COPING WITH IMPRISONMENT:

A COMPREHENSIVE STUDY OF COPING MECHANISMS IN PRISON ENVIRONMENTS

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ABSTRACT

The life of convicts in prison is a highly complex subject studied by many scientific disciplines, each helping to better understand the intricate dynamics, processes, and outcomes of prison life with the goal of improving it. In the study 'Coping with imprisonment: comprehensive study of coping mechanisms in prison environments,' the main focus is on how convicted individuals manage stress within prison, including the analysis of interactions with various internal and external factors—such as psychological traits, criminal behaviour, disciplinary actions, and the risk of reoffending. Particular attention is given to various coping models, styles, and strategies, as well as the impact of social support, visitation opportunities, and the characteristics of prison units on shaping and applying these strategies.

The introductory part of the study examines the concepts of stress and methods to overcome it, including the situations, relationships, and effects connected with stress. The authors illustrate the development of various theories about coping mechanisms and emphasise the importance of differentiating them from related psychological concepts, such as defence mechanisms, and clarifying the differences between coping models, strategies, and styles. Prison life involves specific levels of stress, making stress

management an essential process, and the study and application of positive coping models vital for prisoners' adaptation.

The primary focus is on a detailed analysis of coping strategies in Serbian prison settings. The research includes five main analyses: first, examining the latent and network structure of the Brief-COPE inventory within prisons; second, exploring coping by its relation to social support and environmental factors, such as the prison's distance from the individual's residence; third, predicting coping strategies based on previous criminal behaviour; fourth, analysing coping mechanisms as predictors of psychological traits vital for adaptation in prison, including aggressiveness, depression, self-confidence, and quality of life; and fifth, evaluating the predictive power of coping strategies regarding institutional offences and the risk of future criminal behaviour. Overall, these analyses illuminate how coping strategies influence inmates' behaviour and psychological adjustment. Data were collected from five penitentiary institutions in Serbia: Sremska Mitrovica, Niš, Požarevac, Zabela, and Beograd. Participants volunteered, with functional literacy as the only inclusion criterion.

The research findings are presented in a dedicated section, and the discussion compares these results with data from existing studies. The analysis of the Brief COPE questionnaire did not confirm the expected structure of three primary coping styles but instead identified three new components: Hybrid coping (a mix of adaptive and maladaptive strategies), Social support (help-seeking and religion), and Maladaptive coping (avoidance, denial, substance

use). All components are positively correlated, suggesting that individuals using multiple strategies tend to employ various coping methods more frequently. Network analysis showed that planning and active coping are the most central and influential strategies; strengthening these could promote more adaptive responses to stress within the prison setting. Key findings include: Maladaptive coping (avoidance, denial, substance use) is associated with higher levels of depression and aggression, lower self-esteem, and poorer quality of life in prison; social support coping (seeking help and reliance on others) predicts better quality of life and less psychological disturbance, although it is indirectly linked to depression in some analyses; Hybrid coping has an ambiguous nature but generally tends towards maladaptive behaviours and increased aggression; self-esteem is higher among prisoners in semi-open units and those with support from friends and more frequent visits, but lower among early and chronic offenders. Aggression correlates with a history of delinquency, disciplinary issues, and risk assessments, and is negatively associated with peer support and visits. Depression, aggression, low self-esteem, and reduced quality of life collectively characterise maladjustment in prison. Additionally, the findings highlight that social support from three sources—family and friends, prison staff, and clergy and peers—is essential for adapting to prison life. More frequent visits and shorter distances from home are associated with increased support and reduced reliance on maladaptive coping strategies. Higher education levels decrease the likelihood of employing social support as a coping strategy. Support from staff, more frequent

visits, higher educational attainment, and gender appear to be negative predictors of maladaptive coping—prisoners with stronger support networks and better integration are less prone to resorting to avoidance, denial, or aggression.

Early and persistent offending predicts the use of maladaptive and hybrid strategies, whereas seeking social support is not linked to chronic offenders. Male and older prisoners are less likely to use hybrid strategies, and higher levels of education enhance support-seeking behaviours while reducing maladaptive coping. The type of offence and sentence length have minimal influence, whereas personal and developmental factors are more significant. Maladaptive strategies are associated with higher offending levels and increased risk of reoffending, while adaptive strategies, particularly those that are socially supportive, offer a protective effect. Institutional factors such as the type of prison unit, proximity to residence, and resource availability affect coping strategies, and social support, education, and positive relationships with staff help lower stress and reoffending risk. The study emphasises the importance of interventions that reduce maladaptive coping and promote socially supportive strategies to enhance adaptation and reduce recidivism.

Keywords: Prison environment / Coping / Coping strategies / Stress and adaptation / Psychological traits / Institutional factors

THEORETICAL FRAMEWORK

INTRODUCTION

The stress response includes an individual's or organisation's ability to handle it effectively or to stay in a prolonged crisis state. Crisis theory greatly influences how we understand stress management by proposing that crisis periods not only heighten the risk of mental and physical health issues but also offer a unique chance to improve coping skills and mental well-being (Zotović, 2004, p. 6). Capacities for stress and recovery are defined, examined, and interpreted differently across various theoretical disciplines and approaches. The term "stress" is used in many contexts, making it difficult to provide a simple definition, as its meaning depends on the field it is associated with (Bienertova-Vasku et al., 2020). The difficulty in defining stress comes from its broad range of meanings in everyday language, where it is often used metaphorically rather than literally (Keil, 2004).

The imbalance caused by stress can offer an opportunity for recovery and growth in better circumstances, but it may also pose a risk of long-lasting psychological, social, and other harms. The probability of achieving positive or negative outcomes, however, depends on numerous factors, including the characteristics of the stress itself and the presence and balance of protective and risk factors (Pavićević, 2016). Currently, the imbalance caused by

stress can offer an opportunity for recovery and progress under better circumstances, but it may also lead to lasting psychological, social, and other harms. The distinction between positive and negative effects of stress shows that certain levels of stress can motivate, empower, and encourage a positive response. Conversely, stress can also result in psychological maladjustment (O'Donovan et al., 2013). In his medical practice, Selye observed that individuals respond differently to stress and distinguished between a positive reaction, called eustress, and an adverse reaction, termed distress (Selye, 1976). This spectrum of responses, ranging from beneficial to detrimental, led Selye to conclude that stress is more about how a person responds to an event than the event itself (Selye, 1977). His findings were supported by the clinical and social research conducted by Lennart Levi in Sweden, who found that differences in perception and emotional responses are crucial in determining how individuals react to stress (Szabo et al., 2012). Literature increasingly views coping as a mediator in the stress-response process, suggesting that stress alone does not directly cause various disorders. Instead, stress triggers coping behaviours, which are then associated with specific outcomes (Zotović & Petrović, 2011, p. 246). Aldwin (1994) argues that coping, more than stress itself, is the essential concept that enables us to understand both adaptation and maladaptation. It is not merely stress but how people respond to it that leads to different outcomes (Milanović & Memeti-Ademi, 2019, p. 44).

Although certain types and small amounts of stress may have potential benefits—a topic that remains open to debate—stress in everyday language generally signifies something negative that must be overcome (Keil, 2004). Its effects are mainly associated with negative emotions, with distress dominating as the primary concept in scientific literature. An analysis of Web of Science (WoS) conducted by Bienertova-Vasku and colleagues demonstrates this, showing that the term eustress appears markedly less often, with only 276 entries compared to 246,726 entries for distress (Bienertova-Vasku et al., 2020). Although stress itself is not a disease but rather a state (Regina et al., 2013), its consequences can lead to psychological problems and may contribute to the development of psychiatric disorders. Stress provokes emotional responses that start with arousal during the stressful event, and if the stress remains unresolved, it can escalate to anxiety, anger, discouragement, and depression (McVicar, 2003). Stress manifests as perceived pressure that exceeds an individual's perceived capacity to cope (Palmer et al., 2003).

Therefore, stress is a complex event or state that is not solely linked to an individual's psychological, emotional, or physiological response. The concept of stress includes circumstances, environment, reactions, and consequences, all of which can have broader social and political contexts, often overlooked in modern discussions of stress.

Without engaging in a detailed discourse analysis, it is useful to note Keil's observation that the term 'stress' sounds

appropriate when referring to administrative entanglements but appears out of place when discussing modern wars and ethnic conflicts. Keil remarks: "It would sound odd to say that ethnic cleansing caused stress for the victims" (Keil, 2004, p. 663). She concludes, "There is an implication, therefore, that stress is an individual event, rather than political or social, and also that it can be controlled or mitigated or decreased, and an industry has sprung up to do exactly this" (Keil, 2004, p. 663). This framing shifts responsibility onto individuals for circumstances beyond their control. Stress, like resilience, has thus become a popular term that aligns with corporate and neoliberal consumer demands (Walker & Cooper, 2011; Chandler, 2014; Hall & Lamont, 2013; Evans & Reid, 2014; Pavićević et al., 2019; Keil, 2004). The concepts of risk, stress, adaptation, resilience, and coping are elements of a broader management ideology. This ideology can be broadly defined as placing responsibility on individuals and recommending personal strategies for surviving overwhelming situations caused by much larger social and political forces.

By framing stress as either an opportunity or an adaptive ability that an individual may or may not possess, this perspective aligns with the belief that individuals are entirely responsible for their success or failure. After this brief overview of the different ideological uses and discursive meanings of stress in contemporary language, we return to its primary meaning: an adverse event that must be overcome.

Etymologically, the word cope (as in "She coped with the problem") derives from the Latin colpus, meaning a blow, via the French couper, which means to cut. Its primary meaning of hitting or cutting led to secondary senses of contending with and ultimately overcoming (Keil, 2004, p. 660). The term's scope is evident in its everyday and technical uses, where it acquires specific characteristics and connotations. Analysing the term "coping" in contemporary English, Keil highlights a resonance that contradicts its fundamental meaning, indicating a minimal level of success (Keil, 2004, p. 660). This implication arises from its reference to unfavourable, stressful, and difficult circumstances, which do not guarantee success or a positive outcome. Stress is a state linked to a higher likelihood of adverse outcomes, which can be avoided if an individual successfully adapts to and overcomes the stressful situation. Reactions to stressful, aversive, and unpleasant situations are key behavioural responses that enable successful adaptation to the environment when effective, or contribute to maladaptation when suboptimal (Međedović, 2024b).

Coping represents one possible reaction to stress. Although it can be discussed in cultural terms, there is limited research on understanding the impact of culture on coping (Tweed et al., 2004). Cultural practices shape perceptions and meanings of the concept of stress, as well as the ways and strategies individuals use to cope with stress. The reflexive process of attributing meaning to negative, challenging, and stressful life experiences is mediated by environmental factors, which Lazarus and Folkman (1984)

identified as central to their model of stress and coping. According to this framework, stress arises from the dynamic interaction between environmental demands and personal resources, while coping is how individuals manage that interaction (Lazarus & Folkman, 1984; Tweed et al., 2004). Lazarus and Folkman (1984) categorise coping strategies into problem-focused and emotion-focused strategies. Problem-focused coping involves actively confronting the source of stress, while emotion-focused coping pertains to managing the feelings caused by the stressor (Jelaš et al., 2014, p. 203).

Cultural differences shape how individuals cope, based on prevailing values. In some cultures, there may be a stronger tendency towards collectivist values that emphasise the importance of community and relationships. Conversely, individualistic cultures might prioritise personal autonomy and individual development. These differences influence how people select coping strategies and how they interpret and respond to stressful situations (Tweed, 2004). Recognising stressors often relates to cultural specifics (Masuda & Nisbett, 2001). Culture also affects coping strategies, particularly regarding internal and external control in managing stress (Li-Jun Ji, 2022). Internal control coping strategies can vary across cultures and might include behaviour modification, communication changes, or emotional adjustments to preserve harmony in relationships or improve adaptation to the environment (Tweed, 2004, p. 654). External control, as a coping approach based on managing the environment, emphasises individualistic and swift

responses to stress, characteristic of Western culture (Li-Jun Ji, 2022). Intercultural differences significantly influence the narrative of stress and coping, resulting in diverse behavioural patterns. Therefore, the cultural perspective is a key element in shaping how people experience anxiety and the dynamic interplay between the environment and personal resources (Lazarus & Folkman, 1984).

