoned

Pre-Prison Life Experiences and Well-Being and Development of Prisoners

First-Time Offenders and Recidivists

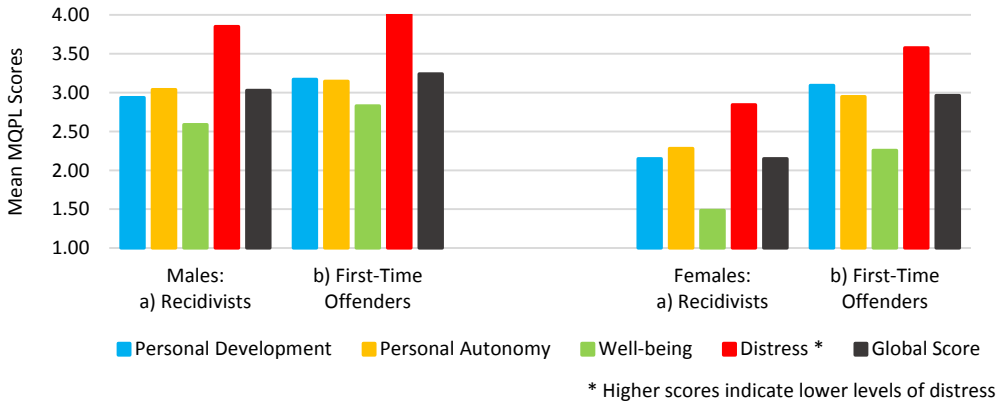
Figure 20 illustrates how the MQPL's *Well-Being and Development* scores differ between first-time offenders and recidivists. Table S15 provides an accompanying comparative analysis. The findings answer our research question: How do perceptions of well-being and development differ between first-time offenders and recidivists?

In the male subgroup, for the *Personal Development* dimension, the lower mean score (*M* = 3.17, *SD* = 0.91) is observed among recidivists, while the higher mean score (*M* = 2.94, *SD* = 0.97) is noted for first-time offenders. Similarly, regarding *Personal Autonomy*, recidivists had a slightly lower mean score (*M* = 3.15, *SD* = 0.78) than first-time offenders (*M* = 3.04, *SD* = 0.79).

The trend continued in the *Well-being* dimension, with first-time male offenders reporting a higher mean score (*M* = 2.83, *SD* = 0.93) than recidivists (*M* = 2.59, *SD* = 0.96). *Distress* scores followed a similar pattern, with first-time offenders having a higher mean score (*M* = 4.10, *SD* = 0.80) than recidivists did (*M* = 3.85, *SD* = 0.88). This pattern persisted for the *Global Well-Being and Development Score*, where first-time offenders scored higher on average (*M* = 3.24, *SD* = 0.71) than recidivists did (*M* = 3.03, *SD* = 0.76).

Figure 20

MQPL's Well-Being and Development Dimensions in First-Time Offenders and Recidivists: Male and Female Prisoners' Perspectives



In the female subgroup, the trends are more pronounced. For *Personal Development*, first-time offenders had a notably higher mean score (*M* = 3.09, *SD* = 0.95) than recidivists did (*M* = 2.15, *SD* = 0.72). Similarly, for *Personal Autonomy* and *Well-being* dimensions, first-time offenders had mean scores of 2.95 (*SD* = 0.92) and 2.26 (*SD* = 0.92), which were higher compared to recidivists, with mean scores of 2.28 (*SD* = 0.81) and 1.48 (*SD* = 0.45), respectively.

Distress scores continued with this pattern, with first-time female offenders exhibiting higher mean scores (*M* = 3.58, *SD* = 0.99) than recidivists did (*M* = 2.84, *SD* = 1.04). As for the *Global Well-Being and Development Score*, first-time offenders scored higher on average (*M* = 2.96, *SD* = 0.77) than recidivists did (*M* = 2.15, *SD* = 0.54).

Among male prisoners, previous prison experience had a significant effect on all MQPL's *Well-Being and Development* scores, except for *Personal autonomy* (Table S15). Specifically, in the *Distress* dimension, recidivist male prisoners scored lower compared to first-time offenders, with the highest mean difference of -0.25 (*SE* = 0.08, $p < .01$) on a 5-point scale, indicating a small effect size ($\eta^2_p = .02$). Next, recidivists exhibited lower mean scores compared to first-time offenders in the *Personal Development*, *Well-Being*, and the *Global Well-Being and Development* Score dimensions, with all differences being statistically significant ($p < .01$). The range of mean differences varied from -0.21 (*SE* = 0.07) in the *Global Score* to -0.24 (*SE* = 0.09) in the *Well-being* dimension (Table S15).

Among female prisoners, the comparison between first-time offenders and recidivists revealed significant differences across all dimensions (Table S15). More precisely, in the *Global Score*, recidivist female prisoners scored lower compared to first-time offenders, with a mean difference of -0.81 (SE = 0.20, $p < .001$), indicating a large effect size ($\eta^2_p = .13$). Correspondingly, in the other dimensions, recidivists exhibited lower mean scores than first-time offenders did, with statistically significant differences ($p < .01$). The range of mean differences varied across dimensions, with the minimal difference observed in the *Personal Autonomy* dimension (-0.67, *SE* = 0.25, $\eta^2_p = .08$) and the most considerable difference in the *Personal Development* dimension (-0.94, SE = 0.25, $\eta^2_p = .15$).

TAKEAWAY NOTES

Differences in Well-Being and Development Between First-Time Offenders and Recidivists

Among male prisoners, recidivists generally reported significantly lower mean scores across all dimensions compared to first-time offenders, yet with no statistical difference in the dimension of Personal Autonomy

First-time female offenders exhibited higher mean scores across all dimensions compared to recidivists, with statistical differences observed in each dimension

These findings suggest that recidivism may be linked to poorer outcomes, particularly in areas such as distress, personal development, and overall well-being

Pre-Prison Drug Use

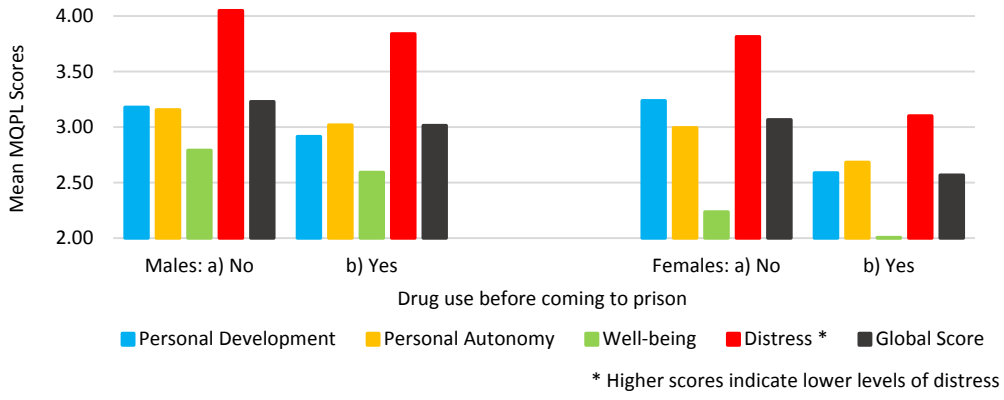
Figure 21 illustrates the scores for MQPL's *Well-Being and Development* dimensions based on pre-prison drug use among male and female prisoners. Table S16 provides an accompanying comparative analysis addressing the question of differences in *Well-being and development* dimensions among prisoners based on drug use before entering prison.

In the male subgroup, the higher *Personal Development* mean score (*M* = 3.18, *SD* = 1.00) is observed among prisoners who did not report drug use before coming to prison, while the lower mean score (*M* = 2.92, *SD* = 0.90) is noted for those who reported drug use. Similarly, in terms of *Personal Autonomy*, prisoners who did not report drug use before incarceration scored higher (*M* = 3.16, *SD* = 0.82) than those who reported drug use (*M* = 3.02, *SD* = 0.75).

The trend continued in the *Well-being* dimension, with those who did not report drug use having a higher mean score (*M* = 2.79, *SD* = 1.02) than those who reported drug use (*M* = 2.59, *SD* = 0.89). *Distress* scores also followed a similar pattern, with male prisoners who did not report drug use having a higher mean score indicating lower stress levels (*M* = 4.05, *SD* = 0.85) than those who reported drug use (*M* = 3.84, *SD* = 0.86). This pattern persisted for the *Global Well-Being and Development Score*, where prisoners who did not report drug use scored higher on average (*M* = 3.23, *SD* = 0.79) than those who did (*M* = 3.01, *SD* = 0.68), as presented in Table S16.

Figure 21

MQPL's Well-Being and Development Dimensions in Relation to the Pre-Prison Drug Use: Male and Female Prisoners' Perspectives



In the female subgroup, those prisoners who did not report drug use before coming to prison had a notably higher mean *Personal Development* score (*M* = 3.24, *SD* = 0.98) than those who reported drug use (*M* = 2.59, *SD* = 0.89; Table S16). Similarly, for *Personal Autonomy* and *Well-being dimensions*, female prisoners who did not report drug use had mean scores of 2.99 (*SD* =

0.98) and 2.24 (*SD* = 1.00), which were higher compared to those who reported drug use, with mean scores of 2.68 (*SD* = 0.91) and 2.01 (*SD* = 0.80), respectively.

Distress scores also followed this pattern. Female prisoners who did not report drug use had higher *Distress* scores, which indicated lower distress levels (*M* = 3.81, *SD* = 0.89) than those who reported drug use (*M* = 3.10, *SD* = 1.07). As for the *Global Score*, female prisoners who did not report drug use showed higher mean scores (*M* = 3.07, *SD* = 0.81) than those who did (*M* = 2.57, *SD* = 0.74).

For male prisoners, significant differences were observed between pre-prison drug users and non-users across all dimensions. Specifically, in the *Personal Development* dimension, male prisoners who reported drug use before incarceration had lower scores compared to those who did not, with a substantial mean difference of -0.26 (*SE* = 0.08, *p* = .002) on a 5-point scale and a small effect size (η^2_p = .02). Significant differences were noted in other dimensions as well, with mean differences ranging from 0.14 (*SE* = 0.07) for the *Personal Autonomy* scores to 0.21 (*SE* = 0.07) for the *Distress* scores (Table S16).

For female prisoners, the results also illustrate significant differences between individuals who reported drug use before imprisonment and those who did not in two dimensions and *Global* score (Table S16). Namely, in the *Personal Development* dimension, female prisoners who reported drug use before incarceration had lower scores compared to those who did not, with a mean difference of -0.65 (*SE* = 0.20, p = .002) and a medium effect size (η^2_p = .11).

Next, in the *Distress* dimension, female prisoners who reported drug use before coming to prison had lower scores than those who did not, with a mean difference of -0.71 (*SE* = 0.21, *p* = .001) and a medium effect size (η^2_p = .12). Finally, in the *Global Well-Being and Development Score*, female prisoners who did not report drug use showed higher scores than those who reported drug use, with a mean difference of 0.50 (*SE* = 0.17, *p* = .004) and a medium effect size (η^2_p = .10).

TAKEAWAY NOTES

Variations in Well-Being and Development Related to the Pre-Prison Drug Use

Male prisoners who did not report pre-prison drug use scored higher than those who reported drug use, with statistically significant differences observed in each dimension

Female offenders who did not report pre-prison drug use exhibited higher mean scores across all dimensions than those who reported drug use, but statistically significant only in areas of distress, personal development, and overall well-being

Pre-prison drug use should consistently be considered as a factor influencing the well-being and development of both male and female prisoners

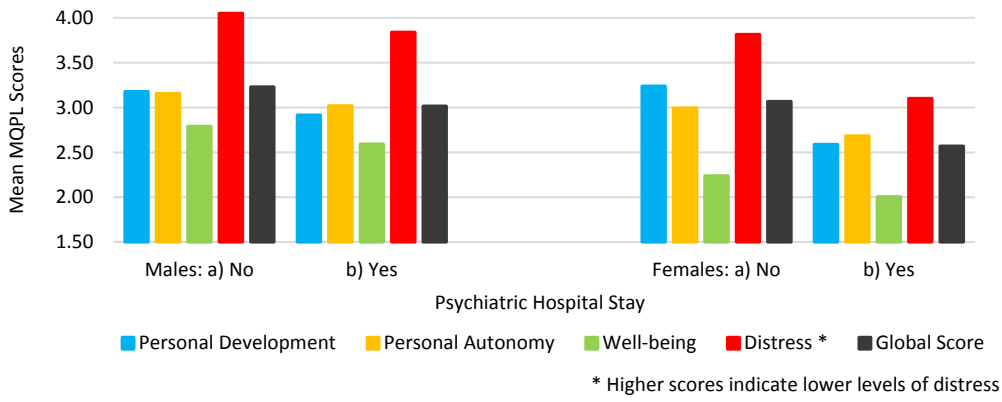
History of Psychiatric Hospital Stays

The scores for MQPL's *Well-Being and Development Dimensions* based on the history of psychiatric hospital stay are illustrated in Figure 22. Detailed comparisons in the subgroups of male and female prisoners can be found in Table S17. That way, the following research question is answered: Are there significant differences in well-being and development dimensions between prisoners reporting psychiatric hospital stays and those without such history?

Several significant findings emerged when the MQPL's well-being and development scores were compared among male prisoners based on their history of psychiatric hospital stays (Table S17). For the *Personal Development* dimension, male prisoners without a history of psychiatric hospital stays showed a higher mean score (M = 3.08, SD = 0.96) than those who confirmed staying in a psychiatric/mental hospital or unit for two days or more (M = 2.82, SD = 0.92). This difference resulted in a statistically significant mean difference of 0.26 (SE = 0.13, p = .043), indicating a small effect size (η^2_p = .01). Similarly, in terms of *Personal Autonomy*, male prisoners without a history of psychiatric hospital stays scored higher (M = 3.13, SD = 0.78) than those prisoners who reported such a history (M = 2.88, SD = 0.85). The mean difference of 0.25 (SE = 0.11, p = .022) was statistically significant, yet with a small effect size (η^2_p = .01).

Figure 22

MQPL's Well-Being and Development Dimensions Based on the History of Psychiatric Hospital Stay: Male and Female Prisoners' Perspectives



In the *Well-being* dimension, male prisoners without a history of psychiatric hospital stays scored higher on average (M = 2.75, SD = 0.96) than those prisoners with such a history did (M = 2.28, SD = 0.90). The mean difference of 0.47 (SE = 0.13, p < .001) was statistically significant, with a small effect size (η^2_p = .03). As for the *Distress* dimension, male prisoners who did not report psychiatric hospital stays had a higher mean score (M = 4.01, SD = 0.84) than those with such a history (M = 3.45, SD = 0.91). The mean difference of 0.56 (SE = 0.12, p < .001) was statistically significant, with a small effect size (η^2_p = .05). Finally, in the *Global Score* dimension,

male prisoners without a history of psychiatric hospital stays scored higher (*M* = 3.17, *SD* = 0.74) than those with such a history (*M* = 2.81, *SD* = 0.74). The mean difference of 0.35 (*SE* = 0.10, *p* < .001) was statistically significant, with a small effect size (η^2_p = .02).

In the female subgroup, the descriptive statistics for *Personal Development* score indicated that prisoners with a history of psychiatric hospital stays had a higher mean score (*M* = 3.04, *SD* = 1.10) than those without such a history (*M* = 2.90, *SD* = 0.96). However, the difference was not statistically significant (*p* = .589, η^2_p = .00).

For *Personal Autonomy*, the mean scores were comparable between the two groups: female prisoners with a history of psychiatric hospital stays had a mean score of 2.83 (*SD* = 1.05) while those without such a history had a mean score of 2.85 (*SD* = 0.93), also without statistically significant difference (*p* = .938, η^2_p = .00). As for the *Well-being*, female prisoners with a history of psychiatric hospital stays had a lower mean score (*M* = 2.00, *SD* = 0.93) than those without such a history (*M* = 2.16, *SD* = 0.90), yet without statistical significance (*p* = .507, η^2_p = .01).

In the *Distress* dimension, female prisoners who did not report psychiatric hospital stays had a higher mean score (*M* = 3.59, *SD* = 0.92) than those with such a history (*M* = 2.96, *SD* = 1.26), reaching a statistically significant mean difference of 0.64 (*SE* = 0.26, *p* = .017), with a medium effect size (η^2_p = .07). For the *Global Score*, female prisoners with a history of psychiatric hospital stays again scored lower (*M* = 2.77, *SD* = 0.95) than those without such a history (*M* = 2.84, *SD* = 0.77), with no statistically significant difference revealed (*p* = .726, η^2_p = .00), as presented in Table S17.

TAKEAWAY NOTES

Differences in Well-Being and Development Dimensions Among Prisoners With and Without a History of Psychiatric Hospital Stays

While male prisoners without a history of psychiatric hospital stays tended to report significantly higher levels of well-being and development, female prisoners with and without such a history showed comparable scores, except for Distress

The potential impact of psychiatric history on distress levels among female prisoners is indicated

History of Medical Security Measures

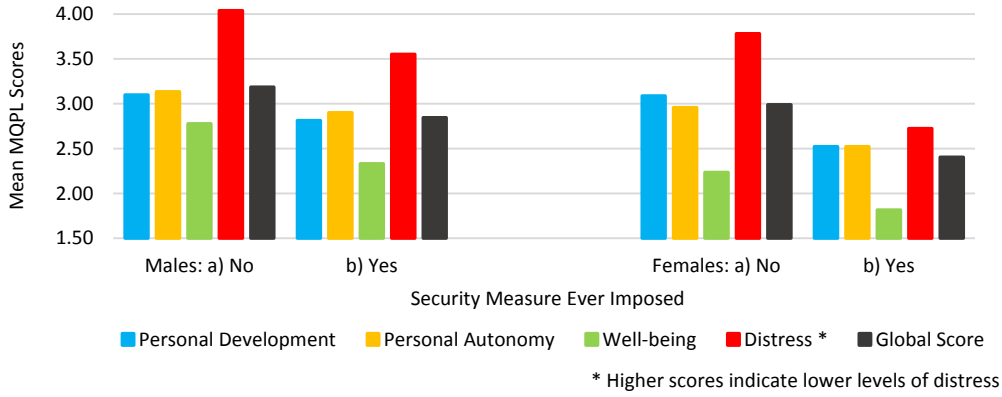
The following research questions were raised: What is the impact of a history of imposed medical security measures on the perceived levels of distress, personal development, autonomy, well-being, and overall well-being and development among prisoners? How do these dimensions differ between prisoners reporting a history of imposed medical security measures and those without such history? The MQPL's *Well-Being and Development Dimensions* scores were compared based on the history of imposed medical security measures, and significant differences were observed across several dimensions (Figure 23, Table S18).

The analysis identified dissimilarities for male prisoners with and without a self-reported history of imposed security measures across all scores. In the *Personal Development* dimension, prisoners who reported no security measure showed a higher mean score (M = 3.10, SD = 0.98) than those who reported being subjected to a security measure (M = 2.81, SD = 0.87).

A similar trend was observed in the *Personal Autonomy* dimension, with male prisoners without a security measure scoring higher (M = 3.13, SD = 0.79) than those with a security measure (M = 2.90, SD = 0.79). Similarly, for *Well-being* and *Distress* dimensions, prisoners without a security measure had mean scores of 2.78 (SD = 0.97) and 4.04 (SD = 0.84), which were higher compared to those who reported being imposed to a security measure, with mean scores of 2.33 (SD = 0.86) and 3.55 (SD = 0.89), respectively. This pattern continued in the *Global Well-Being and Development Score*, where male prisoners without a security measure had higher mean scores (M = 3.19, SD = 0.75) than those with a security measure (M = 2.84, SD = 0.71).

Figure 23

MQPL's Well-Being and Development Dimensions Based on the History of Psychiatric Hospital Stay: Male and Female Prisoners' Perspectives



The analysis of male prisoners revealed significant differences between those with and without a history of imposed security measures across all dimensions (Table S18). Correspondingly, in the *Distress* dimension, those who self-reported being imposed a security measure scored lower on average than those who did not, with a mean difference of 0.49 (*SE* = 0.10, $p < .001$) on a 5-point scale, indicating a small effect size ($\eta^2_p = .05$). Similarly, those with a history of imposed security measures exhibited lower mean scores compared to those without in all other dimensions, with all differences being statistically significant. The range of mean differences varied from 0.23 (*SE* = 0.09, $p = .012$, $\eta^2_p = .01$) in the *Personal Autonomy* to 0.45 (*SE* = 0.10, $p < .001$, $\eta^2_p = .03$) in the *Well-being* dimension (Table S18).

The comparison between female prisoners with and without a history of imposed security measures revealed significant differences in three MPQL scores in this study (Table S18). More precisely, in the *Distress*, those female prisoners with a history of imposed security measures scored lower on average (*M* = 2.72, *SD* = 0.89) compared to those without (*M* = 3.78, *SD* = 0.92), with a mean difference of -1.06 (*SE* = 0.22, $p < .001$), and large effect size ($\eta^2_p = .22$).

Moreover, for *Personal Development* and *Global Well-Being and Development Score*, female prisoners without a security measure had mean scores of 3.09 (*SD* = 0.98) and 2.99 (*SD* = 0.79), which were higher compared to those who reported being imposed to a security measure, with mean scores of 2.52 (*SD* = 0.97) and 2.40 (*SD* = 0.74), respectively. The mean difference observed in the *Personal Development* dimension was -0.57 (*SE* = 0.24, $p < .05$, $\eta^2_p = .06$), and the one found in the *Global Well-Being and Development Score* was -0.59 (*SE* = 0.19, $p < .01$, $\eta^2_p = .11$).

TAKEAWAY NOTES

Differences in Well-Being and Development Dimensions Among Prisoners With and Without a History of Imposed Medical Security Measures

Male prisoners without a history of imposed medical security measures tended to score significantly higher across all dimensions

Female prisoners without a history of imposed security measures scored significantly higher in Distress, Personal Development, and Global Well-Being and Development Score compared to those with a history of security measures

The largest mean difference was found in the Distress dimension in both male and female prisoners

There is the potential negative impact of a history of imposed security measures on well-being, personal growth, and distress levels within the prison environment

History of Self-Harm

Figure 24 presents the scores for MQPL's *Well-Being and Development* dimensions based on prisoners' reports of self-harm, whether inside or outside prison. The detailed results are in Table S19. The findings provide an answer to the research question of whether there are differences in the MQPL's *Well-Being and Development* scores between prisoners reporting a history of self-harm and those without such a history.

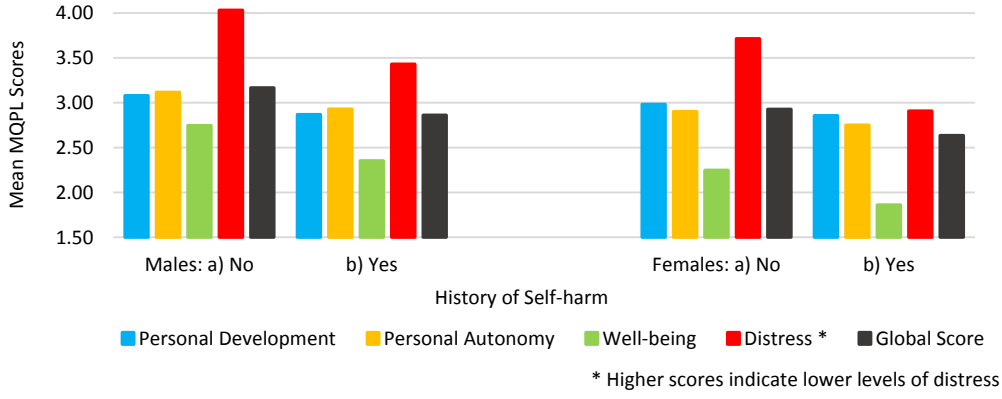
In the male subgroup, the higher mean score for the *Personal Development* dimension (*M* = 3.08, *SD* = 0.96) is observed among prisoners who did not report a history of self-harm, while the lower mean score (*M* = 2.87, *SD* = 0.96) is noted for those who reported a history of self-harm (Table S19).

As for *Personal Autonomy*, prisoners who did not report a history of self-harm scored higher (*M* = 3.12, *SD* = 0.78) than those who reported a history of self-harm (*M* = 2.93, *SD* = 0.86). The trend continues in the *Well-being* dimension, with those who did not report a history of self-harm having a higher mean score (*M* = 2.75, *SD* = 0.93) than those who reported such a history (*M* = 2.35, *SD* = 1.06).

Distress scores also followed a similar pattern, with male prisoners who did not report a history of self-harm having a higher mean score and lower level of distress (*M* = 4.03, *SD* = 0.79) than those who reported a history of self-harm (*M* = 3.43, *SD* = 1.06). Regarding the *Global Score*, male prisoners who did not report a history of self-harm scored higher (*M* = 3.17, *SD* = 0.73) than those who reported such a history (*M* = 2.86, *SD* = 0.79).

Figure 24

MQPL's Well-Being and Development Dimensions Based on the History of Self-Harm: Male and Female Prisoners' Perspectives



In the female subgroup, comparable *Personal Development* scores were noted in prisoners who did not report a history of self-harm (*M* = 2.98, *SD* = 1.01) and those who did (*M* = 2.86, *SD* = 0.97). Next, in terms of *Personal Autonomy*, female prisoners who did not report a history of self-harm exhibited a higher mean score (*M* = 2.90, *SD* = 0.99) compared to those who did (*M* = 2.75, *SD* = 0.89).

Female prisoners without a history of self-harm had mean *Well-being* scores of 2.25 (*SD* = 0.99) and 3.71 (*SD* = 0.87) in *Distress*, which were higher compared to those who reported a history of self-harm, with mean scores of 1.86 (*SD* = 0.62) and 2.91 (*SD* = 1.15), respectively. As for the *Global Well-Being and Development Score*, female prisoners who did not report a history of self-harm had a higher mean score (*M* = 2.93, *SD* = 0.82) than those who did (*M* = 2.63, *SD* = 0.77; Table S19).

For male prisoners, significant differences were observed between those with and without a history of self-harm across several dimensions. Specifically, in the *Distress* dimension, male prisoners who reported a history of self-harm scored lower than those who did not, with a mean difference of -0.60 (*SE* = 0.13, $p < .001$) on a 5-point scale and a medium effect size ($\eta^2_p = .06$). Next, significant differences were noted in two more MQPL scores, with mean differences of -0.39 (*SE* = 0.12, $p = .001$, $\eta^2_p = .02$) for the *Well-being* to -0.31 (*SE* = 0.09, $p = .001$, $\eta^2_p = .02$) for the *Global Well-Being and Development Score* (Table S19).

For female prisoners, significant differences were observed between those with and without a history of self-harm across the *Well-being* and *Distress* dimensions only. Specifically, female prisoners who reported a history of self-harm exhibited lower mean scores compared to those who did not, with a significant mean difference of -0.39 (SE = 0.18, $p = .030$) on a 5-point scale and a small effect size ($\eta^2_p = .04$). Higher distress levels were confirmed in female prisoners who reported a history of self-harm than in those who didn't, with a significant mean difference of 0.81 (SE = 0.22, $p = .001$) on a 5-point scale and a medium effect size ($\eta^2_p = .13$). No significant differences were found in other dimensions (Table S19).

TAKEAWAY NOTES

Differences in Well-Being and Development Dimensions Among Prisoners With and Without a History of Self-harm

Prisoners without a history of self-harm, whether inside or outside prison, tended to score higher across all dimensions

Significant differences were noted in the Well-being and Distress dimensions, suggesting a more pronounced impact of self-harm history on distress levels and "pains of imprisonment"

A history of self-harm among both male and female prisoners may negatively affect their quality of prison life, particularly in terms of higher distress levels and lower overall well-being

History of Suicide Attempts

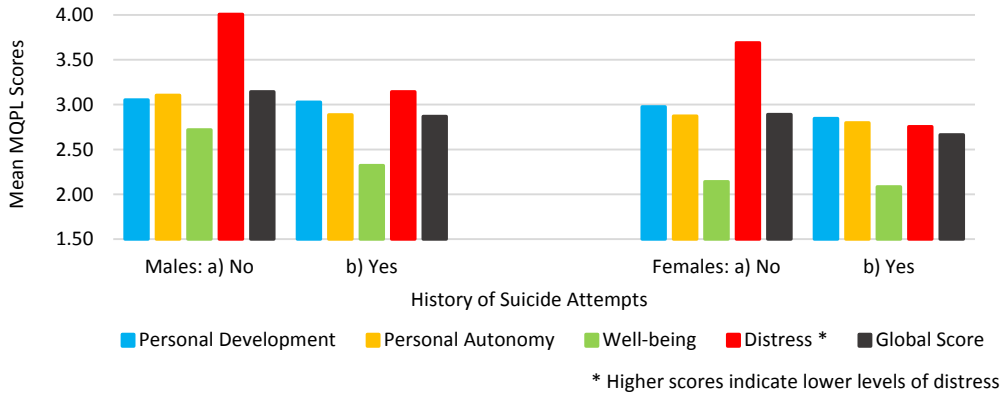
The *Well-Being and Development Dimensions* scores from the MQPL are compared based on prisoners' responses regarding their history of suicide attempts, either inside or outside prison (Figure 25). Significant differences were confirmed in a few dimensions (Table S20). The findings provide an answer to the research question on differences in the MQPL's *Well-Being and Development scores* between prisoners who self-reported a history of suicide attempts and those who did not.

For male prisoners, those who confirmed attempting suicide in the past and those who did not have comparable *Personal Development* scores, with a mean of 3.03 (*SD* = 0.94) and 3.05 (*SD* = 0.96), respectively (Table S20). In the *Personal Autonomy* dimension, prisoners without a history of suicide attempts scored higher on average (*M* = 3.10, *SD* = 0.78) than those with such a history (*M* = 2.89, *SD* = 0.94).

Next, for *Well-being* and *Distress* dimensions, male prisoners without a history of suicide attempts had mean scores of 2.72 (*SD* = 0.95) and 4.01 (*SD* = 0.82), which were higher compared to those who reported ever attempting suicide in the past, with mean scores of 2.32 (*SD* = 1.04) and 3.14 (*SD* = 0.95), respectively. This pattern continued in the *Global Well-Being and Development Score*, where prisoners without a history of suicide attempts scored higher (*M* = 3.14, *SD* = 0.73) than those who confirmed such attempts (*M* = 2.87, *SD* = 0.85).

Figure 25

MQPL's Well-Being and Development Dimensions Based on the History of Suicide Attempts: Male and Female Prisoners' Perspectives



Female prisoners who did not report a history of suicide attempts scored slightly higher (*M* = 2.98, *SD* = 0.94) in the *Personal Development* dimension compared to those who did (*M* = 2.85, *SD* = 1.17; Table S20). However, in the *Personal Autonomy*, those who reported a history of suicide attempts had comparable scores to those who did not confirm ever attempting suicide in the past, with a mean of 2.80 (*SD* = 1.11) and 2.87 (*SD* = 0.91).

Similarly, in terms of the *Well-being* dimension, female prisoners who did not report a history of suicide attempts exhibited slightly higher mean scores compared to those who did (*M* = 2.14, *SD* = 0.91 and *M* = 2.08, *SD* = 0.90, respectively). The mean scores for the *Distress* dimension follow a similar pattern, with female prisoners who did not report a history of suicide attempts having a higher mean score and lower levels of distress (*M* = 3.69, *SD* = 0.86) than those who reported a history of suicide attempts (*M* = 2.75, *SD* = 1.22). As for the *Global Well-Being and Development Score*, participants who did not report a history of suicide attempts had a slightly higher mean score (*M* = 2.89, *SD* = 0.75) than those who confirmed such a history (*M* = 2.66, *SD* = 0.97).

The analysis revealed significant differences between those male prisoners with and without a history of suicide attempts in three scores in this study (Table S20). Specifically, in the *Distress* dimension, those who self-reported ever attempting suicide in the past scored lower compared to those who didn't, with a mean difference of -0.86 (*SE* = 0.14, $p < .001$) on a 5-point scale and a medium effect size ($\eta^2_p = .06$). Similarly, those with a history of suicide attempts exhibited lower mean scores compared to those without such a history in the *Well-being* dimension (*MD* = -0.40, *SE* = 0.17, *p* = .018) and in the *Global Well-Being and Development Score* (*MD* = -0.27, *SE* = 0.13, *p* = .035), however with small effect sizes ($\eta^2_p = .01$, both).

In summary, significant differences between female prisoners with and without a history of suicide attempts were found in only one MQPL score – *Distress* (Table S20). More precisely, female prisoners who confirmed ever attempting suicide in the past scored significantly lower than those without a history of suicide attempts, with a mean difference of -0.94 (*SE* = 0.29, *p* = .003) and a large effect size ($\eta^2_p = .15$). No significant differences were found in other dimensions between female prisoners with and without a history of suicide attempts.

TAKEAWAY NOTES

History of Suicide Attempts and Prisoners' Well-Being and Development

Both male and female prisoners with a history of suicide attempts may experience significantly lower levels of well-being and higher stress levels within the prison environment

The Distress dimension appears particularly impacted by a history of suicide attempts

Prison Visitation Status and Prisoners' Well-Being and Development

The scores for MQPL's *Well-Being and Development Dimensions* based on the prison visitation status are illustrated in Figure 26. A detailed comparison, revealing several significant findings, can be found in Table S21. The following research question was answered: What are the differences in the global *Well-being and development* scores between prisoners who receive visits and those who do not?

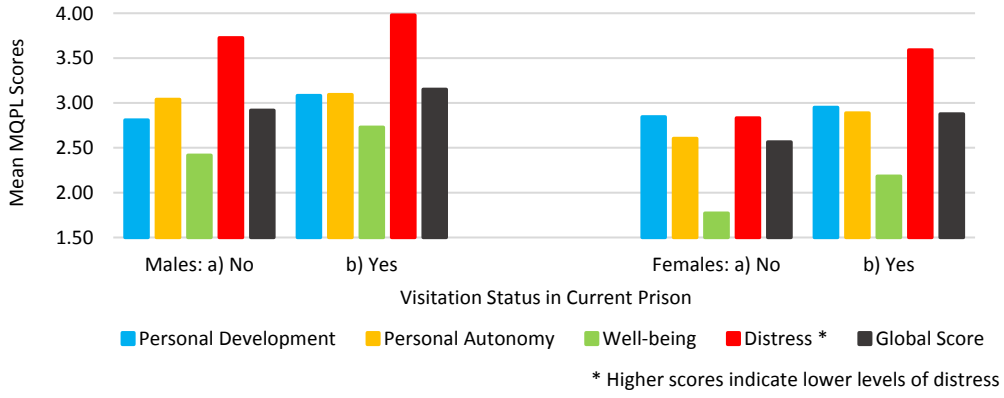
For the *Personal Development* dimension, male prisoners who received visits in the current prison had a higher mean score (M = 3.08, SD = 0.95) than those who did not (M = 2.81, SD = 1.02), resulting in a statistically significant mean difference of 0.27 (SE = 0.13, p = .035), with a small effect size (η^2_p = .01). In the *Well-being* dimension, male prisoners receiving visits scored higher (M = 2.73, SD = 0.96) than those who did not (M = 2.42, SD = 0.91). The mean difference of 0.31 (SE = 0.13, p = .016) was statistically significant, with a small effect size (η^2_p = .01).

As for the *Distress* dimension, male prisoners who confirmed having visitors in the current prison had a higher mean score (M = 3.98, SD = 0.84) than those who stated that they did not have any visitors (M = 3.73, SD = 0.95). The mean difference of 0.25 (SE = 0.12, p = .028) was statistically significant, with a small effect size (η^2_p = .01).

Regarding the *Global Well-Being and Development Score* dimension, male prisoners with confirmed visitations scored higher (M = 3.15, SD = 0.74) than those without visitors (M = 2.92, SD = 0.79). The mean difference of 0.23 (SE = 0.10, p = .021) was statistically significant, with a small effect size (η^2_p = .01). However, in terms of *Personal Autonomy*, the mean scores were comparable between the two groups: male prisoners who received visitors had a mean score of 3.09 (SD = 0.77) while those who didn't receive visitors had a mean score of 3.04 (SD = 0.89). The mean difference of 0.05 (SE = 0.11) was not statistically significant (p = .613, η^2_p = .00), as presented in Table S21.

Figure 26

MQPL's Well-Being and Development Dimensions Based on the Prison Visitation Status: Male and Female Prisoners' Perspectives



The descriptive statistics for the *Personal Development* dimension indicate that female prisoners who received visitors scored higher (*M* = 2.95, *SD* = 1.02) than those without visitation in the current prison (*M* = 2.84, *SD* = 0.91). For *Personal Autonomy*, the mean scores were comparable between the two groups: female prisoners who confirmed having visitors had a mean score of 2.89 (*SD* = 0.97), while those who didn't receive visitors had a mean score of 2.60 (*SD* = 0.84). When it comes to *Well-being*, female prisoners with a positive visitation status had a higher mean score (*M* = 2.18, *SD* = 0.95) than those without such a status (*M* = 1.77, *SD* = 0.53).

The trend continued in the *Distress* dimension. Female prisoners who did not report receiving visitors in the current prison had a lower mean score (*M* = 2.83, *SD* = 0.98) than those who received visitors (*M* = 3.59, *SD* = 0.99), indicating a difference in their distress levels. Finally, the *Global Well-Being and Development Score* was higher in those female prisoners who stated that they were receiving visitors (*M* = 2.88, *SD* = 0.83) than those who denied having visitation in the current prison (*M* = 2.57, *SD* = 0.68).

Furthermore, differences based on the prison visitation status were statistically confirmed for two scores – *Well-being* and *Distress* (Table S21). More precisely, in the *Well-being* dimension, female prisoners who reported receiving visitors scored higher compared to those who did not receive any visitors, with a mean difference of 0.41 (*SE* = 0.19, *p* = .038) on a 5-point scale and a small effect size (η^2_p = .03). Also, significant differences were noted in the *Distress* dimension, with a mean difference of 0.76 (*SE* = 0.31, *p* = .016) and a medium effect size (η^2_p = .07). No significant differences were found in other dimensions between female prisoners based on their visitation status (Table S21).

TAKEAWAY NOTES

Visitation Status and Prisoners' Well-being

Male prisoners who received visits in the current prison tended to score higher in Personal Development, Well-being, Distress, and Global Score

Female prisoners who reported receiving visitors rated Well-being and Distress more positively than those who did not

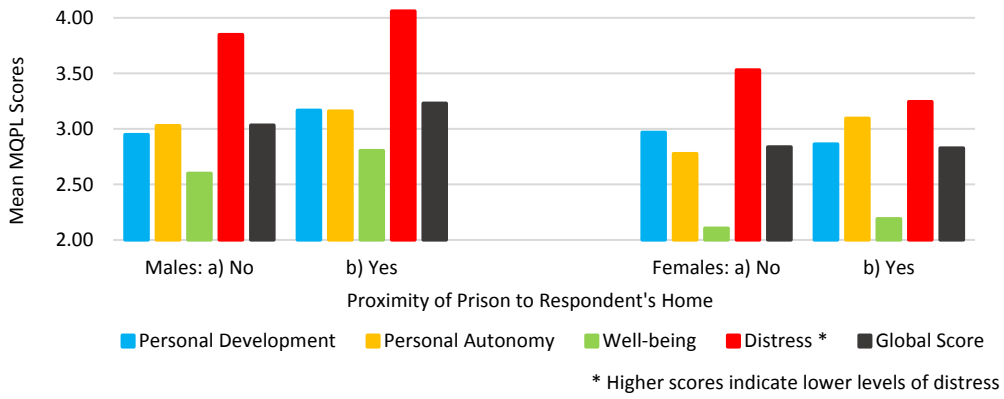
Visitation has positive implications for the psychological well-being of prisoners and appears to play an important role in the rehabilitation and reintegration efforts of male inmates

Proximity of Prison to Respondent's Home and Their Well-Being and Development

The scores for MQPL's *Well-Being and Development Dimensions* based on the prison proximity to the home area are illustrated in Figure 27, while comparisons are provided in Table S22. The following research question was answered: How do prisoners perceive their well-being and development based on the prison proximity to their home area?

Figure 27

MQPL's Well-Being and Development Dimensions Based on the Prison Proximity to Home Area: Male and Female Prisoners' Perspectives



For the *Personal Development* dimension, male prisoners incarcerated in prisons close to their home area reported higher scores (*M* = 3.17, *SD* = 0.98) than those whose homes were farther away from their current prisons (*M* = 2.95, *SD* = 0.93). This trend was consistent across other dimensions as well (Table S22).

Regarding *Personal Autonomy*, prisoners with a nearby home exhibited a slightly higher mean score (*M* = 3.16, *SD* = 0.77) than those without a nearby home (*M* = 3.03, *SD* = 0.80). As for the *Well-being* dimension, male prisoners with a nearby home had a higher mean score (*M* = 2.80, *SD* = 0.99) than those without (*M* = 2.60, *SD* = 0.93).