To better understand the relationship between stress and coping, it is important to explore how, why, when, and under what conditions various antecedent variables affect adaptive outcomes (Hudek-Knežević et al., 2005, p. 91). Recognising differences between individuals in similar situations requires examining the cognitive processes that occur between the encounter and the response, along with the factors that influence this mediation (Lazarus & Folkman, 1984, p. 23). In their seminal work, which we will discuss shortly, Lazarus and Folkman conceptualised coping as a four-step process. This interaction takes place between the individual and the environment and focuses on managing the demands placed on the individual. Coping involves cognitive and behavioural processes aimed at reducing the needs arising from the interaction between the individual and their environment (Lazarus & Folkman, 1984, as cited in Soleberg et al., 2021).

The dichotomy of coping seen in Lazarus and Folkman's framework—problem-focused and emotion-focused coping—represents just one of many contrasting strategies that have appeared in later literature. Ongoing debates about the key factors shaping coping styles and their classification into "super-strategies"

have continued since early research on coping. There remains disagreement regarding what determines coping, specifically whether coping is more influenced by the stressor, personality traits, or the combined effects of these factors (Žuljević & Gavrilov-Jerković, 2011, p. 36).

Furthermore, the distinction between theoretical and methodological approaches to coping is seen in the classification into psychodynamic approaches, which highlight the use of defence mechanisms; personality approaches, which concentrate on coping styles; and cognitive-behavioural models, which emphasise ecological demands and their impact on coping strategies (Aldwin & Yancura, 2004).

Before we proceed to describe various coping models, it is important to clarify the differences between the terms adaptation, defence mechanisms, and coping, which can often be ambiguous in everyday language. Coping is a specific form of an organism's adaptation to the external environment. It represents a broader concept that includes routine, sometimes automatic, ways of functioning, while coping explicitly indicates the presence of stress (Zotović, 2004, p. 8). As a broader concept, adaptation involves the ongoing and comprehensive interaction of the individual with their environment. In contrast, coping is limited to those forms of adaptation that involve stress, new responses, or specific efforts, often linked to distressing emotional reactions (Zotović, 2004).

The link between psychological and social adaptation, which is achieved through successful interaction with the environment,

and coping as a response to problems and crises, is reflected in the distinction between adaptive and maladaptive coping. Adaptive coping involves how individuals manage stress through personal growth, optimism, problem-solving, creativity, and flexibility. Maladaptive coping strategies may develop when stressors are overwhelming or prolonged, or when there has been trauma, neglect, or emotional invalidation during childhood (Brown & Bond, 2019).

In analysing the relationship between adaptation, appraisal, and the coping process, Lazarus and Folkman emphasise that regardless of how these concepts are defined or conceptualised, they significantly influence adaptive outcomes. The three main types of outcomes include functioning in work and social life, morale or life satisfaction, and somatic health (Lazarus & Folkman, 1984, p. 181). In simple terms, according to these authors, quality of life, along with mental and physical health, is closely connected to how individuals evaluate and cope with life's stresses.

Psychoanalytic research on individual adaptation relies on early studies of defence mechanisms, which are regarded as unconscious strategies to protect against anxiety. According to the APA (1994), seven primary types of defence mechanisms have been identified, arranged hierarchically from the most to the least severe. These include highly adaptive or "mature" mechanisms such as altruism, humour, sublimation, and repression (Aldwin & Yancura, 2004).

The fundamental difference between coping and defence mechanisms, as described by Cramer (2000), is that coping involves a conscious choice about how an individual will face stress and varies depending on the suitability of environmental demands. In contrast, defence mechanisms are unconscious reactions that are unintentional, dispositional, hierarchical, and often linked with pathology (Cramer, 2000, as cited in Aldwin & Yancura, 2004, p. 4). However, coping cannot be solely classified as a conscious process; it reflects a complex dynamic involving unconscious, semi-conscious, and conscious strategies (Aldwin, 2011, p. 21).

MODELS, STRATEGIES AND STYLES OF COPING

The complexity of coping models stems from an interaction of emotions, personal traits, and environmental influences. Cognitive theories describe coping as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141). Coping addresses demands perceived as challenging or threatening (Lazarus & Folkman, 1984) and involves modification or change (Keil, 2004), which can be either an adjustment to external factors or an internal adaptation to them (Folkman & Lazarus, 1980). In contrast to the transactional approach, which views coping as a dynamic response to stressors, the personality dimensions perspective (McCrae & Costa, 1986) characterises coping as an "epiphenomenon of personality," suggesting it does not play an independent role in explaining stress and adaptation.

If coping is seen as a dynamic interaction between personality traits and the environment, individuals may face the same external stressor but respond differently. Their unique traits shape these responses. Additionally, a person can react differently to various situations, depending on what each environment

requires (Greenaway et al., 2015). Some individuals have more fixed coping tendencies, while others can adapt their coping strategies. This highlights the complexity of defining coping in practice. Measurement models vary. Coping can be described in different ways—as an outcome, a process, behaviour, or set of strategies or styles influenced by traits and states (Brown & Bond, 2019).

Although these various approaches differ, definitions of coping should encompass efforts to manage stressful demands, regardless of their success. Moreover, a comprehensive review of coping should include both adaptive and maladaptive strategies (Greenaway et al., 2015) and differentiate the coping process itself from the outcomes it produces (Lazarus & Folkman, 1984).

Appraisal is crucial in managing stress (Lazarus & Folkman, 1984; Greenaway et al., 2015). People can respond to stress calmly or turbulently, and these reactions vary among individuals. How a person appraises a stressful situation influences their response. According to Lazarus's theory of stress and coping, there are two types of cognitive appraisals: primary and secondary. Primary appraisal concerns whether a situation affects a person's well-being, including harm, threat, and challenge. Secondary appraisal involves the person's assessment of their ability to cope with the situation. For secondary appraisal, the practical and psychological resources accessible to the individual are significant (Greenaway et al., 2015).

Coping Strategies and Models

Early coping models categorised strategies into emotion-focused and problem-focused types, which later inspired models distinguishing coping as cognitive- and emotion-focused forms (Lazarus & Folkman, 1984). These frameworks led to tools like the Ways of Coping Questionnaire (WCQ), while subsequent models introduced varying numbers of coping factors (Stanisławski, 2019). However, dichotomies—such as approach versus avoidance, active versus passive, proactive versus reactive, social versus solitary, and cognitive versus behavioural (Tang et al., 2016)—have been criticised for oversimplifying coping (Carver et al., 1989). Another key distinction is between situational (specific stressor) and dispositional (habitual method) coping (Bouchard et al., 2004). Critics point out that the interaction between cognitive and emotional responses creates conceptual ambiguities (Skinner et al., 2003). Research indicates that simple dichotomies do not fully capture the true complexity of coping, which is multidimensional (Carver et al., 1989).

Coping strategies are practical techniques that individuals use to manage stress. These methods may be cognitive (mental) or behavioural (action-based). Strategies can be categorised into broad types. Algorani & Gupta (2023) describe the primary coping strategies as follows:

1. *Problem-Focused Coping* – This strategy focuses on addressing the problem that causes stress. Examples include actively confronting the issue, planning solutions, refraining from impulsive reactions, and avoiding activities that hinder problem-solving.

2. *Emotion-Focused Coping* – This reduces negative emotions caused by the problem. Examples include positive reinterpretation, acceptance, spirituality or religion, and humour.

3. *Meaning-Focused Coping* – This strategy utilises cognitive methods to help individuals find meaning in a stressful situation, facilitating better coping.

4. *Social Coping (Seeking Support)* – This strategy involves asking for emotional or practical assistance from friends, family, or community resources to reduce stress.

Krohne (1993) proposed two overarching strategies for categorising coping techniques. Attentional focusing involves a coping method where individuals gather and process detailed information about a stressful event to regulate their response. Conversely, cognitive avoidance is a coping method where individuals intentionally divert their attention away from cues or reminders related to the stressful event (Milenović & Memeti-Ademi, 2018, p. 45).

Different coping strategies are effective in different situations. Some research suggests that problem-focused coping is more beneficial, whereas some strategies can lead to worse

outcomes. Maladaptive coping can damage mental health and worsen symptoms. Examples include withdrawal, problem avoidance, and emotional suppression.

Researchers often group coping strategies into broader coping styles, such as emotion-focused versus problem-focused or adaptive versus maladaptive coping (Brown & Bond, 2019). Early typologies include repression-sensitisation (Byrne, 1964), blunting-monitoring (Miller, 1980), and approach-avoidance (Roth & Cohen, 1986) (as cited in Aldwin, 2011, p. 21). Coping styles are personal tendencies that determine habitual responses to stress (Milenović & Memeti-Ademi, 2018, p. 45) and are sometimes referred to as dimensions.

Different types, strategies, and styles of coping are difficult to fit into pure theoretical and methodological models. In more than 80% of stress-coping cases, individuals switch between different styles and strategies (Lazarus, 1983). Coping styles are not always connected to the strategies used in every situation (Pateck et al., 2006). This indicates that people may have a main coping style, but their strategies can vary depending on the context. However, when examining the overall pattern of coping behaviour, styles can predict common coping strategies at a general level (Aldwin, 2011, p. 21).

Stanisławski (2019) outlines the main challenges for coping theorists and researchers. First, there is no consensus on the structure of coping mechanisms. Experts differ on how to define the main categories, making it difficult to integrate knowledge

(Skinner et al., 2003; Stanislawski, 2019). Second, external factors, such as mental health measures, must align with each specific model (Stanislawski, 2019). Third, coping inventories should include more positive emotional regulation. Coping also needs to be more closely connected to emotional regulation. Fourth, a gap exists between coping theory and practical application, as the foundations for interventions to improve coping skills remain unclear. Finally, the effectiveness of coping strategies depends on situational factors, such as controllability (see Stanislawski, 2019).

Coping – Age and Gender

The relationship between coping and age differences is debated, mainly focusing on the argument that age-related changes in coping are complex and not universally agreed upon. Some researchers maintain that there are no significant differences, while others propose a decline in coping as people age. Conversely, some observe an increase in coping abilities as individuals grow older (Aldwin, 2011, p. 24). Previous findings on these changes, drawn from adult populations, are generally categorised into developmental, contextual, or cohort conceptualisations (Maglica et al., 2001, p. 21).

Expanding on these developmental interpretations, a second approach offers a different perspective for understanding coping across the lifespan. Within this framework of contextual interpretations, cohort perspectives further improve our understanding of how coping develops over time. Moving from theoretical explanations to observed developmental trends, research on coping characteristics throughout the lifespan shows a recognisable developmental pattern in childhood, while changes in adulthood are more subtle (Aldwin, 2011, p. 24).

Turning to childhood and adolescence, research findings regarding age differences in coping within these groups remain uncertain. As individuals progress into adulthood, coping is often described as a shift in the balance between gains and losses,

emphasising ongoing changes in both stressors and resources throughout the lifespan (Uittenhove et al., 2023, p. 889).

When considering gender, the main argument is that empirical research on problem-focused coping produces mixed results. Some studies suggest men are more inclined towards direct action, while others report no differences or even indicate women prefer such strategies (Maglica et al., 2001, p. 26). Given this complexity, it is essential to recognise that gender influences not only stress and coping responses but also how stress is perceived, the coping strategies chosen, and the outcomes of these reactions (Barnett et al., 1987). Building on this, a significant body of research shows women tend to perceive more stress and encounter more stressful situations than men (Matud, 2004). Additionally, regardless of age, women are consistently found to utilise emotional coping strategies and benefit more from social support (see Maglica et al., 2001).

Results from a meta-analysis indicate that women are generally more likely than men to use strategies such as active coping, seeking social support, or relying on religion to manage stress (Tamres et al., 2002). The perception of stress and coping in relation to gender is based on two primary assumptions: gender-based socialisation differences (Barnett et al., 1987) and role constraints (Rosario et al., 1988). Matud explains that traditional female roles involve dependence, affiliation, emotional expressiveness, lack of assertiveness, and prioritising others' needs. In contrast, traditional male roles emphasise autonomy, self-confidence, assertiveness,

instrumentality, and goal orientation. These traits can hinder men from accepting and expressing feelings of vulnerability, incapacity, and fear. Conversely, these same traits may obstruct women from adopting a proactive, problem-solving approach (Matud, 2004).

The role constraint idea suggests that coping differences stem from the distinct roles and resources available to men and women (Rosario et al., 1988, as cited in Matud, 2004). Research using MANCOVA indicates that women employ more emotion-focused and less action-based coping strategies than men. Men tend to rely more on problem-solving. Women also report more physical symptoms and psychological issues resulting from stress, so they might require assistance with managing stress and adapting to the changing situations that cause it (Matud, 2004).

Taxonomy of Coping Models

The proliferation of coping categories and confusion over fundamental constructs create challenges in aggregating stressors, comparing results, and building consistent knowledge in coping research. Inconsistencies occur as researchers use different labels, leading to variations in definitions and operationalisation of coping styles. The numerous coping categories and confusion over key constructs complicate grouping stressors, comparing outcomes, and developing field knowledge (Skinner et al., 2003). When researchers employ different conceptual labels, it increases variability in defining coping styles (Brown & Bond, 2019). Skinner et al. note that over 100 coping systems reviewed used all different sets of categories, ranging from two or three to ten times more. There are over 400 unique category labels (Skinner et al., 2003, p. 216).

Building on Lazarus and Folkman's fundamental definition of coping as a dichotomy between problem-focused and emotion-focused approaches, later models vary in both the number and type of coping dimensions. For instance, the WCCL and WCQ highlight two broad coping strategies, whereas the COPE, CISS, and Coping Strategies Inventory each present unique sets of strategies and subscales. These include those targeting avoidance and cognitive restructuring, demonstrating how different models prioritise various aspects of coping behaviour.

Roger et al. (1984) proposed four coping dimensions: rational, distancing, emotional, and avoidant coping—a broader categorisation than Lazarus and Folkman's dichotomous approach. Compas et al. (2001) further refined this work, distinguishing coping as either approach-based (actively confronting stress) or avoidant (evading stress). Greenaway et al. (2015) expanded the range of measurement with six categories in the Coping Strategies Questionnaire, providing higher granularity. The Proactive Coping Inventory (PCI) (Greenglass & Schwarzer, 1998) offers a unique perspective by measuring anticipatory coping strategies, focusing on proactive rather than reactive responses to stress.

Carver et al. identified two main methods for creating coping instruments: theoretical and empirical (Carver et al., 1989; Solberg et al., 2021). The theoretical approach begins with hypothesised coping categories, while the empirical method records strategies used by groups after stress. Statistical analysis then identifies coping factors (Solberg et al., 2021).

The Coping Orientation to Problems Experienced (COPE) inventory was created to evaluate how individuals respond to stress, encompassing both situational and dispositional strategies (Carver et al., 1989). This tool consists of 60 items divided into 13 subscales: active coping, planning, suppression of competing activities, restraint, seeking instrumental social support, seeking emotional social support, positive reinterpretation, acceptance, denial, turning to religion, venting of emotions, behavioural disengagement, and mental disengagement. Because of the

extensive number of items and the time needed to complete the questionnaire, Carver (1997) devised a simplified version, the Brief COPE, which features 28 items across two scales. Its main aim is to measure how often different coping strategies are used in reaction to various stressors. The Brief COPE inventory excludes two scales from the full COPE (restraint coping and suppression of competing activities), reduces each subscale to two items, and introduces a new subscale (self-blame) (Solberg et al., 2021).

In Carver's (1997) classification, emotion-focused strategies comprise acceptance, emotional support, humour, positive reframing, and religion. Problem-focused strategies include active coping, instrumental support, and planning. Dysfunctional coping strategies encompass behavioural disengagement, denial, self-distraction, self-blame, substance use, and venting of emotions (Garcia et al., 2018).

The 14 subscales in the Brief COPE, each with two items, are:

Acceptance: Accepting reality or learning to live with it.

Emotional Support: Seeking comfort and understanding.

Humour: Making jokes about the situation or finding humour in it.

Positive Reframing: Trying to see the situation from a different perspective to make it seem more positive.

Religion: Finding comfort in religious or spiritual beliefs, prayer, or meditation.

Active Coping: Taking action to improve the situation.

Instrumental Support: Seeking help or advice from others.

Planning: Developing a strategy or thinking through steps to take.

Behavioural Disengagement: Giving up trying to cope.

Denial: Convincing oneself "this is not real."

Self-Distraction: Engaging in work or other activities to divert focus.

Self-Blame: Criticising or blaming oneself.

Substance Use: Using alcohol or drugs to feel better.

Venting: Expressing negative feelings (Garcia et al., 2018).

Stress of Imprisonment

Prison is a major source of stress, mainly because it causes a loss of freedom and interrupts daily routines. Managing this stress effectively is vital for inmates' mental health and adaptation (Međedović, 2024b). Sykes (1958) described the "pains of imprisonment" as the deprivation of freedom, goods, relationships, autonomy, and personal security, each of which reduces self-esteem and identity (Sykes, 1958, p. 68 as cited in Ilijjić, 2014). This paper argues that recognising and addressing these specific stressors is crucial for enhancing inmate well-being and promoting rehabilitation.

In modern contexts, as Foucault observed, punishment has shifted from physical pain to psychological suffering. He remarked that "the punishment of the soul has replaced the punishment of the body" (Foucault, 1977). A substantial body of psychiatric research links mental health disorders with criminal behaviour. Incarcerated individuals are significantly more likely than the general population to engage in self-harm, struggle with substance abuse, suffer from serious mental illnesses and personality disorders, and experience suicidal ideation (Kovács et al., 2019).

Studies consistently show that prison experiences worsen negative outcomes in economic, social, and health areas (Proter, 2018). Poor mental health functions both as a cause and a consequence of incarceration, demonstrating the cyclical nature of

imprisonment. Massoglia (2008) found that simply being imprisoned, regardless of the sentence length, has a significant impact on inmates' self-reported health.

The stress associated with entering prison can be regarded as an acute stressor. In contrast, the experience of incarceration is better understood as a chronic and cumulative stress condition. The initial stressor is the loss of freedom, followed by additional stressors such as the prison environment, overcrowding, and exposure to violence. Isolation from previous social networks, financial difficulties, divorce, and challenges in fulfilling parental responsibilities also contribute to the situation. Research indicates that the early phases of imprisonment are characterised by high stress levels, particularly among first-time inmates, which tend to diminish over time (Zamble & Porporino, 1988; Reitzel & Harju, 2000; Edwards & Potter, 2004; Kovács et al., 2019). Literature on prison stress further distinguishes between acute stressors, like the immediate impact of a physical assault, and chronic stressors, such as the ongoing fear of victimisation (Porter, 2018). Imprisonment is also viewed as involving both primary and secondary stressors that contribute to a broader process of stress proliferation (Pearlin et al., 1997, as cited in Porter, 2018). Primary stressors directly stem from the prison experience. In contrast, secondary stressors develop as long-term challenges after release, including stigmatisation, difficulties in securing employment or housing, and efforts to rebuild social relationships. These secondary stressors can be persistent, often lacking a clear

resolution, and demand effective coping strategies to reduce their long-lasting adverse effects on health (Porter, 2018).

Three main models explain inmate misconduct in research: importation, deprivation, and situational (Drury & DeLisi, 2008). Importation theory considers inmates' pre-existing traits and backgrounds as causes of mental health and behavioural issues (Irwin, 1970; Irwin & Cressey, 1962; Edwards & Potter, 2004). Deprivation theory, also known as the indigenous approach, attributes inmates' health and behavioural challenges to the prison environment (Sykes, 1958; Goffman, 1961).

Importation factors include socio-demographic traits such as age, marital status, and gender, along with prior criminal history and risk factors like previous incarcerations, gang associations, and substance abuse. Deprivation theory suggests that prison adaptation mainly depends on prison conditions. Overcrowding, isolation, and lack of autonomy are key elements (Zhao et al., 2020). Dye (2010) demonstrates that the prison environment causes human suffering. Risks involve victimisation by staff or inmates and feelings of insecurity, particularly for those with mental health issues or histories of violence. Goffman (1961) points out that loss of identity and changes in self-perception are major stressors. Clemmer (1940) explains that inmates suffer by assuming inferior roles and adjusting to strict prison rules, often leading to passivity regarding their needs.

Beyond the formal structure of prisons, Clemmer also recognised the existence of a hidden prison community that

functions alongside the official organisational framework (Clemmer, 1940). The prison environment is influenced by certain habits and behaviours. These include a heavy reliance on external structures and routines, a tough exterior that prevents the expression of vulnerability, and widespread mistrust stemming from fear of exploitation. There is also a tendency to respond aggressively to even minor provocations (Haney, 2012, p. 7, as cited in Crewe, 2024, p. 1083).

The situational model views misconduct as resulting from the combination of when, where, and with whom events occur (Jiang & Fisher-Giorlando, 2002, as cited in Hall, 2014, p. 18). Collectively, these three models explain why behavioural problems happen in prison. When inmates' characteristics combine with prison deprivation and stress, delinquent behaviour is more likely (Hall, 2014, p. 19).

A shift in identity masks accompanies the destruction of the self, such as macho, violent, and criminal identities.[1] These masks may start as temporary but can become permanent, damaging the inmate's self-concept (Goffman, 1969). The stress of imprisonment has been linked to inmates' experiences of moral emotions, including guilt, remorse, and regret (Kroll & Egan, 2004). Shame, guilt, embarrassment, and pride serve as an emotional moral barometer, providing immediate and significant feedback about our

[1] The fragmented and non-essential nature of the core identity (personality) in Goffman's concept of the multiplicity of the self stems from the numerous and transient roles that develop within the continuum of social interactions and changing contexts (Goffman, 1969, as cited in Pavićević et al., 2021, p. 118).

social and moral standing (Tangney, 2007, p. 347). The dynamics of moral emotions like shame and guilt, particularly when associated with criminal acts, are crucial for inmates' mental health and coping strategies (Kovács et al., 2019).

One of the main limitations of the deprivation model is its failure to explain why inmates experience both maladaptation and adaptation within the same prison environment. The importation theory completely overlooks the effects of deprivation (Dye, 2010). The shortcomings of both models have led to the development of combined theoretical frameworks (Thomas & Petersen, 1977; Thomas et al., 1978). Dhami and colleagues (2007) highlight research examples that draw on both the importation and deprivation models. In these cases, factors from both theories serve as strong predictors of individual behaviours and various prison events. However, neither model alone is sufficient to predict outcomes within its own domain. Measures from the importation approach proved to be stronger predictors of rule violations than those from the deprivation model. Integrated or mixed-model approaches that incorporate both importation and deprivation factors may offer better predictive power for certain maladaptive behaviours in prison (Dhami et al., 2007). Focusing on individual characteristics—such as gender, age, education, economic status, and mental health—and the prison environment could provide a more comprehensive understanding.

Research into prison life, especially suicides, often looks at both individual traits (like gender, age, education, economic status,

and mental health) and the prison environment (such as deprivation, social isolation, and interactions with staff) (Dye, 2010; Favril et al., 2017; Liebling & Ludlow, 2016; Marzano, 2010). Social deprivation and poor health are well-known risk factors for suicidal behaviour. These vulnerabilities increase the chance of criminal responsibility and, because they are common among inmates, help explain the high rates of suicidal thoughts and actions in prisons (Favril, 2021). Suicide results from a combination of imported and prison-related factors, with mental illnesses being explained similarly. Incarceration can worsen pre-existing disadvantages, raising mental health risks for some inmates but not others. Dear (2006) demonstrates how the interaction of imported and situational factors leads to varied outcomes among inmates in his study on prison suicides.

ADAPTATION TO THE PRISON ENVIRONMENT

Adaptation to prison life is successful when an inmate follows rules (i.e., avoids disciplinary violations) and maintains stable psychological health (e.g., no depression, anxiety, insomnia, or somatisation) (Heigel et al., 2010, as cited in Kovács et al., 2019). However, these definitions often overlook the perspectives of the inmates. Most research concentrates on prison administrators and their views on adaptation (Leigyu, 2015). Administrators usually define adaptation as inmates adhering to rules and not drawing attention or causing disruption (Willis & Zaitlow, 2015, as cited in Taglianetti, 2022).

Adapting to imprisonment is almost always painful and frequently results in dysfunctional thinking and behaviour (Dhami, 2015). Adaptation involves coping strategies and personal perspectives, influencing whether an inmate accepts or rejects a criminal identity (Porporino & Zamble, 1984).

Adaptation, adjustment, accommodation, assimilation, and coping are closely related but not interchangeable. In prison, these terms describe ways individuals respond to the significantly changed environment. Broadly, adaptation covers coping with

stress, either successfully (adaptive) or not (maladaptive). The word adaptation originates from Latin and means adjustment, modification, or reconfiguration. Adaptable describes someone or something that is flexible, applicable, or usable (Uzelac et al., 2008).