Distress scores also followed this pattern, with male prisoners whose prison was near their home area having a higher mean score and lower distress levels (*M* = 4.06, *SD* = 0.81) compared to those without a nearby home (*M* = 3.85, *SD* = 0.89). When it comes to the *Global Well-Being and Development Score*, prisoners incarcerated in prisons close to their homes scored higher on average (*M* = 3.03, *SD* = 0.72) than those whose homes were farther away (*M* = 3.23, *SD* = 0.76).

Several significant differences were found in the group of male prisoners divided based on whether the prison was located near their home area (Table S22). Notably, male prisoners with a nearby home had significantly higher scores in the *Personal Development*, *Well-being*, *Distress*, and *Global Well-Being and Development Score* dimensions than those whose homes were

farther away. The mean differences ranged from -0.22 to -0.20, with corresponding *p*-values ranging from .002 to .016 with a very small effect size (η^2_p ranging from .01 to .02). However, in *Personal Autonomy*, the mean scores were comparable between groups (p = .058, η^2_p = .01).

The descriptive statistics for the *Personal Development* dimension showed that female prisoners who reported the prison being near their home area scored slightly higher (M = 2.97, SD = 0.99) compared to those who reported the prison not being near their home area (M = 2.86, SD = 1.02). However, the difference in means was not statistically significant (p = .672).

Regarding *Personal Autonomy*, female prisoners who were incarcerated in prisons close to their home area scored higher on average (M = 3.10, SD = 0.85) compared to those whose homes were farther away (M = 2.78, SD = 0.98), with no statistical significance (p = .021). For the *Well-being* dimension, the mean scores were also comparable between the two groups (M = 2.19, SD = 0.94, and M = 2.11, SD = 0.90, respectively), with no significant difference calculated (p = .713). For the *Distress* dimension, female inmates incarcerated in prisons close to their homes had a slightly lower mean score (M = 3.25, SD = 0.87) than those whose homes were farther away (M = 3.53, SD = 1.08). Yet, the difference was not statistically significant (p = .275). Lastly, for the *Global Well-Being and Development Score*, there was no significant difference between female prisoners based on the proximity of the prison to their home area (M = 2.83, SD = 0.85, and M = 2.84, SD = 0.80, respectively; p = .964).

TAKEAWAY NOTES

Home Proximity and Prisoners' Well-Being

Male prisoners with prisons near their home area tended to score higher across various dimensions, including Personal Development, Well-being, Distress, and Global Score

While differences were noted in some dimensions between female prisoners based on home proximity, no consistent pattern emerged, and no significant differences were observed across all dimensions measured by the MQPL

Proximity to the home area appears to be a more influential factor for male prisoners

Its impact on female prisoners' life quality within the prison environment is less pronounced, particularly given the single prison facility in the country, which is typically distant from their homes

Work Engagement in Prison and Inmates' Well-Being and Development

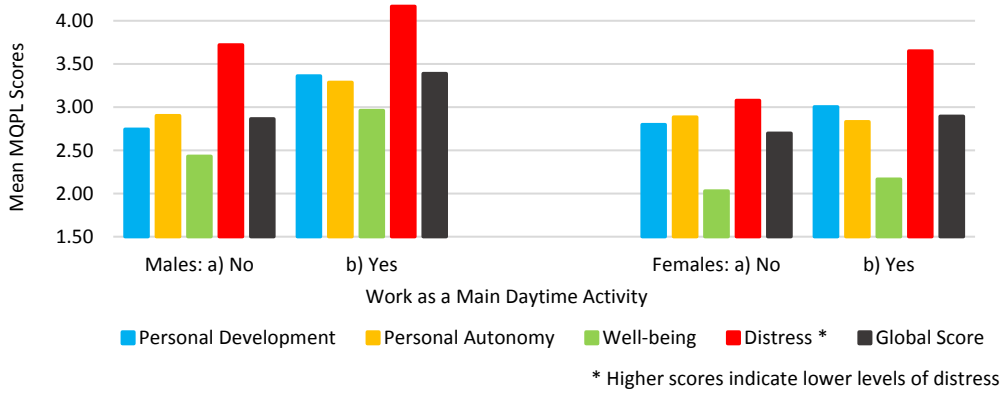
Figure 28 illustrates the MQPL's *Well-Being and Development* scores categorised by work being the main daytime activity or not for both male and female prisoners, with a detailed comparison provided in Table S23. This analysis answered the next research question: How do the differences in work engagement in prison as the main daytime activity affect prisoners' overall well-being and development?

The analysis among male prisoners based on their main daytime activity, specifically whether they were engaged in work or not, revealed consistent variations in reported scores (Table S23). For the *Personal Development* dimension, male prisoners engaged in work as their main daytime activity demonstrated a higher mean score (M = 3.36, SD = 0.94), while those not involved in work had a lower mean score (M = 2.74, SD = 0.86).

Similarly, regarding *Personal Autonomy*, male prisoners engaged in work scored higher (M = 3.29, SD = 0.70) than those not engaged in work (M = 2.90, SD = 0.82). For the *Well-being* dimension, male prisoners engaged in work had a higher mean score (M = 2.96, SD = 0.94) than those not engaged in work (M = 2.43, SD = 0.91). In the *Distress* dimension, male prisoners engaged in work scored higher (M = 4.17, SD = 0.74), indicating lower distress levels, than those not engaged in work did (M = 3.72, SD = 0.92). Finally, for the *Global Well-Being and Development Score*, male prisoners engaged in work had a higher mean score (M = 3.39, SD = 0.71) than those not engaged (M = 2.86, SD = 0.69).

Figure 28

MQPL's Well-Being and Development Dimensions Based on Main Daytime Activity: Male and Female Prisoners' Perspectives



The differences in mean scores between the two groups were statistically significant across all dimensions, indicating that engagement in work as the main daytime activity may positively impact various aspects of well-being and development for male prisoners. Notably, in *Personal Development*, male prisoners engaged in work scored higher compared to those not engaged in work, with the largest mean difference confirmed (*MD* = 0.62, *SE* = 0.08, $p < .001$) on a 5-point scale, with a large effect size ($\eta^2_p = .11$). Similarly, in *Personal Autonomy*, *Well-being*, *Distress*, and the *Global Score*, male prisoners engaged in work showed higher scores compared to those not working, with all differences being statistically significant ($p < .001$). The range of mean differences varied from 0.38 (*SE* = 0.07, $\eta^2_p = .06$) in the *Personal Autonomy* to 0.53 (*SE* = 0.08, $\eta^2_p = .08$) in the *Well-being* dimension (Table S23).

For female prisoners, those engaged in work as their main daytime activity showed a higher mean *Personal Development* score (*M* = 3.00, *SD* = 1.03) compared to those not working (*M* = 2.80, *SD* = 0.95). However, this difference was not statistically significant ($p = .389$, $\eta^2_p = .01$). Interestingly, for *Personal Autonomy*, female prisoners engaged in work demonstrated a slightly lower mean score (*M* = 2.83, SD = 0.97) than those not engaged in work (*M* = 2.88, *SD* = 0.92). Again, this difference was not statistically significant ($p = .816$, $\eta^2_p = .00$). The mean scores for the *Well-being* dimension were comparable between female prisoners engaged in work (*M* = 2.17, *SD* = 0.91) and those not engaged in work (*M* = 2.03, *SD* = 0.86), with no statistically significant difference observed ($p = .516$, $\eta^2_p = .01$).

This pattern persisted in the *Global Score*. Female prisoners engaged in work scored higher (*M* = 2.89, *SD* = 0.82) than other inmates (*M* = 2.70, *SD* = 0.80), although this difference was not statistically significant ($p = .313$, $\eta^2_p = .01$). In contrast, significant differences were observed in the *Distress* dimension. Female prisoners engaged in work scored higher on average (*M* = 3.65, *SD* = 0.98) than inmates not engaged in work (*M* = 3.08, *SD* = 1.08), indicating lower distress levels among those involved in work ($p = .018$) with a medium effect size ($\eta^2_p = .07$), as presented in Table S23.

TAKEAWAY NOTES

Work Engagement in Prison and Inmates' Well-Being and Development

Work engagement as the primary daytime activity is associated with significantly higher scores across all dimensions in male prisoners

Work engagement positively impacts well-being and development within the prison environment for male prisoners, especially in fostering personal growth and rehabilitation

Female prisoners engaged in work demonstrated significantly lower distress levels, suggesting a potential benefit of work engagement on emotional well-being

Extended Daytime Cell Lockdown and Prisoners' Well-Being and Development

Figure 29 illustrates the MQPL's *Well-Being and Development* scores categorised by extended daytime cell lockdown, with a detailed comparison in Table S24. The following research question was raised: How does extended daytime cell lockdown impact the *Well-being and Development dimension* among prisoners?

In the subgroup of male prisoners, those experiencing prolonged daytime cell lockdown had a lower mean *Personal Development* score (M = 2.76, SD = 0.87) in comparison to those not experiencing lockdown (M = 3.22, SD = 0.96), with a statistically significant mean difference of -0.45 (SE = 0.09, p < .001) and a small effect size (η^2_p = .05). In *Personal Autonomy*, those who confirmed usually spending six or more hours locked in their cells scored lower (M = 2.81, SD = 0.78) than those who did not (M = 3.25, SD = 0.74), with a statistically significant mean difference of -0.43 (SE = 0.07, p < .001) and a medium effect size (η^2_p = .07).

Similarly, male prisoners experiencing extended lockdown had a lower mean *Well-being* score (M = 2.38, SD = 0.88) than inmates not experiencing lockdown (M = 2.89, SD = 0.95), with a statistically significant mean difference of -0.51 (SE = 0.09, p < .001) and a medium effect size (η^2_p = .07). As for the *Distress,* those experiencing prolonged lockdown scored lower on average (M = 3.56, SD = 0.94) and had higher distress levels than inmates not experiencing lockdown did (M = 4.16, SD = 0.73), with a statistically significant mean difference of -0.60 (SE = 0.08, p < .001) and a medium effect size (η^2_p = .11).

Regarding the *Global Well-Being and Development Score*, male prisoners who confirmed being subjected to extended lockdown scored lower (M = 2.82, SD = 0.68) than those who did not (M = 3.30, SD = 0.72), with a statistically significant mean difference of -0.49 (SE = 0.06, p < .001) and a medium effect size (η^2_p = .10), as presented in Table S24.

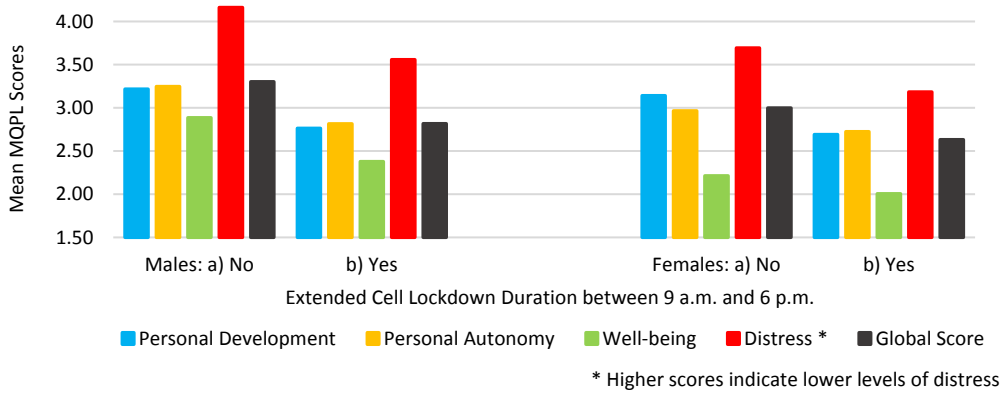
Interestingly, not all differences among female prisoners were statistically significant (Table S24). In terms of *Personal Autonomy*, the mean scores were comparable between the two groups (p = .259, η^2_p = .02). Female prisoners who confirmed usually spending six or more hours locked in their cells had a mean score of 2.72 (SD = 0.86), while those who did not confirm the same scored 2.97 on average (SD = 1.04). Similarly, for *Well-being*, no statistically significant difference was observed between female prisoners experiencing extended lockdown (M = 2.01, SD = 0.65) and those not experiencing it (M = 2.21, SD = 1.05; p = .277, η^2_p = .01).

However, those experiencing prolonged daytime cell lockdown had a lower mean *Personal Development* score (M = 2.69, SD = 0.90) than female prisoners not experiencing lockdown did (M = 3.14, SD = 1.07), with a statistically significant mean difference of -0.45 (SE = 0.22, p = .044) and a small effect size (η^2_p = .05). This trend continued in the *Distress* aspect of prison life quality. Results confirmed that female inmates who confirmed being subjected to extended lockdown scored lower on average (M = 3.18, SD = 0.91) and had higher distress levels in comparison to those not experiencing lockdown (M = 3.69, SD = 1.10), with a statistically significant mean difference of -0.51 (SE = 0.23, p = .026) and a moderate effect size (η^2_p = .06).

Furthermore, female prisoners who confirmed usually spending six or more hours locked in their cells had a lower mean *Global Well-Being and Development Score* (*M* = 2.63, *SD* = 0.69) than those not experiencing lockdown (*M* = 3.00, *SD* = 0.89), with a statistically significant mean difference of -0.37 (*SE* = 0.18, *p* = .042) and a small effect size (η^2_p = .05).

Figure 29

MQPL's Well-Being and Development Dimensions Based on Extended Daytime Cell Lockdown: Male and Female Prisoners' Perspectives



TAKEAWAY NOTES

Effects of Extended Daytime Cell Lockdown on Prisoners' Well-Being and Development

Male prisoners under prolonged lockdown showed significantly lower scores across all dimensions compared to those not experiencing lockdown, indicating reduced personal development and autonomy, lower overall well-being with increased "pains of imprisonment" and higher distress levels

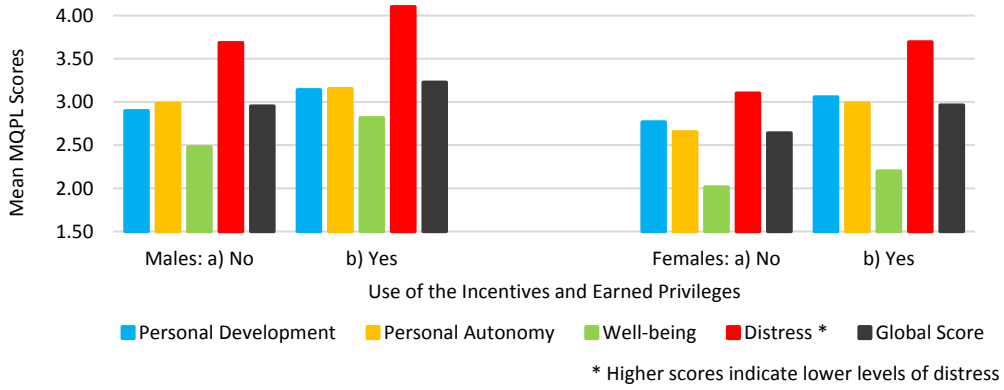
Female prisoners under extended lockdown demonstrated significantly lower scores in personal development, distress, and global well-being compared to those not experiencing lockdown, implying reduced opportunities for addressing offending behaviours, preparing for release, and fostering personal growth with higher distress levels and reduced overall well-being

Use of Incentives and Earned Privileges and Variations in Well-Being and Development

Figure 30 illustrates the MQPL's *Well-Being and Development* scores categorised by using incentives and earned privileges, complemented by a detailed comparison in Table S25. For research purposes, the following question was posed: Do prisoners who utilise incentives and earned privileges exhibit higher levels of well-being and development, as conceptualised in the MQPL framework, than those who do not?

Figure 30

MQPL's Well-Being and Development Dimensions Based on the Use of Incentives and Earned Privileges: Male and Female Prisoners' Perspectives



The analysis revealed variations in reported MQPL scores among male prisoners concerning their utilisation of incentives and earned privileges within or outside the prison environment (Table S25). Male prisoners who reported using incentives and earned privileges demonstrated a higher mean score in *Personal Development* (M = 3.14, SD = 0.96) than those who did not use these benefits (M = 2.90, SD = 0.93). The mean difference of 0.24 (SE = 0.09) was statistically significant (p = .005) with a small effect size (η^2_p = .02).

Similarly, in *Personal Autonomy*, male prisoners who reported using the mentioned privileges exhibited a higher mean score (M = 3.15, SD = 0.79) than those inmates who did not (M = 2.98, SD = 0.78). This mean difference of 0.17 (SE = 0.07) was statistically significant (p = .016) with a very small effect size (η^2_p = .01).

In the *Well-being* dimension, male prisoners who reported using incentives and earned privileges had a higher mean score (M = 2.82, SD = 1.00) than inmates who did not (M = 2.48, SD = 0.86). This mean difference of 0.34 (SE = 0.08) was statistically significant (p < .001), though with a small effect size (η^2_p = .03).

Male prisoners who reported using some of the listed privileges had a lower distress level, as indicated by a higher mean *Distress* score (*M* = 4.10, *SD* = 0.82), in comparison to those who did not report ever using them (*M* = 3.69, *SD* = 0.87). This mean difference of 0.42 (*SE* = 0.08) was statistically significant ($p < .001$), and the effect size was moderate ($\eta^2_p = .06$). Finally, for the *Global Score*, male prisoners who reported using incentives and earned privileges had a higher mean score (*M* = 3.23, *SD* = 0.75) than inmates those who did not use them (*M* = 2.95, *SD* = 0.71). This mean difference of 0.28 (*SE* = 0.07) was statistically significant ($p < .001$) with a small effect size ($\eta^2_p = .03$).

Female prisoners who reported using incentives and earned privileges scored higher in *Personal Development* (*M* = 3.06, *SD* = 1.00) than inmates who did not utilise such benefits (*M* = 2.77, *SD* = 0.97). However, the mean difference of 0.29 (*SE* = 0.22) was not statistically significant ($p = .188$, $\eta^2_p = .02$). In *Personal Autonomy*, female prisoners who reported using the mentioned privileges exhibited a higher mean score (*M* = 2.99, *SD* = 0.90) than those who did not (*M* = 2.65, *SD* = 1.01). Again, the mean difference of 0.33 (*SE* = 0.21) was not statistically significant ($p = .116$, $\eta^2_p = .03$).

The mean scores for *Well-being* were comparable between the two groups, with those female prisoners who utilised those privileges having a slightly higher mean score (*M* = 2.20, *SD* = 0.95) than inmates who did not (*M* = 2.01, *SD* = 0.82), although not statistically significant ($p = .354$, $\eta^2_p = .01$). In contrast, a significant difference was observed in the *Distress* dimension, where female prisoners who reported using incentives and earned privileges had a higher mean score (*M* = 3.70, *SD* = 0.90) indicating lower distress levels compared to those who did not utilise such benefits (*M* = 3.10, *SD* = 1.13). The mean difference of 0.59 (SE = 0.22) was statistically significant ($p = .008$) with a medium effect size ($\eta^2_p = .08$).

Concerning *Global Score*, female prisoners who reported using incentives and earned privileges had a higher mean score (*M* = 2.96, *SD* = 0.77) than inmates who did not use these benefits (*M* = 2.64, *SD* = 0.84). However, a mean difference of 0.32 (*SE* = 0.18) was not statistically significant ($p = .071$, $\eta^2_p = .04$), as presented in Table S25.

TAKEAWAY NOTES

Variations in Well-Being and Development Based on the Use of Incentives and Earned Privileges

Male prisoners who reported utilising incentives and earned privileges demonstrated significantly higher scores across all dimensions compared to those who did not

However, only lower distress levels among female inmates using incentives and earned privileges were statistically confirmed

The use of incentives and earned privileges may enhance the prison experience for male inmates and potentially reduce distress among female inmates

History of Disciplinary Measures and Prisoners' Well-Being and Development

Figure 31 presents the MQPL's *Well-Being and Development Dimensions* scores based on whether a participant reported experiencing disciplinary measures in their current prison. Detailed comparisons can be found in Table S26. For research purposes, the following question was raised: How do disciplinary measures imposed in prison affect the well-being and development of prisoners across different dimensions?

Significant findings emerged across all dimensions in comparing well-being and development scores among male prisoners based on disciplinary measures being imposed in their current prison (Table S26). In the *Personal Development* dimension, male prisoners who reported no disciplinary measures demonstrated a higher mean score (M = 3.25, SD = 0.96) than those with disciplinary measures imposed did (M = 2.72, SD = 0.85), resulting in a statistically significant mean difference of 0.53 (SE = 0.08, $p < .001$) with a medium effect size ($\eta^2_p = .07$).

Next, in the *Personal Autonomy*, male prisoners without disciplinary measures scored higher (M = 3.21, SD = 0.78) than those who reported disciplinary measures being imposed (M = 2.89, SD = 0.77), with a statistically significant mean difference of 0.32 (SE = 0.07, $p < .001$) and a small effect size ($\eta^2_p = .04$).

The trend continues in the *Distress* dimension. Male prisoners who reported no disciplinary measures scored higher in *Distress* on average (M = 4.05, SD = 0.86), indicating lower levels of severe emotional disturbance compared to those with disciplinary measures imposed (M = 3.78, SD = 0.84). The statistically significant mean difference of 0.27 (SE = 0.08, $p = .001$) with a small effect size ($\eta^2_p = .02$) suggests that disciplinary measures may exacerbate distress among male prisoners.

As for the *Global Score*, male prisoners who reported no disciplinary measures had a higher mean score (M = 3.28, SD = 0.76) than inmates with disciplinary measures did (M = 2.86, SD = 0.64), with a statistically significant mean difference of 0.42 (SE = 0.06, $p < .001$) and a medium effect size ($\eta^2_p = .08$).

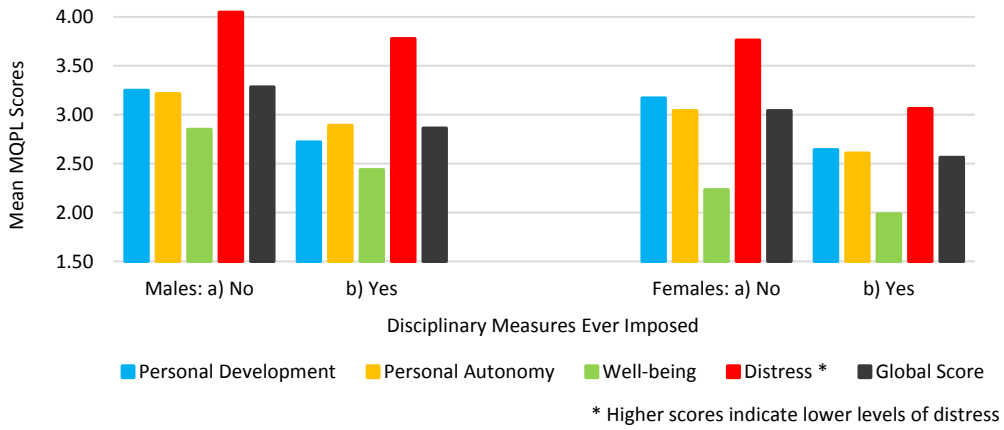
On the contrary, male prisoners without disciplinary measures imposed scored higher in the *Well-being* (M = 2.85, SD = 0.96) than inmates with disciplinary measures imposed did (M = 2.44, SD = 0.91), resulting in a statistically significant mean difference of 0.41 (SE = 0.08, $p < .001$) with a small effect size ($\eta^2_p = .04$).

In the female subgroup, inmates with a history of imposed disciplinary measures had a lower mean score in *Personal Development* (M = 2.64, SD = 0.95) than those without such a history (M = 3.17, SD = 0.96), with a statistically significant mean difference of -0.53 (SE = 0.21, $p = .014$) and a medium effect size ($\eta^2_p = .07$).

Regarding *Personal Autonomy*, female prisoners who reported disciplinary measures being imposed had a score of 2.61 on average (SD = 0.93). On the other hand, those who reported no disciplinary measures had a mean score of 3.04 (SD = 0.93). This mean difference of -0.43 (SE = 0.21) was statistically significant with a small effect size ($p = .036$, $\eta^2_p = .05$).

Figure 31

MQPL's Well-Being and Development Dimensions Based on Disciplinary Measures Being Imposed in Current Prison: Male and Female Prisoners' Perspectives



Regarding *Well-being*, although the mean score was higher for female prisoners without disciplinary measures (M = 2.23, SD = 0.91) in comparison to those with disciplinary measures (M = 1.99, SD = 0.88), the difference was not statistically significant (MD = 0.25, SE = 0.20, p = .212, η^2_p = .02). As for the *Distress* dimension, female prisoners with no disciplinary measures had a higher mean score (M = 3.76, SD = 0.95) in comparison to those with disciplinary measures (M = 3.06, SD = 1.01), with a statistically significant mean difference of 0.70 (SE = 0.21, p = .002) and a medium effect size (η^2_p = .11). Finally, female prisoners without disciplinary measures had a higher *Global score* on average (M = 3.04, SD = 0.78) than those with disciplinary measures (M = 2.56, SD = 0.78), with a significant mean difference of 0.48 (SE = 0.17, p = .006) and a medium effect size (η^2_p = .09), as presented in Table S26.

TAKEAWAY NOTES

Differences in Well-Being and Development Dimensions Among Prisoners With and Without a History of Disciplinary Measures

Male prisoners with disciplinary measures scored significantly lower across all dimensions compared to those without, implying adverse effects on personal development, autonomy, well-being, distress levels, and overall well-being

Female prisoners with disciplinary measures also showed significantly lower scores in personal development, autonomy, distress levels, and overall well-being compared to those without disciplinary measures, indicating similar adverse effects

Despite this, female prisoners reported comparable levels of "pains of imprisonment" regardless of disciplinary history

Impact of Prison Regime and Social Dynamics on the Prison Experience

In this section of the study, hierarchical regression analyses were conducted to understand the impact of prison regime and social dynamics on the prison experience of male and female inmates. Specifically, the analysis examined how variables such as staff-prisoner relationships, prisoner interactions with other prisoners and personal social relationships, as measured by the MQPL survey and WHOQOL-BREF questionnaire, predict various dimensions of well-being and development in prison after controlling for the prison regime and gender of inmates.

More precisely, the first predictor focuses on staff-prisoner interactions and safety from staff, and the second predictor assesses safety from other prisoners and interpersonal dynamics among prisoners. The third predictor examines prisoners' satisfaction with their personal relationships and support networks. Each predictor provides insights into different aspects of social dynamics in prison. Therefore, the findings could explain the role that prison regimes and social dynamics have in predicting well-being among male and female inmates.

The following specific research question was addressed: After controlling for prison regime and gender as potential confounding factors, to what extent can variance in various aspects of the prison experience, including personal development, personal autonomy, well-being, distress, and the global score, be explained by relationships between prison staff and prisoner and between prisoners themselves and prisoners' personal relationships and support networks?

The **first regression analysis** revealed that the prison regime significantly predicted *Personal Development* (β = .22) during Step 1 of the regression, whereas gender did not (Table S27). However, the initial model demonstrated a relatively low explanatory power, accounting for only 5% of the variance in *Personal Development* score. By incorporating the MQPL and WHOQOL-BREF variables in Step 2, the β coefficient for the prison regime decreased to .00 and became non-significant, whereas explanatory power improved by 70%, explaining 74% of the variance in this scores. *Staff-prisoner relationships* made the most substantial unique contribution (β = .84), followed by *Social relationships* (β = .08). Specifically, an increase of 1 point in *Staff-prisoner relationships* corresponded to a *Personal Development* score increase of 0.79. The same increase in *Social relationships* led to an improvement in *Personal Development* of 0.02.

In the **second regression analysis**, both the prison regime (β = .21) and inmates' gender (β = .08) significantly predicted *Personal Autonomy* in Step 1 (Table S27). However, the initial model had a low explanatory power, explaining only 5% of the variance in *Personal Autonomy* scores. Upon entering additional predictors in Step 2, these associations became non-significant, and the β coefficient for prison regime decreased to -.02, while for gender β was reduced to .01. The expanded model in Step 2 improved explanatory power, accounting for an additional 47% of the variance in *Personal Autonomy* scores. All predictor variables introduced in Step 2 were statistically significant, with *Staff-prisoner relationships* demonstrating the most pronounced unique contribution (β = .49), followed by *Inmate interactions* (β = .28) and *Social relationships* (β = .08). More precisely, a 1-point improvement in *Staff-prisoner relationships* and *Inmate interactions* is associated with an increase of 0.39 and 0.31, respectively, in the MQPL score for *Personal Autonomy*. Furthermore, a 1-point change in *Social relationships* is linked to an improvement of 0.02 in the same MQPL score.

In the **third regression analysis** conducted, both the prison regime (β = .26) and inmates' gender (β = .20) significantly predicted *Well-being* in Step 1 (Table S27). However, the association between *Well-being* score and prison regime became non-significant in Step 2. The β coefficient for gender decreased to .11 in Step 2 while remaining statistically significant (p < .001), indicating a moderate but consistent effect on the well-being of prisoners. The overall model demonstrated a substantial increase in explanatory power from Step 1 (11%) to Step 2 (49%), with an improvement of 38% in the variance explained in *Well-being*. Among the predictor variables, *Inmate interactions* emerged as the most influential predictor (β = .42), followed by *Staff-prisoner relationships* (β = .31), suggesting that being a male prisoner and experiencing more positive interactions with staff and other inmates is associated with improved well-being. More precisely, a 1-point improvement in *Inmate interactions* is associated with an increase of 0.55 in the *Well-being* score. At the same time, a 1-point change in *Staff-prisoner relationships* is associated with an increase of 0.29 in the same score. Being a male prisoner implied having a *Well-being* score higher than females for 0.31 points.

Comparable findings resulted from the **fourth regression analysis** conducted (Table S27). The prison regime (β = .18) and inmates' gender (β = .17) significantly predicted *Distress* in Step 1. After introducing variables of prisoners' self-ratings of their social dynamics in Step 2, the prison regime became non-significant. At the same time, the β coefficient for gender decreased to .10 and remained statistically significant (p < .001). The overall model demonstrated an increase in explanatory power from Step 1 (6%) to Step 2 (28%), with an improvement of 22% in the variance explained. All predictor variables were statistically significant, with *Inmate interactions* demonstrating the most pronounced unique contribution (β = .32), followed by *Social relationships* (β = .16) and *Staff-prisoner relationships* (β = .15). Results indicated that a 1-point improvement in *Inmate interactions*, *Social relationships* and *Staff-prisoner relationships* is associated with an increase of 0.37, 0.04 and 0.13, respectively, in the MQPL *Distress* score. As revealed, male prisoners scored 0.24 points higher on the *Distress* scale than females.

In the **final regression analysis**, both the prison regime (β = .27) and inmates' gender (β = .10) significantly predicted the *Global Well-Being and Development Score* in Step 1 (Table S27). Upon entering three predictors in Step 2, these associations became non-significant, with β coefficients decreased to .02 and .04 for prison regime and gender, respectively. While the initial model had a low explanatory power, explaining only 8% of the variance in the *Global Score*, the expanded model had improved explanatory power, accounting for an additional 65% of the variance in the mentioned score. All three predictor variables were statistically significant, with *Staff-prisoner relationships* demonstrating the most pronounced unique contribution (β = .66), followed by *Inmate interactions* (β = .23) and *Social relationships* (β = .09). Overall, a 1-point improvement in *Staff-prisoner relationships* and *Inmate interactions* is associated with an increase of 0.49 and 0.23 in the global score for *Well-Being and Development*, respectively. Furthermore, a 1-point change in *Social relationships* is related to an improvement of 0.02 in the same *Global Score*.

TAKEAWAY NOTES

Impact of Prison Regime and Social Dynamics on the Prison Experience

While the prison regime and gender initially showed significant associations with different well-being and development dimensions, these associations became non-significant after introducing additional predictors

Staff-prisoner relationships prevailed as the most influential predictor overall, confirming their importance in shaping prisoners' well-being and development

However, the quality of interactions with other prisoners contributed to a better overall sense of well-being despite the discomfort associated with imprisonment

DISCUSSION

This study explored different aspects of prisoners' autonomy, personal growth, and psychological well-being. We examined how individual characteristics, the prison environment, institutional practices, social dynamics, and pre-prison life influenced prisoners' experiences. The overarching research question was how various factors contributed to variations in prisoners' overall well-being and development, as defined in the MQPL framework.

Based on the presented findings, we believe that policymakers, prison authorities, and researchers can develop informed, evidence-based, and targeted programs and policies and plan future studies to support prisoners' rehabilitation and reintegration into society. In conclusion, our findings confirm that the prison experience is complex and that further research on the diverse needs and challenges the imprisoned population faces in Serbia and beyond is necessary.

Prisoners' Perceptions of Well-being and Development within the Prison Environment

The findings revealed how prisoners perceived *Well-being and Development* within the prison environment, following the aspects outlined in the MQPL framework (Tables 10 and 11). For male prisoners, the data indicates that they tended to rate *Well-being and Development* less positively compared to *Conditions and Family Contact* and *Security*. However, their perceptions of *Well-being and Development* were more positive than their perceptions of *Harmony* and *Professionalism* dimensions. Based on the presented results, male prisoners had more positive experiences related to their living conditions, family interactions, and safety than with their personal development and well-being in prison. It also indicates that they may have encountered challenges or limitations in accessing opportunities for personal growth, autonomy, and psychological well-being within the prison environment. Furthermore, their experiences in these areas were still more positive than their experiences in *Harmony* and *Professionalism* dimensions, suggesting challenges in interpersonal dynamics, which may have contributed to a sense of cohesion and respect, and administrative practices related to fairness and respect for prisoners' rights within the prison system.

On the other hand, our results showed that while female prisoners rated *Harmony*, *Security*, and *Conditions and Family Contact* more positively, they tended to perceive *Well-being and Development* similarly to *Professionalism*, which had the lowest ranking within the MQPL framework. This finding could imply that female prisoners had more positive experiences in terms of interpersonal dynamics, safety, living conditions, and family relationships than related to their personal growth, autonomy, and psychological well-being within the prison environment. According to our results, their perceptions of *Well-being and Development* aligned with their perceptions of *Professionalism*, suggesting that they may have viewed the lack of professionalism or inadequacies in administrative practices at the same level as their experiences of limited well-being.

Our findings also revealed significant disparities in prisoners' perceptions of distress, well-being, personal development, and autonomy within the prison environment (Tables 12 and 13). Prisoners tended to rate *Distress* the most positively, indicating lower levels of severe emotional

disturbance, while *Well-being* received the lowest rating, indicating a stronger perception of the "pains of imprisonment". This trend was consistent across genders, with both male and female prisoners rating *Personal Development* and *Personal Autonomy* dimensions between these extremes. Additionally, female prisoners rated *Personal Development*, *Personal Autonomy* and *Well-being* dimensions below the generally recommended threshold of 3.

Overall, prisoners generally rated their well-being lower compared to their perception of the prison's support for personal growth and development and experience of severe emotional disturbance or distress. Based on the presented results, prisoners tended to place more importance on negative aspects such as pain, punishment, tension, and the "pains of imprisonment" than on positive aspects like personal development, preparation for release and feelings of agency and self-determination.

Reduced levels of general autonomy in prisons and their associations with the perceived quality of prison life are reported earlier in the literature (Van Der Kaap-Deeder et al., 2017; Van Ginneken et al., 2018). Some authors have further explored the role of autonomy in influencing prisoners' subjective quality of life (Van Der Kaap-Deeder et al., 2017). They revealed that perceived afforded choice within the prison environment was associated with a higher subjective quality of life and that increased autonomy satisfaction partially explained that association.

Next, mean scores and agreement levels were analysed across statements or items from *Personal Development*, *Personal Autonomy*, *Well-being*, and *Distress* (Tables 14, 15, 16, and 17). Prisoners' perceptions varied across dimensions, and that finding indicates their different experiences within the prison environment in general.

Prisoners expressed relatively positive sentiments regarding the transformative potential of their time served, although dissatisfaction was noted regarding the support for reintegration and efforts to prevent reoffending. The data presented for the items "I get help from employees so that I can lead a life in accordance with the law after release" and "In this prison, all employees make efforts to prevent convicts from reoffending after release" illustrate prisoners' perceptions of the prison's role in reintegration and crime prevention (Table 14). Generally, prisoners had reservations about the support provided for leading a law-abiding life post-release and the effectiveness of rehabilitation programs. On the other hand, there is a positive sentiment towards the potential for transformation during their time served, registered by their strong agreement with the statement "I see the time spent in this prison as a chance to change", which could express their aspirations for personal growth.

While many prisoners felt they could maintain their personality in prison, there were significant concerns about their control over daily life and the extent of autonomy within the prison regime. This pattern is evident in the contrast between the lower mean score for "Wherever I am in this prison, I still feel like a prisoner" and the highest mean score for "You can keep your personality in this prison" (Table 15).

Furthermore, participants reported variable levels of discomfort and stress. While moderate agreement was observed regarding the painful nature of the prison experience, significant variability existed in responses. Tension and stress were prevalent, with many respondents reporting heightened levels. Particularly noteworthy was the perception of imprisonment as

punitive, with a significant proportion of prisoners viewing their time in prison as predominantly punitive (Table 16).

However, distress levels, as measured by suicidal thoughts and emotional management, showed a mixed picture. This finding confirmed that there were both positive and adverse aspects of prisoners' mental well-being (Table 17). In summary, prisoners in our sample generally reported moderate MQPL distress levels, with variations across specific distress indicators. While suicidal thoughts appeared to be a significant concern for a minority of participants, the majority expressed confidence in managing their emotions and presented a mixed perspective on night-time sleep issues.

Marić and Kamenović (2023) aimed to investigate the factors that contribute to the quality of life for inmates in Serbian prisons using the MQPL. They found that the dimensions of *Personal Development* and *Well-being* significantly contributed to prisoners' overall satisfaction with the quality of prison life, in contrast to *Personal Autonomy* and *Distress*.

A study conducted in Chile adapted the MQPL survey to measure the moral performance of prisons in the country, finding variations in moral quality among the prisons studied (Sanhueza & Pérez, 2019). The highest-rated domain was *Resilience and meaning* (3.48), followed by *Infrastructure and food* (3.55) and *Treatment between inmates* (3.46). On the other hand, the lowest-rated domain was *Honesty and fairness of officials* (2.60), followed by *Staff-prisoner relationships* (2.62) and *Bureaucratic legitimacy* (2.93). Significant differences were confirmed between different prisons, with the Female Penitentiary Centre in Santiago generally rating better regarding honesty and bureaucratic legitimacy compared to male prisons. Common issues included dishonesty and unfair treatment by officials, poor staff-prisoner relationships, and limited access to programs leading to boredom. Comparing the findings from Chile and Serbia, we can observe that both samples of prisoners rated aspects like security and family contact more positively than opportunities for personal growth and well-being. However, Chilean inmates seemed more concerned with fairness and respectful treatment from prison officials, while Serbian prisoners highlighted dissatisfaction regarding the support for reintegration and efforts to prevent reoffending and a lack of control over their daily lives.

In a study by Kyprianides and Easterbrook (2020), researchers examined prisoner well-being across the UK. Their findings revealed an average *Well-being* score of 2.74. Interestingly, a follow-up study focusing on a single UK prison showed a slightly higher average score of 2.89. In our study, male prisoners reported an average *Well-being* score of 2.69, lower than the UK findings. However, the most concerning disparity lies with female prisoners. Their average score of 2.13 falls significantly below the UK averages and the scores reported by male prisoners in Serbia. Possible explanations for this disparity include contextual differences such as culture and prison systems between Serbia and the UK. Additionally, factors like social connections, prison overcrowding, lack of rehabilitation programs, or limited access to mental health services could also contribute to lower well-being scores in our data.

The study conducted in The Netherlands by Bosma, van Ginneken, Palmen, et al. (2020) introduced a new Prison Climate Questionnaire (PCQ). This tool is designed to measure various aspects of prison life. While direct comparisons to our findings are limited due to different measurement tools, both studies highlight areas for improvement. However, several scores can be presented in parallel since both the MQPL and PCQ both utilise a 5-point Likert scale for

scoring. For instance, *Autonomy*, which presents the degree of independence or autonomy experienced by prisoners, received a moderate score (2.71), lower than our findings on *Personal Autonomy* (males: 3.09, females: 2.85), suggesting a feeling of some control over decision-making within the prison. Regarding *Meaningful Activities*, as measured by the PCQ, ratings were moderate for *Satisfaction with Activities* (3.12), while *Availability of Activities* (2.27) and *Reintegration Programs* (2.49) scored lower. While there is no direct match for *Meaningful Activities* in the MQPL, but lower scores in *Personal Development* (males: 3.05, females: 2.94) could indicate a lack of perceived opportunities for growth and rehabilitation. Finally, the *Overall Quality of the Institution* in the Bosma, van Ginneken, Palmen, et al. (2020) study received a moderate score (2.92), while the *Subjective Severity of Imprisonment* was rated higher (3.48). In our study, the *Well-being* scores were notably lower (males: 2.69, females: 2.13), indicating a more negative experience for prisoners in our study.