Various theories of adaptation to prison focus on the psychological and identity changes inmates experience, viewing adaptation as a process with different aspects. Clemmer (1940) coined "prisonization" to describe adaptation that promotes behaviours contrary to social standards. Deprivation theory considers adaptive mechanisms as responses to deprivation, resulting in a prison subculture that inmates adopt, reflecting suffering caused by imprisonment and rooted in the prison structure (Brent et al., 2016). Alternatively, other perspectives argue that the prison subculture mirrors the values, norms, and beliefs inmates bring with them, which can outweigh the effects of prisonization (Ilijić, 2012, p. 233).

The subjective experiences of inmates best reveal how they adapt, develop, and what results (Porporino & Zamble, 1984). Crewe and colleagues (2017) studied inmate adaptation to prison over time. Crewe described adaptation as a shift from reactive to productive adjustment, organised in stages. These stages are adjusting to the sentence, reclaiming control, building autonomy, and taking responsibility for the offence (Crewe, 2016). Taking responsibility gives inmates purpose, promoting growth, education, and the wish to contribute to society (Crewe, 2020).

Coping strategies support adaptation and depend on the quality of prison life at different levels (Pavićević et al., 2024).

This transition involved developing a new sense of self—often motivated by a desire to demonstrate a personal ethic—which made the sentence 'constructive' and helped inmates find purpose and meaning in life. Faith and spirituality often supported this process. Most inmates believed they 'matured' during their sentence, particularly in terms of anger management and tolerance. However, they also felt that time 'out there' had stopped once the sentence started, believing they missed key developmental life events and years of 'life-building' (Crewe, 2019).

Understanding prison life through the lens of social and moral climate emphasises the quality of human interactions, especially between staff and inmates. If staff authority, which is necessary for maintaining order, is perceived as fair, consistent, and legitimate by inmates, it enhances discipline and well-being (Liebling, 2011). Humane treatment fosters trust and alleviates negative emotions. Simultaneously, social support from staff is a vital predictor of successful adaptation, mental health, and positive outcomes in inmates' identity transformation (Liebling, 2011; Ilijić et al., 2024).

DEVELOPMENT OF A MODERN INSTRUMENT FOR MEASURING THE QUALITY OF PRISON LIFE

The changing societal attitudes towards sentencing in the 1980s led to a clear shift within prison systems, moving from a focus on rehabilitation to more practical management aims, such as maintaining order and security. This change redefined how the quality of prison life was assessed, often ignoring the experiences and perceptions of inmates (Liebling, Hulley, & Crewe, 2012, p. 358).

This new focus prioritised measurable, operational concepts while neglecting the lived experiences of inmates, which hindered real progress in assessing the quality of prison life. Conceptual limitations in existing methods restricted genuine improvements.

Efforts to empirically represent prison life increasingly emphasised the importance of personal experience and perception, challenging narrow managerial frameworks. Highlighting humanistic values is essential for truly understanding the quality of prison life (Liebling, 2004).

Research at the Cambridge University Prisons Research Centre (MQPL) directly tackled these issues by assessing the

quality of prison life to answer fundamental questions about the nature, effects, and management of prisons. Longitudinal studies (2001–2011) focused on developing a framework that genuinely reflects the social realities and meaningful differences between prisons (Liebling, Hulley, & Crewe, 2012).

The foundational MQPL study examined everyday prison life through observation and in-depth interviews across five prisons. This innovative, multidimensional approach focused on what matters most to inmates, showing that the most meaningful experiences are not always easy to measure.

The study aimed to discover what genuinely matters to inmates using Appreciative Inquiry (AI), a method designed to identify positive influences and challenging aspects of prison life. This qualitative approach revealed the key elements needed to accurately assess prison quality from the perspective of those experiencing it.

This study identified agreement on key but challenging-to-measure aspects such as "respect," "humanity," and "trust." These results then directed quantitative assessment, emphasising that an accurate evaluation of prison life quality must focus on elements considered most vital by inmates (Liebling & Arnold, 2004).

The second phase of the research translated these dimensions into detailed surveys, maintaining the meaning from the original qualitative work. This method enabled precise measurement of moral aspects shaping prison quality, resulting in a

tool that assesses internal legitimacy from the inmate's perspective.

The social-scientific and ideological orientation underpinning the development of this research is one of its key features. The commitment to studying the nature of phenomena and their deep, qualitative origins enables an understanding of the "validity of the face" (staff and inmates), recognising outcomes and achieving reasonable performance in explanations. This approach allows for the use of results in statistical explanations of differences in suicide rates, well-being levels, personal development experiences, and risks of disorders (Liebling, 2012; according to Ilijić et al., 2022, p. 82). Thoughtfully operationalised concepts from the ground up are more likely to yield meaningful results—mature quantitative data—compared to arbitrary theories about life and prison quality that mainly interest policymakers. Therefore, "difficult-to-measure" qualitative and moral aspects of prison life are often absent from existing data and performance assessments. These aspects are key differences between prisons, as well as between and within the public and private sectors (Johnsen et al., 2011; Liebling, 2012, p. 4).

MQPL Measuring the Quality of Prison Life

The foundational instrument used in the research is MQPL (Measuring the Quality of Prison Life) (Liebling et al., 2012), which was developed to assess the prison social climate (Međedović et al., 2024). The studies on the quality of prison life or "moral performance" aimed to establish a conceptual and methodological basis for understanding prison life (Liebling, 2014; Ilijić et al., 2020), that is, "to answer questions about the nature, quality, management, and effects of prisons by measuring the quality of life within them" (Pavićević et al., 2024, p. 153).

The adapted version of MQPL in Serbian (Milićević et al., 2024; Međedović et al., 2024; Milićević et al., 2023) comprises 127 items related to inmates' experiences of prison life, assessed on a five-point Likert scale (1 = strongly agree, 3 = neither agree nor disagree, 5 = strongly disagree) and one question evaluating the overall quality of life in prison (with 1 = the lowest rating; 10 = the highest rating). The questionnaire includes 72 items formulated positively (where agreement indicates a positive response, e.g., "I feel safe because I know that I will not be injured or abused in this prison, nor will any staff member threaten me."), and 55 items formulated negatively (where agreement indicates a negative attitude, e.g., "The planned activities in this prison are not respected."). During scoring, the ratings were transformed into

positive ones to ensure that higher agreement levels correspond to more positive responses (Ilijić et al., 2024).

The items are organised into 21 dimensions, which are thematically grouped into five higher-order scales: Harmony (54 items), Professionalism (28 items), Security (22 items), Conditions and Family Contact (7 items), and Well-being, Welfare, and Development (19 items). In the analysis, the average results for each subdimension (Međedović et al., 2024) and for the entire category were calculated. Higher scores indicate better quality of prison life, while lower scores suggest a less favourable assessment of a particular aspect of prison life (Ilijić et al., 2024). The original English version of MQPL and the adapted Serbian version of the Prison Life Quality Measurement Questionnaire demonstrate good psychometric properties, with reliability ranging from 0.56 to 0.97 (Međedović et al., 2024; Liebling et al., 2012).

The dimensions of ***harmony*** examined the following aspects of prison life:

Arrival at the prison: This involves feelings and experiences related to the treatment during the arrival process (example item: "When I arrived at this prison, I felt that all staff members were taking good care of me").

Respect/courtesy: This refers to a positive, polite, and courteous attitude of the staff towards inmates (example item: "Most of the staff address and speak to me with respect").

Staff-inmate relationship: This dimension assesses the reciprocal relationships between staff and inmates, characterised by trust, fairness, and support (example item: "Staff in this prison frequently show sincerity and consistency").

Humanity: This describes an environment marked by respect and care, where the values and dignity of individuals are acknowledged (example item: "In this prison, I am treated as a person of worth").

Decency: This assesses how reasonable and appropriate the staff and prison regime are (example item: "In this prison, I can be myself and relaxed around staff").

Care for vulnerable groups: This involves the care and support given to inmates at risk of self-harm, suicide, or abuse (example item: "In this prison, anyone on enhanced supervision due to potential self-harm receives the care and assistance they need from staff").

Help and support: This aspect covers the assistance and encouragement provided to inmates experiencing health issues, addiction challenges, or treatment progress (example item: "Anyone who has a drug problem, upon arriving at this prison, receives the necessary help for safe detoxification").

The Professionalism dimension covers various elements of prison life, such as:

Staff Professionalism: This pertains to the expertise and confidence of staff members in exercising authority (example item:

"The staff in this prison have enough experience and expertise to deal with the issues that are important to me").

Bureaucratic legitimacy: This mainly reflects the transparency of prison operations and the system's willingness to respond to and morally consider the individual (example item: "When important decisions about me are made in this prison, I am treated as a person, not as a number").

Fairness: This relates to the perceived impartiality, proportionality, and legality of disciplinary punishments and procedures (example item: "My legal rights as an inmate are respected in this prison").

Organisation and consistency: This aspect relates to the predictability, clarity, and reliability of the prison system (example item: "In this prison, you never know where you stand").

The Security dimension also includes several subdimensions, such as:

Policing and security: This includes professional supervision and management of the prison setting (example item: "Staff respond quickly to incidents and alarms in this prison").

Prisoner safety: This relates to the personal feeling of security and being protected from harm, threats, or any danger (example item: "I have no issues with other inmates here").

Prisoner adaptation: This refers to the pressure or need that inmates feel to engage with informal groups within the prison

(example item: "It is hard for me to avoid getting into debt in this prison").

Drugs and abuse: This pertains to the use of drugs, misuse, and victimisation within the prison environment (example item: "Drugs cause many problems between inmates here").

The conditions of life in prison and family contact encompass specific physical aspects within the prison, such as accommodation, hygiene, nutrition, and healthcare, as well as opportunities for maintaining contact with family through visits.

Conditions: This refers to the assessment of the physical environment within the prison, specifically how adequate the living conditions are (e.g., "This prison provides adequate conditions for me to maintain my physical appearance").

Family contact: This pertains to the opportunities for maintaining family relationships (example item: "I can receive visits in this prison frequently enough").

The Well-being and Development dimension includes several subscales, such as:

Personal development: This describes the environment that supports inmates in developing their potential, overcoming criminal behaviour, and preparing properly for release (example item: "In this prison, all staff members make efforts to help inmates refrain from committing crimes after release").

Personal autonomy: This reflects inmates' feelings about their personal autonomy and self-determination. This subdimension "reflects the perceived ability of inmates to make choices, have autonomy, and maintain some level of control over their circumstances" (Ilijić et al., 2024, p. 53) (example item: "The regime in this prison allows me to think for myself").

Well-being: This refers to the suffering caused by imprisonment, including feelings of pain, punishment, and tension experienced by inmates (example item: "The time spent in this prison feels largely like a punishment").

Distress: This describes the personal sensation of intense inner turmoil (example item: "I have thought about suicide in this prison").

BRIEF COPE INVENTORY AND ITS UNDERLYING STRUCTURE

The COPE inventory (Carver, 1997; Carver et al., 1989) is a widely used self-report tool for assessing coping strategies. Much of the research discussed in this publication is based on data from the COPE and Brief COPE inventories. The COPE has 60 items; the Brief COPE is a shorter, 28-item version. The COPE model identifies 14 coping mechanisms that individuals use to manage stress: active coping, planning, instrumental support, emotional support, venting, behavioural disengagement, self-distraction, self-blame, positive reframing, humour, denial, acceptance, religion, and substance use. Its main advantage is its comprehensiveness, as it covers a broad range of responses to stressful stimuli. The COPE is organised hierarchically. These fourteen indicators are seen as expressions of three broader coping strategies: problem-focused coping (including active coping, seeking informational support, planning, and positive reframing), emotion-focused coping (including venting, seeking emotional support, humour, acceptance, self-blame, and religion), and avoidant coping (including self-distraction, denial, substance use, and behavioural disengagement).

However, empirical results often do not support this. The expected factor structure is rarely found in practice. A review of principal components, exploratory, and confirmatory factor

analyses on the Brief COPE reveals a wide variety of factor solutions. Researchers have identified between 2 and 15 factors from the Brief COPE indicators. Most studies report two or three latent components (Solberg et al., 2022). These results imply that the Brief COPE exhibits a somewhat unstable factor structure. Even bifactor modelling, which generally provides a better fit because the general factor accounts for more variation, did not yield satisfactory fit indices for the Brief COPE's latent structure (Rodrigues et al., 2022).

Results in prisoner populations support this perspective. For example, a Serbian study identified three factors: adaptive, social-support coping, and maladaptive coping (Međedović, 2024b). A study on US female prisoners discovered four factors: positive coping, support, negative coping, and escapism (Celinska et al., 2022). In a mixed-gender incarcerated Canadian sample, researchers identified eight factors: support seeking, acceptance, disengagement, active coping, substance use, humour, religion, and self-blame (Power et al., 2021). The authors did not perform a second-order factor analysis, although correlations between these eight mechanisms suggest that fewer second-order factors may be possible. None of these solutions matched the structure originally proposed by the inventory's creators.

Another intriguing question concerns the coping strategies measured by the Brief COPE. Several studies have observed positive correlations between adaptive and maladaptive coping mechanisms. This includes links between problem-solving,

emotion-focused, and avoidant or disengaged coping strategies (Cramer et al., 2020; Međedović, 2024b; Sarid et al., 2025; Simpson et al., 2025; Shukri et al., 2024). One might anticipate negative correlations between adaptive and maladaptive approaches, as they represent opposing responses to stress. However, it is also possible that individuals utilise both adaptive and maladaptive coping strategies. How frequently they employ each influence the overall adaptiveness of their behaviour. Therefore, positive correlations may occur simply because some people use many coping strategies while others rely on a few. This pattern could produce positive associations between different styles, both adaptive and maladaptive. This raises an additional question about adaptiveness: are those who utilise both adaptive and maladaptive coping better adapted because they exert more effort to manage adversity? Alternatively, are individuals who employ fewer coping mechanisms more resilient and therefore more adaptive, perhaps because they require less active coping?

Coping and basic personality traits

Coping behaviour is triggered by stressful environmental factors. However, it is reasonable to assume that responses to stress are relatively similar across individuals. Therefore, we can view coping behaviour as an expression of personal traits. Connecting coping behaviour with basic personality traits can give deeper psychological insight and context. This helps us better understand coping mechanisms. One of the most well-known classifications of major personality traits is called the Big Five (Goldberg, 1990). A common operationalisation of this model is known as the Five Factor Model (Costa & McCrae, 2000). This taxonomy describes general personality traits through five broad domains: Extraversion (sociability, gregariousness, activity, and positive emotions), Neuroticism (tendency to experience negative emotions such as anxiety, depressiveness, hostility, followed by emotional instability), Openness to experience (curiosity, imagination, aesthetic appreciation, and adventurousness), Agreeableness (flexibility, patience, care, and emotional empathy), and Conscientiousness (high achievement motivation, orderliness, self-discipline, and deliberation).

We will rely on two primary sources to describe the links between coping and Big Five personality traits. In their meta-analysis, Connor-Smith & Flachsbart (2007) developed a taxonomy of coping behaviours. They identified the following categories:

Primary Control (problem solving, instrumental social support, emotional social support, mixed social support, and emotion regulation), Secondary Control (distraction, cognitive restructuring, and acceptance), Disengagement (avoidance, denial, wishful thinking, and withdrawal), and Miscellaneous (mixed emotion focus, negative emotion focus, religious coping, and substance use). They conducted meta-analyses with 2,653 effect sizes from 165 samples and 33,094 participants, reporting meta-analytic correlations between personality traits and these coping behaviours. More recently, Guadalupe and DeShong (2025) carried out a qualitative review of the associations between personality and three broad coping strategies. These strategies align with the Brief COPE taxonomy: positive coping, emotion-focused coping, and avoidant coping. The combined results of these two studies are presented in Table A.

Table A

Associations between Big Five personality traits and coping styles

Connor-Smith & Flachsbart, 2007:		N	E	O	A	C
Primary Control	Problem solving	-0.13*	0.20*	0.14*	0.09*	0.30*
	Instrumental social support	0.03	0.22*	0.06*	0.08*	0.08*
	Emotional social support	0.11*	0.25*	0.08*	0.12*	0.06
	Mixed social support	-0.01	0.24*	0.06*	0.11*	0.09
	Emotion regulation	0.00	0.03	0.06*	0.01	0.08*
Secondary control	Distraction	0.17*	0.09*	0.05	-0.05	-0.07
	Cognitive restructuring	-0.16*	0.22*	0.15*	0.14*	0.20*
	Acceptance	-0.10*	0.02	0.07	0.08*	0.07
Disengagement	Avoidance	0.13	-0.04	-0.05	/	/
	Denial	0.18*	-0.02	-0.07	-0.12*	-0.17*
	Wishful thinking	0.35*	-0.03	0.11	/	/
	Withdrawal	0.29*	-0.05	0.10*	0.08	0.01
Miscellaneous	Mixed emotion focus	0.22*	0.08	0.10	-0.09*	-0.13*
	Negative emotion focus	0.41*	-0.05	0.03	-0.09*	-0.14*
	Religious coping	0.01	0.02	-0.12*	0.12*	0.09*
	Substance use	0.28*	-0.04	0.04	-0.18*	-0.18*
Guadalupe & DeShong, 2025:						
Problem-focused	Positive associations	0	10	10	5	15
	Negative associations	7	0	0	1	0
Emotion-focused	Positive associations	10	5	2	3	2
	Negative associations	2	1	1	4	6
Avoidant	Positive associations	0	1	0	0	0
	Negative associations	3	4	4	3	3

Notes: * - significant meta-analytic effects (confidence intervals that do not overlap zero). The number of studies that found positive or negative effects is shown for Problem-focused, Emotion-focused, and Avoidant coping in the lower part of the table.

The findings from these two studies are consistent. Conscientiousness exhibits the most adaptive coping: it encourages problem-solving and cognitive restructuring, with less denial, negative emotions, and substance use. Agreeableness is similar but weaker, demonstrating problem-focused coping, cognitive restructuring, acceptance, and fewer negative emotions and less substance use. Unlike Conscientiousness, Agreeableness also utilises social support. Extraversion supports adaptive coping by fostering problem-focused strategies, cognitive restructuring, and seeking social support. Openness exhibits the same but weaker pattern. Neuroticism mainly results in maladaptive coping: it is associated with less problem-solving, cognitive restructuring, and acceptance, and with more disengagement, such as denial, wishful thinking, withdrawal, negative emotions, and higher substance use.

The connections between personality and coping are well established. Personality traits reflect individual differences in stress responses and can either facilitate or hinder reactions to stress, as well as tendencies to seek or avoid stressful situations. Personality and coping likely share temperamental dispositions, approach-avoidance motivations, and attentional mechanisms (Carver & Connor-Smith, 2010). Key mechanisms include:

1) Stronger attention, executive function, and behavioural control support problem-solving in Conscientiousness.

2) Agreeableness involves large social networks and non-antagonistic interactions, making social support a key strategy for those high in this trait.

3) Positive affectivity and approach motivation enable extraverts to use cognitive and social skills to manage stress.

4) Reward sensitivity and curiosity facilitate problem-solving in those high in Openness.

5) High stress vulnerability and frequent negative emotions lead to poor emotional coping in Neuroticism and may hinder cognitive efforts, causing withdrawal and avoidance.

Thus, personality traits offer valuable insights into the psychological foundations of coping. Nonetheless, the links between personality and coping styles are modest, leaving room for other individual, environmental, and situational factors to influence coping behaviour.

Coping, depression, self-esteem, aggression and quality of life

We have chosen to describe the relationships between coping mechanisms and several personal characteristics that are important for adaptation within prison environments. These include depression, self-esteem, aggression, and quality of life (or well-being). We selected these behavioural traits because they serve as valid indicators of adaptation to penitentiary settings. Higher levels of depression, aggressiveness, and violence, along with lower self-esteem and quality of life in prison, can negatively impact adaptive functioning during the sentence in various ways. This approach allows us to achieve two aims: first, to gain a deeper understanding of the nomological network of coping styles; and second, to provide a more detailed picture of the psychological mechanisms related to adaptation to imprisonment. Self-esteem is defined as an assessment of oneself. It can be applied across various personal domains and traits, and generally ranges from positive to negative. The latter is associated with poorer psychosocial health (Rosenberg, 1965).

Therefore, in this section, we discuss the relationships between coping and these psychological traits. Note that most of the cited research has not been conducted in prison settings. Instead, it is based on specific groups, such as patients with terminal illnesses, individuals in high-stress jobs, pregnant or

postpartum women, and those recovering from trauma. As a result, it remains uncertain whether the findings can be applied to prisoners. Nonetheless, this research provides an opportunity to identify common links between coping strategies and behavioural traits that could be relevant across different contexts.

Coping and depression

Most studies found that maladaptive coping is positively linked with depressive symptoms. Some exceptions exist, often due to methodological issues like small sample size. For example, Cooper & Livingston (1991) found no association between coping styles and depression in a sample of 50 male prisoners. Still, they observed positive correlations between depression, wishful thinking, and escapism—coping mechanisms that suggest adjustment difficulties. Emotion-focused coping can increase post-traumatic stress following imprisonment; this was seen in Palestinian political prisoners in Israeli prisons. Problem-focused coping can also be associated with certain aspects of post-traumatic stress (Kanninen et al., 2002). Negative cognitive reframing, anger, and blaming others are more common among youth in Quebec's juvenile justice system and child welfare services who experience suicidal ideation (Chagnon, 2007).

Talking with friends and parents (i.e., social interaction-associated coping), along with introspection related to emotional regulation, was linked to lower depression; conversely, negative self-talk, self-blame, and substance abuse were associated with higher depression levels in a sample of teachers (Ghasemi, 2022). Disengagement coping strategies, such as self-blame and self-distraction, are the most prominent predictors of psychological distress in prospective research designs (two-year follow-up) as

well (Nielsen & Knardahl, 2014). Adaptive coping and coping efficacy can also act as protectors against post-traumatic stress and depression following severe trauma from natural disasters (Wadsworth et al., 2009). Higher maladaptive coping, coupled with lower use of adaptive mechanisms (including problem- and emotion-focused coping), has been observed in infertile Indian women experiencing depressive and anxiety symptoms (Dadhwal et al., 2022). Problem-focused engagement is not only negatively associated with depression but also with anxiety and overall stress levels; the opposite is true for emotion-focused disengagement (using emotions to avoid stressors: Fernandes & Panwar, 2024). Similarly, maladaptive coping measured by the brief COPE inventory is positively related to anxiety, stress, and depression among low-income Malaysian participants (Shukri et al., 2024).

The most valuable studies investigate how environmental stressors and psychological responses together contribute to depression. Calvete et al. (2007) examined whether maladaptive cognitive schemas and disengagement coping—such as avoidance, denial, or wishful thinking (Connor-Smith et al., 2000)—serve as mediators between intimate partner violence and depressive symptoms. Their findings revealed that physical abuse in relationships resulted in cognitive schemas of disconnection and rejection, including beliefs about abandonment, abuse, defectiveness, and emotional deprivation (Young & Brown, 1994). Disengagement coping partially mediated the relationship between these schemas and depression.

Avoidant coping mediates the connection between maladaptive perfectionism and depression. Similarly, low avoidant coping explains the negative relationship between adaptive perfectionism (non-neurotic high achievement motivation) and depression (Noble et al., 2014). Behavioural disengagement increases self-critical perfectionism and depressive symptoms. Six months later, problem-focused coping is associated with positive emotional states in depressive patients (Richard et al., 2021). Avoidant coping fully mediates the relationship between substance use, specifically cannabis, and depression in men (Villanueva-Blasco et al., 2025). For moderate to heavy alcohol use, depression predicts alcohol consumption, with avoidant coping acting as a mediator (Bondarchuk et al., 2025). Overall, these findings suggest maladaptive coping strengthens the link between substance misuse and depression. Substance use itself, such as alcohol, can also serve as a maladaptive coping strategy that predicts higher depressive symptoms (Magee & Connell, 2021).

Coping may lessen the relationship between stressful events and depression. Cyberbullying victimisation is linked to higher depression only in individuals with low approach coping, such as problem solving and seeking social support (Kochenderfer-Ladd & Skinner, 2002). This link is much weaker when approach coping is high (Ho et al., 2023). Social support has a role: the mediating effect of avoidant coping between cyberbullying and depression is stronger with low social support. High support from family, friends, or others buffers this mediating role (Nguyen et al., 2025).