Male prisoners in our study reported a slightly higher well-being score (2.69) than prisoners in a study conducted by Skar et al. in 2019 (2.40). On the other hand, both studies show a similar average distress score in male prisoners (around 4.0, which translates to relatively low levels of reported distress within the MQPL framework, where higher scores indicate lower distress). This observation could indicate a potential strength in the prison environment regarding managing prisoner stress. However, female prisoners in our study scored significantly lower in well-being (2.13) and had higher distress levels compared to the overall average reported by Skar et al. (2019). This gender disparity in well-being is a key finding in our research.

The score on the MQPL's *Well-being* dimension from Canada (3.00) is higher than both male (2.69) and female scores (2.13) in Serbia (Weinrath & Ricciardelli, 2023). This outcome might indicate a more positive overall well-being for Canadian prisoners than their Serbian counterparts. However, when it comes to *Personal Development*, scores in both Serbia (3.05 for males, 2.94 for females) and Canada (2.90) fall within a similar range, with Canadians' scores being the lowest of three, suggesting a comparable level of perceived opportunities for growth and self-improvement within the prison environment. As noted by Neubacher et al. (2021), there is a potential universality in the experience of imprisonment, regardless of the specific laws or reasons for incarceration. However, the Canadian study used a mixed method approach (quantitative and qualitative data) and a shorter version of the MQPL survey, offering a richer understanding of prisoner experiences compared to the purely quantitative data from Serbia gathered with a longer MQPL version (Weinrath & Ricciardelli, 2023). Differences in the results can be explained by social norms and prison policies that might differ between the two countries, impacting factors like access to programs, family contact, or basic amenities.

The study by Liebling et al. (2021) explored a unique prison situation. Both Norwegian and non-Norwegian prisoners were relocated to the Norgerhaven prison in the Netherlands. The scores for *Personal Development* of relocated Norwegian prisoners (2.77) is lower compared to our data, but also compared to Non-Norwegian at Norgerhaven. This suggests a potential issue with perceived opportunities for growth within the Norgerhaven environment for relocated Norwegian prisoners, possibly due to the challenges of adjusting to a new prison system in a different country. Compared to Serbian and non-Norwegian prisoners, relocated Norwegian prisoners showed the highest level of distress (3.41), indicating intensified distress or emotional disturbance. However, non-Norwegian prisoners in Norgerhaven scored higher or similar compared to both male and female scores in our study and relocated Norwegian fellow inmates.

This might be explained by the fact that those prisoners were already foreigners, but also by the positive features of Norgerhaven. This prison is described as having an open layout, allowing for prisoner interaction and a 'light-present' feel (Liebling et al., 2021, p. 44). Finally, scores of prisoners in Serbia, and both Norwegians and non-Norwegians at Norgerhaven were lower than those reported for Norwegian open prisons (specifically, only *Personal Development* and *Well-being* scores are reported).

The findings, alongside data on Norwegian open prisons, confirmed that each prison has its unique prison climate and differences in the quality of prison life across different prison settings are not surprising. To summarise, Serbian prisoners, especially females, reported lower scores in *Personal Autonomy*, *Well-Being*, and *Distress* compared to their Norwegian counterparts. Norwegian open prisons demonstrate significantly higher *Well-being* and *Personal Development* scores, reflecting the benefits of more progressive prison environments. While Serbian females reported lower well-being and higher distress, Serbian males showed relatively low distress scores, suggesting potential differences in coping mechanisms between genders.

The study conducted by Favril et al. (2017) investigated the link between *Personal Autonomy*, as measured by the MQPL, and suicidal ideation. They found a significant association, with prisoners reporting lower levels of perceived autonomy being more likely to experience suicidal ideation. This finding highlights the potential importance of this MQPL score in suicide prevention efforts within prison. Comparing the data, the average scores for *Personal Autonomy* in both studies fall within a similar range (our study: 2.85-3.09; Favril et al.: 2.5-2.9). This observation could suggest a generally moderate level of perceived control over decision-making within the prison environment for both samples.

Crewe et al. (2015) investigated staff-prisoner relationships, staff professionalism, and prisoner experiences of authority in public and private prisons in England and Wales. Average scores for *Personal Development* and *Autonomy* are comparable to our results. This observation suggests a comparable level of perceived opportunities for growth and control over daily routines in both contexts, public and private. *Well-being* scores are lower in our study compared to those reported for private prisons by Crewe et al. (2015), while *Distress* scores are higher. This observation might indicate a potential difference in prisoner experiences related to overall well-being and distress levels.

Discussing environmental factors further, the conditions of imprisonment, such as overcrowding, health care, educational and occupational conditions and inadequate facilities, can negatively impact the quality of life for inmates, particularly in female prisons (Abgoola, 2016). As reported in this research conducted in South Africa, female prisoners face particularly poor conditions, with inadequate health care, sanitation, and access to education (Abgoola, 2016). Among key factors in perceived quality of life, respecting prisoners' autonomy and consent for transferring to another prison is important, as noted by Liebling et al. (2021). Prisoners who were involuntarily transferred to a prison rated their quality of life more poorly than those who had been voluntarily sent to the prison.

Despite the growing recognition of factors contributing to well-being in prison, such as improved educational opportunities and the introduction of physical and sports-related initiatives (Zanetti & Macri, 2020), the potentially important role of autonomy and perceived choice has not been sufficiently explored. The reason might be the common belief that people in prison have little

autonomy and limited control over their own lives and decisions, so researchers have not fully explored how autonomy and perceived choice affect prisoner well-being (van der Kaap-Deeder et al., 2017). Factors such as engagement in structured activities, emotional coping strategies, and social support can affect adjustment and overall well-being among inmates (Kaap-Deeder et al., 2017). Offering opportunities for autonomy and choice in the prison environment can positively influence prisoners' well-being and development. Achieving personal autonomy requires consideration of various social, psychological, and ethical factors. Additionally, many inmates enter prison with diminished personal autonomy, resulting in limited opportunities for personal development (Pavićević, 2024). Hidayati, Toharudin, et al. (2021) found that, while the overall psychological well-being of prisoners is high, there are specific areas, such as self-acceptance and personal development that require attention.

According to the Self-Determination Theory (Deci & Ryan, 2000), personal autonomy, which is crucial for individuals' well-being, can be nurtured through contexts that support autonomy. (van der Kaap-Deeder, et al., 2017). The perception of available choice opportunities enhances autonomy and quality of life for individuals, even those who do not prioritise making independent choices (van der Kaap-Deeder et al., 2017). For Ryan and Deci (2008), autonomy is a prerequisite for personal development. As an intrinsic and internalised characteristic, personal autonomy is a prerequisite for integration; when individuals act from autonomous motivation, they experience a sense of independence and autonomy. However, when motivation is imposed and controlled, individuals may feel pressured to behave in a certain way, potentially diminishing or completely losing their sense of personal autonomy.

Changes in the subjective well-being of prisoners can be noticed upon entering remand prison (Bloem et al., 2019). Current evidence suggests that inmates initially experience a decline in subjective well-being. However, this effect varies among individuals. Interestingly, those with pre-existing challenges like alcohol/substance abuse, housing problems, or unemployment actually report a rise in well-being upon admission. Overall, subjective well-being tends to improve during remand imprisonment, except for inmates with antisocial personality disorder, who are more likely to experience a further decline (Bloem et al., 2019). Two studies reported on the quality of life in the UK immigration detention centres and measured perceptions of immigration cases, mental health, and quality of life. Detainees were generally dissatisfied with their quality of life, and some positive aspects included perceptions of staff decency, safety, and a sense of agency (Bosworth & Kellezi, 2012, 2015). Regarding night-time sleep issues, recent evidence suggests that poor sleep quality, namely insomnia, is associated with a lower quality of life for prisoners (Fakorede et al., 2021). Nearly half (45.7%) of the inmates studied met the criteria for insomnia, indicating a significant sleep problem within this population. To reduce inmates' insomnia and improve their overall quality of life, the authors recommended improving prison conditions, such as safety, order, contact with the outside world, and providing access to meaningful activities.

Overall, numerous previous studies have established the importance of understanding how the initial period of imprisonment affects a prisoner's well-being. In the same way, it is equally important to consider the ongoing factors within the prison environment that continue to shape their life in prison, health and well-being. For instance, McCann et al. (2019) developed a comprehensive set of standards for improving the health and well-being of women in prisons across England, with a potential for adaptation and implementation in other countries and their

prison systems. They developed 122 standards organised into 10 key areas: general health and well-being, mental health, self-harm and suicide prevention, substance misuse, violence and abuse, sexual and reproductive health, pregnancy and families, older women, nutrition and diet, physical activity, and weight management. Six core principles guide how to implement these standards. Prioritising health and well-being (principle 1) is the foundation. A trauma-informed approach (principle 2) and user involvement (principle 3) ensure a safe and relevant environment. The remaining principles further strengthen this foundation by providing purposeful activities (principle 4), peer support (principle 5), and continuity of care after release (principle 6). This comprehensive approach has the potential to be adapted by other prison systems.

Prison Quality Thresholds

Auty and Liebling (2024) conducted research to identify key thresholds for prison quality of life, aiming to differentiate between 'good enough' and 'unacceptably low' conditions. Their study explored the relationship between these thresholds and violence rates within prisons and established two key thresholds for each dimension of prison quality of life measured by the MQPL survey. A lower threshold represents a minimum acceptable level, below which prison environments are considered 'unsafe' and experience a higher risk of violence. A safer threshold represents a more desirable level, indicating a 'minimally safe' environment with a lower risk of violence. Table 20 compares scores on the *Well-being and Development* Dimension of the MQPL survey for male and female prisoners in Serbia with the thresholds established by Auty and Liebling (2024).

Table 20

Quality of Prison Life in Serbia: MQPL Scores Compared to Auty and Liebling's (2024) Thresholds[6]

MQPL Well-being and Development Dimension [a]	Results from Serbia, *M* (*SD*)		Threshold	
	Males	Females	Lower	Safer
Personal Development	3.05 (0.96)	2.94 (0.99)	2.75	3.40
Personal Autonomy	3.09 (0.79)	2.85 (0.95)	3.00	3.60
Well-being	2.69 (0.96)	2.13 (0.90)	2.30	3.30
Distress [b]	3.94 (0.86)	3.46 (1.03)	3.00	3.75

Note. MQPL = Measuring the Quality of Prison Life.
[a] Theoretical range 1–5. [b] Higher scores indicate lower levels of distress.

These thresholds provide benchmarks for assessing prison environments. Prisons scoring below the lower thresholds in key dimensions are likely to have safety concerns and higher risks of violence. Conversely, prisons consistently exceeding the safer thresholds are considered to have a more positive and secure environment. However, it is important to note that Auty and Liebling (2024) have acknowledged the challenges of managing prisons towards these thresholds,

[6] Adapted from: Auty and Liebling, 2024, Tables 1 and 2.

especially with limited resources. They have also emphasised the importance of a balance between security (e.g., policing and security dimension) and positive prisoner interactions (e.g., harmony and relational dimensions). Both aspects contribute to achieving a 'good enough' prison environment (Auty & Liebling, 2024).

Both male and female prisoners in Serbia score below the 'safer' threshold for three dimensions (*Personal Development*, *Personal Autonomy*, and *Well-being*). More precisely, the *Personal Development* and *Personal Autonomy* scores of male prisoners are closer to the safer threshold, indicating more positive experiences in these areas. However, the *Well-being* dimension scores are notably lower for both genders, particularly for females, suggesting significant challenges in this area. Interestingly, in the *Distress* dimension, where higher values indicate lower levels of distress, both genders scored above the lower threshold, but only males reached the safer threshold.

Overall, all dimensions for both genders fall below the 'safer' threshold but are mostly above the 'lower' threshold established by Auty and Liebling (2024). This finding suggests that while there might be safety concerns based on these measures, there also might be room for improvement in creating a more positive and secure prison environment.

The data presented in Table 20 highlights a concerning trend: female prisoners in Serbia score below the 'lower' threshold for both *Personal Autonomy* and *Well-being*. This finding could indicate safety concerns as Auty and Liebling (2024) have associated scores below the lower threshold with a higher risk of violence. This observation suggests a potential issue within the prison environment that disproportionately affects female prisoners in Serbia and raises concerns about their safety and security. Furthermore, extremely low *Well-being* scores indicate that female prisoners are likely experiencing challenges or difficulties in mental and emotional health, which can negatively affect their ability to participate in rehabilitation programs and prepare for reintegration into society.

There are some limitations to consider while comparing MQPL scores from our prison study conducted in Serbia with thresholds presented by Auty and Liebling (2024). First, these thresholds were established specifically for the UK prison system based on their data. Prison systems in Serbia and the UK have different cultural contexts, operational procedures, and resource allocation. Different sample sizes and demographics can also affect the comparability of findings. Furthermore, while the Serbian version of the MQPL has been successfully adapted for cultural context (Liebling et al., 2012; Milićević et al., 2024), these limitations, including contextual differences and potential variations in how prisoners interpret the MQPL, might have influenced the comparability of MQPL scores and thresholds across countries.

Prisoners' Individual Quality of Life

Differences were confirmed between various dimensions of individual quality of life, which were explored in-depth using the WHOQOL-BREF questionnaire (Tables 18 and 19). While male prisoners tended to prioritise psychological and physical well-being, emphasising aspects like bodily image, self-esteem, spirituality, thinking, learning, memory, and concentration, but also mobility, energy, work capacity, sleep and rest and daily independence, female prisoners placed greater emphasis on social relationships, including personal relationships, sexual activity and

support networks. Both subgroups of prisoners consistently rated environmental health the lowest, indicating challenges related to financial resources, physical safety and security, healthcare accessibility, participation in leisure activities, and living conditions within the prison environment.

The analysis further explored prisoners' overall ratings of individual quality of life and general health satisfaction. Approximately one-third of male participants rated their quality of life neutrally, with another one-third rating it positively. A smaller proportion rated it as 'very good', while one-fifth rated it as 'poor' or 'very poor'. Female prisoners showed a different distribution, with more participants rating their quality of life as 'poor' or 'very poor' compared to males (Figure 4). Regarding health satisfaction, approximately half of male participants reported being satisfied or very satisfied, while many indicated neutrality (Figure 5). On the other hand, nearly half of female prisoners expressed dissatisfaction with their health, with a smaller percentage reporting satisfaction. These findings suggest that female prisoners may have faced additional challenges or perceived their circumstances less favourably than males.

As defined by the American Psychological Association (n.d.), *quality of life* reflects an individual's level of satisfaction across various domains, including emotional, material, and physical well-being, social relationships and participation in society, personal development, and autonomy. Regarding a prisoner's individual quality of life, a study conducted in Malaysia indicated that it was significantly impacted by the prison climate (Baharudin et al., 2021b). This group of authors reported that a favourable prison climate improves individual quality of life and that elements like safety, respectful interactions with officers, and access to activities are influential. The study also emphasised specific aspects of individual quality of life that are important for drug-abuse inmates' life satisfaction. These include religious practice, mental well-being, and opportunities for personal growth. Moreover, the research revealed that individual quality of life acts as a mediator between prison climate and life satisfaction. In other words, a supportive prison environment that fosters a good individual quality of life indirectly leads to greater life satisfaction among prisoners. Overall, this study empirically indicated that prison climate modified prisoners' individual quality of life. It suggests that improvements in prison environments and programs that enhance prisoner's individual quality of life can contribute to positive outcomes for these inmates.

Our findings, consistent with earlier observations, reveal the lowest ratings for environmental health. This result suggests potential financial constraints and issues related to physical safety, healthcare access, and living conditions within the prison. Previous research has established that the well-being of prisoners is influenced by various individual and contextual factors. Individual perceptions of the prison environment, including the quality of prison life, interpersonal relationships, and the overall prison climate, can significantly influence the well-being of inmates (Van Ginneken, 2022). Studies have explored the barriers and facilitators to promoting health and well-being among prisoners, including access to information, support, and mentoring programs (National Guideline Centre (UK), 2016). As explained, barriers originate from the environment, resources and support. More precisely, environmental factors include limited movement around the prison, lack of access to outdoor/fresh air, sharing cells with smokers, unclean facilities, and lack of privacy. Lack of access to health promotion information and education programs, limited opportunities for physical exercise, poor quality of food, and limited access to washing facilities and self-care equipment are resource-related issues. Barriers

also come from the lack of staff support and potentially negative staff attitudes towards prisoners. While this report highlights the lack of staff support as a barrier, it also mentions peer support and family/friend support as potential facilitators for prisoner well-being. For instance, when it comes to the relationship between aspirations and well-being, goals supported in prison, such as physical health, positively impact psychological well-being. In contrast, goals not supported, such as self-acceptance and affiliation, negatively impact well-being in prison (Kasser, 1996).

A comparison of our findings with those of the study conducted in France (Combalbert et al., 2019) confirms a similar pattern of negative perceptions of quality of life and health among prisoners. A French study focused on male prisoners over 50, while our study included a broader prison population and both genders. Both studies revealed a substantial portion of prisoners experiencing a poor quality of life and dissatisfaction with their health. Female prisoners consistently reported lower quality of life and health satisfaction compared to males in both studies, suggesting they might face greater challenges within the prison environment. This consistency across studies, despite geographical and potentially sample characteristic differences, strengthens the argument that prison environments themselves may contribute to these negative outcomes.

According to our results, negative quality of life and health dissatisfaction prevail among the prison population in Serbia. The observation may reflect the relatively low general perception of the quality of prison life reported earlier in Serbia. A negative overall experience of life in prison and a low percentage of prisoners expressing a positive perception of the quality of prison life are reported in the general prison population (Ćopić et al., 2024) but also in the female prison population (Batrićević et al., 2023).

A recent study from Serbia explored the healthcare needs and treatment of women in prison in Serbia (Ilijić, 2024). Over half (55.6%) reported having illnesses. Self-reported mental health problems were the most prevalent (35.4%), followed by cardiovascular diseases (27%). Despite a high rate of prior drug use (48%), only 21.2% reported needing help with drug rehabilitation upon arrival. Regarding their individual quality of life, many prisoners rated it as poor (40%) and were dissatisfied with their health in general (50.6%). As concluded, the healthcare system in this prison is inadequate to address the extensive needs of female prisoners, particularly in mental health. Appropriate medical care, specialised treatment programs, and mental health interventions, considering past traumas, are not available to meet the healthcare needs of female prisoners in Serbia. To address these issues, Ilijić (2024) recommends improving healthcare access, providing gender-specific services, and expanding support programs for female inmates. Furthermore, to better address the specific needs of female prisoners and enhance their quality of life globally, gender-specific facilities, access to essential services, staff training on gender-responsive principles, continuous monitoring of prison conditions, and increased funding for programs that help women develop skills and address trauma are recommended (Milićević, 2024).

When the role of prison climate was examined, Ross et al. (2011) found that a positive prison climate is crucial as it facilitates interactions between correctional staff and prisoners regarding healthcare. This research has already confirmed the significant impact of prison climate on both prisoners' perceptions of healthcare access and satisfaction, as well as staff-inmate interactions,

which is a possible explanation for our results. Specifically, aspects of the prison environment, such as safety or respectful interactions, predict how satisfied prisoners are with healthcare services. Further, positive prison climates encourage better interactions between staff and prisoners regarding healthcare, while negative climates can act as a barrier to their communication. Additionally, prisoners' perception of healthcare access and satisfaction is linked to their overall perception of the prison environment (Ross et al., 2011). However, these findings must be interpreted with caution because prisoners with specific health conditions, such as diabetes mellitus (Bellali et al., 2020) and obesity (Luhrs & Giorgi, 2020), may require specialised healthcare. Loeb et al. (2014) and Kheirbek and Latham-Mintus (2023) discussed the challenges and needs of aging prisoners, including end-of-life care and compassionate release, underscoring the importance of comprehensive care and interdisciplinary collaboration. These results, therefore, need to be interpreted with caution as they add another layer of complexity to physical well-being and individual or health-related quality of life in prison settings.

A study by De Smet et al. (2017) investigated quality of life of older prisoners in Belgium. Compared to our findings, *Physical Health* and *Psychological Health* domains received the highest average scores, while *Environmental Health* had the lowest scores in both studies.

However, *Environmental Health* scores showed the most significant disparity between the studies. De Smet et al. (2017) reported a higher average score (61.29) compared to our study (males: 52.52, females: 44.48, overall: 51.40; scores were multiplied by 4 for a direct comparison). This might be due to factors like financial resources, access to and quality of health and social care, green spaces, participation in leisure and recreational activities, or perceived safety within the prison environment, which could differ between the Belgian prisons and our study's setting. Regarding green spaces and the role of nature, even limited exposure to nature through windows can have a positive impact on the environmental health of prisoners, specifically their mental well-being and life satisfaction (Li et al., 2021). As detailed, positive effects on well-being were mediated by a decrease in loneliness and mental health problems.

On the other hand, *Social Relationships* scores were consistently higher in our study (males: 57.28, females: 55.24, overall: 57.00) compared to the score 52.96 reported by De Smet et al. (2017). This could be due to several factors, such as differences in prison policies regarding visitation, social interaction among prisoners, or the focus on social support systems within the prison. It is important to consider that study specifically focused on older prisoners, who might have different social needs and support structures compared to the sample from general prison population in our study. In contrast, *Psychological Health* scores were also lower in our study (males: 59.52, females: 54.72, overall: 58.84 vs. 65.50). This observation aligns with the findings from the previous comparison using the MQPL survey, where our study showed higher distress levels and lower well-being of prisoners. As already explained, prison environments, regulations, cultural context and support systems can vary significantly between countries, which can further influence factors like access to healthcare, social interaction, and recreational activities, all of which can impact prisoners' individual quality of life.

Our research results confirm, as long-established, Sykes' observation that the sufferings caused by imprisonment are predominantly psychological, encompassing the loss of freedom, deprivation of autonomy, and frustrations stemming from the lack of access to goods, services, and basic needs (Crewe, 2011; Sykes, 1958). The regime of penal discipline impacts the mental

well-being of convicted individuals, eroding their sense of identity and self-esteem and creating a disconnection with the social identities formed prior to their incarceration (Cohen & Taylor, 1972; Goffman, 1961; Maruna, 2011). Fundamental and deliberate changes in personality (Maruna, 2001), manifested in identity transformation, are perceived differently concerning social connections and traditional roles. Criminological literature, especially studies on desistance from crime, discusses the desirable shift in identity from survival-oriented to growth-oriented (Haigh et al., 2012; Liebling, 2012a; Liebling & Arnold, 2004; Szifris, 2017).

Building upon these observations, the core and extensive thesis of research into the potential for identity transformation in prisons is grounded in the notion that a restrictive environment within prison communities fosters a survival-oriented identity, whereas a supportive environment fosters a growth-oriented identity (Liebling, 2012a; Pavićević et al., 2021; Szifris, 2017). Prison deprivation, which entails the loss of personal freedom, is exacerbated by the adoption of survival strategies within the prison environment to navigate daily prison life. This environment suppresses individuality and autonomy, where the loss of freedom extends beyond mere physical confinement and encompasses a deprivation of thought, action, and identity (Liebling et al., 2011b). In light of these findings, it is evident that a crucial factor influencing the transformation of identity in prisons is the nature of the prison environment itself.

Similar to other homosocial environments, male prisoners are often excluded due to the absence of male stoicism in coping with the challenges of incarceration. Their mutual surveillance and display of vulnerabilities result in prisoners being ensnared in a power dynamic where they themselves are the bearers of this control (Foucault, 1991, p. 201). Upon entering prison, individuals must learn to navigate complex social relationships within it – a place where there exists a prescribed “right” way of behaving (Liebling & Arnold, 2004). Social exclusion or inclusion is intertwined with concepts of masculinity, solidarity, physical prowess, prestige, power hierarchy, influence on status and control, and gang membership (Szifris, 2017). However, while traditional power hierarchies rooted in hyper-masculinity emphasise qualities like courage, toughness, and respect when viewed through the lens of surviving in prison, the construct of masculinity varies significantly across ethnic, class, geographical, sexual, age, and other social divisions (Pattman et al., 1998).

Aligned with this theoretical and research framework, there is an acknowledgement of latent identity adaptation within the male prison population concerning their individual experience of prison life quality. Self-esteem and body image, focusing on physical capabilities, mobility and energy, indicate a tendency towards adopting a survival-oriented identity and aggressive coping strategy where physical strength, masculinity, and toughness are deemed crucial for effectively navigating the prisoner status hierarchy (Jewkes, 2005). Even though the quality of life is perceived through the need for spirituality, learning, memory, concentration, and daily independence, the high-ranking significance of physical and psychological health regarding prison life quality implies the importance of the ability to survive in the prison environment.

This need for empowerment, besides its survival purpose, holds the potential to assist prisoners in attaining esteemed primary human goods (such as life, excellence in play, work, and agency, connectedness), thereby fostering a gratifying and meaningful life conducive to human flourishing and intrinsic motivation for rehabilitation (Laws & Ward, 2011; Mann et al., 2004;

Ward & Brown, 2004, as cited in Tartarini, 2021). Drawing from numerous studies, well-being as a positive mental state encompasses elements like competence, self-acceptance, autonomy, empathy, and prosocial behaviour, with an interpersonal focus (Marsh et al., 2020). The term 'competence' was part of Huppert and So's (2013) original list of constructs. However, it could be more accurately described as 'clear thinking', given its derivation from DSM/ICD criteria concerning the capacity for thought, concentration, and decision-making (Huppert & So, 2013). The shift towards positive mental states, rather than deficit and risk reduction therapies, relies on effectively translating positive mental health into positive emotions, which can facilitate ongoing personal growth (Rabon et al., 2018; Teismann et al., 2019, as cited in Tartarini, 2021).

The culture of support and rehabilitation represents a shift towards a prison environment that fosters a crucial sense of self-determination – a sense of responsibility for one's life and personal autonomy (Deci & Ryan, 2004). This shift is not just a change in policy but a fundamental reimagining of the prison system. It involves abandoning the idea of prison as "one of the clearest manifestations of the hostile solidarity of punishment, both in material and in symbolic terms" (Chamberlen & Carvalho, 2019, p. 107). The prison regime is not only a deprivation of freedom for inmates but also involves strict and intensive surveillance and regulation of their lives, controlled by the regime primarily through the determination of penalties and privileges based on their behaviour in prison. Prisons need to address the social and psychological harms they produce to promote well-being and foster human flourishing (Tartarini, 2021, p. 124).

The individual assessment of the quality of life in Serbian prisons revealed that environmental health is the primary concern for both male and female inmates. This finding underscores the challenge of achieving nearly all facets of well-being in conditions marked by unfavourable financial, security, health, recreational, and other aspects of prison life. The inherently dehumanising nature of incarceration gives rise to various forms of decline and prompts reactive responses aimed at avoiding it through adaptation strategies. Promoting rehabilitation in prison should also operate at a symbolic level that respects the individuality of inmates (including their values, goals, and ambitions) in selecting activities and tailoring the relationship between staff and inmates to these personal characteristics (Tartarini, 2021, p. 124).

The results of the individual assessment of the quality of life in prison also unveiled anticipated disparities between the male and female prison demographics. Women showed higher levels of dissatisfaction with their quality of life, especially concerning deprivations in social life and contacts. The existing literature on gender differences in well-being has highlighted distinctions also observable within the prison environment. The "gender paradox" represents a specific aspect of the relationship between the well-being of men and women, characterised by generally poorer mental health and lower levels of satisfaction in various life domains for women compared to men while simultaneously showing higher overall life satisfaction among women (Becchetti & Conzo, 2022, as cited in Pavićević, 2024, p. 266). This "paradox" is evident in the research results, characterised by a markedly low level of well-being among women alongside a relatively high distress score. The paradox in the study of the quality of life of the female prison population appears as simultaneously high levels of adaptation and stress among female prisoners, accompanied by a very low level of well-being. This discrepancy can be attributed to the continuity of low well-being among female inmates that extends from pre-prison to prison life. In other words, it is a continuous adaptation to stressful circumstances, depression, anxiety, victimisation, substance abuse, discrimination on multiple bases, and

marginalisation (Batrićević et al., 2023, p. 282). The initial explanations for gender differences in well-being linked biological factors such as hormones or neurotransmitters to women's well-being, assuming a biological basis for these differences. However, these approaches quickly faced criticism for insufficiently considering gender-specific factors that contribute to the well-being gap, especially those related to exposure to sexual harassment and victimisation of this kind among women (Patalay & Demkowicz, 2023, as cited in Pavićević, 2024, p. 266).

Research suggests that men and women may experience the benefits of strong social connections differently regarding their mental health (Kawachi & Berkman, 2001, p. 461). Gender differences related to stress coping and the presence of social support manifest in several fundamental characteristics: women tend to maintain more emotionally intimate relationships than men, mobilise more social supports during periods of stress than men, and provide more frequent and more effective social support to others than do men (Belle, 1987, as cited in Kawachi & Berkman, 2001, p. 462).

The research findings are consistent with the conclusions drawn from previous studies on the topic of loneliness among women in prison institutions (Baranauskienė et al., 2020). The cause of loneliness experienced is despair associated with the subjective feeling of the impossibility of satisfying one's own needs: women fear disclosing themselves, which can make them defenceless and vulnerable in their environment, and they are limited in contact with loved ones (family, partner, friends), they are also limited in personal development and goal achievement, their material security is poor. These dissatisfied needs and low quality of life, in general, are conditioned by the socially closed structure in penitentiary institutions (Baranauskienė et al., 2020).

Lower individual ratings of prison life quality among female prisoners, especially regarding the quality of healthcare services, as well as other prison support services, indicate increased vulnerability in female prisoners as a response to prison deprivations, as well as predominantly passive strategies, reflecting a depressive response to the challenges of prison life. In contrast to male efforts to adapt through empowerment and enhancing mental and physical abilities as coping strategies, women experience a rise in negative emotions triggered by the loss of family and social contacts. Establishing trusting relationships and cooperation with prison staff and gaining a sense of safety and security through understanding gender-specific needs (primarily health-related) require special attention and treatment designed through a comprehensive understanding and development of the well-being of female prisoners.

Sociodemographic Characteristics and Variations in Well-being and Development

Age-Related Variations

Our findings suggested that age played a role in shaping perceptions of prison environment among prisoners. Its influence on male prisoners included dimensions of personal development, autonomy, and general well-being and development. Older male prisoners generally perceived their quality of prison life more positively across multiple dimensions than younger male participants. In contrast, older female prisoners tended to report better well-being only (Table S4). It is worth noting that female participants younger than 30 years reported a *Well-being* score of 1.78 on average, which is below the lower threshold of 2.30 and could be indicative of more frequent violent incidents (Auty & Liebling, 2024).

Turner and Peacock (2017) described the trend of the growing population of older inmates (prisoners aged 50 and above) within prisons. This trend can impact the prison environment, that is, the overall social dynamics and moral climate within prisons. A possible explanation for this impact lies in the distinct characteristics of older inmates compared to younger populations. These characteristics include different needs (e.g., increased medical attention, specific dietary requirements, mobility limitations), greater vulnerability to abuse (physical or emotional), and potentially different patterns of interaction with both inmates and staff.

Age was one of the significant predictors of prisoners' perceptions of the prison environment. Hacin (2018) indicates that age, among other factors such as procedural and distributive justice, trust in authority, effectiveness of the prison staff, Staff-prisoner relationships and prison regime, predicts prisoners' perceptions of the legitimacy of prison staff, suggesting that older prisoners may view authority differently than younger ones.

Additionally, Casey et al. (2016) reveal that the length of incarceration, which is often correlated with age, influences perceptions of the prison social climate, with those incarcerated longer perceiving it more positively. Moreover, Meško and Hacin (2019) explored the social distance between prisoners and prison staff. The results confirmed that age, procedural justice, and the presence of a violent subculture are the best predictors of social interactions within correctional facilities. In other words, age-related perceptions and experiences can contribute to the social dynamics and power structures that influence the moral climate within prisons.

On the other hand, when challenges faced by young prisoners aged 17 to 22 years old in a Portuguese youth detention facility were explored, it turned out that perceptions of a negative correctional climate were the strongest predictor of worsening mental health symptoms among the young inmates (Gonçalves et al., 2016). Additionally, several other factors influencing mental health were identified. For instance, a history of mental health treatment, remand status (being held pre-trial), and lower educational level were all linked to higher levels of mental health symptoms, while black race and participation in prison activities were associated with better perceptions of the correctional climate. Younger prisoners are more likely to be involved in misconduct (both self-reported and officially registered) compared to older inmates, suggesting that they might have a more negative or different perception of the prison climate, which could explain our findings that older prisoners generally perceive some aspects of quality of prison life more positively (Bosma, van Ginneken, Sentse, et al., 2020).

Combalbert et al. (2019) provided insight into the perceived health and quality of life among male prisoners aged 50 and above and found low levels of both. Chiclana et al. (2019) compared the mental health and well-being of young and older prisoners. Although findings indicated no significant differences in well-being, older prisoners demonstrated better psychological adjustment and more resilient internal coping mechanisms. As explained, older prisoners seemed to adjust and function better within the prison environment. This observation might explain for our findings, as well. Other studies reported no significant relationship between age and different well-being components among prisoners (Mola Melaku, 2020).

The results obtained in the study align well with existing criminological literature, which extensively documents the inverse relationship between age and the challenges associated with prison life (Pat et al., 2023; Porporino & Zamble, 1984; Quick et al., 2023; Turner et al., 2021; Wooldredge et al., 2001). The reasons why younger incarcerated individuals tend to report lower levels of personal well-being and personal development in prison stem from different factors. The vulnerability of young offenders may be linked to pre-prison factors such as childhood trauma, including sexual abuse (Liu et al., 2021), along with various other adverse childhood experiences like poverty, unemployment, homelessness, substance abuse, lack of education, and prior health issues (Pat et al., 2023).

The expanded Adverse Childhood Experiences (ACE) also include witnessing community-related violence, domestic violence, parental incarceration, abuse from the parent, removal of one of the parents from the household, racial discrimination, living in an unsafe neighbourhood, experiencing bullying, and growing up in foster care (Felitti et al., 1998; Turney, 2018). Across different countries, prevalence rates of mental disorders ranging between 45% and 90%, as well as high rates of comorbidity, have been reported among juvenile and young adult offenders (Bielas et al., 2016). These prevalence rates are notably higher than those observed in non-offending juveniles and young adults (Turner et al., 2021). Furthermore, this study found that younger female offenders tended to report more mental health disturbances compared to their male counterparts, particularly about social problems (Turner et al., 2021).The incarceration process, at all phases, may also have an impact on the mental health and well-being of the prisoners (Pat et al., 2023).

Younger inmates are more frequently exposed to risks of homosexual assaults and physical and territorial conflicts compared to older and more seasoned inmates (Logan, 2015; MacKenzie, 1987). Effects of mental illnesses on inmate adaptation and found that irrespective of diagnosis, older inmates are less likely to experience both minor and severe forms of victimisation (Logan, 2015, p. 19; Pare & Logan, 2011). Researchers have found that boys are less likely to report being physically abused than girls in court-involved youth, and girls are four times more likely to report being sexually abused than boys (Espinosa et al., 2020). Young adult males are significantly more likely to commit suicide while in prison than when they are in the community (Fazel et al., 2016). Mental health problems in younger inmates lead to a higher risk of violence and recidivism (Barra et al., 2022).

These results partially coincide with existing findings regarding age and gender differences in assessing and perceiving well-being and its subdimensions. Older female prisoners show higher scores in well-being assessment, consistent with previous findings suggesting that older age is associated with greater resilience to the conditions of prison life. Likewise, older male prisoners

also exhibit higher levels of personal development, autonomy, and overall well-being, indicating increased vulnerability among younger male inmates. Results that differ from prior research about the lack of a significant age-related difference in the correlation with distress among both male and female prisoners. Young men are more likely to perceive incarceration as a reduction and limitation of autonomy and diminished opportunities for personal growth and well-being. Among female inmates, however, the attitude towards personal autonomy, personal development, distress, and developmental dimensions remains consistent regardless of age differences. Therefore, despite numerous research findings indicating that correctional environments are designed for young prisoners and are not adapted for older adults with diverse and specific needs (Milićević & Ilijić, 2022a), younger male and female inmates represent an age group that requires unique and interdisciplinary attention in the process of designing supportive prison treatments.

Prisoners' Education

When well-being and development domains were explored by education levels, only a few scores showed statistical significance (Tables S5 and S6). According to our results, female prisoners with unfinished elementary school education had significantly higher scores in *Personal Development* than those with elementary school education. At the same time, male prisoners with elementary school education showed higher distress scores (lower level of distress) than those with high school education.

Descriptively, our research found that higher mean MQPL scores were observed among individuals with lower levels of education, such as unfinished elementary school or completed elementary education. Conversely, lower mean scores were frequently found in prisoners with higher levels of education, particularly vocational college/higher education or high school education. These findings suggest that the prison experience could have an inverse relationship with the level of education. Education may have influenced the perception of specific dimensions of prison life. However, other factors may also be necessary to perceive life quality within the prison environment, like social support networks, availability or adequacy of resources, institutional policies, or individual coping mechanisms. No significant relationship between different aspects of well-being of prisoners and their level education was reported by earlier studies (Firzalinda et al., 2020).

Ćopić et al. (2024) provided insight into the perceived quality of prison life in Serbia and found that prisoners involved in education or vocational training reported a higher quality of life across all MQPL dimensions, with scores exceeding the 3.00 threshold. This finding aligns with the concept of perceived afforded choice from Van Der Kaap-Deeder et al. (2017). Participation in these programs might provide prisoners with a sense of control over their time and a path towards a better future, leading to higher reported well-being. This trend might be further related to the observation of Combalbert et al. (2019) who linked higher education levels to positive emotional reactions in prisoners. This finding complements the idea of autonomy explored by Driessen et al. (2023). Education can enhance a prisoner's sense of agency, the feeling of control over their actions and outcomes. This feeling of control can contribute to a more positive emotional state.

The results relating well-being and personal development to the level of education have revealed that higher education does not emerge as a protective factor for incarcerated individuals. Instead, prisoners with lower levels of education (men) and rural residents (women) scored surprisingly high on both well-being and distress measures (indicating lower levels of distress). These findings, while unexpected, actually underscore their pre-incarceration vulnerability, as they suggest pre-prison low levels regarding personal well-being and development. The assumption that their vulnerability stems from a lack of education on healthy behaviours, as well as deficiencies in competencies, skills, self-confidence, and holistic personal development, theoretically aligns with the important approach to understanding adaptation in prison.

The theoretical approach based on imported factors considers prisoners' characteristics and lifestyle before entering prison as crucial for their adaptation and life in prison (Irwin, 1970; Irwin & Cressey, 1962). The validity of this approach can be tested by investigating factors stemming from their previous lives, such as education level, employment, personal relationships, alcohol and/or substance use, prior incarcerations, and current prison adaptations (Dhami et al., 2007). For example, studies show that, regardless of race, inmates without a high school education had fewer physical problems (being harmed or taken advantage of by other inmates) and had more infractions in prison (Wright, 1989). Individuals with low basic educational backgrounds and consequently few, if any, study skills also tend to be out of practice using study techniques and learning strategies (Manger & Eikeland, 2009, p. 19). Studies have shown that a significantly higher percentage of prisoners compared to the general population have not completed high school. Additionally, a considerable portion of incarcerated individuals have lower educational backgrounds than their parents, suggesting an intergenerational cycle of educational disadvantage (Gathright, 1999; Haigler et al., 1994, as cited in Manger et al., 2009, p. 24).

Although the debate regarding the significance of imported and indigenous factors for adaptation and their interaction remains ongoing, the importance of both approaches in explaining specific adjustment patterns in prison is undeniable (Dhami et al., 2007). Interestingly, research data on the relationship between imported and indigenous factors have shown that prisoners with a poor quality of life before prison participated in more programs than those with a good quality of life before prison. For some prisoners, their official sentence plan may have dictated their level of participation in programs. For others, the level of participation in programs may have resulted from their motivation to improve themselves or alleviate boredom (Dhami et al., 2007). The motivation of inmates with a low quality of life before prison can be a relative advantage in motivating them to acquire skills in prison or to address pre-prison problems, among which substance addiction is particularly pronounced (Dhami et al., 2007; Ilijić, 2022).

A parallel can be drawn with the findings from our study, where individuals with lower levels of education in prison tend to experience sustained low levels of well-being and harbour lower expectations. For instance, individuals lacking primary education enter prison with a lower quality of life, particularly in terms of education and its associated quality of life. They may anticipate enhancing well-being and personal development through educational opportunities provided within the prison system. Furthermore, it is plausible to suggest that a lower level of well-being linked to educational attainment diminishes the perception of vulnerability in

personal well-being and personal development compared to those with higher levels of education. On the other hand, individuals with higher levels of education often perceive prison life as a multifaceted challenge, reflecting their higher standards and greater awareness of personal well-being. Thus, the inverse relationship between education level and personal well-being and development is not surprising or paradoxical.

However, feeling vulnerable regarding well-being and personal development does not negate higher education's advantage in adapting to prison life. Research has shown that incarcerated individuals with higher levels of education often have a more established sense of identity, stronger connections to individuals outside the prison – such as spouses or children – and greater adherence to traditional values compared to their counterparts with lower educational attainment. Importantly, these factors have previously been associated with reduced stress in the prison environment (Clemmer, 1958; Irwin, 1970; Porporino & Zamble, 1984). The association between education and vulnerability to stress indicates that advantaged offenders, such as white-collar criminals, often have personalities and social resources that help them cope with incarceration. Benson and Cullen (1988) noted that these individuals usually possess more personal and social capital, including higher education levels and closer family ties. They also tend to adopt non-criminal identities and have greater emotional and psychological resources, attributed to their middle and upper-class affiliations (Logan et al., 2019; Logan, 2015).

The lower ratings of personal well-being and personal development among prisoners with educational advantages indirectly suggest a higher level of self-esteem and a sense of loss compared to the levels of well-being achieved before entering prison. One recent study indicated a correlation between lower levels of education and poor family and social relationships among female inmates, along with negative associations with almost all forms of support. Fostering personal autonomy as a prerequisite for personal development presents a formidable challenge, necessitating improved quality of life within prison settings. These efforts are crucial given the perception of a very low quality of life among the female inmate population (Pavićević, 2024).

Acknowledging that multiple factors contribute to low educational achievement, interconnected with individuals' well-being and personal growth, is crucial. Understanding the underlying causes of low education can be instrumental in devising appropriate interventions. For instance, difficulties and learning disabilities, as highlighted in the Education Select Committee's report, affect over 30% of prisoners in the UK. This group requires particular attention, as they may encounter difficulties during their incarceration and upon release, particularly if they experience challenges with reading or writing (Navarro & Clare, 2022).

On the other hand, informal learning and self-education are effectively used in open prisons in the Czech Republic to prepare convicts for life after release (Kříž, 2022). The open prison setting, with a likely more positive social climate, is seen as a key factor that allows inmates to prioritise personal development and self-improvement through informal learning. Exploring the role of educational motives on prisoners' participation in education, Manger et al. (2013) highlighted that prisoners with high competence-building motives were more likely to participate in education and desire to start an education while incarcerated, while those with high future planning motives were less likely to participate. Earlier research confirmed that prisoners who

attended educational programs while incarcerated were less likely to return to prison following their release, indicating a more positive prison environment (Vacca, 2004).

As emphasised in the Introduction section, education plays a crucial role in well-being. Therefore, future research should concentrate on individuals with limited educational backgrounds, exploring both the causes and consequences within prison settings. Learning abilities are paramount, not only for selecting appropriate learning techniques and strategies but also for identifying suitable and motivating educational programs. When examining the educational process within prisons, it is crucial to account for the unique environment in which it operates and the characteristics of the inmates as students. However, before delving deeper into the prison context as a space for learning, transformation, and growth, it is important to re-evaluate some fundamental perspectives regarding inmates, the prison environment, and the role of the educational process (Ilijić, 2022, p. 31).

Marital Status: Single and Partnered Prisoners

Regarding the marital status of prisoners, the quality of prison life was perceived similarly by both single and partnered individuals. The analysis indicated slight variations in mean MQPL scores between single and partnered prisoners across most dimensions, but these differences were not substantial (Table S7). Interestingly, single female prisoners reported lower levels of distress compared to those with a partner, while male prisoners who had a partner tended to score slightly higher in personal development. Similarly to education level, marital status may play a role in shaping prisoners' experiences within the prison setting. However, other factors beyond marital status likely contribute more significantly to their overall perceptions of well-being and development.

Previous literature concerning the relationship between partner status and quality of life in prison inmates has shown mixed results (Carcedo et al., 2011). Data from several studies suggest that maintaining good relationships can positively impact prisoner behaviour and well-being and reduce the criminal recidivism rate (De Claire & Dixon, 2017). Regarding inmate relationships, studies indicate that being in a satisfying marriage can reduce feelings of loneliness during incarceration, particularly in inmates with positive perceptions of their relationship history and marital quality (Segrin & Flora, 2001).

Additionally, one research suggested that prisoners with a partner inside the prison tended to experience lower levels of romantic loneliness and a higher level of sexual satisfaction compared to those without partners or with partners outside the prison (Carcedo et al., 2011). As further noted, inmates with a partner inside also reported a higher global quality of life, psychological health, and environmental quality of life as measured by the WHOQOL-BREF. No differences were confirmed between prisoners without a partner and those with a partner outside (Carcedo et al., 2011). Sexual satisfaction directly impacts mental health in prison inmates, with sexual abstinence being a stronger moderator than partner status (Carcedo et al., 2019).

Overall, prisoners involved in romantic relationships, whether inside or outside the prison, may experience variations in their well-being and quality of life. Women in romantic relationships within prison often experience decreased well-being and exhibit poorer behaviour compared to those not involved in such relationships and are also facing increased anger and punishments in contrast to those in relationships with individuals outside the prison (Beer et

al., 2007). Factors such as loneliness, lack of meaningful activities, and poor relationships within the prison environment have been identified as predictors for insomnia among prisoners, underscoring the significance of social connections for their quality of life as measured by the WHOQOL-BREF (Fakorede et al., 2021).

On the other hand, Lindquist (2000) found that social integration, usually through marriage or social support inside and outside of the prison, had different impacts on the mental health of prisoners. Married prisoners reported higher levels of depression and anxiety compared to unmarried ones, with a more pronounced effect observed among imprisoned husbands and fathers. This discrepancy could be the result of various factors, including physical separation from their partners, limited access to support from loved ones, and heightened stigma associated with being married or in a committed relationship while incarcerated (Carcedo et al., 2011; Lindquist, 2000).

Despite the desire for support, the restricted communication channels within prison settings hinder the fulfilment of inmates' relational needs, contributing to feelings of loneliness and decreased well-being (Biggam & Power, 1997, as cited in Carcedo et al., 2011). A group of authors focused on the role of marital and social status in financial stress for formerly incarcerated individuals and highlighted the importance of considering the family unit, not just the individual when designing programs to support reintegration (Bather et al., 2024). Although focused on post-incarceration life, this study has underscored the potential benefits of marital support in reducing stress-related outcomes.

According to existing studies, robust intimate relationships enhance well-being and decrease the probability of antisocial behaviour in prison and recidivism post-release (DeClaire & Dixon, 2019). For instance, longitudinal research involving 500 young men revealed that marriage was linked to a 35% decrease in the likelihood of involvement in criminal activities, attributable to four mechanisms: heightened social obligations which amplify the consequences of criminal behaviour; alterations in social circles and daily routines; direct social control exerted by the partner; and changes in self-perception (Sampson et al., 2006).

The findings of our study indicated that marital status did not significantly influence the perception of well-being and personal development in prison for either married or single participants. Male inmates with partners showed slightly higher scores in personal development, while female inmates with partners had slightly lower distress scores. However, these differences were not considered significant influences of intimate partner relationships on the perception of well-being in prison. In contrast to the existing literature on the positive effects of family contact during incarceration (Luther et al., 2011; Sampson & Laub, 2003), our results suggest that marital relationships did not have a significant impact on the sense of well-being and personal development in both male and female inmates.

The results of our study indicated that the marital status of the participants regarding the perception of well-being and personal development in prison was not significant for those who were married or for those who were single. Male prisoners with partners had slightly higher scores in personal development. In comparison, female inmates with partners had slightly lower distress scores, which cannot be considered significant influences of marital relationships on the perception of well-being in prison. Contrary to the existing literature on the beneficial effects of family contact during incarceration (Luther et al., 2011; Sampson & Laub, 2003), the obtained

results show a lack of impact of marital relationships on the well-being and personal development of both male and female inmates.

Within the field of prison studies, the effects of family life, marriage, and partnership have been widely studied. For instance, the importance of contact for married prisoners was recognised in early studies, highlighting how prison policies regarding phone calls and home visits can significantly impact their ability to maintain pre-incarceration marital dynamics (Fishman & Fishman, 1988). A study on the impact of marital status on social outcomes for returning prisoners found that married or formerly married ex-inmates were half as likely to report new crimes or drug use compared to those in casual, unmarried partnerships (Visher et al., 2009). A group of author have explored the impact of imprisonment on marriage and found that first-time imprisonment had a weak impact on marriage likelihood among unmarried offenders, but a significantly higher divorce risk for married offenders (Apel et al., 2010).

Jiang and Winfree (2006) conducted a study focusing on social support, gender, and inmate adjustment to prison life. According to findings, social support mechanisms are important for inmates who are in the process of adjustment to prison. The study suggests that male inmates with spouses experience better adjustment than unmarried inmates. Since there were no differences between married and unmarried female inmates, the authors concluded that marriage was a resource of social support for married male inmates, whereas female inmates received less or not sufficient support from their husbands. In other words, this study suggested that social support can be influenced by marital status and that it plays a role in how inmates perceive and adjust to prison life, indicating a potential association between marital status and the quality of prison life.

Furthermore, existing literature, as summarised by Folk et al. (2019), provides evidence of the impact on reducing recidivism, increasing post-release employment opportunities, reducing depression, greater involvement in relationships with children after release, decreased depression, and substance use (De Claire & Dixon, 2017; Liu et al., 2016; Visher et al., 2013). Contact with family during incarceration positively impacts post-release functioning, enhances family connectedness, improves inmates' mental health after release, reduces recidivism and alcohol dependence, and increases adaptive community functioning (Folk et al., 2019).

Gender specificity in the significance of partner relationships was evident in research results showing that it is not significant for female inmates, neither spousal support nor support from friends outside the prison (Pavićević, 2024). Other studies of female inmates have also shown that women who have partners during their prison sentence exhibit lower levels of well-being and poorer behaviour in prison (Beer et al., 2007, as cited in De Claire & Dixon, 2019). Additionally, the positive effects of maintaining a relationship with a partner on recidivism, which applies to men, did not hold true for women (Bales & Mears, 2008). These gender differences suggest the need for separate research into the experiences of men and women in prisons (De Claire & Dixon, 2019).

Interestingly, family contact was identified as one of the highest-ranked dimensions of quality of life in the current study. However, it is indicative that it does not significantly contribute to the perception of well-being and personal development.

> In this context, it raises a critical question about the role of a prisoner's family in their journey towards empowerment, resocialisation, and desistance from crime. While family support can be a powerful source of motivation and strength for some prisoners, it can also be a complicating factor if the family has been responsible for victimisation and negative impacts on the prisoner's mental and physical health. This paradox highlights the complexity of family dynamics for female prisoners. It seems that some prisoners find their greatest strength also being their greatest weakness. (Batrićević et al., 2023, p. 283)

Prisoners' Residency

Based on the presented results, male prisoners from rural areas scored higher in *Personal Development* and overall well-being than prisoners who had residency in urban or suburban regions, with statistically significant differences (Table S8). However, differences in other dimensions were not significant. Female prisoners from rural communities also tended to have higher scores in personal development and personal autonomy and lower distress, though not statistically significant. Overall, community type appears to have a limited impact on prisoners' experiences within the prison environment.

The dominant discourse surrounding incarceration has primarily focused on urban communities as a social problem. However, the current study shows notable differences in the perception of well-being and personal development among convicted individuals from rural environments compared to urban environments. Nevertheless, the initial question that could clarify these differences pertains to the distinctions between rural and urban environments.

Most rural crime studies do not provide an operational definition of the term rural (Weisheit et al. 1999, as cited in Weisheit & Donnermeyer, 2000). In Serbian criminological literature, rural crime is not sufficiently explored as a specific phenomenon. Rural crime does not only involve the characteristics of small settlements with a small number of inhabitants but also includes a range of other characteristics that hold a significant place in the spatial and cultural map of Serbia. Additionally, research on differences between rural and non-rural crime is generally underrepresented in existing criminological literature (Johnson & May, 2016). Since there are many more rural areas than urban areas, and considering that rural areas display incredible diversity in cultural, economic, and social conditions, theories that do not account for variations in the structural conditions of rural (and urban) areas lack generalisability (Weisheit & Donnermeyer, 2000). According to Donnermeyer and DeKeseredy (2014), rural areas are characterised by four common factors: smaller population sizes and/or densities, higher densities of acquaintanceship, less autonomy, and influence from external cultural, economic, and social forces. In addition to these basic characteristics, it is assumed that residents of rural areas are more isolated from non-rural communities, have less access to private and public services compared to urban environments, often solve problems on their own, have fewer employment opportunities and traditional rural industry jobs have been replaced with the service sector, low-skilled, and low-paying jobs (Beichner & Rabe-Hemp, 2014; Wodhal, 2006, as cited in Johnson & May, 2016).

Based on the assumption that the role of place is important in examining the consequences of incarceration, a study conducted by Johnson and May (2016) revealed significant differences between inmates from different environments. The research findings indicated that rural

inmates face particularly severe hardships in prison. The authors identified the lack of pre-prison acquaintances and contacts in prison as the most significant reason for this disparity compared to urban inmates. In contrast, urban inmates find it easier to form informal networks, share prison experiences, and alleviate social isolation by connecting with acquaintances from their urban backgrounds. Furthermore, the absence of space or a view of the outside world contributes to a heightened sense of punitiveness among rural inmates, which is a crucial deprivation factor for them. Consequently, rural inmates experience a stronger sense of discontinuity with their previous way of life and a more pronounced feeling of loneliness based on these findings.

Prisoners from rural and very rural areas are more likely to have used drugs throughout their lives and less likely to have sought help for treatment for drug abuse compared to prisoners from urban areas (Warner & Leukefeld, 2001). Our findings show that upon incarceration, rural male prisoners reported higher scores in personal development and overall well-being. This outcome could be due to several factors, including a stronger focus on self-improvement in the absence of established social networks within the prison environment.

Next, our study did not find significant differences in overall well-being between rural and urban female prisoners. However, Staton-Tindall et al. (2007) reported that rural women used fewer health services, potentially indicating a lack of access to or awareness of available services in rural communities. Those female prisoners from rural areas who used community health services before prison seem to have fewer health problems while incarcerated.

By reviewing the literature, Freudenberg (2001) found an overrepresentation of urban populations in jails and prisons in the United States, especially Black and Latino people, identified a higher prevalence of several health issues. Considering prison placement, location plays a significant role in sentencing decisions, with rural and suburban areas utilising prisons more frequently despite lower crime rates compared to urban areas (Beckett, 2022). When considering the residency of prisoners, particularly recurrent inmates, it is important to note how returning to familiar urban neighbourhoods post-release can shape their experiences within correctional facilities. Research has shown that parole residency restrictions often lead ex-prisoners to return to the same neighbourhoods where they resided before incarceration (Kirk, 2015). Furthermore, the proximity of ex-prisoners to their prior neighbourhoods can impact their social connections, support systems, and reintegration efforts. Knowing they will return to these neighbourhoods might influence behaviour within the prison environment, such as gang affiliation or drug use, as a way to prepare for reintegration on those terms. Additionally, returning to areas with limited job opportunities or a high concentration of criminal networks can make it difficult to find legitimate employment and avoid reoffending.

The study conducted by Bobić et al. (2022) in Serbia highlights the importance of a prisoner's background in shaping their perception of treatment quality, in addition to the perception of fairness and positive staff interactions. More precisely, growing up in a rural area is related to a prisoner's willingness to cooperate with authority figures in prison. The results of our research, which indicate significantly higher scores related to well-being and personal development among rural prisoners, regardless of gender, can be explained by a distinct set of value orientations. In rural areas, values such as personal autonomy and its conceptualised personal development may not be as prominent as in urban environments. Consequently, rural inmates

may rate these dimensions more positively and feel less deprived in terms of well-being sub-dimensions. Studies that examine inherent value orientations relative to rural and urban origins of inmates would be significant for designing prison treatments and support aimed at fostering a greater appreciation of personal autonomy and personal development.

Sentence Length and Time Served and Their Effects on Well-being and Development

We found no significant correlations between sentence length and various dimensions of well-being and development (Table S9). Therefore, it can be concluded that sentence length did not have a notable relationship with prisoners' perceptions in four MQPL dimensions and *General Well-being and Development score*. One possible explanation could be that factors beyond sentence duration, such as individual coping mechanisms, support networks, or the staff-prisoner relationship, significantly impact prisoners' experiences and perceptions within the prison environment. In other words, our results confirmed variations in perceptions of different aspects of prison life quality related to well-being. However, the relationship between sentence length and these dimensions was not straightforward.

Regarding time served and prisoners' perceptions of *Well-Being and Development*, descriptively, male prisoners imprisoned for seven or more months but less than two years tended to have more positive perceptions of their prison experiences across all dimensions. In contrast, those incarcerated for over two years reported less favourable perceptions. However, none of the correlation coefficients reached statistical significance, suggesting that the subgroup of male prisoners, regardless of their time served, had similar experiences of the quality of prison life in the *Well-being and Development* category, as presented in the MQPL framework (Table S14).

On the other hand, our findings confirm the potential impact of extended imprisonment on female prisoners' perceptions and experiences within the prison environment (Table S14). As the duration of imprisonment increases, female prisoners may experience a decline in their overall well-being, personal growth and autonomy and a higher distress level, as reflected in their MQPL scores. More precisely, female prisoners with shorter periods of imprisonment tended to report a perception of the prison environment as more supportive when it comes to addressing offending behaviour, preparation for release and developing their potential for personal growth and improvement. Furthermore, our findings indicate that female prisoners with shorter periods of imprisonment tended to perceive a greater sense of control over their own lives and autonomy within the prison environment, which also includes feeling more empowered to make decisions, think independently, and maintain their sense of identity despite being imprisoned, as conceptualised in the MQPL framework. In addition to higher global well-being and development scores, they reported lower levels of distress, which includes suicidal thoughts, emotional management, and night-time sleep problems.

Interestingly, the *Well-being* dimension consistently scored across all categories of time served in the subgroup of female prisoners (Table S14). The finding indicates that female participants, regardless of how much time they had already spent in prison while serving their prison sentence, similarly experienced the "pains of imprisonment".

Consistent with our findings that sentence length and time served do not have a major impact on male prisoners' perceptions of well-being and development within the prison environment, some studies have shown that for male inmates, the length of time spent in prison doesn't have a strong association with their perception of the prison's social climate (Gibson, 2021). However, one line of research showed that sentence length and incarceration length significantly influence inmates' adjustment to prison life and their perceptions of prison climate and environment (Casey et al., 2016; Toman et al., 2015). More precisely, the duration of stay in prison significantly influences prisoners' psychological well-being, including self-awareness, stress, and stress coping, with confirmed gender-based differences (Mola Melaku, 2020), whereas sentence length influences the use of coping strategies (Reed et al., 2009). Longer incarceration negatively impacts cognitive performance and employment prospects, as well (Ezenwa et al., 2020; Ramakers et al., 2014). Long-term prisoners experience psychological distress similar to the level of mental distress reported by psychiatric patients, with depression being the most significant issue (Otte et al., 2017). Some studies suggest that the effect of incarceration length is not straightforward and may vary depending on other factors such as age and incarceration history (Toman et al., 2015). Nevertheless, a negative social climate within the prison might be a major factor influencing the negative aspects of the prison experience, regardless of the length of incarceration (McKendy & Ricciardelli, 2021).

Considering incarceration length and its impact on prisoner's well-being, it is important to note that sleep disorders haven't received as much attention as other mental health problems in prison populations (Fakorede et al., 2021). On the question of the physical and mental well-being of male prisoners aged 50 and above, Combalbert et al. (2019) found that as the length of time spent in prison increases, the sleep quality significantly deteriorates. In other words, they reported a negative correlation between imprisonment length and sleep quality, which indicates that older prisoners who are incarcerated for longer periods tend to experience poorer sleep compared to those who are imprisoned for shorter durations.

Taken together, earlier studies have reinforced the widely-held claim that long-term imprisonment is destructive to the emotional well-being of prisoners (Goffman, 1961; Sykes, 1958). Being imprisoned for years or even decades impacts prisoners' mental and emotional well-being (Yang et al., 2009) and can lead to changes in a person's identity, sense of self, and core values (Hulley et al., 2016). Prisoners must learn to adapt to a new life to cope with imprisonment. For instance, a study found that prisoners who were just starting their long sentences felt more stressed and had lower self-confidence compared to other groups of fellow prisoners, while those prisoners who had already served a significant portion of their long sentences had developed ways to manage the stress and maintain their self-esteem (MacKenzie & Goodstein, 1985). At the same time, some authors reported challenges in time management, maintaining family relationships, and preserving self-identity and self-esteem (Flanagan, 1981). Snacken (1997) discovered that individuals serving long-term prison sentences often experience insecurity and low self-esteem. Additionally, the author emphasised the necessity of providing special attention to those serving life sentences, as they lack access to alternative coping mechanisms or support systems to facilitate their adaptation to incarceration. Other researchers have argued that as long-term prisoners lose their relations with the outside world, they engage in more intensive internal prison programmes and are better adjusted to the disciplinary aspects of prison life (Bonta & Gendereau, 1990; Cohen & Taylor, 1981). Thus, as

prisoners become better adapted to life in prison, they increasingly comply with prison regimes (Osment, 2018). Lazarus and Folkman (1984) explained that as prisoners undergo a life sentence, they must adjust in three principal ways: practically to their new environment; socially, in order to interact with staff and inmates; and finally, psychologically, involving both problem – and emotion-based coping.

Prison Regimes and Prisoners' Well-Being and Development

Prison regimes, encompassing the conditions and management practices within correctional facilities, have a significant impact on prisoners' well-being and development. More precisely, our results confirmed that prisoners in the semi-open regime generally perceived their quality of life within the prison environment more positively than prisoners in the closed regime, especially among male prisoners (Table S10). Significant differences were observed in dimensions of *Well-being*, *Distress*, and *Global Well-Being and Development Score* for female prisoners, with those in closed prison wards reporting lower scores on average. Our findings point out that the type of prison setting, with its varying levels of freedom, environmental factors, unique moral and social climate, and associated policies and practices, can influence prisoners' perceptions of well-being and development. According to our results, varying degrees of impact are observed across different dimensions.

Literature indicates that the well-being of incarcerated individuals is influenced by a combination of deprivation and importation factors, but the extent to which a positive prison climate can mitigate the severity of the prison sentence has yet to be sufficiently researched (van Ginneken et al., 2019). Characteristics of imprisonment may be linked to well-being (van Ginneken et al., 2019), wherein the initial period, spent in pre-trial detention and the actual arrival in prison, is marked as the most stressful, possibly due to the shock of confinement, the need to adapt to a new environment, and uncertainty (Liebling & Ludlov, 2016), the length of the imposed sentence, and the regime under which the sentence is carried out. Additionally, the results of other studies indicate that the level of well-being of inmates depends on the characteristics of the prison unit. The variance between units could be explained mainly by regime characteristics; pre-trial detention and extra-care or isolation regimes were associated with lower well-being (van Ginneken et al., 2019).

The type of prison ward, whether open, semi-open or closed with their specific conditions and management practices, appears to have a significant effect on prisoners' well-being and development. Some studies suggest that open prisons support a healthier lifestyle (Kundu et al., 2018) and are linked to reducing of recidivism, particularly in inmates with low education levels (Mastrobuoni & Terlizzese, 2022). Semi-open wards may provide a more supporting environment for well-being and development of prisoners compared to closed wards (Fardin, 2020). Rehabilitation programs and the overall prison climate are also important, with open and semi-open environments potentially offering more programs that are effective or tailored to the needs of prisoners. Fardin (2020) compared the symptoms of mental disorders between the prisoners in semi-open and closed prison regimes and found that the semi-open prison system could potentially decrease the negative impacts of the prison environment on mental health. Both staff and prisoners in the specialist treatment prison perceived the social climate as being more supportive of rehabilitation efforts (Day et al., 2012). On the other hand, some studies

indicate that both open and closed prisons can negatively impact mental well-being due to factors like duration of stay, loss of privacy, and social integration challenges (Moore, 1981).

Previous literature concerning the relationship between prison regimes and prison experience for inmates has shown contrasting experiences of prison regimes and structures between different prisoner populations. Van Ginneken et al. (2018) examined the quality of prison life in Dutch prison regimes and the associations of different regimes with prisoners' perceptions of the prison environment. Harner and Riley (2013) found that some women viewed the prison structure positively, appreciating the routine and stability it offered. Among the negative aspects, there are reports on monotony for young males and concerns about enhanced regime. According to Jordan (2011), young male prisoners might find the structured and rigid routine difficult to adapt to because they consider it monotonous. de Viggiani (2003, as cited in Goomany & Dickinson, 2015) found that prisoners under the 'enhanced regime' that offers more privileges expressed negativity towards it and questioned its effectiveness for rehabilitation despite offering a more comfortable environment. Goomany and Dickinson (2015) further noted that strict enforcement of rules was seen as disempowering and limiting, that increased time for reflection led to decreased motivation for future planning and that prisoners felt the enhanced regime was dividing them by unfairly applying rules, causing frustration and mistrust towards prison staff.

The previously mentioned study conducted by Van Ginneken et al. in 2018 was conducted in 28 prisons in the Netherlands. As presented, prisoners in regular prison regimes reported better quality of life than prisoners in pre-trial detention, with more positive perceptions of activities, visits, and contact with family and friends. Prisoners in regular prison regimes also reported feeling better overall, perceiving their sentences as less severe, and having better psychological health. In contrast, prisoners in minimum-security regimes reported the highest quality of life and well-being, especially when compared to those in pre-trial detention, police detention, and persistent offender regimes. Furthermore, prisoners in minimum-security regimes tended to report significantly higher levels of autonomy than those in other regimes. However, those in extra-care regimes reported the lowest psychological health and well-being and feelings of safety, along with the highest subjective sentence severity and staff-prisoner relationships than other inmates. The last finding was explained by smaller size and closer staff supervision in extra-care prison regimes in general and the increased vulnerability of the population, including those with mental health needs or specific types of offences. As later reported, the chance of developing mental health conditions is higher among closed-type prisoners compared to those in semi-open and open facilities (Stawinska-Witoszynska et al., 2021).

Indeed, the type of prison, the department, and the treatment group to which the inmate is assigned affect the well-being and welfare of the inmates, as confirmed by the results of our research. Similar conclusions have been reached by other researchers, who noted that inmates serving sentences in minimum security regimes had higher scores on all scales of prison climate compared to scores of inmates in all other regimes. This finding is consistent with expectations, as inmates in minimum security regimes have more freedom of movement, spend more time outside their cells, and maintain more intense contact with the outside world, friends, and family (Bosma, van Ginneken, Sentse, et al., 2020). They are also involved in more treatment activities (education, work, leisure activities). These conditions may be considered more 'psychologically survivable' (Liebling, 2012a).

It should be noted that the type of department in which an inmate is classified also determines the degree of guaranteed rights and privileges for the inmate or extended rights and privileges of both institutional and outside nature. The minimum level of rights and privileges is in closed departments, while the maximum is in open departments.

A less restrictive prison environment involves much more than just physical or practical elements, and examining complex emotional constructs is significant, especially when considering the impact of the regime on the well-being and welfare of inmates. The prison environment, or a more favourable regime with a higher level of rights and privileges, through increased access to the outside world or family visits, as emphasised by Crewe et al. (2014), can provide increased access to 'emotion zones' and their more unrestrained expression, which is controlled within the institution.

In the Republic of Serbia, legal provisions prescribe the types of institutions and types of departments within institutions for the execution of criminal sanctions. In institutions for the execution of criminal sanctions, there can be open, semi-open, and closed departments. In closed-type institutions, there are closed, semi-open, and open departments. In the Correctional Facility for Women in Požarevac, there are closed, semi-open, and open departments, as well as a special department for the execution of juvenile prison sentences. Upon admission to the institution, a convicted individual is always first sent to the admission department, where their personality is assessed, the level of risk is determined, their capacity for change is evaluated, and their individual needs are identified in order to determine an individualised treatment program and classification into closed, semi-open, or open departments (Ćopić et al., 2024).

When classifying a convicted individual, several factors are taken into account: the length of the sentence; the manner of arrival for serving the sentence; the attitude towards the criminal act and the punishment; the type and severity of the criminal offence; prior criminal record; involvement in other criminal proceedings or previous sentences; psychological, pedagogical, social characteristics, security risks, and needs of the convicted individual; behaviour during previous execution of criminal sanctions in the appropriate institution; and other relevant factors for classification.

In an open department, individuals with preserved capacity for change and a low level of risk are classified. In a semi-open department, individuals with a partially preserved capacity for change and a moderate level of risk are classified. In an open department, individuals with preserved capacity for change and a low level of risk are classified. In a semi-open department, individuals with a partially preserved capacity for change and a moderate level of risk are classified. In a closed department, individuals are classified based on their expected difficulty in adapting to institutional conditions, their potential threat to other inmates or staff, their limited capacity for change, and their high level of risk (Regulation on treatment, treatment program, classification, and subsequent classification of convicted individuals).

Risk Factors and Prisoners' Well-Being and Development

Overall, our data suggests that male prisoners with lower risk levels, that is, with a low security classification, reported higher perceived well-being and development levels across all dimensions. In contrast, those in higher-risk categories reported lower scores. This trend was consistent across short- and long-term sentence subgroups (Table S11). Our results imply that higher levels of risk among male prisoners, that is, higher security classification levels regardless of the sentence length, are associated with lower levels of perceived well-being and development within the prison environment.

Based on the presented results, female prisoners with long-term sentences experienced lower levels of personal development, higher distress, and lower overall well-being as measured by the MQPL survey, mainly if they were categorised as high-risk prisoners (Table S11). This observed pattern could be linked to limited access to rehabilitation programs tailored to meet their needs, address their offending behaviour, prepare them for release and life after prison, and develop their skills and positive attributes. Higher distress refers to mental health concerns. It should be highlighted that high-risk female prisoners with short-term and long-term sentences reported Well-being scores of 1.88 and 1.75 on average, below the lower threshold of 2.30, which could be indicative of more frequent violent incidents in prisons (Auty & Liebling, 2024).

Therefore, risk assessment could be a valuable tool for identifying prisoners at higher risk of experiencing poorer outcomes related to well-being and development during their imprisonment. Considering that the assessed level of risk is directly related to the classification of inmates into different types of departments or prison facilities (high risk to closed prison wards and low risk to open prison wards, in general), the findings are expected and linked to the previous discussion on the relationship between prison regimes and prisoners' well-being and development. In Serbia, prisoners are classified according to their Risk, Needs, and Capacity Assessment Questionnaire scores. Therefore, it is advisable to focus on modifiable factors, such as employment, education, or substance abuse programs, to address their complex individual needs through appropriate treatment content and activities.

Gonçalves et al. (2014) conducted a meta-analysis on predicting infractions and health care utilisation in prison. Based on the results from 90 studies, the authors noted the importance of early identification and classification of prisoners at risk for disruptive behaviours or health problems to appropriate security levels and suitable treatment programs. A combination of personal characteristics and the prison environment can influence both a prisoner's likelihood of rule-breaking and their need for using prison medical services, which is closely related to their prison experience and perception of the prison environment (Gonçalves et al., 2014). The strongest personal predictors were prior misconduct in prison, aggressive or impulsive behaviour, antisocial personality traits, younger age, and being assessed as a high-risk prisoner. Contextual factors were more gang activities, overcrowding and a higher proportion of maximum-security inmates.

Bench and Allen (2003) investigated the stigma of prison classification. Their experiment assigned inmates to either maximum or medium security prisons for one year, finding no significant difference in disciplinary infractions. Considering the importance of fair and objective criteria for classifying prisoners into security levels, their findings raise the question of whether the security classification itself might influence behaviour within the prison environment. In

other words, the stricter social and moral climate of maximum security prisons, compared to medium security, leads to more frustration and rule-breaking, even among inmates who wouldn't necessarily behave poorly in a less restrictive setting. Furthermore, focusing more on classification systems and their widespread use, while important for security, might have led to less focus on prison's social and moral climate.

Several authors have expressed concern about applying male-based security classification systems to women's prisons (Collie & Polaschek, 2003; Montford & Hannah-Moffat, 2021). These observations are significant because security classifications based on risk heavily influence how women's prisons are managed and how female prisoners experience their incarceration, particularly regarding motherhood. These classifications impact perceptions of prisoners, access to work programs, and rehabilitation opportunities and can determine visiting options and contact with children.

Our results extend the findings of previous studies by suggesting that risk assessments can be a valuable tool to identify prisoners at risk for lower well-being and development during imprisonment. Steiner and Wooldredge (2018) analysed data from prisoners and officers from 33 prisons investigating prison officer legitimacy, the exercise of power, and inmate rule-breaking. Their findings indicated the importance of security classifications in shaping prisoners' behaviour and interactions within the prison environment. Chen and Shapiro (2007) studied the impact of more restrictive prison conditions on recidivism rates and found that they may lead to more post-release crime and affect prisoners' well-being and reintegration into society. When Cochran et al. (2016) explored the impact of distal prison placements on prisoner social ties, they found that security classifications may impact prisoners' social connections and support systems, which can further influence their well-being.

Well-being and Development Scores by Offence Type

Our analyses revealed no statistically significant differences in the *Well-being and Development* scores between prisoners convicted for criminal offences categorised as violent or non-violent (Table S13). Specifically, male prisoners convicted of non-violent crimes tended to have marginally higher scores compared to those convicted of violent crimes. Conversely, among female prisoners, those convicted of non-violent crimes showed slightly lower scores than non-violent female offenders. However, these differences were not statistically significant.

Our study suggests minimal or no impact of violence-based distinctions on perceived prison life quality among both genders. However, our finding that the average score on *Well-being* is 1.98 in female convicts who were sentenced to prison for crimes without elements of violence needs careful consideration. Namely, the mentioned score is below the low threshold (2.30) that was associated with an increased risk of more severe forms of violence in prisons (Auty & Liebling, 2024) and substantially lower than the 'safer' threshold for the same category (3.30). In other words, the *Well-being* score, which captures prisoners' emotional experiences, including the "pains of imprisonment", falls below the threshold associated with increased risk of experiencing severe forms of violence in prisons in the subgroup of female prisoners convicted for non-violent crimes.

Although numerous studies focused on perpetrators of violent crimes, there is a lack of data supporting the existence of a relationship between the type of criminal offence committed and well-being and personal development during imprisonment. Previous research focusing on perpetrators of violent crimes has primarly been oriented towards studying the relationship between mental health and violence (Kim et al., 2024) and the presence of antisocial personality disorders among violent offenders (Singh et al., 2022). Other research finds linkages between experiencing and witnessing victimisation and delinquent (Baglivio et al., 2015) and violent behaviours (Fox et al., 2015).

Violent criminal behaviour complicates the developmental path (Piquero, 2012) as it is associated with decreased psychosocial functioning (Huesman, 2009) and increased risk of poor health (Reingle et al., 2014). Perpetrators of violent crimes often have a history of prior convictions and risk factors from early life, and those who follow a trajectory of criminal behaviour have more underlying risk factors than those who desist from crime (Tärnhäll et al., 2023a; 2023b).

Studies report that being convicted of violent crime affects prisoners' well-being by leading to greater emotional distress, higher risk of suicide and self-injury, aggressive and antisocial behaviours, and cognitive impairments. There are studies suggesting that being convicted of violent or non-violent crimes does not directly affect the perception of prison climate, which is in line with the findings from our research. Still, exposure to violence during incarceration impacts behaviour and increases emotional distress (Boxer et al., 2009). However, some studies indicate that offence type can influence mental health outcomes among young prisoners (Shagufta et al., 2015). Jarman (2017) discussed the significance of offence type, particularly with heavily stigmatised crimes such as murder, as a variable affecting the adaptation of prisoners with life sentences and their prison experience.

Prisoners convicted of violent crimes are more likely to be victimised (Teasdale et al., 2016), with those convicted of homicide have an increased risk of suicide, both in prison and after release (Bukten & Stavseth, 2021; Zhong et al., 2021). However, they are less likely to be rearrested than those released on nonviolence (Zgoba & Clear, 2021). According to Woessner and Schwedler (2014), a positive prison environment seems to be associated with prisoners developing more positive attitudes and behaviours (except for empathy). However, having a positive prison environment was not predictive of general or sexual/violent recidivism. A systematic review by Chaguendo-Quintero et al. (2023) found that prisoners convicted of violent behaviour exhibited greater difficulty controlling impulses, along with impairments in cognitive flexibility and working memory, compared to those convicted of non-violent crimes or healthy individuals. When the relationship between individual and situational characteristics and prison violence in a sample of 1,330 inmates from 11 Spanish prisons across 10 months was examined, Arbach-Lucioni et al. (2012) found that having a violent conviction offence was not a significant predictor of outcome. Later, Harding et al. (2019) noted that prison sentences had no significant effect on violent crime arrests or convictions after release but modestly reduced violence when considering the impact of incapacitation during imprisonment.

Pre-Prison Life Experiences of Inmates and Their Well-Being and Development

First-Time Offenders and Recidivists

Based on our results, prisoners who were recidivists generally reported lower scores across all dimensions in comparison to those who were first-time offenders. The only exception was *Personal Autonomy*, where no statistical difference was confirmed in male prisoners (Table S15). Our findings could imply that the impact of criminal history, that is, whether a prisoner is a first-time offender or a recidivist, has significantly influenced various dimensions of well-being and development. Specifically, recidivism may be associated with poorer outcomes, particularly in areas such as distress, personal development, and overall well-being. Particularly concerning is the finding that female prisoners who were recidivists reported a *Well-being* score of 1.48 on average. As emphasised earlier, *Well-being* scores below the threshold of 2.30 may suggest a higher likelihood of frequent violent prison incidents (Auty & Liebling, 2024).

By reviewing the literature, we find that the *Well-being and Development Dimensions* reflect the possibilities for a positive future based on personal development and behavioural improvement. This outcome could be achieved in an environment that helps and encourages convicts to adequately deal with their criminal behaviour, develop their positive potentials and prepare for parole (Auty & Liebling, 20220; Stevanović et al., 2024). The higher social and moral quality of life in prisons – those that are decent and well-organised, where prisoners feel safe, treated fairly and with humanity, and have supportive relationships with staff – is associated with increased personal development and lower reoffending rates (Auty & Liebling, 2020). In other words, the prison social climate can contribute to better outcomes on release (Bennett & Shuker, 2018; Calles-Rubiales & Ibáñez Del Prado, 2020; Tobón, 2022). This observation is understandable since a positive prison social climate is linked to improvements in the outcomes of prison-based rehabilitation programs, thus reducing post-release reoffending rates among prisoners (Harding, 2014). Also, inmate safety, staff-prisoner relationships, support, trust, and fairness are identified as influential factors in prisoners' quality of life (Büsselmann et al., 2020).

Studies suggest that first-time offenders and recidivists experience different aspects of prison life as positive, with first-time offenders valuing rehabilitation opportunities and recidivists appreciating improved health (Souza & Dhami, 2010). Namely, more recidivists enrolled in drug treatment programs and had more frequent sex thoughts than first-time inmates, with health being the most important factor in their prison experience. At the same time, first-time offenders prioritised rehabilitation opportunities, quitted smoking and drinking, worried more about physical safety and expressed greater fear of violence, suggesting a greater shock from entering prison. Studies have shown that participation in rehabilitation initiatives can positively impact prisoners' well-being (Talik & Skowroński, 2018).

Recent results from the Serbian prison system show that first-time offenders rated the prison social climate more positively than recidivists in the *Harmony*, *Professionalism*, and *Wellbeing and Development* dimensions (Stevanović et al., 2024). Interestingly, no significant differences were found in the *Security* and *Conditions and Family Contact* dimensions (although there were some differences within these categories, e.g., first-time offenders felt safer regarding police presence). There was also no significant difference in the overall perception of prison life quality. As explained, first-time offenders might have lower expectations and be more receptive to

positive aspects of the prison environment. Additionally, they might be more hopeful about personal change and see the prison as an opportunity for improvement. These observations could explain our findings, as well. On the other hand, recidivists might perceive the prison environment as less stimulating for their growth and change.

The basic and comprehensive thesis on the possibilities for identity transformation in prisons rests on the assumption that the inhibitory environment in prison communities promotes a survival identity. In contrast, a stimulating environment promotes a growth identity (Liebling et al., 2012). In this way, the "what works" strategy and the "risk reduction" strategy are replaced by the strategy of responsibly addressing criminal behaviour, achieved through appropriate treatment programs that challenge and confront attitudes and behaviours common to criminal choices and behaviours (Auty & Liebling, 2020). The availability of implementing such programs and cooperation with relevant services inside and outside the prison, in the community, varies between institutions based on the ability to provide an adequate number of professional staff, such as psychologists, educators, and sociologists, the number of available and accredited courses, as well as on the opportunities for education, professional development, and employment for convicted individuals and their motivation to engage in these programs (Stevanović et al., 2024). Reduced feelings of control or well-being are associated with increased learned helplessness and can have a negative impact on participation in daily activities or training programmes meant to decrease the risk of recidivism (van der Laan & Eichelsheim, 2013). Further, poor adaptation could have a negative effect on the willingness of offenders to participate in daily activities and training programmes, and it could indirectly reduce the effects of these training programmes.