Maladaptive coping is important for connecting depression-related stress and suicidal ideation; with adaptive coping, the link between stress and suicidal thoughts may be cut (Xu et al., 2025). Another moderating effect of coping occurs in sexual and gender minority young adults (Lin et al., 2025). Problem-focused coping protects against depression arising from gender identity stigma. Avoidant coping, on the other hand, makes the connection between discrimination and predicted depression stronger.

Some studies investigate developmental patterns that connect coping styles and depression. Several highlight the comorbidity of maladaptive coping, conduct disorder, oppositional defiant disorder, and disruptive disorder in children as multiple risk factors for later depression (Reich & Schatzberg, 2023). Parental verbal abuse is associated not only with anxiety and depression in children but also with more emotion-focused coping and less task-oriented coping (Aleem & Naz, 2025). Childhood maltreatment has both a direct effect on maladaptive coping and an indirect effect through lower resilience and higher impulsivity in youth with major depressive disorder. These associations are not observed in healthy controls (Zhou et al., 2025). Childhood unpredictability—such as inconsistent parental behaviour—contributes to depression in college students in two ways: firstly, by increasing immature coping mechanisms (self-blame, fantasy, retreat, and rationalisation); and secondly, by reducing mature coping strategies (problem-solving and help-seeking), which lowers resilience and increases depression risk (Ye et al., 2024).

In summary, the evidence is clear: depression is associated with more maladaptive and fewer adaptive coping behaviours. As a result, coping styles are incorporated into counselling and therapeutic programmes for depression. A psychoeducational programme in Malaysian women reduced depressive and anxious symptoms and increased both problem-focused and emotion-focused coping. However, this study did not examine whether adaptive coping mediated the intervention's effects (Ali et al., 2025). Other research provides more substantial evidence. In cognitive therapy, greater self-reliance and less escape coping predicted larger reductions in depressive symptoms (Renaud et al., 2014). Peer intervention in older adults showed that adaptive coping mediated the decrease in depression, both immediately and after 12 months (Hui Joo et al., 2025). Therefore, adaptive coping is not merely a risk factor for depression. Practising and strengthening adaptive coping can reduce depression and enhance psychological well-being.

Coping and self-esteem

The existing data generally confirm that higher self-esteem is associated with adaptive coping strategies, while lower self-esteem relates to maladaptive coping. For instance, Australian students with higher self-esteem employ proactive coping, whereas those with lower self-esteem tend to avoid coping strategies (Lo, 2002). Highly stressful situations, such as high-risk pregnancies, can reduce both coping ability and self-esteem (Williamson et al., 2023). Children with idiopathic scoliosis who employ emotion-focused coping (such as wishful thinking or blaming others) tend to have lower self-esteem (Beka et al., 2006). Cross-cultural findings indicate that maladaptive coping and low self-esteem can predict problematic Internet use, although the relationship varies across countries (Laconi et al., 2025; Spada, 2014).

Coping mechanisms can influence the relationship between self-esteem and dysfunctional behaviours. For example, higher self-esteem reduces non-medical prescription drug use through adaptive coping, while maladaptive coping explains the link between low self-esteem and increased substance use (Tam et al., 2020). Task-oriented coping, such as problem solving and seeking social support, is positively related to self-esteem, and both mediate the protective effect of adaptive perfectionism against school burnout. Conversely, emotion-oriented coping and low self-esteem connect maladaptive perfectionism to burnout (Luo et

al., 2016). Adaptive coping and high self-esteem also promote happiness, as observed in Taiwanese students, where self-esteem and resilience mediate the relationship between humour-based coping and subjective happiness (Liao et al., 2025).

Longitudinal studies in Chinese adolescents demonstrate that self-esteem and adaptive coping mutually reinforce each other over time (Li et al., 2023). Annual assessments over three years show that higher self-esteem predicts future adaptive coping and vice versa, indicating personality stability. In Chinese children, initial self-esteem forecasts later adaptive coping, especially problem solving, which in turn predicts subsequent self-esteem. Maternal authoritative parenting, characterised by warmth, reasoning, and support for autonomy, encourages both adaptive coping and higher self-esteem (Gao et al., 2021).

Overall, these findings consistently support positive connections between higher self-esteem and adaptive coping, and the inverse with maladaptive coping. Consequently, psychosocial interventions focusing on self-esteem and self-efficacy are believed to enhance adaptive coping skills such as active coping, planning, and seeking emotional or social support (Mohammadzadeh et al., 2017).

Coping and quality of life

In our current research, we focus on the Quality of prison life. On the one hand, it extends the concept of quality of life to prison environments. However, it is a more complex construct due to the distinctiveness of the prison setting and essentially reflects the entire prison social climate. Nonetheless, we could not find existing research describing links between coping and the quality of prison life, highlighting the contribution of our present study. Therefore, in this section, we will briefly outline the studies that examine connections between coping mechanisms and overall quality of life. We will also discuss research that involves the concept of well-being, as it is similar to quality of life.

The existing research shows positive links between adaptive coping mechanisms and better quality of life, while maladaptive coping is associated with poorer outcomes across various contexts: in schizophrenia (Hasan & Tumah, 2019), cancer (Merluzzi et al., 2023; Onyedibe et al., 2022), autism spectrum disorder (Siedler et al., 2025), cardiovascular patients (Janjani et al., 2025), and intensive care unit survivors (Dettling-Ihnenfeldt et al., 2016). It also includes therapeutic service providers (Simpson et al., 2025), nurses (Abou Hashish et al., 2023), physicians (Crișan et al., 2024), and university employees (Mittal et al., 2023) in the context of COVID-19 pandemics, as well as coping with climate change in elderly individuals (Khalil et al., 2025), highly sensitive

individuals (Borda-Mas et al., 2025), emergency disaster volunteers (Hendriati & Achmat, 2024), and other crisis supporters (Sercombe et al., 2025).

Research indicates that stress negatively affects quality of life, with coping playing a significant mediating role among Jordanian nurses: lower problem-focused and emotion-focused coping (particularly the former) enhances the impact of stress on quality of life (Ta'an et al., 2024). Maladaptive coping is negatively linked to perceived stress, anxiety, and depression symptoms, and it mediates the relationships between these mental health issues and reduced physical and psychological quality of life (Shukri et al., 2024). Conversely, adaptive coping is negatively associated with depression and post-traumatic stress disorder symptoms, supporting a higher quality of life through increased resilience in families coping with the trauma experienced by a member (Wu, 2011). Positive coping strategies positively influence, while life stressors negatively influence, the relationships between mindfulness, gratitude, optimism, and hope and psychological well-being (Aldbyani et al., 2025). There are connections between coping strategies and core personality traits: adaptive coping (e.g., problem solving) correlates positively with Extraversion and negatively with trait Neuroticism; the reverse applies to maladaptive coping styles such as escape-avoidant emotional coping (Whitworth et al., 2013). Moreover, Extraversion can enhance quality of life through greater problem-solving abilities and reduced escape-avoidant coping. In contrast, Neuroticism may

lower the quality of life because neurotic individuals tend to rely more on escape-avoidant coping.

Interestingly, traumatic life events, depression, and anxiety are positively linked to both adaptive (problem-focused and emotion-focused) and maladaptive coping strategies measured by the brief COPE inventory (Sarid et al., 2025) in a population affected by prolonged violent intergroup conflict. However, problem-focused coping still positively mediated the negative relationship between traumatic life events and the presence of meaning as a measure of quality of life, while maladaptive coping negatively mediated this relationship. Therefore, although stressful events can evoke both adaptive and maladaptive coping, only the former may contribute to higher well-being, whereas the latter may have the opposite effect.

The links between adaptive coping and increased well-being and quality of life are dependable and consistent across contexts; similarly, maladaptive coping is associated with decreased quality of life. Therefore, developing and practising adaptive coping can be part of therapeutic interventions aimed at improving quality of life. Indeed, enhancing planning, coping, social skills, and decision-making has positively influenced the quality of life in Taiwanese female prisoners (Law & Guo, 2015). In this way, coping mechanisms can play a constructive role in adapting to various stressful situations, including penitentiary environments, and this role can be supported and strengthened by psychosocial interventions.

Coping and aggression

Since aggressiveness can be viewed as an indicator of maladjustment, we can expect that it is associated with higher maladaptive and lower adaptive coping. Generally, the existing literature supports this assumption. Planful problem solving as a part of adaptive coping is negatively associated with aggression, while distancing as a maladaptive coping mechanism is positively correlated with aggression in adolescents (Csibi & Csibi, 2011); avoidance and emotion-focused coping (but not the task-oriented coping) are positively associated with aggression in students as well (Shabani et al., 2025). Avoidance coping measured in 6th-grade children was positively associated with aggression, not only in the same measurement point but also in 7th and 8th grade (DiClemente & Richards, 2022). Successful emotion regulation as a coping mechanism is negatively associated with both relational and physical aggression: low emotional regulation makes an additional contribution to the prediction of relational aggression in interaction with reluctance to express feelings (Sullivan et al., 2010).

Associations between coping and aggression can be interpreted within the broader framework of personality traits. Emotion-focused coping is positively related to greater emotional instability (a personality trait similar to neuroticism), while problem-focused coping is positively linked to empathy (Carlo et

al., 2012). In fact, problem-focused coping partly mediates the positive relationship between empathy and prosocial behaviour; conversely, emotion-focused coping mediates the positive impact of emotional instability on physical aggression.

Maladaptive coping styles appear to be particularly significant in enabling aggression. The existing data indicate that maladaptive coping can also interact with other stressful situational factors to produce aggressive behaviour. For example, interpersonal and disengagement coping (but not problem-focused coping), along with community violence victimisation and low support from family and friends, are positively associated with aggression; furthermore, the link between disengagement coping and aggressiveness was especially evident in individuals who had experienced community violence (Scarpa & Haden, 2006). Maladaptive coping emerged as the most crucial predictor of aggression in stress-related contexts: maladaptive (but not adaptive or social-support) coping partially mediates the positive relationship between perceived stress and aggressiveness (Sebalo et al., 2022).

However, the findings are not entirely definitive; data is indicating positive links between both adaptive (i.e., social-support coping) and maladaptive coping (i.e., avoidant) and aggression (Cramer et al., 2020). There are even completely counterintuitive results: some studies found that problem-focused coping is the most maladaptive response to community violence concerning future violent behaviour and delinquency in economically deprived

Black students (DiClemente & Richards, 2022). However, even the conceptual framework of these authors is quite simplistic since they a priori suggested that problem-focused coping would be most harmful as a reaction to experiencing violence, while avoidant coping is the most adaptive; therefore, they proposed the opposite hypotheses compared to the rest of the existing literature without a clear theoretical or empirical basis for doing so.

If we want to understand the connections between coping and aggressiveness, it is important to consider reactive and proactive aggression. Reactive aggressiveness is characterised by the spontaneous expression of aggressive behaviour, driven by intense emotions, and most often occurs as a response to a perceived threat. In contrast, proactive aggression is based on planning; therefore, it is premeditated and not impulsive. The role of emotions is minimal, and it represents instrumental behaviour: its aim is not defence but causing injury to another (Blair, 2003; for additional correlates of proactive and reactive aggression see Međedović, 2015). Emotional and avoidant coping (i.e., maladaptive) are positively correlated with reactive and proactive aggression, along with borderline personality traits; furthermore, emotional coping significantly mediates the link between borderline personality and reactive aggression, while avoidant coping mediates the borderline personality–proactive aggression relationship (Gardner et al., 2012). Passive coping (avoiding stressors) also positively predicted both types of aggression in a

prospective design (Baca et al., 2023). Maladaptive coping further mediates the positive links between loneliness, rejection sensitivity, and reactive aggression (Du, 2024).

The links between coping and Dark Tetrad traits can also help in gaining insight into the aggressive potential that various coping mechanisms hold. Dark Tetrad (DT) is a classification of personality traits that represent dispositions toward antagonistic, amoral, antisocial, and criminal behaviour: narcissism, Machiavellianism, psychopathy, and sadism (Chabrol et al., 2009; Međedović & Petrović, 2015; Paulhus, 2014). It is observed that DT traits produce different forms of aggressive behaviour (Paulhus et al., 2018). Narcissism mainly results in reactive aggression triggered by ego-threat and perceived attacks on the narcissist's self-view. Psychopathy is more malevolent: it is associated with both proactive and reactive aggression, especially physical aggression motivated by a lack of fear, guilt, and empathy towards others. Finally, sadism generates proactive aggression driven by enjoyment in inflicting harm on others, producing the most malicious and brutal aggressive behaviours. Therefore it is not surprising that various research showed that the DT traits are reliable and consistent predictors of antisocial and criminal behaviour and similar outcomes (Azizli et al., 2016; Hampejs et al., 2025; Hardyns et al., 2022; Međedović, 2024a; Međedović & Vujičić, 2022; Palma et al., 2021; Pechorro et al., 2022) with the emphasis that sadism may be the crucial DT characteristic for

explanation of delinquency and crime (Chabrol et al., 2009, 2017; Međedović & Kovačević, 2020).