It should be noted that adapting to prison and its conditions involves feelings of security, autonomy, well-being, stress, and undesirable behaviour among inmates (van der Laan & Eichelsheim, 2013). Importation theory, for instance, underscores the profound influence of an inmate's characteristics, such as their previous prison experiences, on their adaptation to the prison regime. In contrast, deprivation theory focuses exclusively on factors within the prison environment and surroundings as crucial elements in the adaptation process, such as social interactions with staff or other inmates, fairness in procedures, and professional staff conduct, among others. We believe that when considering complex processes such as adaptation and, within it, the sense of well-being and welfare, we cannot limit ourselves to one-sided theoretical foundations. The complex processes that occur in prison, especially those influenced by the prison environment and interactions with other individuals, require multifaceted theoretical approaches. Contemporary studies indicate that both importation and deprivation characteristics explain adaptation to imprisonment (Jiang & Fisher-Giorlando, 2002; van der Laan & Eichelsheim, 2013). Jiang and Fisher-Giorlando (2002) discovered that both deprivation and importation characteristics explained inmate misconduct.

Associations with Pre-Prison Drug Use

As presented, pre-prison drug use may have an impact on various aspects of well-being and development among male prisoners (Table S16). The most profound effect was confirmed in the global score of well-being and development. Our findings further implied that pre-prison drug use had a moderate effect on the overall well-being of female prisoners, as well as on their personal growth and the levels of distress within the prison environment (Table S16).

Generally speaking, our results confirm that it is important to consider pre-prison drug use as a factor influencing the well-being and development of prisoners. Targeted interventions and support mechanisms tailored to address the unique challenges and needs of individuals with a history of drug use before coming to prison are advised.

The literature suggests that many convicts use drugs before entering prison, and a substantial portion of them will continue to do so while incarcerated (Favril, 2023). A systematic review by Mundt et al. (2018) found a concerning prevalence of drug use within prisons, with an estimated 25% (95% CI: 17, 33; range 0–78%) of 90,000 prisoners in low and middle-income countries reporting illicit drug use during their incarceration. This finding aligns with earlier research by Andreoli et al. (2014), who identified a similar prevalence of drug abuse and dependence among inmates in Sao Paulo (27.1% for males and 25.2% for females). Fazel et al. (2017) conducted a systematic review and meta-regression analysis and found a concerningly high prevalence of drug abuse among prisoners across ten countries. As stated, there have been increasing rates of drug use disorders within prison populations over recent decades. Combining all studies and accounting for some variation, the estimated prevalence of drug use disorders in prisoners was 30% for male prisoners (range 10–61%) and 51% for female prisoners (range 30–69%). Supporting these global trends, a study conducted in Ethiopia reported an overall prevalence of substance use disorder of 55.9% (Yitayih et al., 2018). The prevalence of drug use among prisoners in Ecuador was 41.4%, as reported by Benavides et al. (2019)

However, very little is known to date about which factors can contribute to continued drug use in prison (Favril, 2023) and which factors within the prison environment can trigger the onset of drug use (Bukten et al., 2020). Some studies suggest drug use in prison primarily reflects pre-prison patterns, with individuals continuing their past behaviour (Strang et al., 2006). Other research argues that the stressful and potentially dangerous prison environment itself can actually lead some individuals to start using drugs while incarcerated (Boys et al., 2002). Yitayih et al. (2018) identified several factors associated with substance use disorder, such as lack of or poor social support, living in urban areas, psychopathy, and family history of substance use.

Detailed examination of major mental disorders in prison populations in Ecuador by Benavides et al. (2019) showed that the high prevalence of drug use is associated with mental health problems among inmates. The authors found high rates of mental illness in Ecuadorian prisons, drug use as a strong contributing factor and lack of social support exacerbating the mental health outcomes. Regardless of the causal factors, incarcerated individuals have a higher history of drug use, including more harmful methods like injecting, compared to the general population, where drug use might be less prevalent or involve less severe methods. Taken together, prisons and the justice system have a critical role in addressing drug use due to its elevated prevalence among incarcerated individuals (European Monitoring Centre for Drugs and Drug Addiction – EMCCDA, 2022).

Drug use and crime are intricately connected and intertwined in a complex relationship (Favril, 2023). Individuals who use drugs are more likely to come into contact with the criminal justice system (White et al., 2020). The majority of female prisoners who were referred to the forensic psychiatry service in New Zealand and subsequently diagnosed with psychotic and/or post-traumatic stress disorder reported a history of substance use before incarceration, suggesting a potential coping mechanism for dealing with past trauma, as explained by Collier and Friedman (2016). Given this, it is not surprising that there is an increased representation of drug users in correctional facilities compared to the general population who do not use psychoactive substances (Favril, 2023; Fovet et al., 2022).

In the literature, it can be found that the incidence of drug use before entering prison ranged from 30 to 93% (van de Baan et al., 2021). Furthermore, data indicates that upon admission to prison, approximately 30% of men and 51% of women meet the diagnostic criteria for substance use disorder (Fazel et al., 2017). The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA, 2020) data indicates that at the European level, between 30 and 75% of individuals who use psychoactive substances have been in prison. The high prevalence may be linked to a high burden of drug-related problems in an already vulnerable population that frequently ends up in prison (van de Baan et al., 2021).

Prisons may be the first place where hard-to-reach people with drug problems who commit crimes can get in touch with drug rehabilitation programs (Alves et al., 2016). It should be noted that prisons are specific communities in which organising any intervention poses an additional challenge. Another specific reason for the limited availability of drug-related interventions includes the fact that prison systems deal with intense societal pressures regarding safety preservation and protection from violence. Furthermore, prisons often have very limited resources, resulting in prison staff lacking the capacity to adequately respond to the needs of inmates who are addicted (Stöver & Kastelic, 2014).

Drug use in prison increases the risks of adverse health outcomes, including an increased risk of infectious diseases, alcohol abuse, cardiovascular diseases, as well as various mental health problems (van de Baan et al., 2021). Indeed, research results confirm that the health and psychological state of convicts who are addicted can be further exacerbated by their arrival in prison (EMCDDA, 2012). The use of psychoactive substances leads to an increased risk of violence and suicide in prison (Bukten et al., 2020; van de Baan et al., 2021).

The risk of suicide in prison is exceptionally high for convicts who are addicted, and cessation of drug use has been identified as a possible trigger for suicide in the early days of imprisonment (Larney et al., 2014). Additionally, individuals released from prison are at an increased risk of death, especially from drug overdose and accidents, with this risk typically being highest in the weeks immediately following release (Merrall et al., 2010).

Drug use in prison is often the dominant factor in relationships between inmates and between inmates and staff. Many security measures in prisons focus on controlling drug use and trafficking. Daily routines are often influenced by drug-dependent inmates and related issues such as drug-related deaths, emergencies, increasing drug users, dealer hierarchies, debts, trafficking, and infection risks from contaminated needles. Moreover, many activities in prison are directed towards illicit drug procurement, smuggling into the prison, and consumption by drug users (Stöver, 2013, p. 10). In addition to the consequences for the mental and physical

health of individuals, a history of drug use among the prison population and individuals released from prison also has social consequences, as the rate of recidivism is high (van de Baan et al., 2021).

According to the EMCDDA guide for health and social responses to drug problems, interventions implemented in prisons related to drug use can have a significant impact on morbidity, mortality, and public health (EMCDDA, 2022). Research has shown that providing medication-assisted treatment for opioid use disorder in prisons can have a range of benefits, including reducing drug use in prison, lowering the chances of re-incarceration, and potentially saving lives after release (Degenhardt et al., 2014; Kinner et al., 2013; Larney et al., 2012).

From a public health standpoint, prison time could be an opportunity for positive change for those convicted to imprisonment, to address their addictions and criminal behaviour (EMCDDA, 2012; 2022). First, they are removed from their usual environment and prisons may offer addiction treatment programs, and secondly, imprisonment can allow individuals time to consider their past actions and plan for a different future. Researchers emphasise the importance of recognising whether drug use in prison is a behaviour that existed prior to incarceration or was initiated upon arrival in prison in order to implement appropriate and effective preventive and therapeutic activities within the prison setting (Bukten et al., 2020).

When the relationship between prison climate, quality of life, and life satisfaction among drug-abuse inmates in Malaysia was investigated, several positive associations emerged, supported by earlier authors (Baharudin et al., 2021b). First, a favourable prison climate, characterised by factors like safety, respectful interactions with officers, and access to activities, improves the quality of life for drug-abuse inmates (Barquín et al., 2019; De Smet et al., 2017; Skar et al., 2019). Second, positive prison climate aspects like prison activities contribute to their life satisfaction (Ali et al., 2016; Kearney & Sellen, 2013; Lee et al., 2021). Next, a better quality of life, which includes aspects such as religious practice, mental well-being, and personal growth opportunities, leads to greater life satisfaction (Garrido et al., 2013; Hörnquist, 1990; Moons et al., 2006). Finally, quality of life mediates the relationship between prison climate and life satisfaction (Baharudin et al., 2021b). This group of authors has earlier introduced the Maqasid Shariah Quality of Life (MSQoL) as a theoretical framework, linking family social support and prison climate rehabilitation to quality of life, which implies that these factors could indirectly affect life satisfaction through quality of life (Baharudin et al., 2020).

However, surveys such as that conducted by Jones et al. (2017) have shown the role of chronic pain and depression in substance abuse disorder. In the mentioned study, the relationship between physical health, substance abuse, and overall well-being is explored. Based on the indicated connection between physical health, substance abuse disorders and well-being, it can be concluded that a prison environment that promotes physical health and well-being and provides access to pain management and other healthcare services could potentially decrease the risk of drug use among inmates, particularly those with various health issues, such as chronic pain.

Associations with Psychiatric History, Security Measures, Self-Harm, and Suicide Attempts

Based on our results, male prisoners without a self-reported history of psychiatric hospital stays reported higher levels of personal development, autonomy, well-being, and overall well-being and development and lower distress levels within the prison environment compared to those with such a history (Table S17). At the same time, a potential association between psychiatric hospital stays and increased distress levels among female prisoners is indicated. However, regardless of their history of psychiatric hospital stay, female prisoners had similar experiences and comparable perceptions of the quality of prison life in other well-being and development categories, as operationalised in the MQPL framework (Table S17).

According to our results, individuals who self-reported being subjected to medical security measures scored lower in all explored MQPL dimensions among male prisoners and overall well-being, personal growth, and distress among females (Table S18). The highest mean differences were observed in the scores in the subgroups of male and female prisoners.

These findings could suggest that prisoners who were subjected to medical security measures are at increased risk of higher distress levels and poorer outcomes of well-being within the prison environment. It should be pointed out that female prisoners who confirmed a history of medical security measures reported a *Well-being* score of 1.82 on average, which falls below the threshold of 2.30. That score could indicate a higher likelihood of frequent violent incidents in prisons (Auty & Liebling, 2024). To summarise, a history of imposed medical security measures could potentially negatively impact the prison experience.

A history of self-harm may have negatively affected the quality of prison life of both male and female prisoners, particularly in terms of higher distress levels and more pronounced feelings of punishment and "pains of imprisonment" (Table S19). The obtained results showed that a history of self-harm may have impacted the overall well-being of male inmates. When it comes to female prisoners, those who self-reported self-harm in the past had a mean *Well-being* score of 1.86. Accordingly, that score is below the threshold of 2.30 and could indicate a higher likelihood of violent incidents (Auty & Liebling, 2024).

As presented, our findings suggest that a history of suicide attempts among prisoners may be associated with lower levels of well-being and higher levels of distress and "pains of imprisonment" (Table S20).

There is extensive literature on the prevalence of convicted individuals with a history of mental illness and a history of psychiatric hospital stays (Adraro et al., 2019; Fazel et al., 2016; Forry et al., 2019; Van Buitenen et al., 2020; Wilton & Stewart, 2017). Common Mental Disorders (CMDs) encompass a variety of mental health conditions, and prisoners have the highest prevalence of these disorders compared to the general population – one in nine inmates suffers from some form of CMD (Adraro et al., 2019).

Male prisoners exhibit significantly higher rates of common and severe mental disorders compared to the general population. Summarising the literature, Benavides et al. (2019) reported on the prevalence of major mental disorders, with rates varying by country: 8.7% and 20.7% for depression and psychosis in Spain, 6.3% and 12.3%, respectively, in Brazil, 6.1% for depression in Chile, and 38.6% in Colombia. Benavides et al. (2019) reported that over half

(50.2%) of male prisoners screened for depression and psychosis using DSM-IV criteria experienced depression, and a quarter (25.9%) suffered from psychosis.

Drug use within the prison strongly correlated with the likelihood of experiencing depression or psychosis. This correlation grew stronger with increasing age. Additionally, consuming drugs while in prison remained a significant factor associated with depression/psychosis, even after accounting for other variables like age. Interestingly, inmates who never used drugs or quit using them in prison did not show a significant difference in mental health outcomes (Benavides et al., 2019). Nearly half (49.1%) of female prisoners with a history of mental illness (schizophrenia, bipolar, depression, post-traumatic stress disorder, or anxiety) also reported having a substance abuse problem, compared to only 35.4% of those without mental illness (Blitz et al., 2008). Compulsory drug treatment prisons based on therapeutic principles and practices can effectively address offender moral rights and promote rehabilitation, despite compulsory treatment law (Birgden & Grant, 2010).

Two recent scoping reviews (Hidayati et al., 2023; Hidayati, Suryani, et al., 2021) have identified specific mental health problems faced by female prisoners. Based on nine studies included, the first review identified anxiety, depression, substance abuse, stress, loss and grief, trauma, and suicidal thoughts as major mental health concerns for female prisoners (Hidayati, Suryani, et al., 2021). As highlighted, these mental health problems increase the risk of psychological distress. Therefore, the second review focused on mental health needs in prison and identified six major themes: substance abuse treatment (addressing drug, alcohol, and other substance abuse issues); support system (importance of a strong support system to promote mental well-being); empathy (need for prison staff to be empathetic and understanding of female prisoners' experiences); training (training for prison staff on how to identify and address mental health needs); mental illness treatment (access to proper diagnosis and treatment for mental health disorders), and health interventions (availability of therapy, counselling, and other mental health interventions (Hidayati et al., 2023). According to the findings from New Zealand, a significant proportion of the female prisoners who were referred to the forensic psychiatry service (more than one-third) received diagnoses of psychotic disorders. Additionally, one-fifth were diagnosed with post-traumatic stress disorder (Collier & Friedman, 2016).

Many prisoners had mental health needs before coming into prison but often appeared to have been let down by community services (Durkan, 2008). Farrell et al. (2006, as cited in Durkan, 2008) found that the majority of prisoners with mental health problems were not able to get help from mental health services in the year before coming to prison. Although health promotion is not one of the primary objectives of prison incarceration, it can significantly enhance the health and well-being of individuals in prison (Baybutt et al., 2019; van de Baan et al., 2021). Regardless of whether treatment is not the primary task of prison institutions, addressing addiction treatment can have multiple positive effects. Firstly, adequately recognising addiction problems requires the implementation of appropriate addiction treatment therapies because addressing mental and overall health is a prerequisite for personal development and enhancing individual well-being.

As previous works have noticed, the mental health of individuals in prison is a significant concern, and a group of authors has examined the mental health outcomes among jail and prison inmates in the United States (Yi et al., 2017). In the United States, jails hold individuals

for short stays awaiting trial or serving minor sentences (less than a year), while prisons house convicted felons for extended periods, with jurisdiction falling on local authorities for jails and state/federal government for prisons (Dholakia, 2023). High rates of depression, life dissatisfaction, heavy drinking, and illicit drug use are reported by jail and prison inmates (Yi et al., 2017). However, incarceration in jails is associated with higher odds of depression, life dissatisfaction, and recent illicit drug use compared to those not incarcerated. On the other hand, incarceration in prisons is associated with higher odds of life dissatisfaction but lower odds of recent heavy drinking compared to those not incarcerated. Furthermore, it has been found that jail inmates report significantly more depression, heavy drinking, and illicit drug use than prison inmates. As explained by Yi et al. (2017), the association between incarceration and mental health may vary substantially across facilities.

Treating convicted individuals with pre-prison psychiatric health issues poses a delicate task for prison staff and health and treatment services because inadequate handling of these cases encroaches upon human rights. The European Court of Human Rights has held in several judgments that the detention of sick individuals can raise issues under Article 3 of the European Convention on Human Rights, which prohibits inhuman or degrading treatment, lack of access to medical care, and the prevention of adequate detention conditions established by this article (Council of Europe, 2020). Ignoring and violating human rights in prison institutions is part of deeply ingrained patterns of neglect, abuse, and cavalier disregard for the well-being of vulnerable populations in many prisons. This practice mainly manifests as ignoring and inadequately treating mental illnesses simply because the individual is an inmate (Abramsky & Fellner, 2003, p. 3).

On the other hand, mental illnesses affecting convicted individuals with a history of treatment in psychiatric institutions tend to trigger additional and specific mental disorders in prison, such as impulsivity, poor social skills, and disruptive behaviour (Van Buitenen et al., 2020). Despite the high prevalence of mental disorders in prisons, problems related to treating mentally ill inmates are specific and complex, and factors associated with mental disorders among prisoners include, among others, recidivism and prior incarceration, alleged to have committed a violent crime (Forry et al., 2019).

Achieving psychological well-being in cases of mental illness involves various forms of support. Social support has significant positive effects on psychological well-being, particularly in enhancing self-confidence and self-assurance (Adraro et al., 2019). Emotional responses to stress are alleviated by social support, and strengthening coping mechanisms mitigates adverse emotional reactions to stress, reducing risks to mental and physical health. To enhance psychological well-being, which is crucial for overall well-being in cases of inmates with previously diagnosed mental issues, it is recommended that correctional facilities establish a system for identifying individuals with such serious problems, including permanent care upon entry into prison and appropriate levels of prison services (Fazel et al., 2016). Understanding the psychiatric history and assessment by mental health experts determines the level of security in prison and necessary treatment measures, with cognitive-behavioural therapy being recommended as highly effective for prisoners (Willis, 2017, as cited in Gómez-Figueroa & Camino-Proaño, 2022).

In order to protect the human rights of vulnerable prisoners, particularly those with a history of mental illness and/or hospitalisation in psychiatric hospitals, we will mention some recommendations from Human Rights Watch that can be universally applied to improve prison policies for this population. Overall, these recommendations aim to create a prison system that better supports the well-being and human rights of incarcerated individuals with mental illness by focusing on several key areas. First, incarceration for people with mental illness should be reduced. Second, high standards for mental health services are needed. Third, prison conditions should be improved. Fourth, effective performance reviews with independent experts and internal quality review mechanisms should be established for each prison system and prison. Next, it is recommended that the prisoners' concerns be solicited and considered. Also, to provide quality care for inmates with mental illness, continuous funding and a sufficient number of qualified staff and training programs for correctional officers are necessary. Furthermore, specialised facilities should be created or adapted for seriously mentally ill prisoners and mental health professionals should be involved in disciplinary proceedings. Following, seriously mentally ill individuals should be excluded from segregated confinement or supermax prisons. Finally, to ensure a smooth transition back into the community, continuity-of-care protocols should be established between prison mental health services and community resources (Abramsky & Fellner, 2003). These recommendations aim to address the complex challenges faced by incarcerated individuals with mental illness and promote their well-being and rights within the prison system.

Prisoners with a history of self-harm may be triggered by various factors such as family-related issues or sentence length. Despite efforts to prevent self-injury by identifying triggers, the complexity and severity of self-harming behaviours remain significant challenges within prison environments, and prison staff have different perceptions regarding inmates' self-harm (Smith et al., 2019). In general, personalised interventions and support services to address self-harm effectively and support the well-being of the affected prisoners are recommended in the literature.

Prisoners and recently released prisoners commit self-harm, suicide, and attempted suicide at rates much higher than that of the general population. Rates of self-harm, attempted, and actual suicide are particularly high among women prisoners. Of those remanded, approximately 44% will have attempted suicide at some point in their life compared to 27% of remanded men, and 16% of women prisoners engage in self-harm compared to 3% of men (Home Office, 2007a, as cited in Durkan, 2008). The impact of incarceration on the female prison population is profoundly negative; they are more likely to violate discipline, and self-harm among female inmates represents a significant portion of the total reported incidents (Home Office, 2007a, as cited in Durkan, 2008).

A study conducted to examine the prison experience of female prisoners in Serbia, analysing the quality of prison life and various dimensions, highlights the overall low quality of life for female prisoners in Serbia. It emphasises strengths in family contact, prisoner adaptation, and a respectful prison climate while revealing the need for improvements in well-being, bureaucratic legitimacy, organisation, consistency, and decency (Batrićević et al., 2023). From the obtained results, it is clear that a range of limitations impedes the enhancement of the well-being of female inmates, especially those who already have mental health problems. Monitoring the

mental health of female inmates requires resources for adequate recognition and individualised healthcare planning through the provision of specialised medical care (Bartlet & Hollins, 2018).

The success of healthcare delivery depends not only on healthcare systems within and outside of prisons but also on jurisdictional considerations specific to women. These considerations include the profile of women's offences in prison and variable lengths of prison sentences, the treatment and determination of options for female prisoners with serious mental illnesses, the need for hospitalisation due to these illnesses, processes for addressing issues of disability and mental health problems, and managing situations caused by women's mental health issues, including post-traumatic stress disorder (Bartlet & Hollins, 2018). The case of California is indicative, where self-harm is considered a violation of prison rules rather than a sign of psychological distress. These authors also highlight a significant issue affecting the mental well-being of women, whose gender and life experiences are influenced by the presence or absence of gender-specific factors that can impact their mental state. Autonomy and self-determination, common in the socialisation of women in developed European countries, are not typically present for women from other social and cultural communities. The lack of autonomy and self-determination in such environments contributes to many mental difficulties and lowers personal well-being, both before and during imprisonment. Women in Serbia, while not subject to punishments for moral crimes like those in Afghanistan (Bartlet & Hollins, 2018), are influenced by cultural norms that limit their well-being due to the dominance of hierarchical traditional value systems and patriarchal and neo-patriarchal gender patterns (Pavićević, 2024). Therefore, the authors conclude that a rights-based approach can prevent the imposition of culturally insensitive healthcare on poorly described populations and facilitate the development of local solutions.

Calles-Rubiales and Ibáñez Del Prado (2020) reviewed the literature on the influence of adult inmates' mental health on the relational climate over the past 15 years, particularly in Spanish prisons. Despite limited research in this area, the findings highlighted the significantly high prevalence of mental disorders among inmates, with implications for the social climate and interpersonal relationships within prisons. The study revealed that the presence of inmates with mental health issues affects the prison social climate, leading to dysfunctional behaviour, stigmatised treatment, and distorted relationships, thereby creating a need for quality interventions to prevent and mitigate these consequences. The authors also highlighted how inmates with mental health problems had an increased risk of victimisation and a greater predisposition to penitentiary misconduct (Calles-Rubiales & Ibáñez Del Prado, 2020). Furthermore, Johnson et al. (2021) examined literature on the impact of COVID-19 on imprisoned people's mental health. As reported, fear of COVID-19, isolation measures, discontinuation of prison visits, reduced mental health services had adverse effects on prisoners' mental well-being.

Carvalho et al. (2020) also discussed the impact of the COVID-19 pandemic on imprisoned people's mental health and well-being. Overcrowding, lack of hygiene supplies, and poor sanitation, in addition to limited access to healthcare services, made prisons especially vulnerable to outbreaks in general. Concerning mental health challenges faced by prisoners during the pandemic, the combination of social isolation, fear of contracting the virus, and limited access to support services was a major concern.

Factors contributing to suicidal ideation and suicide attempts among inmates are diverse. These may include genetics, perceived stigma, and certain personality traits such as impulsivity (Fentahun et al., 2024). According to data from existing studies, nearly half of the inmates report lifetime suicidal ideation or behaviour, and one in five reports a previous suicide attempt (Sarchiapone et al., 2009; Hayes, 1989; Charles et al., 2003, as cited in Richie et al., 2021). Identifying factors contributing to inmate suicide in line with the life-course model of suicide aetiology is highly significant, and there is a growing awareness of the need to investigate both individual and environmental factors to better understand the aetiology of suicidal behaviour in prisons (Rivlin et al., 2013). Prison-induced suicide, in some studies, is seen as an event triggered by historical (or lifetime) factors that make a person predisposed or vulnerable to suicide, as well as factors related to prison and clinical factors (Rivlin et al., 2013). These authors point out the existence of complex interactions between these factors of various origins. One of the good indicators for monitoring, predicting, and preventing suicidal behaviours and events in prisons is tracking survivors after self-harm and suicide attempts in prison, as this could allow for the analysis and assessment of a wide range of potentially significant factors contributing to such behaviour (Marzano et al., 2009; Rivlin et al., 2012).

Visitation Opportunities and Prison Location and Their Effects on Prisoners' Well-being and Development

Prison Visitation Status

Visitation plays a crucial role in the mental health of prison inmates (Benavides et al., 2019). The comparison of well-being and development dimensions among prisoners based on their visitation status in the current prison revealed several important findings (Table S21). Visitation appears to positively contribute to the rehabilitation and reintegration efforts in male prisoners, as indicated by higher *Personal Development* scores among those who received visits. Moreover, visitation may contribute to prisoners experiencing less intense feelings of pain, punishment, and tension during their time in prison and having more confidence in managing their emotions.

Regardless of gender, all prisoners experience psychological distress due to forced separation from their families (Acevedo & Bakken, 2001; Clark & Duwe, 2017; Douglas et al., 2009; Harner & Riley, 2013; Nurse, 2003). Although research shows that male prisoners feel like they have lost their roles as fathers and family heads due to separation (Fowler et al., 2017), separation from children, especially for first-time offenders, is particularly challenging for women (Harner & Riley, 2013). As presented by Acevedo and Bakken (2001), the majority (79%) of female prisoners in the United States receive visitors, but the majority of those who are mothers (61%) do not receive visits from their young children while incarcerated.

According to our findings, for female inmates, visitation status seems to impact their emotional well-being and particularly their distress levels, indicating that social support from friends and family during incarceration may alleviate some of the adverse psychological effects associated with incarceration (Table S21). It is important to note that female prisoners who did not receive any visitors scored 1.77 in *Well-being*, falling below the threshold of 2.30, which could indicate an increased risk of violent outcomes in prisons (Auty & Liebling, 2024).

Our research emphasises the importance of visits and maintaining contact with friends and family for convicts. The previous literature points to numerous benefits and positive effects of family visits and contact with convicts. As highlighted, maintaining family and social ties is vital for prisoners' well-being and successful reintegration. Skowroński and Talik (2021) explained that social support, both from fellow inmates and prison staff, played a crucial role in improving prisoners' quality of life. However, the effectiveness of some coping mechanisms might be limited by the prison environment itself.

The absence of visitors is significantly associated with higher rates of depression and psychosis among prisoners (Benavides et al., 2019). Specifically, 78.3% of prisoners who did not receive visits presented with depression or psychosis. As further explained, social isolation of prisoners, whether related to the absence of visitors or lacking meaningful social connections, can worsen their existing mental health problems or contribute to the development of new ones. In other words, mental health issues experienced during incarceration could persist upon release and may contribute to behaviours that lead the former prisoner back to criminal activity.

Data from several sources have identified other significant positive effects of prison visits on well-being (De Claire & Dixon, 2017). A review of research on family contact's impact published between 1991 and 2015, despite methodological variations, identified benefits such as reduced depressive symptoms in female and adolescent prisoners, lower recidivism rates, and increased survival rates in the community post-release. Regular contact and interaction with family and friends appear to have positive implications for the psychological well-being of prisoners and play an important role in the rehabilitation and reintegration efforts of male inmates. Visitation could serve as a source of support, potentially mitigating the adverse effects of incarceration on prisoners' mental health (regardless of gender). As concluded, prison visits from family members can positively impact prisoners' well-being and reduce recidivism and rule-breaking behaviour (De Claire & Dixon, 2017).

It is important to note that having visitors does not influence minor rule-breaking behaviours within the prison, like disobeying orders, failure to clean the cell, entering an unauthorized cell, or being late for a designated activity, which results in immediate 24-hour lockdown (Pierce et al., 2018). The findings confirmed a significant impact of visitation on involvement in serious acts of misconduct or serious prison offences, which result in 30 days in restrictive housing as the most common punishment. All groups with visitation (one or multiple visits) had fewer acts of serious misconduct compared to those with no visits, yet potentially even more benefit from having multiple visits.

Support from other prisoners and family or friends is a potential facilitator for prisoner well-being (National Guideline Centre (UK), 2016). Interactions and relationships with family members or friends visiting a prison facility can have a positive and restorative effect, which is important for successful reintegration into the community upon release. In other words, the presence of significant others can help reintegrate into society after release from prison (Eades, 2019). However, family in-prison contact can mediate the adverse effects of pre-prison relationship quality on post-release family relationships and support. It can also have detrimental effects if intimate partner relationships are already strained (La Vigne et al., 2005). Being in prison, some women found relief from prior chaotic lifestyles and the burden of responsibility (Goomany & Dickinson, 2015).

Family plays a crucial yet complex role in the lives of female prisoners (Batrićević et al., 2023, p. 283). While some find support and motivation from their families, others might face additional problems due to negative family influences.

Visits serve three primary functions: "maintaining family unity and cohesion, improving the well-being of the individual and all family members, as well as enhancing successful social reintegration after release" (Hairston, 1991, p. 88). There are, no doubt, other purposes for communication between prisoners and the world outside the prison. Communication between prisoners and outsiders provides, for example, the flow of material goods, money, and information into and out of the prison. The presence of prison visitors, particularly members of the opposite sex, also normalises the prison environment (Hairston, 1991).

Research consistently demonstrates the positive outcomes of prison visits. Convicts who receive visits during incarceration are more likely to have stronger and more stable relationships with their families (Baker et al., 2021; Tewksbury & DeMichele, 2005). The value of visits during incarceration reaches beyond feelings of closeness to family on the outside (Burns et al., 2024).

A range of literature has examined the impact of visits by family and friends on prisoners' mental health, behaviour and subsequent recidivism. Numerous studies have acknowledged the benefits of visits by family and friends in prison for mental health and well-being (Wallace et al., 2016; Woodall et al., 2009). For instance, in a quantitative study involving male offenders and men serving life sentences in prisons in England, Cooper and Berwick (2001) found a significant positive relationship between the number of visits per month and the reduction of anxiety levels. Regarding inmate behaviour, research suggests that inmates who receive visits commit fewer rule violations and adhere more to prison regulations than those who do not (Burns et al., 2024; Jiang & Winfree, 2006).

Concerning a post-prison perspective, research indicates that visits positively impact the transition of former convicts into the community (Burns et al., 2024; Wolff & Draine, 2004). Family and friends provide a sense of stability and tangible support to convicts through visits (De Clair & Dixon, 2017). Therefore, visits are significant not only in terms of their positive influence on societal transition but also positively impact recidivism. Convicts who receive visits are less likely to re-offend (De Clair & Dixon, 2017; Mitchell et al., 2016).

Numerous studies have examined the impact of visits on the well-being of convicted women and men (De Clair & Dixon, 2017). Poehlmann (2005), in a study on the relationship between visits from children and depression, found that those who receive fewer visits from their children have significantly higher levels of depression. The finding that visits from children reduce depression in convicted women in prison environments can be viewed with some confidence. Pinese et al. (2010), in a study on the impact of visits in a women's prison in Brazil, demonstrated a connection between the absence of visits and severe depression. Regarding the impact of visits on stress reduction, Houck and Loper (2002) discovered that some convicted women who received visits from their children experienced higher levels of stress and anxiety.

In contrast to this finding, Tuerk and Loper (2006) confirmed the positive impact of letter contacts on stress reduction in their research. Writing letters may reduce stress because the contact occurs indirectly, thus negating any parental stress caused by children entering the prison environment. Wooldredge (1999) researched factors influencing well-being in the adult

male prison population, identifying a significant relationship between the well-being of prisoners and increased visits. Among the factors that can contribute to the better psychological well-being of prisoners, Wooldredge (1999) listed greater program participation, frequent visitation, and no experience of victimisation during incarceration.

Sociological and prison research has confirmed an inverse relationship between social loneliness and self-esteem. Inmates who do not receive visits while in prison are particularly susceptible to low self-esteem (Burns et al., 2024). Considering that several studies have indicated a positive relationship between high self-esteem and the ability to navigate difficult and adverse conditions effectively (Burns et al., 2024; Whisman & Kwon, 1993), it is logical that family visits can enhance the sense of personal worth of convicts. As Burke and Stets (1999, p. 351) suggested, self-verification through interaction with others also led to increased trust.

The benefits of visits are also reflected in diverting attention from every day, routine prison life, nurturing connections with the outside world, and enabling prisoners to feel "good in their own skin" (Schuhmann et al., 2018, p. 4558). Limited access to prison phones due to high demand was the most frequent barrier to communication (Nurse, 2003). Strong social relationships act as a buffer against mental health issues. Feeling valued, having support from peers and contact with loved ones can all make a difference to a prisoner's well-being (Netten & Gibson, 2023). For example, inmates who did not receive visits from family or friends were more likely to experience depression or psychosis, confirming the importance of social connection for maintaining mental well-being in prison (Benavides et al., 2019). In general, visitation has been shown to reduce the pains of imprisonment and prisoner misconduct within prison populations, suggesting that the ability to receive visits, potentially affected by the distance from home, could influence well-being (Pierce et al., 2018).

As argued elsewhere, security measures such as visitor control and heavy surveillance during visitation create an artificial and impersonal environment. Some prisoners even avoid visits due to these limitations. These security measures may hinder relationships with visitors, making it difficult for prisoners to bond and talk freely with their families, especially in a maximum-security prison (Duwe & Clark, 2013; Harner & Riley, 2013).

Proximity of Prison to Respondent's Home

Our findings suggest that the distance between the prison facility and the prisoner's home could be significant in some aspects of well-being and development among male prisoners (Table S22).

It is important to note the unique circumstances of female prisoners in our findings. Although a significant proportion of female prisoners (75.6%) in Požarevac reported that a prison was not close to their homes, the majority received visits and maintained regular contact with family members, 84.9% and 98.8%, respectively (Table 6). Regarding the MQPL's *Well-being and Development* scores, differences were documented between female inmates who reported that the prison was close to their home area and those reporting otherwise, but no consistent pattern was noted across all dimensions, with no significant differences observed (Table S22). Therefore, while prison proximity may influence certain aspects of female prisoners' life quality, its impact was not detected by the MQPL dimensions. Given that there is only one prison for females in the country, and it is typically distant from their homes, the proximity factor may not significantly affect their overall well-being and development within the prison environment.

According to some studies, female prisoners generally have one of the highest frequency of receiving visits (Acevedo & Bakken, 2001; Connor & Tewksbury, 2015). Still, distance from home is the most significant determinant of visitation (Acevedo & Bakken, 2001). The construction of prisons and their physical distribution in geographic space is not proportional to the distribution of the general or criminal population. The location of prisons as institutions is important for inmates and their families and the surrounding community (Moran et al., 2022). However, while there is literature indicating the influence of the characteristics of prison locations and the surrounding areas on the well-being of inmates and prison staff (Moran et al., 2021), there is very little data on the impact of the distance between prisons and inmates' places of residence on their well-being.

Some studies suggest that greater distance from home negatively impacts inmates' well-being by reducing social connections and support systems and increasing depression (Cochran et al., 2016; Edgemon & Clay-Warner, 2019), while other studies indicate a complex relationship, showing both positive and negative effects depending on the distance (Lindsey et al., 2017; McNeeley & Duwe, 2020). Cochran et al. (2016) noted that distance from home and community significantly disadvantaged prisoners by limiting their access to social ties like family and friends. This effect was even stronger for minorities and those from socially disadvantaged areas.

The average distance between a prisoner's home and the prison in the United States is 100 kilometres, which makes regular visits difficult for families, particularly those with children (Harner & Riley, 2013). Furthermore, serving a prison sentence in a facility in which a higher proportion of Inmates are more than 80 kilometres from their homes is positively associated with levels of depression (Edgemon & Clay-Warner, 2019).

In general, spatial distance from home has a curvilinear relationship with inmate misconduct in the United States (Lindsey et al., 2017). As the distance from home increases (up to 560 kilometres approximately), inmate misconduct also increases. On the other hand, beyond that distance, the effect reverses, and growing distance starts to be associated with less misconduct. This trend had a greater effect on younger inmates and was partially mediated by visitation (Lindsey et al., 2017). One interesting finding was reported by McNeeley and Duwe (2020), who found that longer distance visits from distant friends to inmates were less likely to result in reconviction.

Overall, distance presents a major obstacle for visitors (Casey-Acevedo & Bakken, 2002), and maintaining contact becomes more difficult with increasing distance (Comfort et al., 2016). According to Clark and Duwe (2017), distance between prison and home is a significant barrier to maintaining social connections through visits, which is important as it can impact the well-being of prisoners. This study confirms this hypothesis by finding a negative correlation between distance between prison and home, determined by comparing prison addresses with visitor addresses, and visitation frequency. The study also found that social disorganisation in visitor neighbourhoods (characterised by poverty and/or crime) also reduces visitation rates. In the context of our research findings, the association and impact of the distance between respondents' places of residence and prisons on their well-being and development can be interpreted indirectly through the opportunities to receive visits from family and friends.

In that context, the distance between the correctional facility and the convict's home, correlated with their well-being and welfare, is important regarding the realisation of convicts' basic rights regarding visitation and the utilisation of extended rights and privileges. Specifically, according to the Law on the Execution of Criminal Sanctions of the Republic of Serbia (Official Gazette of the Republic of Serbia, No. 55/2014 and 35/2019), Article 129 stipulates that, in addition to extended basic rights, a convict who behaves exceptionally well, shows commitment and makes progress in the prescribed treatment program, the prison governor may grant the following privileges: free outings into the city; visits to family and relatives on weekends and holidays; temporary leave from the institution for up to seven days per year; and the use of annual leave outside the institution.

The realisation of basic rights and privileges, as well as extended rights and privileges, can be prevented if the convict's residence is distant from the prison where they are serving their sentence. Distance can act as a barrier for family, friends, and relatives in organising visits to the convict. Research indicates that, for all visitors, the greatest obstacle to visiting an inmate is the distance they must travel to the prison (Casey-Acevedo & Bakken, 2002). As further explained, the location of the prison relative to the visitor's home might make it difficult for them to organise a visit, and this barrier of distance is particularly significant for children trying to visit mothers in prison (Casey-Acevedo & Bakken, 2002). Additionally, studies point out that family and friends experience difficulties in maintaining contact with loved ones who are incarcerated at a certain distance (Comfort et al., 2016), and the farther away from home, the less likely inmates are to receive visitors (Cochran et al., 2013).

Work and Lockdown and Their Contrasting Influences on Prisoners' Well-being and Development

Work Engagement in Prison

In summary, engagement in work as the main daytime activity is associated with higher scores in all aspects of prison life among male prisoners (Table S23). However, it is important to note that the positive effect was particularly evident in personal development among male prisoners. Given that personal development encompasses an environment aimed at assisting prisoners with their offending behaviour, preparation for release, and fostering their potential, this finding suggests that participation in meaningful work activities within the prison may contribute positively to inmates' personal development, potentially facilitating their rehabilitation and successful reintegration into society upon release.

Although there were slight variations in mean scores across dimensions, the differences based on whether work was their main daytime activity did not consistently show significance in the subgroup of female prisoners (Table S23). However, lower distress levels were indicated in female inmates who reported work engagement as their primary daytime activity.

Numerous studies have highlighted the negative impact of isolation, lack of activity, and mental stimulation on the mental health of prisoners. Lack of activity and stimulation are detrimental aspects of a prison environment. For instance, the lack of work assignments is linked to increased depression and hostility in prisoners (Edgemon & Clay-Warner, 2019), while boredom and idleness are common even in prisons with incentive programs (de Viggiani, 2003, as cited in

Goomany & Dickinson, 2015). Limited work, exercise, or education access contributes to these feelings (Jordan, 2011). This restricted engagement in meaningful activities and occupation can negatively impact cognitive function and life skills (Jordan, 2011). To escape boredom, prisoners may use drugs, overeat, or smoke excessively (Douglas et al., 2009; Nurse, 2003).

Despite limited resources, creative and motivated staff can find activities for prisoners, according to Birmingham (2003). Engagement in structured activities and spending time involved in organised ones with specific goals (like educational programs, exercise classes, or group therapy) is more helpful for prisoners' mental well-being and ability to cope with prison than simply spending time socialising with other inmates informally (Zamble, 1992). Moreover, participation in structured and prosocial activities, such as work activities in prison, is associated with positive behavioural and emotional outcomes for inmates and enhances their well-being (Vuk & Doležal, 2020). Studies have emphasised the importance of purposeful activity in prisons, enabling convicted individuals to make positive contributions towards their own rehabilitation (Blagden & Wilson, 2020). Furthermore, prisoners value activities like work, exercise, or education, regardless of the prison regime (Nurse, 2003). As indicated, activities help manage morale and regulate behaviour (Yang et al., 2009). The research has also emphasised the importance of meaningful activities in promoting better social rehabilitation outcomes. Participation in prison-based programs, such as horticulture ones, can improve mental well-being, physical activity, and foster personal growth and prosocial behaviours (Baybutt et al., 2019).

According to Trotter and Baidawi (2015), the majority (77%) of older prisoners (aged 50+) in Australia remain engaged in prison activities and prison work programs. Nearly half (48%) of older prisoners nearing release participated in offending behaviour programs, suggesting that they participate to some extent in rehabilitation. However, older prisoners reported facing physical and functional limitations and social isolation that can limit their ability to fully engage in prison activities. As described, 22% of older prisoners required assistance with daily activities. Older prisoners with functional impairments more frequently reported feeling unsafe, whereas those aged 65+ were more likely to report feeling socially disconnected. When compared to younger prisoners (aged 21–49), a higher proportion of older prisoners (20% vs. 2%) perceived that addressing socio-emotional needs, such as feelings of purpose, social interaction, or a sense of accomplishment, was the main benefit of working in prison. However, both younger and older prisoners (around 57–59%) reported that the main benefit of work programs is to stay occupied and active and that they had minimal interest in financial gain or learning new skills through work programs (3% or less).

Competencies desirable in a free environment play a crucial role in the rehabilitation process of convicts, which can be acquired, among other things, through work during imprisonment. Arrival in prison and serving a prison sentence can lead to the weakening of social ties and worsen the relationship between inmates and their environment due to temporary exclusion from certain spheres of life (Lenart-Kłoś et al., 2020). Systematic treatment measures that support the rehabilitation process of convicts, including the employment of convicted individuals, play a key role. The work engagement of prisoners allows for the satisfaction of individual and societal needs, provides a simulation of life after release, and maintains confidence in one's chances for success in the job market upon release. Numerous studies indicate the positive effects of work engagement and professional training of convicts in prison

conditions on reducing the risk of recidivism (Cho & Tyler, 2008; Davis et al., 2013, as cited in Ilijić, 2016), improving life skills (Vacca, 2004, as cited in Ilijić, 2016), reducing violence, and enhancing overall prison discipline (Correctional Association of New York, 2009). On the other hand, the lack of employment manifests in deficits in the psychological domain, social relationships, and economic sphere, promotes social isolation, and negatively affects an individual's self-esteem.

Vocational training and work in prison represent an opportunity for inmates to engage in positive, organised, and meaningful activities within the prison environment, gain work experience, develop a work ethic and discipline, enhance self-esteem, as well as skills and competencies that will improve their prospects for employment upon release (Ilijić, 2016). A longitudinal study of mental health in young prisoners found that the lack of activities and long periods of isolation during the initial days in prison may indirectly contribute to higher levels of mental health symptoms observed during the first three months (Gonçalves et al., 2016). Work engagement as the primary treatment activity in prison can reduce the monotony of the uniform prison life, contributes to improving social skills, and enhances the self-confidence of inmates. Work and the work environment develop valuable skills and provide a context for improving social relationships with other individuals, allowing for the development of a positive experience and satisfaction with work engagement, which contributes to forming a positive attitude towards employment even after leaving prison (Lenart-Kłoś et al., 2020).

Ćopić et al. (2024) noted that prisoners who reported work engagement as their primary daytime activity rated their overall well-being (including personal growth and development) higher than those without jobs (3.31 vs 2.86). Furthermore, those not engaged in work also rated *Harmony* and *Professionalism* below the acceptable threshold of 3.00. It may be that these participants benefitted from work engagement that provided them with a sense of autonomy and control over their daily lives (Driessen et al., 2023; Van Der Kaap-Deeder et al., 2017). This finding suggests that work engagement may be a significant factor contributing to a higher quality of life for prisoners. As discussed previously, work opportunities can provide a sense of autonomy and control over daily life. This aligns with the higher MQPL ratings reported by working prisoners in our study.

Overall, it is not surprising that the potential of work engagement programs to enhance prison social climate is recognised. To improve the overall prison social climate, one of the proposed policy implications is specifically focused on expanding program opportunities in prisons, including educational and vocational programs (Gonzales et al., 2023). Following previous studies, our results also suggest that work engagement could be one of the critical elements in shaping the prison climate and enhancing the overall well-being of prisoners.

Extended Daytime Cell Lockdown

Our study confirmed variations across dimensions of well-being and development within the prison environment related to extended or prolonged daytime cell lockdown (Table S24). Statistically significant differences were observed in all dimensions in the subgroup of male prisoners and some dimensions for female prisoners. These results suggest that prisoners who usually spend six or more hours locked in their cells have reduced opportunities for addressing offending behaviours, preparing for release, and fostering personal growth, alongside increased distress levels and reduced overall well-being. Lower scores also indicate reduced feelings of agency and self-determination among prisoners subjected to extended lockdown, as well as more pronounced "pains of imprisonment".

A possible explanation for this outcome might be related to the role of perceived afforded choice. Namely, the research conducted among Belgian prisoners revealed that offering prisoners opportunities to make choices, especially regarding their daytime activities like work, education, and leisure, can significantly enhance their subjective well-being, particularly in terms of autonomy satisfaction (Van Der Kaap-Deeder et al., 2017).

Previous studies have demonstrated the role of pre-existing conditions in shaping experiences within the prison environment. For instance, prisoners with pre-existing mental illness might spend more time in isolation (Birmingham, 2003). Furthermore, isolation and solitary confinement in prisons can exacerbate existing mental illness, provoke a recurrence of their symptoms or even lead to their development in some cases. Social isolation and sensory restriction are related to different and long-term physiological, mental, and behavioural disorders and a high prevalence of psychological distress (Arrigo & Bullock, 2008; Birmingham, 2003; Grassian, 1983; Haney, 2018; Tayer et al., 2021; Western et al., 2022; Yang et al., 2009).

The time inmates can spend outside their cells is a crucial determinant of overall prisoner health. It encompasses periods in which inmates can engage in purposeful activities such as education, work, and programs to prevent criminal behaviour. However, it also includes time spent in sports activities, exercising, communicating with family, and socialising with other inmates. In addition to being crucial parts of rehabilitation, all these activities are part of the "dynamic security" of the prison, which depends on activities, relationships, and physical security. The amount of time spent outside cells is also critical for the mental health and well-being of prisoners (HM Inspectorate of Prisons, 2008). In its 2008 report, His Majesty's Inspectorate of Prisons (HMIP) for England and Wales cites research findings that inmates who spent ten or more hours outside their cells had significantly better experiences in many key areas of prison life. The positive experiences associated with spending more time outside cells for prisoners primarily include improved relationships with staff, increased access to healthcare and telephones, and greater engagement in prison activities. Most importantly, many inmates believed that they had accomplished something in prison, which would reduce their chances of returning to prison.

According to the deprivation model, a highly stressful prison environment increases the risk of suicide among inmates precisely due to the deprived and stressful environment in which they are confined. In support of this model, evidence has clearly shown that isolation in cells, boredom, lack of purposeful activities, and victimisation (such as harassment and assault) while in prison increase the likelihood of suicide among inmates (Favril, 2021). Long periods of

confinement (up to 23 hours) negatively affect mental health, leading to anger, frustration, and stress (Nurse, 2003). This negative impact is especially strong for women entering prison (Douglas et al., 2009). Research indicates that incarcerated women are particularly vulnerable if they spend a significant portion of the day confined to their cells (Borrill et al., 2005).

Research also shows that the time inmates spend outside their cells during the day positively impacts all categories of prisoners and is particularly significant for those who already have specific mental health issues. Engaging in meaningful and purposeful activities helps inmates cope more easily with the hardships of incarceration, while conversely, time spent in the cell without active engagement produces negative feelings. Therefore, the time inmates spend outside their cells is significant for those going through stressful periods and/or participating in specialised addiction treatment programs (HMIP, 2008).

Incentives/Privileges and Disciplinary Measures and Their Effects on Well-being and Development

Use of Incentives and Earned Privilege

According to our result, using incentives and earned privileges is associated with higher scores across various dimensions (Table S25). This finding could indicate potential benefits in terms of well-being and development, as conceptualised in the MQPL framework. The confirmed differences in mean scores between male inmates who reported utilising various incentives and privileges and those who did not were statistically significant, suggesting their potential to improve the prison experience for those prisoners. On the other hand, significant differences were noted only in the *Distress* dimension in the subgroup of female prisoners (Table S25). Therefore, our findings suggest that incentives and earned privileges provided to prisoners for positive behaviour can potentially support the reduction of distress among female inmates.

Various reward and punishment systems are utilised in prison systems worldwide to encourage, correct, and modify inmate behaviour (Elbers et al., 2022). Rewarding entails granting certain privileges or extended rights for demonstrated good behaviour or success in treatment but also withdrawing or revoking them in case of violations of specific rules and behavioural norms (Burdon et al., 2022). Good behaviour, which may include participation in work or other treatment activities and maintaining hygiene in prison, among other things, has sometimes been rewarded with a reduction in sentence duration (Demleitner, 2017; Weisburd & Chayet, 1989). Today, reward systems are used to manage and change the behaviour of inmates in prison (Serin & Hanby, 2009). Contemporary legal solutions in many countries foresee increased freedom and privileges (Elbers et al., 2022). These legal solutions also apply in the Republic of Serbia (as previously discussed) and involve expanding fundamental rights and benefits.

In the literature, there is a lack of systematic data regarding the impact of rewards and privileges on the well-being of inmates. Most studies have focused on analysing the effects of rewards and granting privileges on recidivism (Elbers et al., 2022) and behaviour after release from prison, but not on changes in behaviour and/or attitudes during the execution of the prison sentence or their impact on the well-being of inmates.

Khan (2022) presented a typology of prisoner compliance with the Incentives and Earned Privileges scheme and highlighted the changing requirements for prisoners to progress through during their sentences. Jewkes and Reisdorf (2016) discussed offering digital technologies in prisons as potential incentives and earned privileges and noted that providing digital technologies could reduce social isolation and offer more communication options, potentially improving the prison experience, but could also be used as a control mechanism by prison officers, raising questions about fairness and control in that case. Our findings support the positive aspects by showing that using incentives and earned privileges is associated with positive well-being outcomes, potentially due to reduced distress and a more positive prison experience, but also by fostering a more positive prison environment and encouraging participation in rehabilitation programs.

The literature suggests that reward systems are an effective management tool for fostering respect and promoting order and safety within prisons. Elbers et al. (2022) report that providing additional visitation or recreation opportunities can incentivise good behaviour in prison. Elbers et al. (2022) also highlight findings from Gendreau et al. (2014), which indicate that encouraging and rewarding good behaviour achieves more intense modifications of antisocial behaviour patterns than punishment systems for poor behaviour. Furthermore, Elbers et al. (2022) reference studies such as Keyes (1996), which found that reward systems and the granting of privileges positively impact inmate behaviour by promoting adherence to rules and discipline, resulting in fewer disciplinary offences. Additionally, Elbers et al. (2022) note Morgan and Flora's (2002) conclusion that such systems boost inmate self-esteem.

Privileges essentially highlight that inmates can indeed manage the conditions under which they serve their sentence, representing an opportunity for specific actions and desirable behaviours to serve as a chance for advancement in treatment (Khan, 2022). Crewe (2011) shares a similar view, suggesting that neoliberal strategies in prison management essentially encourage inmates to take responsibility for their behaviour, align it with desirable prison norms, and refrain from undisciplined behaviour, which carries consequences.

According to Liebling (2008), incentives and earned privileges in prisons negatively impact behaviour and relationships with staff. From a critical perspective, prisoners must openly demonstrate good behaviour to progress through the Incentives and Earned Privileges scheme. This focus on visible compliance can disadvantage introverted or passive prisoners who may struggle to actively participate in programs or feel uncomfortable outwardly displaying their efforts. The pressure to be visibly compliant may not be realistic or achievable for all prisoners, potentially disadvantaging some (Khan, 2022).

In a study on the types of most commonly granted privileges and their impact on parole in the Republic of Serbia in the closed-type Penitentiary Institution in Sremska Mitrovica from 2016 to 2018, Vujučić (2019) noted that the most commonly granted institutional privileges were expanded rights for visits from family members and expanded rights to receive packages. Among the non-institutional privileges, the most common were expanded rights for visits outside the institution, visits to family members and relatives on weekends and holidays, and annual leave outside the institution. The results indicate that inmates who utilised non-institutional privileges were statistically more likely to receive parole compared to those who did not utilise these privileges.

History of Disciplinary Measures

Our findings suggest that the imposition of disciplinary measures may have adverse effects on various dimensions of well-being and development among both male and female prisoners within the prison environment (Table S26). Specifically, these measures are associated with challenges to personal development affecting the sense of agency and self-determination among male prisoners and increased feelings of "pains of imprisonment" and distress among them. A similar trend is noted among female prisoners, with one exception – they experienced comparable levels of "pains of imprisonment" regardless of whether they reported ever being subjected to disciplinary measures.

Procedural justice, or fair and respectful treatment of prisoners, is a predictor not only of prison order and compliance but also of prisoners' psychological well-being (Bosma, van Ginneken, Sentse, et al., 2020). Among other factors, the overall prison climate has been linked to prisoner misconduct, underscoring the importance of social domains within the prison environment, such as the quality of staff-prisoner relationships and the prison regime (Bosma, van Ginneken, Sentse, et al., 2020). If inmates are treated respectfully and humanely by officers, they may have fewer issues with misconduct and find it easier to adjust to incarceration and follow authority (Vieraitis et al., 2018).

Disciplinary measures within prison settings can have significant implications for the well-being of prisoners. Research by Clark (2018) showed the impact of mental illness on segregation following institutional misconduct and how disciplinary segregation, considered a punitive sanction, can affect individuals placed in such conditions. Similar to Clark's (2018) findings on the negative impact of disciplinary segregation on the mental health and overall well-being of inmates, our results show that disciplinary measures are associated with increased distress among prisoners.

Labrecque et al. (2020) explored the gendered application of disciplinary measures in prisons. Our findings, however, suggest that regardless of gender, formal disciplinary actions such as solitary confinement and other disciplinary actions are likely to have negative consequences for well-being, although the specific aspects impacted may differ (e.g., sense of agency and personal growth for males and heightened distress overall for females).

Furthermore, there are reports that acute health conditions in prison, such as having had surgery, accidental injury, dental problems or illness, increase the likelihood of misconduct, which may negatively affect inmates' well-being and quality of life (Grosholz & Semenza, 2018). Antisocial attitudes, behaviour, criminal history, and institutional factors are the strongest predictors of prison misconduct, according to Gendreau et al. (1997). Pre-prison factors like self-regulatory mode and some aspects of the prison climate, such as staff-prisoner relationships and perceived social support, are listed among predictors of prison misconduct (Quick et al., 2023).

Perceptions of fairness and procedural justice within the prison can also play a role. Prisoners who perceive procedural justice as fair and respectful are less likely to engage in misconduct and receive disciplinary reports (Beijersbergen et al., 2015). The prison environment significantly influences the level of violent and nonviolent inmate misconduct, with institutional capacity for control directly affecting prisoner misconduct levels (Griffin & Hepburn, 2013).

A recent study from Serbia by Međedović, Drndarević, and Ilijić (2024) suggests that both personality and the prison environment play a role in prisoner misconduct. First, there was a negative association between prison social climate (quality of prison life, measured by MQPL) and misconduct. At the same time, the study found a positive association between Dark Tetrad traits and misconduct. Interestingly, the prison social climate partially mediated the relationship between Machiavellianism and sadism (from the Dark Tetrad) and misconduct. In other words, while some Dark Tetrad traits are linked to misconduct, a negative prison climate can exacerbate this problem (Međedović, Drndarević, & Ilijić, 2024).

A study examining the quality of prison life and its association with violence and mental health found that a prison environment with higher levels of respect, fairness, humanity, and good relations between staff and prisoners was associated with lower levels of violence (Skar et al., 2019). In other words, a prison that focuses on promoting quality of prison life and good mental health among prisoners will show lower levels of violence. A separate study by Calles-Rubiales and Ibáñez Del Prado (2020) found that inmates with mental health problems are more prone to break prison rules or engage in disruptive behaviour, further emphasising the need for targeted interventions within prisons. Other authors (Baggio et al., 2020) have explored the link between overcrowding and violence in prisons and found a higher frequency of infractions shortly after entry due to overcrowding.

Another factor that can help understand institutional misconduct is the organisational climate in prisons (Lugo, 2016). As explained, a positive organisational climate within prisons is important for creating an environment that promotes rehabilitation and reduces misconduct. Steps to achieve this positive climate and, therefore, implement successful treatment and rehabilitation programs for prisoners are effective leadership and communication, clear goals, and proper training. On the contrary, a poor organisational climate can hinder staff effectiveness, increase job-related stress and create an environment less conducive to rehabilitation, which can, in turn, lead to higher misconduct rates.

Reactive aggression is one consequence of incarceration, influenced by specific characteristics of the prison environment, such as overcrowding, noise, lack of privacy, and a hostile atmosphere, which can provoke behaviours inconsistent with prison discipline rules. Adaptations in response to prison life and its unnatural and abnormal conditions are not inherently “pathological” but rather “normal” reactions to a set of pathological conditions (Haney, 2001).

The dysfunctionality and often destructiveness of these adaptations can become problematic if taken to extremes or if they evolve into chronic and deeply internalised counterproductive behaviour patterns (Haney, 2001). Intermittent explosive disorder receives unexpectedly little attention when it comes to the population of young offenders, despite its potential relevance to violent and criminal behaviours due to its definition as the pathological expression of reactive and impulsive aggression (Turner et al., 2021).

The debate centres on whether disciplinary actions imply both causal and moral responsibility. While criminal law acknowledges the unfairness of penalising individuals unable to grasp moral or legal directives, such moral consideration is generally lacking in the administrative regulations governing inmate behaviour, with standards of administrative insanity being rare (Obegi, 2021). Nevertheless, addressing these questions is pivotal for inmates’ perception of well-being and

their development. Consistency, fairness, and impartiality in punishment shape their view of prison as just or unjust. In this context, Liebling (2012b) highlights that stricter punishment, yielding certain, anticipated, and equitable outcomes, holds better implications, even for those subjected to it.

Auty and Liebling (2024) strongly suggest that the social, relational and moral climate of a prison is crucial for reducing prison violence and creating a safer environment, characterised by a balance of security, overall professionalism, and positive staff-prisoner relationships. This study has identified clear quality of prison life (measured by the MQPL) thresholds below which prisons experience significantly higher rates of violence. Prisons that fall below the "unsafe" threshold have a much stronger relationship with various violent incidents compared to those above the "minimally safe" threshold.

Special attention is warranted for convicted individuals with mental difficulties, as there arises the issue of assessing their responsibility for violating prison discipline. Studies indicate the association between mental health problems of inmates and adherence to order and discipline in prison (Obegi, 2021; Steiner et al., 2014). Some authors suggest that the frequency of disciplinary measures is higher among inmates with mental health problems (James & Glaze, 2006), as well as a greater likelihood of receiving disciplinary sanctions with longer durations (Morgan et al., 1993). Findings suggest that inmates with a mental illness are more likely to be placed in segregation compared to those without a mental illness (Clark, 2018). Brandy (2022) indicates that inmates with multiple mental disorders are more frequently subjected to stricter disciplinary measures, such as isolation and solitary confinement, for disciplinary infractions.

Prison disproportionately affects women in various ways. For instance, women are disciplined at a rate 40% higher than men (224 offences per 100 prisoners compared to 160 per 100 men) (CSIP London Development Centre, 2006, as cited in Durcan, 2008). A recent Serbian study on prison quality of life (Pavićević, 2024) found that female inmates who experienced solitary confinement as a disciplinary measure scored significantly lower on the *Personal Development* scale compared to those who had not. Similarly, any disciplinary action involving special measures resulted in significantly lower scores on the *Personal Autonomy* scale for female respondents. It is interesting to note that in our study, female prisoners consistently reported "pains of imprisonment" regardless of disciplinary measures. Overall, there are indications to consider alternative and gender-based approaches to managing prison misconduct that prioritise rehabilitation and well-being alongside maintaining order and safety.

Impact of Social Dynamics on the Prison Experience

The results of our hierarchical regression analyses indicate that the quality of interactions between staff and prisoners, as measured by the MQPL's *Staff-Prisoner Relationships* dimension, significantly contributes to all well-being and development aspects of prison moral and social climate. Type of prison ward and gender initially showed significant associations with *Well-being and development* scores, but these associations became non-significant after additional predictors were introduced (Table S27). Our results build upon the findings of previous studies, such as the work by Meško and Hacin (2019), who explored the social distance between prisoners and prison staff. They found that prisoners and prison staff perceived the social climate more positively in more liberal prison regimes. Their finding suggests that the type of prison regime can influence the social dynamics and interactions within the prison environment, impacting both prisoners' and prison workers' perceptions of the overall climate (Meško & Hacin, 2019).

Previous research has established that the prison climate and interpersonal relationships within the prison play a significant role in shaping inmates' mental health and quality of life (Aliyeva, 2022; Wooldredge, 1999). Research has also consistently shown that supportive and respectful staff-prisoner relationships can positively influence inmates' mental and emotional well-being. When prison staff demonstrate empathy, understanding, and a commitment to treating inmates with respect and dignity, it can contribute to a more humane and rehabilitative prison environment. Positive and meaningful relationships between prisoners and staff contribute to a positive prison climate where prisoners feel safe and secure (Blagden & Wilson, 2020).

Our finding corresponds with other studies that show that good relationships between staff and prisoners can positively impact prisoner well-being, mental health problems and behaviour (Beijersbergen, Dirkzwager, Van Der Laan, et al., 2016; Beijersbergen et al., 2014). Researchers attempted to evaluate the impact of the quality of interactions between staff and prisoners on their overall in-prison experience and post-release outcomes. The overall conclusion is that staff-prisoner relationships are crucial for maintaining a safe and orderly prison environment, and the right balance in staff-prisoner relationships involves respect and fair and confident use of authority to protect vulnerable prisoners from victimisation and exploitation (Crewe et al., 2015; Liebling, 2011a, 2011b; Liebling & Arnold, 2004; Molleman & Leeuw, 2012). Furthermore, previous research has established that the extent to which prisoners feel treated fairly and respectfully in their daily interaction with staff is associated with reoffending rates (Beijersbergen, Dirkzwager, & Nieuwbeerta, 2016).

Furthermore, a group of authors (Bobić et al., 2022) explored the prisoner perceptions of the quality of treatment practices they received. The study surveyed 237 prisoners from various prison regimes (open, semi-open, and closed) in all six prisons within Serbia's Vojvodina region. Results showed that three factors influenced prisoners' perception of treatment quality, namely: *satisfaction with prison workers* (positive interactions with staff seem to improve perceived treatment quality), *perception of fairness in life* (prisoners who felt life was fair overall had a more positive view of treatment practices; this was the strongest factor), and *environment where they grew up* (growing up in a rural environment). In addition to the factor of prisoners' perceptions of fairness, their relationship with prison staff emerged as the crucial aspect of the

treatment process, which is relevant for understanding prisoner resocialisation, that is, reintegration into society upon release.

As mentioned earlier, the *Staff-Prisoner Relationships* dimension is the MQPL dimension focused on prisoners' perceptions of staff support, fairness in treatment, trust in prison officers, and feelings of safety from harm by staff. Therefore, our findings align with previous ones by confirming that more positive interactions between staff and prisoners are strongly related to perceptions of the prison environment as helpful when addressing their offending behaviour, preparing for release, and supportive when it comes to their personal growth and development. Furthermore, supportive relationships between staff and prisoners contribute to prisoners' feelings of control over their actions and decisions within the prison environment. However, they also have a strong influence on overall well-being in prisons.

According to a study on prisons and their moral performance, several aspects of the prison moral and social climate, such as respect, fairness, order and the quality of treatment, along with good relations between staff and prisoners, can have a detrimental impact on the well-being of both parties (Liebling & Arnold, 2004). Studies have consistently shown that staff-prisoner relationships have an impact not only on the well-being of prisoners (Driessen et al., 2023) but also on procedural justice and overall institutional legitimacy (Bickers et al., 2019).

When characterised by respect, fairness, and professionalism, staff-prisoner relationships are essential for creating a safe and humane prison environment (Crewe et al., 2011, 2015; Hulley et al., 2012; Liebling, 2011b; Liebling et al., 2021; Liebling & Maruna, 2005; Martinez-Iñigo, 2021). For instance, Vieraitis et al. (2018) focused on the daily experiences and interactions of inmates and officers and noted that three dimensions (consistency, humane treatment, and respectability) were crucial for understanding re-entry and reintegration into society. However, staff-prisoner relationships can be diverse and not necessarily hostile, as previously thought (Ben-David, 1992). A mix of positive and negative perceptions characterises interactions between staff and prisoners. Many prisoners view prison officers as professional and patient, mainly when dealing with challenging situations. In contrast, negative opinions are directed towards specialised staff, often perceived as incompetent and manipulative (Hacin & Meško, 2018).

Given that specialised workers are responsible for the treatment and rehabilitation of prisoners and that the treatment of prisoners is essential in resocialisation and their reintegration into society, fostering positive relationships and promoting mutual respect between staff and prisoners becomes paramount for the effectiveness of correctional facilities.

Prison staff attitudes and competence play a crucial role in determining prisoner quality of life, as demonstrated by Crewe (2011), who found a complex relationship between staff culture and prisoner quality of life. In prisons where staff members demonstrated positive attitudes and high levels of competence in their work, prisoners tended to rate their experiences more positively. Conversely, in prisons where staff showed less positive attitudes towards their work and demonstrated lower levels of competence, prisoners were likely to have more negative perceptions of their quality of life (Crewe et al., 2011).

In addition, negative relationships between staff and prisoners, combined with the prison environment characterised by extended periods of isolation and staff shortages, contribute to poor mental health and increased stress levels in both staff and prisoners (Nurse, 2003). Bierie (2012) highlighted the negative impact of harsh physical conditions on staff well-being, which in turn can affect their interactions with prisoners. Furthermore, prisoners perceived their circumstances more favourably in prison units where staff demonstrated supportive orientations towards them (Molleman & Leeuw, 2012).

To summarise, staff professionalism has an impact on the prisoner experience (Crewe et al., 2015). Evidence to date suggests that cultivating high-quality relationships within the prison environment, which encompasses empathy, positive regard, acceptance, and genuineness from prison staff, contributes to higher levels of psychological resilience and self-rated post-traumatic growth (Hearn et al., 2021). Our findings are consistent with this trend. We found that more positive interactions between staff and prisoners are strongly associated with prisoners perceiving the prison environment as supportive in addressing offending behaviour, preparing for release, and fostering personal growth and development. When supportive, staff-prisoner relationships contribute to prisoners feeling more control over their actions and decisions and significantly impact overall well-being in correctional facilities. It is interesting to note that being a male prisoner and experiencing more positive interactions with staff and other inmates were associated with higher well-being scores, less pronounced "pains of imprisonment" and less psychological discomfort, as well as lower distress levels.

Inmate interactions is a score that represents the quality and importance of interactions with other prisoners. According to our findings, this aspect of the quality of prison life is relevant for inmates' sense of autonomy, self-determination and overall well-being in prisons, although to a lesser extent than *Staff-Prisoner Relationships*. More importantly, we found that interactions among prisoners made the strongest unique contribution to inmates' distress levels and emotional disturbance they experienced. At the same time, *Social relationships*, which include personal relationships, satisfaction with sex life, and satisfaction with the support received from friends, predicted both *Personal Development* and *Autonomy* and *Distress* in our sample, although to a lesser extent than *Staff-Prisoner Relationships*.

The importance of inmate-to-inmate relationships is underscored by their significant role in the social environment of prisons, mainly when external community ties are limited (Chong, 2013). Our findings are consistent with those of Kyprianides and Easterbrook (2020), who emphasised the importance of prisoner interactions and group ties and demonstrated that positive interactions among prisoners lead to increased feelings of autonomy, contributing to greater well-being and adaptation to life inside a prison. As acknowledged, the social climate within prisons is influenced by factors like staff beliefs and the treatment of inmates and significantly impacts the well-being of both prisoners and staff (Calles-Rubiales & Ibáñez Del Prado, 2020). Moreover, the social support network from peers within prisons is crucial for prisoners' well-being, mental health preservation in prison and adaptation to imprisonment (Solbakken & Wynn, 2022).

Additionally, the presence or absence of social support during imprisonment can impact the relationship between the prison environment and life satisfaction among inmates (Baharudin et al., 2021a). Extensive research has shown that interactions among prisoners can be complex and

resemble or contrast friendship networks outside of prison, significantly impacting prisoners' well-being and the prison social climate in general (Lindquist, 2000; Schaefer et al., 2017). However, the impact of interactions among prisoners on their well-being varies, as some studies demonstrate a positive influence while others do not (Kreager et al., 2016; Kyprianides & Easterbrook, 2020; Lindquist, 2000; Solbakken & Wynn, 2022).

While support from informal sources outside prison and prison officers was not considered significant, companionship, a sense of belonging, shared activities and time, and everyday conversations were highlighted as important forms of support in a study conducted by Solbakken and Wynn (2022). For example, prisoners can engage in meaningful activities with each other, such as taking on roles that help fellow inmates, which can be an opportunity for personal growth and giving back to the community (Van Ginneken, 2016). Positive social interactions, such as those facilitated through programs like horticulture or music, have been associated with improved mental health, increased confidence, and enhanced social skills among prisoners (Farrier et al., 2019).

The study on the social integration of inmates sheds light on the complex interplay between social relationships and their mental well-being, with higher distress levels associated with social relationships inside and outside the prison (Lindquist, 2000). Evidence to date suggests that mental health problems reflect on the prison social climate and foster dysfunctional behaviour, stigma, and distorted relationships (Calles-Rubiales & Ibáñez Del Prado, 2020).

A study conducted by Liu and Chui in 2014 found that women in prison prioritise different sources of support for their well-being. This study indicated that external support systems (family, staff, and volunteers) were more valuable to these women's mental and emotional health than internal support networks (friendships with other inmates) formed within the prison environment. Female prisoners described the relationships with staff as complex and emotionally intense, with characteristics like blurred boundaries between professional and personal interactions, feeling infantilised or treated like children, pettiness and inconsistency from staff and favouritism shown to certain prisoners (Crewe et al., 2023). As explained, these dynamics are linked to the power imbalance in prison. First, women in prison are generally more vulnerable and have less power. Secondly, some staff may have experienced trauma or abuse in their own lives. Next, staff may unintentionally misuse their power while trying to be supportive (like a kind but controlling parent). Since power dynamics in these prisons often involve a mix of control and emotional connection between staff and prisoners, the authors concluded that traditional models of prison authority and order did not fully capture the complexities of women's prisons (Crewe et al., 2023).

On the other hand, social relationships outside the prison are often seen as a source of support. However, they may also bring about added stress and anxiety for prisoners, as reported by Lindquist (2000). Furthermore, approximately three-quarters of inmates disagreed with the statement that their family and friends would remain supportive and loyal to them. Married prisoners, particularly husbands and fathers, reported elevated depression and anxiety levels, whereas female prisoners with close social relationships within the prison had increased hostility (Lindquist, 2000). These results are similar to those reported later by Beer et al. (2007), who investigated the impact of romantic and/or intimate relationships on female inmates' well-being and institutional behaviour. They found increased anger, hostility, and disciplinary

infractions among those in romantic relationships, particularly with females within the prison, with relationship satisfaction and social support showing no significant predictive value when it comes to well-being or institutional behaviour.

An earlier analysis of the central aspects of MQPL in our sample revealed the significance of harmony, professionalism, well-being, and development as key nodes or bridges between different dimensions of prisoners' quality of life (Međedović, Drndarević, & Milićević, 2024). For instance, staff professionalism contributes to enhanced family contact, while assistance from staff supports prisoners' well-being and development, which contributes to understanding our findings. Our findings underscore the importance of staff-prisoner relationships, characterised by staff support and well-structured activities, in promoting prisoners' well-being.

In this section of the study, we have examined the impact of prison regimes and social dynamics on the prison experience of male and female inmates. Our findings indicated the critical role of social interactions within prisons, particularly staff-prisoner relationships, in shaping inmates' well-being and development.

Several key findings should be mentioned. First, while prison regime and gender initially showed some associations with well-being, these became insignificant after accounting for social dynamics. Secondly, positive interactions with staff were associated with increased personal development, autonomy, well-being, and lower distress. Next, interactions with other prisoners contributed as the most influential predictor of a better sense of well-being. In addition, these interactions could also be a source of distress. Finally, social relationships with friends and family outside of prison played a less significant role but could be both supportive and a source of stress.

Our results extend the findings of previous studies by demonstrating a clear hierarchy of social dynamics influencing inmates' well-being. Staff-prisoner relationships were the most impactful factor, followed by interactions among prisoners and social relationships outside prison. This finding suggests that positive staff-prisoner relationships are a critical factor in promoting well-being across diverse prison regimes, including both male and female prisoners.

CONCLUSION

Perceptions of Well-being and Development in Prison and Individual Quality of Life

Our findings revealed variations in how prisoners perceived different aspects of well-being and development within the prison environment. Male prisoners rated well-being and development less positively than prison living conditions, contact with family and security. However, their experiences in these areas were still more positive than their perceptions of harmony and professionalism within the prison system. On the other hand, female prisoners perceived well-being and development as very low, similar to professionalism. This finding could indicate that they may have perceived a lack of professionalism or inadequacies in the conduct and operation of the prison system, administrative practices, fairness, and respect for prisoners' rights at the same level as their experiences of limited well-being.

Moreover, prisoners reported mixed perceptions regarding their sense of self in prison. Some reported that they could adapt and maintain their identity, while others reported that they often struggle with the limitations they encounter in prison. Additionally, there were concerns about the punitive nature of imprisonment, with some prisoners viewing their time in prison primarily as punishment.

Our investigation into prisoners' individual quality of life and general satisfaction with their health revealed a range of experiences within the prison environment. Some prisoners expressed satisfaction, while others reported neutrality or dissatisfaction. Male prisoners were more satisfied with their psychological and physical well-being, whereas females placed greater emphasis on social relationships. Despite these differences, both groups consistently rated environmental health as the lowest domain. This finding underscores the challenges related to financial resources, physical safety, healthcare accessibility, and living conditions within the prison environment.

Sociodemographic Characteristics and Prisoners' Well-being and Development: Age, Education, Marital Status, and Residency

Our findings revealed several significant associations between sociodemographic characteristics and perceptions of well-being and development among prisoners.

Age emerged as a critical factor, particularly for female prisoners, when it comes to the experienced feelings of punishment and "pains of imprisonment". Older male inmates generally perceived their quality of life more positively across several dimensions than younger prisoners. This trend was particularly noted regarding feelings of agency and self-determination, "pains of imprisonment", and overall well-being.

Education levels played a minor role, with lower-educated participants reporting higher well-being scores in our study. Marital status also showed minimal variations in perceptions of prison life quality. Single female prisoners reported lower levels of distress. On the other hand, a more positive perception of the prison environment as supportive in addressing their offending behaviour and preparing for release was reported by partnered male prisoners. Interestingly, urban versus rural residency has a limited impact on prisoners' experiences. Male inmates from rural areas tended to report higher general well-being and personal development scores.

In conclusion, while sociodemographic factors contribute to perceptions of prison life quality, other factors may influence prisoners' experiences to some extent.

The Roles of the Prison Environment, Institutional Practices, and Pre-Prison Life Experiences of Inmates

Our study found no significant differences in various dimensions of well-being and development between prisoners based on the length of their sentences and whether they were convicted of violent or non-violent crimes. However, our data confirmed that inmates in semi-open prison settings generally reported higher levels of well-being and development compared to those in closed regimes, particularly evident among male prisoners. As for female prisoners, those in closed wards reported more pronounced "pains of imprisonment", higher distress and lower well-being in general. In general, recidivist prisoners scored lower across various well-being and development dimensions compared to first-time offenders.

While male prisoners' perceptions of prison life were relatively consistent regardless of time served, female prisoners experienced declining overall well-being and autonomy, less favourable perceptions of the prison environment as supportive of their personal growth, and increased distress with longer sentences. Additionally, male prisoners with lower risk levels reported higher well-being and development scores. In contrast, those with higher risk levels reported lower scores. However, only high-risk female prisoners with long-term sentences reported lower well-being in general, higher distress, and limited personal development.

Our study found that prolonged daytime cell lockdown significantly impacted prisoners' well-being and development, reducing opportunities for rehabilitation, increasing distress levels, and diminishing feelings of agency and self-determination. Moreover, work engagement as the main daytime activity was associated with higher scores in various aspects of prison life among male prisoners, particularly in personal development, indicating its potential positive impact on rehabilitation and reintegration. The effect of work engagement in female prisoners was found only related to their increased feelings of "pains of imprisonment". Visitation positively affected prisoners' emotional well-being and distress, whereas for males, it also positively influenced their rehabilitation efforts. Furthermore, proximity to the home area affected only the well-being and development of male prisoners.

To summarise, incentives and earned privileges emerged as influential in various dimensions for male inmates, suggesting potential benefits for their well-being and development. For female prisoners, incentives and earned privileges made significant differences only in the Distress dimension, indicating their possible role in reducing distress.

On the other hand, disciplinary measures in prison were related to adverse effects on the well-being and development of both male and female inmates, particularly impacting personal development for males and increasing distress for females. Besides, females consistently reported experiencing discomfort, pain, punishment, and tension associated with imprisonment regardless of disciplinary history.

Our study found that pre-prison drug use significantly affected the well-being and development of prisoners. As further noted, male prisoners subjected to medical security measures scored lower across MQPL dimensions, while female prisoners experienced poorer well-being and

personal growth and higher distress. Furthermore, male prisoners without a history of psychiatric hospital stays reported higher levels of well-being and development compared to those with such a history. For female prisoners, only distress levels appeared to be associated with psychiatric hospital stays. Our study also indicated that a history of self-harm negatively affected some aspects of their prison life quality, leading to higher distress levels and pronounced feelings of punishment, similar to prisoners with a history of suicide attempts.

In conclusion, sentence length or type of crime did not contribute to perceptions of well-being and development in prison. On the other hand, factors like prison regime, risk levels, visitation and proximity to home, work engagement, and incentives and earned privileges were confirmed as significant for prisoners' experiences.

The Role of Social Dynamics

Our results confirm that positive social dynamics within the prison environment are associated with all aspects of the well-being of prisoners:

1. Prison staff has the most influential role in fostering an environment that benefits prisoners' personal growth and development, promotes their sense of autonomy and self-determination, and enhances their overall well-being and development in prison.
2. Interactions with other inmates played a more substantial role in prisoners' well-being and in experiencing negative emotions associated with distress than type of prison regime.
3. Prisoners' satisfaction with their personal relationships and support networks positively contributed to their growth, sense of control, and emotional well-being during their incarceration, as well as their perception of the prison as a resource for rehabilitation and positive change in various aspects of their lives.

Practical Implications

Our study provides valuable data for better understanding the underlying factors associated with well-being and development, as conceptualised in the MQPL framework, and planning in-prison services and policies. To the best of our knowledge, these are the only available data of their kind in Serbia. National authorities could use identified factors and predictors of well-being and development in prison as a primary starting point for improving in-prison services and policies.

Measures should be taken to improve professionalism, promote positive staff-prisoner relationships and safe interactions among prisoners, and address administrative practices and respect for prisoners' rights, particularly among female prisoners who perceived these aspects poorly. Since prisoners rated environmental health the lowest, we suggest that a series of measures be taken to overcome the challenges related to financial resources, physical safety and security, healthcare accessibility, participation in leisure activities, and living conditions within the prison environment.

Although gender-based differences were not the focus of this study, gender-specific needs should be considered when planning interventions or designing new programs. For example,

the emphasis should be on social relationships among female prisoners and psychological and physical well-being among male prisoners. Furthermore, programs should be developed based on age and adapted to education levels since our findings recognised the influence of these factors on prisoners' perceptions of well-being and development. Rehabilitation strategies should particularly focus on the well-being and development of recidivist prisoners. According to our findings, they generally scored lower compared to first-time offenders.

However, we need to express concerns about the punitive nature of imprisonment and the challenges in maintaining identity and autonomy within the prison environment, which were prevalent among all prisoners. On the other hand, we need to note the positive impact of semi-open prison settings on well-being and development, especially among male prisoners, which should be acknowledged and fostered.

Although further research is needed, risk assessment tools have the potential to identify prisoners who are at higher risk of experiencing poorer outcomes related to well-being and development. Participation in meaningful work activities within the prison and the positive impact of incentives and earned privileges should be promoted since our study confirmed their positive contribution to inmates' personal development, including their rehabilitation, which is important for their successful reintegration into society upon release. Specialised support and personalised interventions should be provided to prisoners with a history of self-harm, suicide attempts, medical security measures, psychiatric hospital stays, and pre-prison drug use.