Existing data show positive associations between DT traits and both adaptive and maladaptive coping in prisoners, with narcissism exhibiting the most adaptive pattern of coping, followed by Machiavellianism, compared to the other DT traits (Međedović, 2024b). In a longitudinal, daily diary study, it was shown that narcissism predicted various coping styles, whereas psychopathy and sadism were more related to emotion-focused and avoidant coping (Charlton et al., 2025). Therefore, it appears that maladaptive forms of coping are more frequently used by individuals exhibiting malevolent and destructive proactive aggression, whereas adaptive coping is linked to less malicious reactive aggression.

Finally, existing research on prisoner populations shows similar results. For example, data from adult male incarcerated offenders in a South African private maximum-security correctional centre reveal a positive association between avoidance coping and both physical and verbal aggression, along with negative correlations between problem-solving, seeking social support, and physical aggression (Pretorius et al., 2024). However, similar to other contexts, the data is more varied, and there are findings of positive links between both adaptive and maladaptive coping and aggression in prisoners. Prisoners in medium and maximum security facilities in the United States who had more violent disciplinary reports were less successful at seeking support

from other prisoners and staff. However, they also exhibited more pronounced coping strategies such as humour and active coping (Rocheleau, 2015). The data even yielded unexpected results: positive associations between aggressiveness, problem-solving, and seeking social support, with negative links to avoidance coping in maximum security South African offenders (Gwambe et al., 2025). This highlights that the connections between coping and aggression can be complex in prison environments.

First, aggressive behaviour can itself serve as a coping mechanism in the stressful and demanding prison setting. Second, the relationships between coping and aggressive behaviour are likely twofold, particularly in a penitentiary context. Individuals who struggle to cope may respond with aggression to environmental stressors; however, anger and rage are negative and unpleasant emotions, which can also cause stress—they may trigger both adaptive and maladaptive coping responses to manage stress. Despite this complexity, successful and adaptive coping skills are seen as key strengths and protective factors that support desistance and reduce the likelihood of violence in prisoners (de Vries Robbé, 2022). More specifically, self-control, coping, work, motivation for treatment, and attitudes toward authority are the most significant protectors against violent behaviour for most individuals. In psychiatric patients with a history of sexual offending, coping and attitudes toward authority also lower the risk of new violent acts. Consequently, these findings suggest that coping mechanisms are valuable targets for psychosocial

interventions, as enhancing them can aid in adaptation to prison environments by reducing aggression and violence, among other benefits.

COPING STRATEGIES IN PRISON

The ability to cope mentally with a prison sentence influences institutional programmes. It also impacts efforts to reduce violence rooted in anxiety and depression among inmates (Wooldredge, 1999). Adaptation to prison happens in three main stages. First, inmates adjust to their new environment. Second, they socially adapt to communicate with staff and other inmates. Third, they handle personal issues and emotions (Richardson, 2012, p. 149). Coping, or managing stress with available resources, is a deeply ingrained personality trait. It can be linked to poor adaptation to prison life (Ireland et al., 2005).

Coping styles are vital when managing stress in prisons because inmates encounter frequent, diverse stressors (Ireland et al., 2005). Problem-focused coping, regarded as an adaptive strategy, involves active planning or specific behaviours to resolve distress (Folkman & Lazarus, 1985, p. 150). However, as prison constraints restrict which coping strategies inmates can utilise (Zamble & Porporino, 1988), individual coping styles often become ineffective due to the restrictions of the environment (Ireland et al., 2006).

Problem-focused coping is associated with lower stress levels (Brissette et al., 2002). In contrast, emotion-focused coping

is generally less effective. Some studies indicate that emotional detachment and low expression help inmates, especially adolescents, cope initially. Over time, they may develop more effective coping styles (Brown & Ireland, 2006). Some researchers suggest that problem-focused coping is less helpful for inmates, as they cannot undo their crime or resolve the original issue. Instead, emotion-focused coping has a positive impact on psychological well-being (Van Harreveld et al., 2007). Sharing feelings with others in a social network constitutes the social aspect of emotion-focused coping, while reinterpreting the situation represents its cognitive side (Van Harreveld et al., 2007). Van Harreveld and colleagues (2007) found that inmates who provide and receive social support experience improved mood and health. In a study involving male inmates serving life sentences, participants shared their perspectives on coping with prison stress. They described coping as a personal process influenced by personality, temperament, social resources, mental health protection, and available work programmes (Richardson, 2012, p. 149).

Research indicates that older inmates utilise various strategies and resources to cope with psychological challenges and manage prison life.

These coping resources encompass physical, cognitive, emotional, social, and spiritual aspects (Maschi et al., 2014). Coping resources act as protective factors, enhancing older incarcerated individuals' resilience against the adverse effects of stress and trauma (Maschi et al., 2011). Research indicates that

programmes promoting safe family connections foster hope, optimism, and a sense of community (Maschi et al., 2014, p. 9). These programmes may include family or volunteer visits, correspondence, caregiver support, and intergenerational visits.

Maladaptive coping mechanisms include dissociation, denial, self-blame, emotional dysregulation, and untreated PTSD. They also encompass depression, substance abuse, and self-harm (Lynch et al., 2012; Kubiak et al., 2005, as cited in Maschi et al., 2014). These strategies influence the connection between maladaptive traits and psychological stress (Ireland et al., 2006). Inmates with comorbidities, particularly mental health issues, are more susceptible to ineffective coping. This links comorbidity, high stress levels, and externalising behaviours (Hall, 2014, p. 18).

Problematic coping behaviours often begin before incarceration, as demonstrated in Zamble and Porporino's longitudinal study (1988). They found inmates' coping styles remained largely consistent regardless of environmental changes. This behaviour tends to be impulsive and direct, favouring quick fixes even when problems are complex. 'Explosive behaviour' or 'out-of-control behaviour' indicates a lack of positive coping skills and is prevalent among younger inmates (Wooldredge et al., 2001).

Coping in the context of criminal behaviour

This part of our introductory text will focus on coping mechanisms in prison environments, with two main aims: identifying the antecedents (predictors) of coping behaviour in such a specific setting, and determining the correlates and potential behavioural outcomes of coping that are relevant for adaptation and antisocial behaviour. Prisoners can respond in various ways—affectively, cognitively, and behaviourally—to challenges like difficulties in adjusting to prison life, feelings of powerlessness, adherence to unwritten laws, bearing pain for the family, avoiding trouble, experiencing exploitation of the weak, and feeling forgotten (Flores-Barolo et al., 2019). Tortured ex-convicts imprisoned in Diyarbakır Military Prison in Turkey used political awareness, giving meaning, resistance, and social support to cope with torture experiences (Yarkın, 2013). Mentally ill criminal patients tend to approach problem situations less frequently and instead tend to avoid them compared to the control group without physical dysfunctions; furthermore, they distance themselves from social interactions, lack planning and action regarding stressors, and exhibit a negative attitude towards addressing current problems (Dixit et al., 2011). A lack of physical and emotional closeness in social relationships, along with the loss of autonomy in prison, can be especially challenging for elderly prisoners. They devise various coping strategies, including

recognising a lack of control over the situation, withdrawing and isolating, self-improvement, staying connected to the outside world, and self-expression (McLennan et al., 2025).

Generally, like any other behaviour, prisoners' adjustment can be explained by two broad factors: the characteristics of the situation and the individual traits and experiences of prisoners. The first perspective, known as the deprivation model, argues that various restrictive pressures imposed in prison settings hinder adaptation to the new environment ("pains of imprisonment": Sykes, 1958). The second perspective, called the importation model, emphasises the role of individual characteristics and pre-prison experiences as key determinants of successful adjustment (Irwin, 1970). Since human behaviour is generally a product of both situations and individual differences, it is unsurprising that empirical data support both views. For example, research has shown that factors such as age, level of religious commitment, years of incarceration, prison history, and pre-prison experiences—including socioeconomic background, marital status (especially for those with children), and educational level—are associated with adaptation to prison life, thereby highlighting the importation model (Aborisade et al., 2016). Other studies (Mohino et al., 2004) reveal the importance of imprisonment itself in how prisoners cope. They found that within the first four months of incarceration, prisoners tend to use emotional discharge more frequently (to reduce tension by expressing negative feelings) and demonstrate less positive reappraisal

(thinking about the problem positively while still accepting its existence and impact). This indicates a struggle to cope with the new environment immediately after beginning their sentences. The same research also observed that first-time prisoners seek alternative rewards more often than repeat offenders; interestingly, no correlation was found between prisoners' intellectual level and the use of different coping strategies. Additionally, the length of imprisonment influences coping strategies: short-term prisoners are more likely to seek social support, whereas long-term prisoners attempt to develop greater self-control (Reed et al., 2009). Some scholars have tried to identify specific aspects of the prison environment that hinder prisoners' adjustment – the most common being less time spent in structured activities, fewer visits per month, recent victimisation by aggravated assault, and the fear of victimisation itself (Picken, 2012).

We should bear in mind that maladaptive coping is not only harmful in penitentiary environments – it also constitutes one of the personality traits that can promote criminal behaviour itself and consequently increase the likelihood of being arrested initially. Therefore, in a longitudinal study where risk factors were measured during childhood and criminal behaviour was assessed 15 years later in adulthood, avoidant coping was found to significantly positively predict criminal convictions despite many other factors being controlled for, including established predictors

such as externalising symptoms, problematic alcohol use, male gender, and low socio-economic status (Aebi et al., 2014).

Coping mechanisms are strongly linked to adjustment in prison settings. Negative cognitive reframing, anger, and blaming others were reported more frequently by suicidal youths compared to those without suicidal ideation among young individuals in Quebec Juvenile Justice and Child Welfare Services (Chagnon, 2007). Among young (18-21 years) and juvenile offenders (15–17 years), emotion-focused coping was associated with increased somatic symptoms, anxiety, insomnia, social dysfunction, and severe depression; conversely, rational coping was linked to fewer symptoms overall in young offenders and less depression in juvenile offenders (Ireland et al., 20025). Similarly, seeking social support is negatively associated with internalising and externalising symptoms; acceptance also correlates negatively with internalising symptoms, while denial is positively associated with internalising symptoms in incarcerated male juvenile offenders (Shulman & Cauffman, 2011). Longitudinal data confirmed the disruptive role of dysfunctional coping, which heightened obsessive-compulsive behaviours, depression, anxiety, and hostility during the first year of imprisonment. However, the effects of emotion and problem-focused coping were not observed (Meyers et al., 2024). In some cases, researchers have even used a multivariate space of coping and mental health to create clusters of female prisoners with different challenges and capacities for

coping with imprisonment and varying needs (Fanarraga & Celinska, 2024). Three clusters have been identified:

1) high anxiety, characterised by low positive and support coping, but elevated negative and escapism coping;

2) high somatisation, sharing the same coping pattern as the previous group; and

3) high depression, with elevation across all four coping mechanisms.

Coping is also associated with institutional misbehaviour. Prisoners demonstrating higher misbehaviour exhibited increased use of venting emotions, denial of issues, use of humour, and disengagement (i.e., all maladaptive coping strategies), while showing lower levels of seeking support from others (Rocheleau, 2014). Interestingly, in a multivariate model predicting misconduct—where many sociodemographic and criminological variables were controlled for—lower support-seeking behaviours combined with higher venting of emotions and religiousness emerged as the most prominent coping predictors.

Adaptive coping strategies, such as problem-solving and social support, are linked to better adjustment across various indicators (internal, external, and physical; Wright, 1985), whereas avoidant coping shows the opposite effect (Rogers et al., 2024). Interestingly, the same research found that more frequent social contacts correlate with lower levels of adjustment. The authors suggested that contacts themselves do not necessarily facilitate

adaptation; rather, the quality of contact is what truly matters. We propose an alternative explanation: in cross-sectional studies, the direction of causality remains unclear, making it plausible that individuals with lower levels of adjustment simply seek more contact with family, friends, or other inmates.