Finally, our study revealed that female prisoners under 30 years old, high-risk individuals with long-term sentences, recidivist females, those sentenced for non-violent crimes, and those with a history of medical security measures, self-harm, or no visitors were at increased risk of experiencing violent incidents in prison. At the same time, female prisoners experiencing less positive interactions with staff and other inmates tended to have lower well-being scores and more intensive "pains of imprisonment" and psychological discomfort, as well as higher levels of distress.

Strengths, Limitations and Recommendations for Future Research

Our study examined various dimensions of well-being and development among male and female prisoners in Serbia. We included various factors, including sociodemographic characteristics, prison regimes, risk levels, visitation, work engagement, and disciplinary measures. Data was gathered from more than 600 questionnaires. MQPL and WHOQOL-BREF are well-established measures with confirmed reliability and validity in previous prison research conducted worldwide. Although the study was not focused on gender-based differences, research findings are presented parallel to recognise their unique prison experiences. Our findings can inform prison-related policy-making and direct rehabilitation efforts by providing evidence-based insights for designing new interventions or improving existing ones.

A series of shortcomings should be considered when interpreting the results. Our study may be limited by the sample size, particularly regarding the subsample of female prisoners (n = 86). However, our sample included 37.4% of female convicts in prison in Serbia at the time of study and 11.6% of males, which should be considered when generalising our findings to broader prison populations. Regarding the diversity of participants, it cannot be confirmed whether the

sample is representative. Moreover, the inclusion of five main and large prisons located in different parts of the country facilitated a high level of heterogeneity in terms of the demographic, criminological and penological characteristics of the participants. Our analysis did not include some potentially relevant variables, such as prior victimisation history or specific details of prison living conditions like overcrowding or cell sharing. Furthermore, the MQPL survey can be extended to include prison experience from the perspective of prison staff. This aspect of prison life was not considered in our study. Our data is retrospective by nature and relied on self-reported measures, MQPL and WHOQOL-BREF, designed to capture well-being and development and individual quality of life as subjective constructs. Therefore, one should take social desirability and/or memory recall issues when generalising our findings. Finally, the cross-sectional study design may have restricted our findings, conclusions and practical recommendations. Therefore, they should only be directly applied to other countries or regions after considering the differences between the prison systems and cultural contexts.

Future research on well-being in prisons should combine data from both prisoners and prison staff and ensure the inclusion of diverse prison populations. Quantitative data should be supplemented with qualitative ones collected by conducting interviews or direct observations and by including other potentially relevant variables. Longitudinal and intervention studies are advised to explore causal relationships and protective factors. Future studies could continue by investigating the effectiveness of rehabilitation or reintegration programs and mental health interventions and exploring the impact of environmental factors and institutional policies on inmates' experiences. Gender-based differences and the role of social support networks should also be further explored. Although our study incorporated intersectionality to some extent by examining factors such as age, marital and recidivism status, future studies should consider other dimensions of identity, such as ethnicity or disability status. Moreover, directing further research on the long-term effects of imprisonment and the experiences of marginalised prison populations, such as ethnic minorities, the older, and LGBTQ+ individuals in prison, as well as conducting comparative studies across different prison systems, could help us better understand the diversity of well-being and development.

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Appendix 1 – Variables

Measuring the Quality of Prison Life Survey (MQPL)

1. Harmony

- *Operationalisation*: Measures the overall atmosphere and treatment within the prison environment, including feelings upon arrival, respect from staff, trust in staff-prisoner relationships, and support for vulnerable individuals.
- *Indicators*: Entry into Prison, Respect and Courtesy, Staff-Prisoner Relationships, Humanity, Decency, Care for the Vulnerable, Help and Assistance.
- *Number of Items, Scoring and Interpretation*: 44 items are rated on a 5-point scale (1 = strongly disagree, 5 = strongly agree). The overall score is calculated by taking the mean of all items (range 1–5). Higher scores reflect a more positive perception of harmony within the prison.

2. Professionalism

- *Operationalisation*: Assesses the professionalism and conduct of prison staff, transparency of procedures, fairness of disciplinary actions, and consistency in organisational operations.
- *Indicators*: Staff Professionalism, Bureaucratic Legitimacy, Fairness, Organisation and Consistency.
- *Number of Items, Scoring and Interpretation*: 28 items are rated on a 5-point scale (1 = strongly disagree, 5 = strongly agree). The overall score is calculated by taking the mean of all items (range 1–5). Higher scores suggest a more positive perception of professionalism, fairness and organisational practices.

3. Security

- *Operationalisation*: Evaluates the effectiveness of security measures, safety of prisoners, adaptation to prison groups, and management of issues such as drug use and victimisation.
- Indicators: Policing and Security, Prisoner Safety, Prisoner Adaptation, Drugs and Exploitation.
- *Number of Items, Scoring and Interpretation*: 22 items are rated on a 5-point scale (1 = strongly disagree, 5 = strongly agree). The score is calculated by taking the mean of all items (range 1–5). Higher scores suggest greater perceptions of safety, security and management of security issues within the prison.

4. Conditions and Family Contact

- *Operationalisation*: Assesses the adequacy of living conditions within the prison and opportunities for maintaining contact with family members.
- *Indicators*: Conditions, Contact with Family.
- *Number of Items, Scoring and Interpretation*: 7 items are rated on a 5-point scale (1 = strongly disagree, 5 = strongly agree). The overall score is calculated by taking the mean of all items (range 1–5). Higher scores suggest better living conditions and more opportunities for family contact within the prison.

5. Well-being and Development

- *Operationalisation*: Measures prisoners' perceptions of personal development, autonomy, emotional well-being, and levels of distress within the prison environment.
- *Indicators*: Personal Development, Personal Autonomy, Well-being, Distress.
- *Number of Items, Scoring and Interpretation*: 19 items are rated on a 5-point scale (1 = strongly disagree, 5 = strongly agree). The score is calculated by taking the mean of all items (range 1–5). Higher scores suggest positive experiences of personal growth, autonomy, and well-being, and lower levels of distress.

6. Prisoner Interactions with Other Prisoners

- *Operationalisation*: Assess the quality of interactions among prisoners within the prison environment.
- *Indicators*: feelings of safety from harm by other prisoners, the level of vigilance required around both other prisoners and staff, perceptions of the best way to spend time in prison to avoid conflict with other prisoners, and the ability to relax and be oneself among other prisoners.
- *Number of Items, Scoring and Interpretation*: 5 items are rated on a 5-point scale (1 = strongly disagree, 5 = strongly agree). The score is calculated by taking the mean of all items (range 1–5). Higher scores suggest positive interactions among prisoners.

The World Health Organization Quality of Life Brief Version (WHOQOL-BREF)

1. Physical Health

- *Operationalisation*: Measures perceptions of one's physical state, including activities of daily living, dependence on medical aids, energy levels, mobility, pain and discomfort, sleep quality, and work capacity.
- *Indicators*: Extent of physical pain interfering with daily activities, Need for Medical Treatment, Energy Level, Mobility, Sleep Satisfaction, Daily Living Activities and Work Capacity Satisfaction.
- *Number of Items, Scoring and Interpretation*: 7 items are rated on a 5-point scale. The score is calculated by taking the mean of all items and multiplied by 4, with higher scores indicating better physical health (range 4–20).

2. Psychological Health

- *Operationalisation*: Assesses cognitive and affective states, including bodily image, feelings, self-esteem, spirituality, and cognitive functions (thinking, learning, memory, concentration).
- *Indicators*: Enjoyment of Life, Sense of Meaningfulness in Life, Ability to Concentrate, Acceptance of Bodily Appearance, Self-Satisfaction.
- *Number of Items, Scoring and Interpretation*: 5 items are rated on a 5-point scale (Item on transport satisfaction is excluded from the analyses). The score is calculated as the mean of all items multiplied by 4, with higher scores indicating better psychological well-being (range 4–20).

3. Social Relationships

- *Operationalisation*: Evaluates interpersonal relationships and social roles, including personal relationships, social support, and sexual activity.
- *Indicators*: Satisfaction with Personal Relationships, Support from Friends, and Sex Life.
- *Number of Items, Scoring and Interpretation*: 3 items are rated on a 5-point scale. The overall score is calculated by taking the mean of all items and multiplied by 4, with higher scores indicating better satisfaction with social relationships (range 4–20).

4. Environmental Health

- *Operationalisation*: Explores various environmental factors impacting individual well-being, such as financial resources, freedom, physical safety and security, accessibility and quality of health and social care, environment, opportunities for learning and recreation, and physical environmental factors like pollution, noise, traffic, and climate.
- *Indicators*: Feeling of Safety in Daily Life, Healthiness of Physical Environment, Financial Resources, Availability of Information in Day-to-Day Life, Opportunity for Leisure Activities, Satisfaction with Living Place Conditions and Access to Health Services
- *Number of Items, Scoring and Interpretation*: 8 items are rated on a 5-point scale. The score is calculated as the mean of all items multiplied by 4, with higher scores indicating better environmental well-being (range 4–20).

5. Overall Rating of Quality of Life

- *Operationalisation*: Assesses respondents' quality of life in general.
- *Indicators*: Rating of quality of life.
- *Item, Scoring and Interpretation*: 1 item, rated on a 5-point scale. The higher the score, the better the perceived quality of life (range 1–5).

6. General Health Satisfaction

- *Operationalisation*: Assesses respondents' satisfaction with their health.
- *Indicators*: Rating of satisfaction with health.
- *Item, Scoring and Interpretation*: 1 item, rated on a 5-point scale. Higher scores indicate higher levels of satisfaction with health (range 1–5).

Demographic Profile

Operationalisation: Sociodemographic characteristics of the inmates.

Indicators:

- Gender: Biological gender of the individuals.
- Age: Age in years (self-reported).
- Education: Highest level of education attained by the inmates.
- Marital status: Relationship status (single, married, extramarital union, divorced, widowed).
- Number of children: Number of children (self-reported).
- Religion: Religious affiliation (None, Christianity, Islam, Other; self-reported).
- Type of community: Type of community of residence (rural, urban/suburban).
- Region of residence: Based on the territorial affiliation of the municipality of residence.
- Citizenship: Citizenship status of inmates (Republic of Serbia, foreign or dual).

Profile of the Penitentiary Population Sample

Operationalisation: Prison and Inmate Characteristics.

Indicators:

- Prison: Location of the prison (Požarevac, Sremska Mitrovica, Niš, Požarevac–Zabela, Beograd)
- Sentence length: Duration of the inmates' current sentence in years and months.
- Prison regime: Type of prison regime based on the institutional classification (closed, semi-open).
- Treatment group: Classification of individuals into treatment groups (B1, B2, V1, V2).
- Risk category: Classification of individuals into risk categories based on the last recorded scores of risk assessment (up to 3 years of imprisonment: low-, middle-, high-risk; for more than 3 years of imprisonment: low-, middle-, high-, very high-risk)
- Criminal offences: Types of criminal offences committed by individuals (against human health, property, life and limb, public peace and order, economic interests, other criminal offences)
- Elements of violence: Classification of criminal offences into violent and non-violent crimes.
- Time served: Duration of time served in years and months at the time of data collection.
- First-time prisoners (yes/no; based on a history of previous imprisonments).
- Number of times in prison: Frequency of previous incarcerations for recidivist individuals (self-reported).
- Time spent in prison over the lifetime: Duration of cumulative prison time (self-reported).
- History of drug use before incarceration (yes/no; self-reported).
- History of psychiatric hospitalisation (2 days or more: yes/no; self-reported).
- Experience of security measures imposed (none, drug addiction treatment, alcohol addiction treatment, psychiatric treatment institutional, psychiatric treatment at liberty; self-reported).
- History of self-harm (yes/no; self-reported).
- History of suicide attempts (yes/no; self-reported).
- Visits: Whether the individual receives visits in the current prison (yes/no; self-reported).
- Prison proximity to the individual's home (yes/no; self-reported).
- Regular contact with family members: (yes/no; self-reported).
- Main activity engaged in during the daytime (Education or training, Work; self-reported).
- Usually spends 6 or more hours locked in the cell on a typical day (yes/no; self-reported).
- History of receiving disciplinary action (yes/no; self-reported).
- History of being placed in isolation or solitary confinement (yes/no; self-reported).
- History of being subjected to control measures (yes/no; self-reported).
- History of being applied to a special measure (yes/no; self-reported).
- History of using incentives and earned privileges (yes/no; self-reported).
- Count of disciplinary measures received (derived from self-reported data).
- Count of special measures applied (derived from self-reported data).

Appendix 2 – Supplementary Data

Table S1

Cases With Missing Data (n = 611)

Variable	Missing data, *n* (%)
Age	3 (0.5)
Education	17 (2.8)
Marital status	18 (2.9)
Number of children	14 (2.3)
Religion	11 (1.8)
Type of community	24 (3.9)
Region of residence	22 (3.6)
Citizenship	25 (4.1)
Sentence length	17 (2.8)
Treatment group	27 (4.4)
Risk category	18 (2.9)
Criminal offences	15 (2.5)
Elements of violence	17 (2.8)
First-time prisoners	60 (9.8)
How many times in prison before this one? (recidivists only)	55 (19.4)
Time spent in prison over the lifetime	16 (2.6)
Use of drugs before coming to prison	2 (0.3)
Ever stayed in a psychiatric/mental hospital or unit for 2 days or more	17 (2.8)
Ever imposed to a security measure – None	35 (5.7)
Ever imposed to a security measure – Drug addiction treatment	35 (5.7)
Ever imposed to a security measure – Alcohol addiction treatment	35 (5.7)
Ever imposed to a security measure – Psychiatric treatment (institutional)	35 (5.7)
Ever imposed to a security measure – Psychiatric treatment at liberty	35 (5.7)
Ever self-harmed in the past	5 (0.8)
Ever attempted suicide in the past	4 (0.7)
Receives visits in this prison	4 (0.7)
Prison close to home	3 (0.5)
Main daytime activity – Education or training	5 (0.8)
Main daytime activity – Work	5 (0.8)
Usually spends 6 or more hours locked in the cell	16 (2.6)
Ever given any disciplinary action in this prison	7 (1.1)
Ever being placed in isolation/solitary confinement	6 (1.0)
Ever been subjected to control measures	6 (1.0)
Ever been applied a special measure	46 (7.5)
Ever used any of the incentives and earned privileges	1 (0.2)
Disciplinary measures (number of actions given)	7 (1.1)
MQPL – My needs are taken into account in this prison	5 (0.8)
MQPL – In this prison, I am encouraged to work towards my goals	10 (1.6)
MQPL – I get help from employees so that I can lead a life in accordance with the law after release	4 (0.7)

Table continues

Variable	Missing data, *n* (%)
MQPL – In this prison, all employees make efforts to prevent convicts from re-offending after release	4 (0.7)
MQPL – The regime in this prison encourages me to make positive changes and progress	5 (0.8)
MQPL – The time spent in this prison I see as a chance to change	1 (0.2)
MQPL – The prison regime here encourages me to think about plans for life after release	2 (0.3)
MQPL – Generally speaking, I am just 'doing' the sentence time, instead of using that time qualitatively	7 (1.1)
MQPL – I have no control over my daily life in this prison	5 (0.8)
MQPL – You can keep your personality in this prison	3 (0.5)
MQPL – The regime in this prison allows me to think for myself	4 (0.7)
MQPL – Wherever I am in this prison, I still feel like a prisoner	5 (0.8)
MQPL – My experience in this prison is painful	7 (1.1)
MQPL – I feel tense in this prison	7 (1.1)
MQPL – My experience with being held in this prison is stressful	2 (0.3)
MQPL – The time spent in this prison largely feels as a punishment	2 (0.3)
MQPL – I was thinking about a suicide in this prison	9 (1.5)
MQPL – I feel like I can manage my emotions here	3 (0.5)
MQPL – I have trouble sleeping at night	3 (0.5)
WHOQOL-BREF Psychological domain score	1 (0.2)
WHOQOL-BREF Social relationships domain score	3 (0.5)
WHOQOL-BREF Environment domain score	1 (0.2)
WHOQOL-BREF item 1 – Overall Quality of Life	5 (0.8)
WHOQOL-BREF item 2 – General Health	3 (0.5)

Table S2

Prisoners' Overall Rating of Quality of Life in Serbia: Male and Female Prisoners' Ratings

Overall Rating of Quality of Life	Males [a]		Females [a]	
(WHOQOL-BREF item 1)	*n*	%	*n*	%
1 – Very poor	36	6.9	15	17.4
2 – Poor	68	13.0	19	22.4
3 – Neither poor nor good	185	35.2	31	36.5
4 – Good	167	31.8	13	15.3
5 – Very good	65	12.4	7	8.2

Note. Item 1 of the World Health Organization Quality of Life Brief Version (WHOQOL-BREF) questionnaire = How would you rate your quality of life?

[a] Cases with missing data: males *n* = 4 (0.8%); females *n* = 1 (1.2%).

Table S3

Prisoners' General Health Satisfaction in Serbia: Male and Female Prisoners' Ratings

General Health Satisfaction (WHOQOL-BREF item 2)	Males [a]		Females [a]	
	n	%	*n*	%
1 – Very dissatisfied	52	9.9	16	18.6
2 – Dissatisfied	77	14.7	26	30.2
3 – Neither satisfied nor dissatisfied	130	24.8	25	29.1
4 – Satisfied	159	30.3	11	12.8
5 – Very satisfied	104	19.8	8	9.3

Note. Item 2 of the World Health Organization Quality of Life Brief Version (WHOQOL-BREF) questionnaire = How satisfied are you with your health?

[a] Cases with missing data: males *n* = 3 (0.6%).

Table S4

Well-Being and Development Dimensions of MQPL: Descriptive Statistics by Age Category and Age-Related Correlations in Male and Female Prisoners

		Males			Females		
MQPL Scores [a]	Age Group	*M*	*SD*	*r* (*p*) [b]	*M*	*SD*	*r* (*p*) [b]
Personal Development	20–30	3.10	0.85	**.172****	2.95	0.73	.087
	31–40	2.85	0.95	(< .001)	2.97	1.17	(.425)
	41–50	3.06	0.97		2.75	0.99	
	> 51	3.46	0.92		3.29	0.80	
Personal Autonomy	20–30	3.11	0.74	**.148****	2.66	0.85	.147
	31–40	2.96	0.78	(.001)	2.91	1.02	(.178)
	41–50	3.07	0.77		2.78	1.04	
	> 51	3.41	0.81		3.13	0.73	
Well-being	20–30	2.70	0.89	**.116****	1.78	0.65	**.379****
	31–40	2.59	0.92	(.008)	2.02	0.85	(< .001)
	41–50	2.65	0.98		2.15	0.99	
	> 51	3.01	1.06		2.81	0.87	
Distress [c]	20–30	3.92	0.86	.044	3.51	1.01	.111
	31–40	3.95	0.89	(.310)	3.52	0.96	(.310)
	41–50	3.83	0.86		3.17	1.20	
	> 51	4.13	0.77		3.89	0.74	
Global Well-Being and Development Score	20–30	3.15	0.63	**.165****	2.73	0.60	.193
	31–40	2.99	0.74	(< .001)	2.85	0.88	(.075)
	41–50	3.10	0.78		2.70	0.88	
	> 51	3.47	0.73		3.25	0.62	

Note. MQPL = Measuring the Quality of Prison Life.

[a] Theoretical range 1–5.

[b] Pearson's correlation coefficients were calculated between MQPL scores and age in years and given bold if statistically significant.

[c] Higher scores indicate lower levels of distress.

* $p < .05$; ** $p < .01$.

Table S5

Well-Being and Development Dimensions of MQPL: Descriptive Statistics by Education Level and Education-Related Comparisons in Male and Female Prisoners

		Males			Females		
MQPL Scores [a]	Education	*M*	*SD*	*p* [b]	*M*	*SD*	*p* [c]
Personal Development	Unfinished elementary school	3.26	0.55	.118	3.55	0.78	**.043**
	Elementary school	3.06	0.92		3.16	0.96	
	High school	3.01	0.98		2.67	1.00	
	Vocational college/higher	3.35	0.93		3.04	0.99	
Personal Autonomy	Unfinished elementary school	3.06	0.95	.093	2.94	1.00	.331
	Elementary school	3.28	0.53		3.16	0.76	
	High school	2.98	0.77		3.00	0.79	
	Vocational college/higher	3.11	0.80		2.70	1.06	
Well-being	Unfinished elementary school	3.32	0.75	.095	2.88	0.97	.182
	Elementary school	3.10	0.78		2.85	0.96	
	High school	2.59	0.94		1.94	0.85	
	Vocational college/higher	2.54	0.88		2.17	0.86	
Distress [d]	Unfinished elementary school	2.74	0.95	**.024**	1.97	0.85	.181
	Elementary school	2.95	1.15		2.65	1.08	
	High school	2.70	0.95		2.13	0.91	
	Vocational college/higher	3.81	0.87		3.00	0.93	
Global Well-Being and Development Score	Unfinished elementary school	3.77	0.85	.125	3.27	1.12	.297
	Elementary school	4.03	0.84		3.67	0.95	
	High school	4.07	0.90		3.31	1.12	
	Vocational college/higher	3.96	0.85		3.45	1.03	

Note. MQPL = Measuring the Quality of Prison Life. *p* value of under .05 is bold.

[a] Theoretical range 1–5.

[b] One-way ANOVA.

[c] Kruskal-Wallis Test.

[d] Higher scores indicate lower levels of distress.

Table S6

Post hoc Comparisons of Well-Being and Development Scores by Education Levels in Male and Female Prisoners

		Males [a]			Females [b]		
MQPL Scores	Education levels for Comparisons	*M*	*MD*	*p*	Mean Rank	*Mdn*	*p*
Personal Development	Unfinished elementary school				36.19	3.63	**.023**
	Elementary school				23.46	3.13	
Personal Development	Elementary school				39.16	3.13	.038
	High school				29.01	2.63	
Distress [c]	Elementary school	3.77	-0.26	**.023**			
	High school	4.03					
Distress [c]	Elementary school	3.77	-0.31	.326			
	Vocational college/higher	4.07					

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference. Significant *p* value after Bonferroni correction is bold.

[a] Post-hoc using Tukey HSD.

[b] Mann-Whitney *U*-tests as post-hoc.

[c] Higher scores indicate lower levels of distress.

Table S7

Well-Being and Development Dimensions of MQPL: Descriptive Statistics and Comparative Analysis by Marital Status in Male and Female Prisoners

						95% CI for *MD*		
Subgroup	MQPL Scores [a]	Marital Status	*M* (*SD*)	*MD*	*SE*	*LL*	*UL*	*p* (η^2_p)[b]
Male	Personal Development	Single	2.95 (0.90)	-0.23	0.08	-0.40	-0.07	**.006**
		With a partner	3.18 (1.00)					(.015)
	Personal Autonomy	Single	3.09 (0.78)	-0.01	0.07	-0.14	0.13	.931
		With a partner	3.10 (0.79)					(.000)
	Well-being	Single	2.68 (0.97)	-0.03	0.09	-0.20	0.14	.723
		With a partner	2.71 (0.94)					(.000)
	Distress [c]	Single	3.97 (0.84)	0.04	0.08	-0.11	0.19	.617
		With a partner	3.93 (0.87)					(.000)
	Global Well-Being and	Single	3.09 (0.72)	-0.10	0.07	-0.23	0.03	.136
	Development Score	With a partner	3.18 (0.77)					(.004)
Female	Personal Development	Single	2.94 (1.02)	0.00	0.22	-0.44	0.43	.989
		With a partner	2.94 (1.00)					(.000)
	Personal Autonomy	Single	2.84 (0.93)	-0.04	0.21	-0.46	0.38	.848
		With a partner	2.88 (0.99)					(.000)
	Well-being	Single	2.23 (0.83)	0.22	0.20	-0.17	0.62	.267
		With a partner	2.01 (0.99)					(.021)
	Distress [c]	Single	3.72 (0.96)	0.60	0.21	0.18	10.03	**.006**
		With a partner	3.11 (1.00)					(.088)
	Global Well-Being and	Single	2.89 (0.80)	0.13	0.18	-0.23	0.48	.476
	Development Score	With a partner	2.76 (0.84)					(.006)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] *p* is based on the independent samples *t*-tests. *p* value of under .05 is bold.

[c] Higher scores indicate lower levels of distress.

Table S8

Well-Being and Development Dimensions of MQPL: Descriptive Statistics and Comparative Analysis by Community Type in Male and Female Prisoners

Subgroup	MQPL Scores [a]	Type of Community	*M* (*SD*)	*MD*	*SE*	95% CI for *MD*		*p* (η^2_p) [b]
						LL	*UL*	
Male	Personal Development	Rural	3.35 (1.02)	0.37	0.10	0.16	0.57	**< .001**
		Urban/Suburban	2.98 (0.91)					(.024)
	Personal Autonomy	Rural	3.17 (0.80)	0.08	0.09	-0.08	0.25	.322
		Urban/Suburban	3.09 (0.77)					(.002)
	Well-being	Rural	2.66 (1.04)	-0.05	0.10	-0.25	0.16	.648
		Urban/Suburban	2.70 (0.92)					(.000)
	Distress [c]	Rural	4.05 (0.80)	0.11	0.09	-0.07	0.30	.225
		Urban/Suburban	3.94 (0.87)					(.003)
	Global Well-Being and	Rural	3.28 (0.80)	0.18	0.08	0.02	0.34	**.026**
	Development Score	Urban/Suburban	3.10 (0.71)					(.010)
Female	Personal Development	Rural	3.25 (0.81)	0.36	0.34	-0.31	1.02	.291
		Urban/Suburban	2.89 (1.02)					(.013)
	Personal Autonomy	Rural	3.05 (0.73)	0.23	0.32	-0.41	0.87	.478
		Urban/Suburban	2.82 (0.98)					(.006)
	Well-being	Rural	1.99 (0.97)	-0.15	0.31	-0.76	0.46	.622
		Urban/Suburban	2.14 (0.90)					(.003)
	Distress [c]	Rural	3.75 (1.25)	0.34	0.35	-0.35	1.03	.325
		Urban/Suburban	3.41 (1.00)					(.012)
	Global Well-Being and	Rural	3.04 (0.52)	0.24	0.27	-0.31	0.78	.392
	Development Score	Urban/Suburban	2.80 (0.84)					(.009)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] *p* is based on the independent samples *t*-tests. *p* value of under .05 is bold.

[c] Higher scores indicate lower levels of distress.

Table S9

Well-Being and Development Dimensions of MQPL: Descriptive Statistics and Sentence Length-Related Correlations in Male and Female Prisoners

		Males			Females		
MQPL Scores [a]	Sentence Length	*M*	*SD*	ρ (*p*) [b]	*M*	*SD*	ρ (*p*) [b]
Personal Development	< 1 year	4.29	/	-.032	3.32	0.51	-.211
	1–3 years	3.02	0.95	(.468)	3.16	0.97	(.052)
	3–10 years	3.14	0.89		2.62	0.98	
	10–20 years	2.85	1.07		2.66	1.21	
	> 20 years	3.04	1.13		3.78	0.34	
Personal Autonomy	< 1 year	4.00	/	-.029	3.21	0.64	-.131
	1–3 years	3.07	0.84	(.515)	2.94	0.91	(.232)
	3–10 years	3.15	0.74		2.53	0.95	
	10–20 years	2.98	0.82		2.93	1.00	
	> 20 years	3.08	0.93		3.88	1.03	
Well-being	< 1 year	3.50	/	-.010	2.32	0.81	.047
	1–3 years	2.73	0.95	(.821)	2.07	0.86	(.668)
	3–10 years	2.72	0.91		1.93	0.89	
	10–20 years	2.62	1.06		2.55	1.07	
	> 20 years	2.64	1.07		2.75	0.79	
Distress [c]	< 1 year	5.00	/	.020	3.67	0.69	-.086
	1–3 years	3.95	0.79	(.654)	3.40	1.07	(.436)
	3–10 years	3.95	0.86		3.45	1.05	
	10–20 years	3.92	0.95		3.20	0.88	
	> 20 years	4.07	0.81		4.00	1.59	
Global Well-Being and	< 1 year	4.17	/	-.031	3.14	0.46	-.169
Development Score	1–3 years	3.12	0.77	(.490)	2.93	0.78	(.121)
	3–10 years	3.18	0.69		2.59	0.78	
	10–20 years	3.00	0.81		2.78	1.01	
	> 20 years	3.13	0.90		3.62	0.74	

Note. MQPL = Measuring the Quality of Prison Life.

[a] Theoretical range 1–5.

[b] Spearman's rank correlation coefficients (ρ) were calculated between MQPL scores and sentence length in months due to positively skewed data with leptokurtic distribution and given bold if statistically significant.

[c] Higher scores indicate lower levels of distress.

Table S10

Well-Being and Development Dimensions of MQPL: Descriptive Statistics and Comparative Analysis by Prison Regime in Male and Female Prisoners

						95% CI for *MD*		
Subgroup	MQPL Scores [a]	Prison Regime	*M* (*SD*)	*MD*	*SE*	*LL*	*UL*	*p* (η^2_p) [b]
Male	Personal Development	Closed	2.92 (0.95)	-0.50	0.09	-0.69	-0.32	**< .001**
		Semi-open	3.43 (0.88)					(.053)
	Personal Autonomy	Closed	2.99 (0.79)	-0.39	0.08	-0.54	-0.24	**< .001**
		Semi-open	3.38 (0.70)					(.046)
	Well-being	Closed	2.54 (0.93)	-0.59	0.09	-0.77	-0.40	**< .001**
		Semi-open	3.13 (0.91)					(.071)
	Distress [c]	Closed	3.85 (0.89)	-0.38	0.07	-0.53	-0.23	**< .001**
		Semi-open	4.23 (0.69)					(.038)
	Global Well-Being and	Closed	3.00 (0.73)	-0.48	0.07	-0.62	-0.34	**< .001**
	Development Score	Semi-open	3.48 (0.68)					(.079)
Female	Personal Development	Closed	2.85 (0.96)	-0.38	0.25	-0.88	0.12	.132
		Semi-open	3.24 (1.07)					(.027)
	Personal Autonomy	Closed	2.76 (0.93)	-0.42	0.24	-0.90	0.06	.086
		Semi-open	3.18 (0.99)					(.035)
	Well-being	Closed	1.99 (0.84)	-0.58	0.22	-1.02	-0.14	**.011**
		Semi-open	2.57 (0.99)					(.074)
	Distress [c]	Closed	3.36 (1.09)	-0.44	0.22	-0.87	-0.01	**.046**
		Semi-open	3.80 (0.75)					(.033)
	Global Well-Being and	Closed	2.73 (0.78)	-0.44	0.20	-0.85	-0.04	**.031**
	Development Score	Semi-open	3.18 (0.84)					(.054)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] *p* is based on the independent samples *t*-tests. *p* value of under .05 is bold.

[c] Higher scores indicate lower levels of distress.

Table S11

Association Between Well-Being and Development Dimensions Scores and Risk Category Among Male Prisoners with Short-Term vs. Long-Term Sentences

Subgroup: Male MQPL Scores [a]	Risk Category	Up to 3 years of imprisonment (*n* = 143)			More than 3 years of imprisonment (*n* = 365)		
		M	*SD*	*r* (*p*) [b]	*M*	*SD*	*r* (*p*) [b]
Personal Development	Low	3.39	0.84	**-.233****	3.96	0.66	**-.242****
	Middle	3.18	0.97	(.005)	3.25	0.93	(< .001)
	High	2.67	0.80		2.92	0.96	
	Very high				2.70	0.84	
Personal Autonomy	Low	3.43	0.86	**-.258****	3.50	0.65	**-.236****
	Middle	3.22	0.76	(.002)	3.27	0.73	(< .001)
	High	2.82	0.84		2.97	0.78	
	Very high				2.83	0.71	
Well-being	Low	3.15	0.99	**-.302****	3.28	0.43	**-.279****
	Middle	2.90	0.96	(< .001)	2.94	0.98	(< .001)
	High	2.26	0.79		2.51	0.91	
	Very high				2.29	0.85	
Distress [c]	Low	4.33	0.68	**-.325****	4.39	0.31	**-.313****
	Middle	4.09	0.70	(< .001)	4.20	0.75	(< .001)
	High	3.55	0.94		3.81	0.91	
	Very high				3.36	0.85	
Global Well-Being and Development Score	Low	3.49	0.73	**-.316****	3.79	0.41	**-.319****
	Middle	3.27	0.72	(< .001)	3.34	0.70	(< .001)
	High	2.76	0.70		2.98	0.73	
	Very high				2.75	0.66	

Note. MQPL = Measuring the Quality of Prison Life.

[a] Theoretical range 1–5.

[b] Pearson's correlation coefficients were calculated between MQPL scores and the last recorded scores of risk assessment of prisoners at the time of data collection and given bold if statistically significant.

[c] Higher scores indicate lower levels of distress.

** $p < .01$.

Table S12

Comparison of Well-Being and Development Dimensions Scores Based on Risk Category Among Female Prisoners with Short-Term vs. Long-Term Sentences

Subgroup: Female		Up to 3 years of imprisonment (n = 40)			More than 3 years of imprisonment (n = 42)		
MQPL Scores [a]	Risk Category [b]	*Mdn*	Mean Rank	p (r) [c]	*Mdn*	Mean Rank	p (r) [c]
Personal Development	Middle	2.81	19.00	.416	3.25	26.45	**.017**
	High	3.20	22.00	(.128)	2.50	17.41	(.367)
Personal Autonomy	Middle	3.13	20.18	.860	3.00	24.21	.191
	High	3.25	20.83	(.028)	2.50	19.26	(.202)
Well-being	Middle	2.25	23.65	.084	2.25	24.61	.133
	High	1.88	17.35	(.273)	1.75	18.93	(.232)
Distress [d]	Middle	3.67	22.90	.188	4.33	27.16	**.006**
	High	3.17	18.10	(.208)	3.00	16.83	(.422)
Global Well-Being and	Middle	3.00	21.28	.675	3.00	26.50	**.016**
Development Score	High	2.89	19.73	(.066)	2.53	17.37	(.371)

Note. MQPL = Measuring the Quality of Prison Life.

[a] Theoretical range 1–5.

[b] Due to a small number of participants, *Low-risk* (n = 1, 2.4%) and *Very high-risk* categories (n = 2, 4.5%) are excluded from the analyses.

[c] p values were obtained using Mann-Whitney U-tests, comparing the last recorded risk assessment scores at the time of data collection; the effect size measure (r) was calculated using the formula $z/\sqrt{n}$. p value of under .05 is bold.

[d] Higher scores indicate lower levels of distress.

Table S13

Well-Being and Development Dimensions of MQPL: Descriptive Statistics and Violence-Based Differences in Male and Female Prisoners

Subgroup	MQPL Scores [a]	Elements of Violence	*M* (*SD*)	*MD*	*SE*	95% CI for *MD* *LL*	95% CI for *MD* *UL*	*p* (η^2_p) [b]
Male	Personal Development	Non-violent	3.09 (0.91)	0.08	0.08	-0.09	0.24	.367
		Violent crime	3.01 (1.00)					(.002)
	Personal Autonomy	Non-violent	3.12 (0.79)	0.05	0.07	-0.09	0.19	.475
		Violent crime	3.07 (0.77)					(.001)
	Well-being	Non-violent	2.75 (0.95)	0.12	0.08	-0.04	0.29	.149
		Violent crime	2.63 (0.96)					(.004)
	Distress [c]	Non-violent	4.01 (0.82)	0.11	0.08	-0.04	0.26	.142
		Violent crime	3.89 (0.90)					(.004)
	Global Well-Being and Development Score	Non-violent	3.17 (0.73)	0.08	0.07	-0.04	0.21	.200
		Violent crime	3.08 (0.75)					(.003)
Female	Personal Development	Non-violent	2.88 (0.99)	-0.15	0.22	-0.58	0.29	.509
		Violent crime	3.02 (1.02)					(.005)
	Personal Autonomy	Non-violent	2.72 (0.94)	-0.32	0.21	-0.74	0.09	.129
		Violent crime	3.04 (0.96)					(.028)
	Well-being	Non-violent	1.98 (0.87)	-0.36	0.20	-0.75	0.04	.074
		Violent crime	2.34 (0.93)					(.038)
	Distress [c]	Non-violent	3.40 (1.03)	-0.11	0.23	-0.57	0.34	.618
		Violent crime	3.51 (1.05)					(.003)
	Global Well-Being and Development Score	Non-violent	2.74 (0.78)	-0.22	0.18	-0.58	0.13	.219
		Violent crime	2.96 (0.84)					(.018)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] *p* is based on the independent samples *t*-tests and given bold if under .05.

[c] Higher scores indicate lower levels of distress.

Table S14

Well-Being and Development Dimensions of MQPL: Descriptive Statistics by Time Served Category and Time Served-Related Correlations in Male and Female Prisoners

		Males			Females		
MQPL Scores [a]	Time Served	*M*	*SD*	ρ (*p*) [b]	*M*	*SD*	ρ (*p*) [b]
Personal Development	≤ 6 months	3.12	0.87	-.072	3.52	0.77	**-.302****
	7–12 months	3.24	0.90	(.102)	3.09	1.09	(.005)
	1–2 years	3.20	0.93		2.86	0.86	
	> 2 years	2.93	0.98		2.71	1.03	
Personal Autonomy	≤ 6 months	3.12	0.74	-.020	3.50	0.55	**-.217***
	7–12 months	3.19	0.82	(.102)	2.72	0.99	(.046)
	1–2 years	3.16	0.70		2.79	1.03	
	> 2 years	3.03	0.81		2.70	0.95	
Well-being	≤ 6 months	2.65	0.94	-.048	2.44	0.74	-.081
	7–12 months	2.82	0.94	(.283)	1.83	0.61	(.463)
	1–2 years	2.86	0.94		2.22	1.00	
	> 2 years	2.61	0.97		2.07	0.98	
Distress [c]	≤ 6 months	3.76	0.84	.077	3.98	0.73	**-.269***
	7–12 months	3.90	0.92	(.083)	3.59	0.87	(.013)
	1–2 years	4.15	0.74		3.57	0.96	
	> 2 years	3.93	0.88		3.16	1.15	
Global Well-Being and Development Score	≤ 6 months	3.12	0.71	-.052	3.36	0.56	**-.288****
	7–12 months	3.24	0.76	(.239)	2.82	0.77	(.007)
	1–2 years	3.27	0.69		2.82	0.76	
	> 2 years	3.04	0.76		2.65	0.87	

Note. MQPL = Measuring the Quality of Prison Life.

[a] Theoretical range 1–5.

[b] Spearman's rank correlation coefficients (ρ) were calculated between MQPL scores and time served in months due to positively skewed data with leptokurtic distribution and given bold if statistically significant.

[c] Higher scores indicate lower levels of distress.

* $p < .05$; ** $p < .01$.

Table S15

Well-Being and Development Dimensions of MQPL: Comparative Analysis Between First-Time Offenders and Recidivists Among Male and Female Prisoners

Subgroup	MQPL Scores [a]	First-time Prisoners	*M* (*SD*)	*MD*	*SE*	95% CI for *MD*		*p* (η^2_p) [b]
						LL	*UL*	
Male	Personal Development	No	2.94 (0.97)	-0.23	0.09	-0.41	-0.06	**.008**
		Yes	3.17 (0.91)					(.015)
	Personal Autonomy	No	3.04 (0.79)	-0.11	0.07	-0.25	0.04	.147
		Yes	3.15 (0.78)					(.005)
	Well-being	No	2.59 (0.96)	-0.24	0.09	-0.42	-0.07	**.007**
		Yes	2.83 (0.93)					(.016)
	Distress [c]	No	3.85 (0.88)	-0.25	0.08	-0.41	-0.09	**.002**
		Yes	4.10 (0.80)					(.021)
	Global Well-Being and	No	3.03 (0.76)	-0.21	0.07	-0.35	-0.08	**.002**
	Development Score	Yes	3.24 (0.71)					(.020)
Female	Personal Development	No	2.15 (0.72)	-0.94	0.25	-1.45	-0.44	**< .001**
		Yes	3.09 (0.95)					(.145)
	Personal Autonomy	No	2.28 (0.81)	-0.67	0.25	-1.16	-0.17	**.009**
		Yes	2.95 (0.92)					(.080)
	Well-being	No	1.48 (0.45)	-0.77	0.16	-1.09	-0.45	**< .001**
		Yes	2.26 (0.92)					(.115)
	Distress [c]	No	2.84 (1.04)	-0.73	0.28	-1.28	-0.18	**.010**
		Yes	3.58 (0.99)					(.079)
	Global Well-Being and	No	2.15 (0.54)	-0.81	0.20	-1.22	-0.41	**< .001**
	Development Score	Yes	2.96 (0.77)					(.163)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] *p* is based on the independent samples *t*-tests and given bold if under .05.

[c] Higher scores indicate lower levels of distress.

Table S16

Comparative Analysis of MQPL's Well-Being and Development Dimensions Among Male and Female Prisoners: Pre-Prison Drug Use

						95% CI for *MD*		
Subgroup	MQPL Scores [a]	Drug Use [b]	*M* (*SD*)	*MD*	*SE*	*LL*	*UL*	*p* (η^2_p) [c]
Male	Personal Development	No	3.18 (1.00)	0.26	0.08	0.10	0.43	**.002**
		Yes	2.92 (0.90)					(.019)
	Personal Autonomy	No	3.16 (0.82)	0.14	0.07	0.00	0.27	**.046**
		Yes	3.02 (0.75)					(.008)
	Well-being	No	2.79 (1.02)	0.20	0.08	0.03	0.36	**.018**
		Yes	2.59 (0.89)					(.011)
	Distress [d]	No	4.05 (0.85)	0.21	0.07	0.06	0.36	**.005**
		Yes	3.84 (0.86)					(.015)
	Global Well-Being and	No	3.23 (0.79)	0.21	0.06	0.09	0.34	**.001**
	Development Score	Yes	3.01 (0.68)					(.021)
Female	Personal Development	No	3.24 (0.98)	0.65	0.20	0.25	1.05	**.002**
		Yes	2.59 (0.89)					(.110)
	Personal Autonomy	No	2.99 (0.98)	0.31	0.21	-0.10	0.72	.133
		Yes	2.68 (0.91)					(.027)
	Well-being	No	2.24 (1.00)	0.23	0.20	-0.16	0.62	.244
		Yes	2.01 (0.80)					(.016)
	Distress [d]	No	3.81 (0.89)	0.71	0.21	0.29	1.13	**.001**
		Yes	3.10 (1.07)					(.120)
	Global Well-Being and	No	3.07 (0.81)	0.50	0.17	0.16	0.83	**.004**
	Development Score	Yes	2.57 (0.74)					(.096)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] Before coming to prison.

[c] *p* is based on the independent samples *t*-tests and given bold if under .05.

[d] Higher scores indicate lower levels of distress.

Table S17

Comparison of Well-Being and Development Dimensions Scores Based on the History of Psychiatric Hospital Stay Among Male and Female Prisoners

Subgroup	MQPL Scores [a]	Psychiatric Hospital Stay [b]	*M* (*SD*)	*MD*	*SE*	95% CI for *MD*		*p* (η^2_p) [c]
						LL	*UL*	
Male	Personal Development	No	3.08 (0.96)	0.26	0.13	0.01	0.52	**.043**
		Yes	2.82 (0.92)					(.008)
	Personal Autonomy	No	3.13 (0.78)	0.25	0.11	0.04	0.46	**.022**
		Yes	2.88 (0.85)					(.010)
	Well-being	No	2.75 (0.96)	0.47	0.13	0.21	0.72	**< .001**
		Yes	2.28 (0.90)					(.025)
	Distress [d]	No	4.01 (0.84)	0.56	0.12	0.34	0.79	**< .001**
		Yes	3.45 (0.91)					(.045)
	Global Well-Being and Development Score	No	3.17 (0.74)	0.35	0.10	0.16	0.55	**< .001**
		Yes	2.81 (0.74)					(.024)
Female	Personal Development	No	2.90 (0.96)	0.14	0.26	-0.66	0.38	.589
		Yes	3.04 (1.10)					(.004)
	Personal Autonomy	No	2.85 (0.93)	0.02	0.25	-0.48	0.52	.938
		Yes	2.83 (1.05)					(.000)
	Well-being	No	2.16 (0.90)	0.16	0.24	-0.31	0.63	.507
		Yes	2.00 (0.93)					(.005)
	Distress [d]	No	3.59 (0.92)	0.64	0.26	0.12	10.16	**.017**
		Yes	2.96 (1.26)					(.067)
	Global Well-Being and Development Score	No	2.84 (0.77)	0.07	0.21	-0.35	0.50	.726
		Yes	2.77 (0.95)					(.001)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] "Have you ever stayed in a psychiatric/mental hospital or unit for 2 days or more?".

[c] *p* is based on the independent samples *t*-tests and given bold if under .05.

[d] Higher scores indicate lower levels of distress.

Table S18

Comparison of Well-Being and Development Dimensions Scores Based on the History of Imposed Medical Security Measures Among Male and Female Prisoners

Subgroup	MQPL Scores [a]	Security Measure [b]	*M* (*SD*)	*MD*	*SE*	95% CI for *MD*		*p* (η^2_p) [c]
						LL	*UL*	
Male	Personal Development	No	3.10 (0.98)	0.29	0.11	-0.51	-0.07	**.011**
		Yes	2.81 (0.87)					(.013)
	Personal Autonomy	No	3.13 (0.79)	0.23	0.09	-0.41	-0.05	**.012**
		Yes	2.90 (0.79)					(.013)
	Well-being	No	2.78 (0.97)	0.45	0.10	-0.65	-0.24	**< .001**
		Yes	2.33 (0.86)					(.031)
	Distress [d]	No	4.04 (0.84)	0.49	0.10	-0.68	-0.29	**< .001**
		Yes	3.55 (0.89)					(.046)
	Global Well-Being and Development Score	No	3.19 (0.75)	0.34	0.09	-0.51	-0.17	**< .001**
		Yes	2.84 (0.71)					(.031)
Female	Personal Development	No	3.09 (0.98)	0.57	0.24	-1.04	-0.09	**.021**
		Yes	2.52 (0.97)					(.064)
	Personal Autonomy	No	2.96 (0.98)	0.44	0.23	-0.89	0.02	.062
		Yes	2.52 (0.83)					(.043)
	Well-being	No	2.24 (0.94)	0.42	0.22	-0.85	0.01	.038
		Yes	1.82 (0.74)					(.044)
	Distress [d]	No	3.78 (0.92)	1.06	0.22	-1.50	-0.61	**< .001**
		Yes	2.72 (0.89)					(.219)
	Global Well-Being and Development Score	No	2.99 (0.79)	0.59	0.19	-0.97	-0.21	**.003**
		Yes	2.40 (0.74)					(.105)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] "Have you ever been imposed a security measure?".

[c] *p* is based on the independent samples *t*-tests and given bold if under .05.

[d] Higher scores indicate lower levels of distress.

Table S19

Comparison of Well-Being and Development Dimensions Scores Based on the History of Self-Harm Among Male and Female Prisoners

Subgroup	MQPL Scores [a]	History of Self-harm [b]	*M* (*SD*)	*MD*	*SE*	95% CI for *MD*		*p* (η^2_p) [c]
						LL	*UL*	
Male	Personal Development	No	3.08 (0.96)	0.21	0.12	-0.02	0.44	.075
		Yes	2.87 (0.96)					(.006)
	Personal Autonomy	No	3.12 (0.78)	0.19	0.10	0.00	0.38	.055
		Yes	2.93 (0.86)					(.007)
	Well-being	No	2.75 (0.93)	0.39	0.12	0.16	0.62	**.001**
		Yes	2.35 (1.06)					(.021)
	Distress [d]	No	4.03 (0.79)	0.60	0.13	0.35	0.85	**< .001**
		Yes	3.43 (1.06)					(.061)
	Global Well-Being and Development Score	No	3.17 (0.73)	0.31	0.09	0.13	0.48	**.001**
		Yes	2.86 (0.79)					(.021)
Female	Personal Development	No	2.98 (1.01)	0.13	0.23	-0.33	0.59	.586
		Yes	2.86 (0.97)					(.004)
	Personal Autonomy	No	2.90 (0.99)	0.15	0.22	-0.29	0.59	.494
		Yes	2.75 (0.89)					(.006)
	Well-being	No	2.25 (0.99)	0.39	0.18	0.04	0.74	**.030**
		Yes	1.86 (0.62)					(.040)
	Distress [d]	No	3.71 (0.87)	0.81	0.22	0.36	1.25	**.001**
		Yes	2.91 (1.15)					(.133)
	Global Well-Being and Development Score	No	2.93 (0.82)	0.29	0.19	-0.08	0.66	.121
		Yes	2.63 (0.77)					(.028)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] "Have you ever self-harmed in the past?".

[c] *p* is based on the independent samples *t*-tests and given bold if under .05.

[d] Higher scores indicate lower levels of distress.

Table S20

Comparison of Well-Being and Development Dimensions Scores Based on the History of Suicide Attempts Among Male and Female Prisoners

Subgroup	MQPL Scores [a]	History of Suicide Attempts [b]	*M* (*SD*)	*MD*	*SE*	95% CI for *MD*		*p* (η^2_p) [c]
						LL	*UL*	
Male	Personal Development	No	3.05 (0.96)	0.02	0.17	-0.30	0.35	.885
		Yes	3.03 (0.94)					(.000)
	Personal Autonomy	No	3.10 (0.78)	0.22	0.16	-0.11	0.55	.187
		Yes	2.89 (0.94)					(.005)
	Well-being	No	2.72 (0.95)	0.40	0.17	0.07	0.73	**.018**
		Yes	2.32 (1.04)					(.011)
	Distress [d]	No	4.01 (0.82)	0.86	0.14	0.58	1.15	**< .001**
		Yes	3.14 (0.95)					(.064)
	Global Well-Being and Development Score	No	3.14 (0.73)	0.27	0.13	0.02	0.53	**.035**
		Yes	2.87 (0.85)					(.009)
Female	Personal Development	No	2.98 (0.94)	0.13	0.25	-0.37	0.63	.605
		Yes	2.85 (1.17)					(.003)
	Personal Autonomy	No	2.87 (0.91)	0.08	0.24	-0.40	0.55	.754
		Yes	2.80 (1.11)					(.001)
	Well-being	No	2.14 (0.91)	0.06	0.23	-0.40	0.51	.801
		Yes	2.08 (0.90)					(.001)
	Distress [d]	No	3.69 (0.86)	0.94	0.29	0.35	1.52	**.003**
		Yes	2.75 (1.22)					(.153)
	Global Well-Being and Development Score	No	2.89 (0.75)	0.23	0.20	-0.18	0.63	.267
		Yes	2.66 (0.97)					(.015)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] "Have you ever attempted suicide in the past?".

[c] *p* is based on the independent samples *t*-tests and given bold if under .05.

[d] Higher scores indicate lower levels of distress.

Table S21

Comparison of Well-Being and Development Dimensions Scores Based on the Prison Visitation Status Among Male and Female Prisoners

Subgroup	MQPL Scores [a]	Prison Visitation Status [b]	*M* (*SD*)	*MD*	*SE*	95% CI for *MD*		*p* (η^2_p) [c]
						LL	*UL*	
Male	Personal Development	No	2.81 (1.02)	-0.27	0.13	-0.53	-0.02	**.035**
		Yes	3.08 (0.95)					(.009)
	Personal Autonomy	No	3.04 (0.89)	-0.05	0.11	-0.26	0.16	.613
		Yes	3.09 (0.77)					(.000)
	Well-being	No	2.42 (0.91)	-0.31	0.13	-0.57	-0.06	**.016**
		Yes	2.73 (0.96)					(.011)
	Distress [d]	No	3.73 (0.95)	-0.25	0.12	-0.48	-0.03	**.028**
		Yes	3.98 (0.84)					(.009)
	Global Well-Being and	No	2.92 0.79)	-0.23	0.10	-0.43	-0.04	**.021**
	Development Score	Yes	3.15 (0.74)					(.010)
Female	Personal Development	No	2.85 (0.91)	-0.11	0.31	-0.73	0.52	.737
		Yes	2.95 (1.02)					(.001)
	Personal Autonomy	No	2.60 (0.84)	-0.28	0.30	-0.88	0.31	.345
		Yes	2.89 (0.97)					(.011)
	Well-being	No	1.77 (0.53)	-0.41	0.19	-0.80	-0.03	**.038**
		Yes	2.18 (0.95)					(.025)
	Distress [d]	No	2.83 (0.98)	-0.76	0.31	-1.37	-0.15	**.016**
		Yes	3.59 (0.99)					(.068)
	Global Well-Being and	No	2.57 (0.68)	-0.31	0.25	-0.81	0.19	.222
	Development Score	Yes	2.88 (0.83)					(.018)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] "Do you receive visits in this prison?".

[c] *p* is based on the independent samples *t*-tests and given bold if under .05.

[d] Higher scores indicate lower levels of distress.

Table S22

Comparison of Well-Being and Development Dimensions Scores Based on the Prison Proximity to Home Area Among Male and Female Prisoners

Subgroup	MQPL Scores [a]	Proximity to Home Area [b]	*M* (*SD*)	*MD*	*SE*	95% CI for *MD*		*p* (η^2_p) [c]
						LL	*UL*	
Male	Personal Development	No	2.95 (0.93)	-0.22	0.08	-0.38	-0.05	**.009**
		Yes	3.17 (0.98)					(.013)
	Personal Autonomy	No	3.03 (0.80)	-0.13	0.07	-0.27	0.00	.058
		Yes	3.16 (0.77)					(.007)
	Well-being	No	2.60 (0.93)	-0.20	0.08	-0.37	-0.04	**.016**
		Yes	2.80 (0.99)					(.011)
	Distress [d]	No	3.85 (0.89)	-0.21	0.08	-0.36	-0.06	**.005**
		Yes	4.06 (0.81)					(.015)
	Global Well-Being and Development Score	No	3.03 (0.72)	-0.20	0.07	-0.33	-0.07	**.002**
		Yes	3.23 (0.76)					(.018)
Female	Personal Development	No	2.97 (0.99)	0.11	0.25	-0.39	0.60	.672
		Yes	2.86 (1.02)					(.002)
	Personal Autonomy	No	2.78 (0.98)	-0.32	0.24	-0.79	0.16	.185
		Yes	3.10 (0.85)					(.021)
	Well-being	No	2.11 (0.90)	-0.08	0.23	-0.54	0.37	.713
		Yes	2.19 (0.94)					(.002)
	Distress [d]	No	3.53 (1.08)	0.28	0.26	-0.23	0.80	.275
		Yes	3.25 (0.87)					(.014)
	Global Well-Being and Development Score	No	2.84 (0.80)	0.01	0.20	-0.40	0.42	.964
		Yes	2.83 (0.85)					(.000)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] "Is the prison near your home? (if the prison is at most an hour away, it is considered close to you)?".

[c] *p* is based on the independent samples *t*-tests and bold if under .05.

[d] Higher scores indicate lower distress levels.

Table S23

Comparison of Well-Being and Development Dimensions Scores Based on Main Daytime Activity Among Male and Female Prisoners

Subgroup	MQPL Scores [a]	Work (Main Daytime Activity) [b]	*M* (*SD*)	*MD*	*SE*	95% CI for *MD*		*p* (η^2_p) [c]
						LL	*UL*	
Male	Personal Development	No	2.74 (0.86)	-0.62	0.08	-0.77	-0.46	**< .001**
		Yes	3.36 (0.94)					(.105)
	Personal Autonomy	No	2.90 (0.82)	-0.38	0.07	-0.52	-0.25	**< .001**
		Yes	3.29 (0.70)					(.060)
	Well-being	No	2.43 (0.91)	-0.53	0.08	-0.69	-0.37	**< .001**
		Yes	2.96 (0.94)					(.077)
	Distress [d]	No	3.72 (0.92)	-0.45	0.07	-0.59	-0.31	**< .001**
		Yes	4.17 (0.74)					(.068)
	Global Well-Being and Development Score	No	2.86 (0.69)	-0.52	0.06	-0.64	-0.40	**< .001**
		Yes	3.39 (0.71)					(.124)
Female	Personal Development	No	2.80 (0.95)	-0.21	0.24	-0.68	0.27	.389
		Yes	3.00 (1.03)					(.009)
	Personal Autonomy	No	2.88 (0.92)	0.05	0.23	-0.40	0.50	.816
		Yes	2.83 (0.97)					(.001)
	Well-being	No	2.03 (0.86)	-0.14	0.21	-0.56	0.28	.516
		Yes	2.17 (0.91)					(.005)
	Distress [d]	No	3.08 (1.08)	-0.57	0.24	-1.05	-0.10	**.018**
		Yes	3.65 (0.98)					(.066)
	Global Well-Being and Development Score	No	2.70 (0.80)	-0.20	0.19	-0.58	0.19	.313
		Yes	2.89 (0.82)					(.012)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] "What is your main daytime activity? Work (Yes/No)".

[c] *p* is based on the independent samples *t*-tests and bold if under .05.

[d] Higher scores indicate lower distress levels.

Table S24

Comparison of Well-Being and Development Dimensions Scores Based on Extended Daytime Cell Lockdown Among Male and Female Prisoners

Subgroup	MQPL Scores [a]	Extended Daytime Cell Lockdown [b]	*M* (*SD*)	*MD*	*SE*	95% CI for *MD*		*p* (η^2_p) [c]
						LL	*UL*	
Male	Personal Development	No	3.22 (0.96)	0.45	0.09	0.29	0.62	**< .001**
		Yes	2.76 (0.87)					(.053)
	Personal Autonomy	No	3.25 (0.74)	0.43	0.07	0.30	0.57	**< .001**
		Yes	2.81 (0.78)					(.070)
	Well-being	No	2.89 (0.95)	0.51	0.09	0.34	0.67	**< .001**
		Yes	2.38 (0.88)					(.065)
	Distress [d]	No	4.16 (0.73)	0.60	0.08	0.45	0.76	**< .001**
		Yes	3.56 (0.94)					(.114)
	Global Well-Being and Development Score	No	3.30 (0.72)	0.49	0.06	0.36	0.61	**< .001**
		Yes	2.82 (0.68)					(.099)
Female	Personal Development	No	3.14 (1.07)	0.45	0.22	0.01	0.89	**.044**
		Yes	2.69 (0.90)					(.050)
	Personal Autonomy	No	2.97 (1.04)	0.24	0.21	-0.18	0.67	.259
		Yes	2.72 (0.86)					(.016)
	Well-being	No	2.21 (1.05)	0.21	0.19	-0.17	0.58	.277
		Yes	2.01 (0.65)					(.014)
	Distress [d]	No	3.69 (1.10)	0.51	0.23	0.06	0.96	**.026**
		Yes	3.18 (0.91)					(.060)
	Global Well-Being and Development Score	No	3.00 (0.89)	0.37	0.18	0.01	0.72	**.042**
		Yes	2.63 (0.69)					(.051)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] "Do you usually spend 6 or more hours locked in your cell between 9 a.m. and 6 p.m.?".

[c] *p* is based on the independent samples *t*-tests and bold if under .05.

[d] Higher scores indicate lower distress levels.

Table S25

Comparison of Well-Being and Development Dimensions Scores Based on the Use of Incentives and Earned Privileges Among Male and Female Prisoners

Subgroup	MQPL Scores [a]	Incentives and Earned Privileges [b]	*M* (*SD*)	*MD*	*SE*	95% CI for *MD*		*p* (η^2_p) [c]
						LL	*UL*	
Male	Personal Development	No	2.90 (0.93)	-0.24	0.09	-0.41	-0.08	**.005**
		Yes	3.14 (0.96)					(.015)
	Personal Autonomy	No	2.98 (0.78)	-0.17	0.07	-0.31	-0.03	**.016**
		Yes	3.15 (0.79)					(.011)
	Well-being	No	2.48 (0.86)	-0.34	0.08	-0.50	-0.18	**< .001**
		Yes	2.82 (1.00)					(.029)
	Distress [d]	No	3.69 (0.87)	-0.42	0.08	-0.57	-0.27	**< .001**
		Yes	4.10 (0.82)					(.055)
	Global Well-Being and Development Score	No	2.95 (0.71)	-0.28	0.07	-0.41	-0.15	**< .001**
		Yes	3.23 (0.75)					(.032)
Female	Personal Development	No	2.77 (0.97)	-0.29	0.22	-0.72	0.14	.188
		Yes	3.06 (1.00)					(.021)
	Personal Autonomy	No	2.65 (1.01)	-0.33	0.21	-0.75	0.08	.116
		Yes	2.99 (0.90)					(.029)
	Well-being	No	2.01 (0.82)	-0.19	0.20	-0.58	0.21	.354
		Yes	2.20 (0.95)					(.010)
	Distress [d]	No	3.10 (1.13)	-0.59	0.22	-1.03	-0.16	**.008**
		Yes	3.70 (0.90)					(.080)
	Global Well-Being and Development Score	No	2.64 (0.84)	-0.32	0.18	-0.67	0.03	.071
		Yes	2.96 (0.77)					(.038)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] "Have you used any of the incentives and earned privileges in this prison or outside the prison?".

[c] *p* is based on the independent samples *t*-tests and bold if under .05.

[d] Higher scores indicate lower distress levels.

Table S26

Comparison of Well-Being and Development Dimensions Scores Based on Disciplinary Measures Being Imposed in Current Prison Among Male and Female Prisoners

Subgroup	MQPL Scores [a]	Disciplinary Measures Imposed[b]	*M* (*SD*)	*MD*	*SE*	95% CI for *MD* *LL*	95% CI for *MD* *UL*	*p* (η^2_p) [c]
Male	Personal Development	No	3.25 (0.96)	0.53	0.08	0.36	0.69	**< .001**
		Yes	2.72 (0.85)					(.072)
	Personal Autonomy	No	3.21 (0.78)	0.32	0.07	0.19	0.46	**< .001**
		Yes	2.89 (0.77)					(.040)
	Well-being	No	2.85 (0.96)	0.41	0.08	0.25	0.58	**< .001**
		Yes	2.44 (0.91)					(.044)
	Distress [d]	No	4.05 (0.86)	0.27	0.08	0.12	0.42	**.001**
		Yes	3.78 (0.84)					(.023)
	Global Well-Being and Development Score	No	3.28 (0.76)	0.42	0.06	0.30	0.54	**< .001**
		Yes	2.86 (0.64)					(.075)
Female	Personal Development	No	3.17 (0.97)	0.53	0.21	0.11	0.95	**.014**
		Yes	2.64 (0.95)					(.070)
	Personal Autonomy	No	3.04 (0.93)	0.43	0.20	0.03	0.84	**.036**
		Yes	2.61 (0.93)					(.051)
	Well-being	No	2.23 (0.91)	0.25	0.20	-0.14	0.64	.212
		Yes	1.99 (0.88)					(.019)
	Distress [d]	No	3.76 (0.95)	0.70	0.21	0.28	1.12	**.002**
		Yes	3.06 (1.01)					(.114)
	Global Well-Being and Development Score	No	3.04 (0.78)	0.48	0.17	0.14	0.81	**.006**
		Yes	2.56 (0.78)					(.086)

Note. MQPL = Measuring the Quality of Prison Life; *MD* = Mean Difference; *SE* = Std. Error; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

[a] Theoretical range 1–5.

[b] "Have disciplinary measures ever been imposed on you in this prison?".

[c] *p* is based on the independent samples *t*-tests and bold if under .05.

[d] Higher scores indicate lower distress levels.

Table S27

Summary of the Standard Hierarchical Regression Analysis for Variables Predicting Well-being and Development of Prisoners

		Step 1		Step 2	
MQPL Scores	Predictor/Model	*B*	β	*B*	β
Personal Development	Prison regime	.48	**.22****	.00	.00
	Gender	.05	.02	-.01	.00
	Social relationships			.02	**.08****
	Staff-prisoner relationships			.79	**.84****
	Inmate interactions			-.01	-.01
	Model R^2 / Adj. R^2 / ΔR^2	.05 / .05 / .05**		.74 / .74 / .70**	
	F (*df1, df2*)	15.33 (2, 594)**		342.53 (5, 592)**	
Personal Autonomy	Prison regime	.39	**.21****	-.03	-.02
	Gender	.19	**.08***	.03	.01
	Social relationships			.02	**.08****
	Staff-prisoner relationships			.39	**.49****
	Inmate interactions			.31	**.28****
	Model R^2 / Adj. R^2 / ΔR^2	.05 / .05 / .05**		.52 / .51 / .47**	
	F (*df1, df2*)	15.92 (2, 601)**		128.53 (5, 598)**	
Well-being	Prison regime	.58	**.26****	.11	.05
	Gender	.57	**.20****	.31	**.11****
	Social relationships			.01	.04
	Staff-prisoner relationships			.29	**.31****
	Inmate interactions			.55	**.42****
	Model R^2 / Adj. R^2 / ΔR^2	.11 / .11 / .11**		.49 / .49 / .38**	
	F (*df1, df2*)	36.87 (2, 600)**		116.38 (5, 597)**	
Distress [a]	Prison regime	.34	**.18****	.03	.02
	Gender	.43	**.17****	.24	**.10****
	Social relationships			.04	**.16****
	Staff-prisoner relationships			.13	**.15****
	Inmate interactions			.37	**.32****
	Model R^2 / Adj. R^2 / ΔR^2	.06 / .06 / .06**		.28 / .27 / .22**	
	F (*df1, df2*)	19.70 (2, 595)**		46.23 (5, 592)**	
Global Well-Being and Development Score	Prison regime	.46	**.27****	.04	.02
	Gender	.22	**.10***	.09	.04
	Social relationships			.02	**.09****
	Staff-prisoner relationships			.49	**.66****
	Inmate interactions			.23	**.23****
	Model R^2 / Adj. R^2 / ΔR^2	.08 / .08 / .08**		.74 / .74 / .65**	
	F (*df1, df2*)	27.27 (2, 599)**		334.55 (5, 596)**	

Note. MQPL = Measuring the Quality of Prison Life (theoretical range 1–5); *B* = unstandardized coefficient; β = standardised beta coefficient; R^2 = determinant multiple correlation coefficient; Adj. R^2 = adjusted multiple correlation coefficient; ΔR^2 – multiple correlation coefficient change; Social relationships = WHOQOL-BREF domain (theoretical range 4–20); Staff-prisoner relationships and Interactions with prisoners = MQPL dimensions (theoretical range 1–5).

[a] Higher scores indicate lower distress levels.

* $p < .05$. ** $p < .01$. Statistically significant predictors are given bold.

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Summary

The book “Well-Being in Prison: The Case of Serbia” by Ljeposava Ilijić, Olivera Pavićević, and Milena Milićević investigates how well-being is perceived in Serbian prisons, using the *Measuring Quality of Prison Life* (MQPL) survey. The book explores the concept of well-being in prison, from historical and philosophical ideas to contemporary measures of quality of prison life and subjective well-being in the prison environment. In addition, the book offers an overview of Serbia’s prison system, including its legal framework, types of institutions, the rights of convicted persons and statistical data on the prison population.

The central focus of the book is the research aimed to examine how individual characteristics, the prison environment, institutional practices, and life experiences affect the subjective well-being and personal development of prisoners. The main research question asked is: *How do the levels of well-being and development of convicted persons differ depending on different factors?* This research is part of a three-year national project called PrisonLIFE, whose goal is to understand and improve the quality of prison life of convicted persons in Serbia.

The data was collected in the period from May 2022 to January 2023 from 611 convicted persons in five prisons in Serbia. The convenience sample included 525 men and 86 women legally sentenced to imprisonment. The main instrument for collecting data on the quality of prison life was the Serbian version of the MQPL survey, originally created by the Cambridge Institute of Criminology Prisons Research Centre. The MQPL questionnaire covers a wide range of topics relevant to the prison experience of convicted persons, including respect, relationships with prison professionals, safety, personal development, and well-being.

Overall, prisoners rated the living conditions and the opportunity to maintain contact with their families the most positively, but they were more critical of the professionalism of the prison staff. This perception was similar for men and women.

Male prisoners rated well-being and development lower than conditions and opportunities for maintaining contact with close persons but higher than the overall functioning of the prison and the professional behaviour of prison staff. Female prisoners rated well-being and development lower than other categories but comparable to the rating of the professional behaviour of prison staff.

The survey further showed that all respondents were dissatisfied with their general well-being in prison. Prisoners felt most positive about opportunities for personal development and feeling in control of their actions. They, on the other hand, expressed an optimistic attitude regarding the possibility of personal change and improvement but were unsure of the prison system’s contribution to this and less confident that prison would help them after release. They felt they could preserve their identity but had limited autonomy in their daily lives. The feeling of confinement prevailed. Although they recognised problems in the prison environment and negative aspects of prison life, they reported lower levels of distress, except for the problems with emotion management and night-time sleep.

Male prisoners who were older, without a history of drug abuse or mental health problems and who had a work engagement in prison, felt the most positive about their experience of well-being in prison. Female prisoners who were older, had no history of drug use, no mental health

problems, no history of violent behaviour and self-harm and who received visits in prison reported more positively about some aspects of prison life related to well-being.

Prisoners in semi-open wards have a higher level of well-being as an aspect of the quality of prison life than those in closed wards. The longer periods of incarceration were generally associated with less favourable prison experiences for women. First-time offenders scored higher than those who had been in prison before. Prisoners who used incentives and privileges felt more positive than those who did not. Prisoners who were subject to disciplinary measures rated their well-being in prison more negatively than those without a history of disciplinary measures.

For men in particular, receiving visits was associated with more positive ratings of personal development, general well-being, stress management, and overall prison experience. Prisons closer to home benefited men, who scored higher in various aspects of well-being. However, this association was less pronounced in women, possibly because there is only one prison for women in the country. The most important factor affecting the well-being of prisoners was the quality of their relationship with prison staff.

In the final chapter, the book addresses the implications of the research and offers recommendations. The authors make several proposals for improving the well-being of convicts in prison, which could lead to a reduction in recidivism. Research by other authors indicates an association between higher levels of inmate well-being and positive perceptions of prison morale and social climate, with a trend of reduced recidivism rates.

First, there is a need to improve the professionalism of prison staff. In addition, improvements are necessary in the areas of funding and resources, physical security, health care and living conditions, as well as in certain segments of treatment (especially in terms of sports and leisure activities).

Secondly, the study highlights the need for gender-specific approaches in the treatment of convicted persons. For female prisoners, part of the focus should be on fostering social connections, while for men, priority should be given to psychological and physical well-being. In addition, programs should be more sensitive to individual differences between prisoners, especially in terms of their age and previous education in order to achieve positive effects on the level of well-being and personal development and improve the quality of prison life.

Thirdly, it is suggested to focus rehabilitation strategies on recidivist prisoners who usually experience a lower level of well-being. In addition, the findings indicate the necessity of regular (re)classifications and promotion in treatment programs (advancement to more favourable treatment groups, i.e. wards), given that prisoners in semi-open wards reported significantly higher well-being than those in closed ones.

Finally, the findings support the importance of targeted interventions for high-risk prisoners. In addition, risk assessment can help identify prisoners who need additional support, such as those with a history of self-harm, suicide attempts, drug abuse or mental health problems. The rehabilitation of convicted persons and their successful social reintegration after release could be contributed by employment or work engagement, as well as the granting of extended rights and benefits.

The study also identified a specific group of high-risk female prisoners that need extra attention. These include women under 30, those with long time served, those with a history of self-harm, suicide attempts, drug abuse, or mental health problems, and those with no visits or without the support of family or friends. These groups of female prisoners had a lower level of well-being and a higher level of stress and distress.

Overall, this book offers a comprehensive analysis of well-being in Serbian prisons from the perspective of the prisoners themselves. The analysis of specific factors provides valuable information about the well-being of the prison population, which could be relevant to policymakers and prison administrators in making informed decisions about improving the quality of prison life.

Keywords: Quality of Prison Life, MQPL, Prisoner Well-being, Social Rehabilitation, Prison Environment, Social Dynamics in Prison, Serbia Prison System, Imprisonment, Personal Development, Prison Treatment, Pains of Imprisonment

Sažetak

Knjiga „Dobrobit i blagostanje u zatvoru: Slučaj Srbije“ autorki Ljeposave Ilijić, Olivere Pavićević i Milene Milićević istražuje kako se blagostanje doživljava u zatvorima Srbije, koristeći instrument *Merenje kvaliteta zatvorskog života* (MQPL). Knjiga se bavi konceptom dobrobiti i blagostanja u zatvoru, od istorijskih i filozofskih ideja do savremenih mera kvaliteta zatvorskog života i subjektivnog blagostanja u zatvorskom okruženju. Osim toga, knjiga nudi pregled zatvorskog sistema Srbije, uključujući pravni okvir, tipove institucija, prava osuđenih lica i statističke podatke o zatvorskoj populaciji.

Centralni fokus knjige je istraživanje koje je sprovedeno sa ciljem da se ispita kako individualne karakteristike, zatvorsko okruženje, institucionalne prakse i životna iskustva utiču na subjektivno blagostanje i lični razvoj osuđenih lica. Glavno istraživačko pitanje koje je postavljeno je: *Kako se nivoi dobrobiti, blagostanja i razvoja osuđenih lica razlikuju u zavisnosti od različitih faktora?* Ovo istraživanje je deo trogodišnjeg nacionalnog naučnog projekta nazvanog PrisonLIFE, čiji je cilj da se razume i poboljša kvalitet zatvorskog života osuđenih lica u Srbiji.

Podaci su prikupljani u periodu od maja 2022. do januara 2023. godine od 611 osuđenih lica u pet zatvora u Srbiji. Prigodnim uzorkom je obuhvaćeno 525 muškaraca i 86 žena pravosnažno osuđenih na kaznu zatvora. Glavni instrument za prikupljanje podataka o kvalitetu zatvorskog života bila je srpska verzija upitnika MQPL, čiju je originalu verziju kreirao Centar za istraživanje zatvora Univerziteta u Kembridžu. Upitnik MQPL pokriva širok spektar tema relevantnih za iskustvo osuđenih lica na izvršenju kazne zatvora, uključujući poštovanje, odnose sa zatvorskim stručnim osobljem, bezbednost, lični razvoj i blagostanje.

Osuđenici su bili zadovoljni uslovima života u zatvoru i mogućnošću da održavaju kontakt sa porodicom, ali su bili kritičniji prema profesionalizmu zaposlenih u zatvoru. Ova percepcija je bila slična kod muškaraca i žena.

Osuđenici su ocenili dobrobit, blagostanje i razvoj niže nego materijalne uslove i održavanje veza sa bliskim osobama, ali više od celokupnog funkcionisanja zatvorske jedinice i profesionalnog ponašanja zatvorskog stručnog osoblja. Osuđenice su dobrobit, blagostanje i razvoj ocenile niže od ostalih kategorija, ali uporedivo sa ocenom profesionalnog ponašanja zatvorskog stručnog osoblja.

Istraživanje je dalje pokazalo da su svi ispitanici bili nezadovoljni svojim opštim blagostanjem u zatvoru. Najpozitivnije su se osećali u pogledu mogućnosti za lični razvoj i osećaja kontrole nad svojim postupcima. Izrazili su, pak, optimističan stav u vezi sa mogućnošću sopstvene promene i poboljšanja, ali nisu bili sigurni u to koliko zatvorski sistem može da doprinese u tome i manje uvereni da će im zatvor pomoći nakon izlaska na slobodu. Osećali su da mogu da očuvaju svoj identitet, ali su imali ograničenu autonomiju u svakodnevnom životu. Osećaj zatočeništva je preovladavao. Iako su prepoznavali probleme u zatvorskom okruženju i negativne aspekte zatvorskog života, prijavili su niži nivo uznemirenosti, izuzev problema sa upravljanjem emocijama i spavanjem.

Osuđenici muškog pola koji su bili stariji, bez istorije zloupotrebe droga, problema sa mentalnim zdravljem i koji su bili radno angažovani u zatvoru izjasnili su se najpozitivnije kada je u pitanju lični doživljaj dobrobiti i blagostanja u zatvoru. Osuđenice koje su bile starije, bez istorije

zloupotrebe droga, problema sa mentalnim zdravljem, nasilnog ponašanja i samopovređivanja, a imale su posete u zatvoru, izjasnile su se pozitivnije prema nekim aspektima zatvorskog života vezanim za dobrobit i blagostanje.

Kod osuđenika u poluotvorenim odeljenjima utvrđen je viši nivo dobrobiti i blagostanja kao aspekta kvaliteta zatvorskog života nego kod osuđenika u zatvorenim odeljenjima. Duži periodi zatvorenosti su generalno bili povezani sa manje povoljnim iskustvima u zatvoru za žene. Ispitanici koji su bili prvi put na izvršenju kazne zatovra izjasnili su se pozitivnije nego oni koji su već bili u zatvoru. Osuđenici koji su koristili nagrade i privilegije osećali su se pozitivnije nego oni koji nisu. Osuđenici prema kojima su primenjene disciplinske mere u zatvoru ocenili su negativnije dobrobit i blagostanje u poređenju sa onima kojima nisu bile izrečene disciplinske mere.

Posebno kod muškaraca, primanje poseta je bilo povezano sa pozitivnijim ocenama u vezi sa ličnim razvojem, opštim blagostanjem, upravljanjem stresom i ukupnim iskustvom zatvorskog života. Zatvori bliži kući bili su od koristi muškarcima, koji su postigli više poena u različitim aspektima dobrobiti i blagostanja. Međutim, ova povezanost je bila manje izražena kod žena, verovatno zbog toga što u zemlji postoji samo jedan zatvor za žene. Najvažniji faktor koji utiče na dobrobit i blagostanje osuđenika bio je kvalitet njihovog odnosa sa zatvorskim stručnim osobljem.

U završnom poglavlju, knjiga se bavi implikacijama istraživanja i nudi preporuke. Autorke iznose nekoliko predloga za unapređenje dobrobiti i blagostanja osuđenih lica u zatvoru. Istraživanja drugih autora ukazuju na povezanost višeg nivoa dobrobiti i blagostanja u zatvoru, kao i pozitivnije procenjene zatvorske moralne i socijalne klime, s trendom smanjenja stope recidivizma.

Prvo, postoji potreba da se unapredi profesionalizam zatvorskog stručnog osoblja. Pored toga, neophodna su poboljšanja u oblastima finansiranja i resursa, fizičke bezbednosti, zdravstvene zaštite i životnih uslova, kao i u pojedinim segmentima tretmana (posebno u pogledu sportskih i slobodnovremenih aktivnosti).

Drugo, studija naglašava potrebu za rodno specifičnim pristupima u postupanju sa osuđenim licima. Za osuđenice, jedan deo fokusa bi trebalo da bude na negovanju socijalnih veza, dok za muškarce, prioritet bi trebalo dati psihološkom i fizičkom blagostanju. Pored toga, programi treba da budu osetljiviji na individualne razlike između osuđenika, posebno u pogledu njihove starosti i prethodnog obrazovanja kako bi se ostvarili pozitivni efekti na nivo dobrobiti, blagostanja i ličnog razvoja i unapredio kvalitet zatvorskog života.

Treće, predlaže se usmeravanje strategija rehabilitacije na osuđenike recidiviste kod kojih je obično zabeleženo niže blagostanje. Osim toga, nalazi ukazuju na neophodnost redovnih (re)klasifikacija i izmena programa postupanja (napredovanje u povoljnije tretmanske grupe, odnosno odeljenja) s obzirom da su osuđenici iz odeljenja poluotvorenog tipa procenili da imaju bolje blagostanje u poređenju sa osuđenicima u odeljenjima zatvorenog tipa.

Na kraju, nalazi potvrđuju važnost ciljanih intervencija za osuđenike sa visokim rizikom. Pored toga, nalazi ukazuju da bi procena rizika mogla pomoći u identifikovanju osuđenih lica kojima je potrebna dodatna podrška, kao što su osuđenici sa istorijom samopovređivanja, pokušaja samoubistva, zloupotrebe droga ili problema sa mentalnim zdravljem. Rehabilitaciji osuđenih

lica i njihovoj uspešnoj socijalnoj reintegraciji po izlasku na slobodu bi moglo doprineti radno angažovanje, kao i dodeljivanje proširenih prava i pogodnosti.

U istraživanju je takođe identifikovana specifična grupa osuđenica sa visokim rizikom kojima je potrebna dodatna pažnja. To uključuje one osuđenice koje su mlađe od 30 godina, zatim one koje su dugo na izvršenju kazne zatvora, koje imaju istoriju samopovređivanja, pokušaja samoubistva, zloupotrebe droga ili problema sa mentalnim zdravljem, kao i one bez poseta ili koje nemaju podršku porodice ili prijatelja. Ove grupe osuđenica su imale značajno niži nivo blagostanja i iskazivale veći nivo stresa i uznemirenosti.

Sveukupno, knjiga nudi sveobuhvatan pogled na dobrobit i blagostanje u zatvorima u Srbiji iz perspektive samih osuđenika. Kroz analizu konkretnih faktora, pruža dragocene informacije o dobrobiti i blagostanju osuđeničke populacije, a koje bi mogle biti relevantne za kreatore politika i upravnike zatvora u cilju donošenja informisanih odluka o poboljšanju kvaliteta zatvorskog života.

Ključne reči: kvalitet zatvorskog života, MQPL, dobrobit i blagostanje osuđenika, socijalna rehabilitacija, zatvorska sredina, socijalna dinamika u zatvoru, zatvorski sistem Srbije, zatvor, lični razvoj, zatvorski tretman, patnje zatočeništva

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Conflict of Interest

The authors declare no conflicts of interest.

An Ethics Statement

All procedures were performed following the Ethic approval granted by the Ethics Committee of the Institute for Criminological and Sociological Research (No. 103/2020, 38c/2022, 274/22, 119/24) and with the 1964 Helsinki declaration and its later amendments.

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