Similarly, Gwambe and colleagues' (2025) data revealed negative associations between social support and adaptive coping, suggesting that individuals with poor coping skills may rely on social support to manage the penitentiary environment. Consistent with this, social support during imprisonment was found to have both positive and negative effects on coping among female prisoners: writing letters to family provided comfort, yet visitations from friends and children were linked to maladaptive coping (Celinska et al., 2022). Conversely, it has been shown that while violent victimisation increases stress in incarcerated women, stronger in-prison friendship ties and larger friendship networks significantly reduce stress levels, suggesting that friendships are among the most crucial facilitators of adjustment in prison (Edison et al., 2025).

There are several attempts to empirically evaluate the effects of psychosocial interventions on coping mechanisms in prisoners. Cognitive Behavioural Therapy / Mindfulness-Based Stress Reduction intervention that lasted 10 sessions succeeded in significantly improving calming and distraction strategies in adult males with a history of traumatic brain injury. However, this effect was lost after 12 weeks of follow-up (Mitchell et al., 2021).

Findings indicate that successful training of emotion regulation and distress tolerance skills significantly improved problem-focused coping and reduced perceived stress in Iranian prisoners (Davood & Ghahari, 2017). Therefore, future psychosocial treatments aimed at targeting coping mechanisms are potentially fruitful and beneficial in facilitating prisoners' adaptation to penitentiary environments.

Coping and well-being in prison

Prisoner well-being includes both physical and mental health, affecting everyday functioning. A key research question relates to how increased autonomy and social connections can improve well-being and support successful reintegration. Incarceration often leads to psychological and emotional difficulties, which are worsened by poor conditions. Many inmates enter prison with existing mental health issues. Ryff and Singer (2008) outline six dimensions of well-being: self-acceptance, positive relationships, personal growth, purpose in life, environmental mastery, and autonomy. Following social norms and building strong interpersonal relationships are linked to better well-being.

Misconduct in prison, including violence, rule-breaking, and self-harm, damages inmate well-being in various ways. Violence heightens fear and anxiety, while rule-breaking often leads to punitive measures that harm mental health. Self-harm, usually a response to stress or a lack of control, directly impacts physical and emotional health. Improving autonomy and social connections can reduce these behaviours and aid reintegration. Promoting well-being in prisons results in better outcomes, as inmates who have a sense of purpose and values are more likely to make positive choices.

Coping strategies can either support or hinder well-being. Prison life limits individuality and autonomy, affecting inmates'

thoughts, behaviours, and self-perception. Supporting autonomy and personal development can help reduce the adverse effects of incarceration. Greater autonomy generally enhances inmates' quality of life, although its influence after release is less researched. Well-being offers a sense of purpose and values, encouraging positive choices. Coping strategies can either bolster or undermine well-being. Prison life restricts individuality and autonomy, impacting inmates' thoughts, behaviours, and self-perception. Supporting autonomy and personal development can help lessen the negative effects of incarceration. Increased autonomy generally improves inmates' quality of life, although its impact after release is less well understood. Well-being provides a sense of purpose and values, encouraging positive choices. Coping strategies can either strengthen or weaken well-being.

Prison environments restrict individuality and autonomy. This limitation on freedom affects how inmates think, behave, and perceive themselves (Liebling et al., 2011, p. 29; Liebling et al., 2004). The environment raises questions about maintaining autonomy within controlled settings. Supporting personal autonomy and development may help reduce some of the adverse effects of incarceration. Autonomy involves making decisions independently, while freedom pertains to the absence of external constraints (Pavićević, 2024, p. 264). Generally, greater autonomy is linked to a higher quality of life for inmates (De Jong, Willems & Van Burik, 2015; Van der Kaap-Deeder et al., 2017). However,

there is limited research on the relationship between autonomy, well-being, and post-release adjustment (Ginneken et al., 2018).

An inmate's psychological traits, mental health, well-being, and coping skills all affect how they adapt to prison. These factors, together with risks and protective elements, influence adjustment. Higher well-being generally results in better adaptation and is a key aim of prison treatment and rehabilitation.

Studies suggest that harsh conditions often cause inmates to develop survival-based identities. Conversely, supportive prison environments promote growth and development (Liebling, 2012; Sifriz, 2017; Pavićević et al., 2021, cited in Ilijić et al., 2024, p. 156). While relationships with fellow inmates may pose risks such as violence or victimisation (Bottoms, 1999; Maitland & Sluder, 1996), these same relationships can become catalysts for positive change. Narratives of transformation often arise where there is encouragement and support, enabling inmates to redefine their identities through shared experiences and collective resilience. Positive social interactions can help reduce stress and may also foster environments conducive to personal growth (Harvey, 2007). Such dual narratives emphasise the complexity of prison life and highlight the potential for strength-oriented reforms to bring about lasting change.

Effective coping strategies improve psychological well-being (Mefoh et al., 2015). Coping involves emotional, behavioural, and cognitive responses that help individuals adapt to difficult situations. Research findings on coping vary because of the

complex links between stress, coping, and health (Garcia et al., 2018). However, having suitable resources and coping techniques greatly predicts well-being. Literature classifies coping strategies as either adaptive or maladaptive (Campos et al., 2004, cited in Garcia et al., 2018). Adaptive strategies include problem-solving, positive reframing, emotion regulation, and self-control. Maladaptive strategies are rigid or unhelpful, such as rumination, venting, confrontation, withdrawal, and emotional suppression (Campos et al., 2004; Connor-Smith et al., 2007, cited in Garcia et al., 2018).

Research suggests that incarceration generally decreases perceived quality of life. Few studies examine how coping styles affect inmate well-being (Skowroński & Talik, 2018, p. 526). One study found that inmates with a high quality of life across physical, social, personal, and spiritual domains tend to use active coping strategies, such as planning, seeking support, positive thinking, and personal growth (Skowroński & Talik, 2018, p. 537). Evidence also indicates that social support helps individuals manage stress (Van Harreveld et al., 2007; Carr, 2013; Rogers, 2019; Cohen et al., 1985). The study further suggests that inmates who view prison as an opportunity for growth are more likely to accept their circumstances (Skowroński & Talik, 2018, p. 537). Those with a high quality of life sometimes employ passive strategies, like avoiding action when problems appear insurmountable (Skowroński & Talik, 2018). Conversely, inmates with low quality of life often turn to denial, distancing, abstinence, substance use,

or humour. These patterns are evident across all facets of quality of life (Skowroński & Talik, 2018).

The distinction between adaptive and maladaptive coping strategies is not always straightforward. Effectiveness can depend on the context. Moritz et al. (2016) propose that these styles are not entirely separate. A strategy is considered adaptive if it provides both immediate and long-term benefits. Maladaptive strategies may offer quick relief but can hinder functioning later on (Moritz et al., 2016, pp. 1-8).

Research shows a strong link between coping, adjustment, and well-being in prisons. Reforms can enhance these outcomes (Ajala et al., 2020). Support and assessments should prioritise relationships, especially between staff and inmates. Positive staff-inmate relationships boost well-being and mental health (Liebling, 2004) and promote effective coping. Correctional officers can strengthen these relationships through consistent, empathetic communication and by facilitating collaborative activities that foster mutual respect and teamwork. These measures can help create a healthier prison environment.

GOALS OF THIS RESEARCH

Empirical research on coping mechanisms among prisoners is still scarce. This is despite the theoretical and practical importance of these mechanisms for prisoner wellbeing and adaptation to penitentiary conditions. The main goal of the present research is to conduct a detailed and comprehensive analysis of coping in Serbian prison environments. More precisely, we aim to provide five specified analyses. These will shed more light on the role of coping characteristics of individuals in prisons' socioecology:

1) Examine the latent and network structure of the Brief-COPE inventory in prison settings;

2) Explaining coping by examining its associations with social support and ecological factors. These include factors associated with potential support, like the distance of the prison from the participants' place of living;

3) Predicting coping in prisons by analysing the history of criminal behaviour;

4) Investigating coping mechanisms as predictors of psychological characteristics important for adaptation in prisons. These are aggressiveness, depressiveness, self-esteem, and the quality of life in prison;

5) Analysing the predictive power of coping mechanisms. This will explain specific outcomes that indicate institutional misconduct and future risk of criminal behaviour.

These specific goals can help us understand coping mechanisms—defined here as the strategies individuals use to manage stress or adapt to challenging situations—by explaining their structure and links with criminal history and social support. We also aim to determine the predictive power of these coping strategies in explaining adaptation to prison environments and the potential risk of criminal relapse. Hence, we aim to provide both conceptual and practical contributions to the existing literature on coping. We hope to generate knowledge that can help prison staff and criminological practitioners reduce maladaptation (the inability to adjust) and misconduct in prisons, as well as criminal recidivism (reoffending) in general.

Sample

Data were collected in five penitentiary facilities in Serbia: Sremska Mitrovica, Niš, Požarevac, Zabela, and Padinska Skela. Participants volunteered, with functional literacy as the only inclusion criterion. All were informed about study goals, filled out consent forms, and could withdraw at any time. Researchers were present throughout. The final sample included 605 participants (86% males; Mage = 39.73, SD = 10.09). Participants had lower education levels than the Serbian average: 61.30% completed high school, 23.00% elementary school, 6.90% university, 5.80% did not finish elementary school, and 2.90% had missing data. Violent offenders made up 46.90% of the sample. The institutional ethical committee approved the research, and it was part of the PrisonLIFE project (https://prisonlife.rs/en/). The dataset from PrisonLIFE is publicly available (Milićević et al., 2024).

Measures

We assessed coping mechanisms using the Brief-COPE inventory (Carver, 1997), which evaluates dispositional responses to stressful events through 28 items. Each of the 14 coping behaviours—such as *active coping, planning, instrumental support, emotional support, venting, behavioural disengagement, self-distraction, self-blame, positive reframing, humour, denial, acceptance, religion*, and *substance use*—is measured by two items. Responses are scored on a 5-point Likert scale, from 1 ("completely disagree") to 5 ("completely agree"); higher scores reflect a greater tendency to exhibit the trait.

We assessed social support by asking participants to rate the importance of support from individuals both inside and outside prison. Specifically, we inquired about the importance of support from the following individuals during their sentence: *spouse or romantic partner, friends, parents, biological children, a priest from their original residence, prison health workers, treatment staff, security staff, other convicts, and a prison spiritual counsellor*. Responses used a 5-point Likert scale, from 1 ("not important at all") to 5 ("very important"). We also asked whether participants received visits during their sentence (binary: 0 = "no", 1 = "yes") and whether the prison was near their home (defined as within an hour; binary: 0 = "no", 1 = "yes").

We evaluated past criminal behaviour by recording: *frequency of imprisonment* (number of separate sentences), *number*

of convictions, *age at first sentence*, *length of the current sentence*, *length of stay during the current sentence*, and *total time spent in custody*. The last four variables are measured in years, except for the current sentence length (in months).

We assessed aggressiveness using the Aggressiveness Questionnaire (Buss & Perry, 1992; Serbian adaptation: Dinić & Janičić, 2012). It evaluates four dimensions: Physical Aggression (9 items), Verbal Aggression (5 items), Anger (7 items), and Hostility (8 items), along with a total score for our analysis. The 5-point response scale ranges from 1 ("completely disagree") to 5 ("completely agree").

We used the Measuring the Quality of Prison Life (MQPL: Liebling et al., 2012; Serbian adaptation: Milićević et al., 2024) to evaluate the *quality of prison life*. MQPL comprises five higher-order scales: Harmony (54 items), Professionalism (28 items), Security (22 items), Conditions and Family Contact (7 items), and Wellbeing and Development (19 items). Only the overall mean score was utilised, with responses measured on a 5-point Likert scale.

We assessed *self-esteem* using the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1989), which comprises 10 items—five positively worded and five negatively worded—that evaluate overall self-worth. Responses are recorded on a 4-point Likert scale, ranging from 1 ("totally disagree") to 4 ("totally agree").

The Beck Depression Inventory (BDI) assesses *depression* using a 21-item self-report questionnaire (Beck et al., 1961). Each item offers 4 or 5 options to indicate the severity of various depression symptoms; scores are added together to produce a total score.

We operationalised institutional misconduct using several indicators. We calculated *disciplinary measures* as the mean frequency of wardens' reprimands, restricted package privileges (up to three months), loss of extended rights or benefits (up to three months), and restricted money privileges (up to three months). *Special measures* were calculated as the mean frequency of confiscations of permitted items, secure room placements, increased supervision, testing for infection or substance use, and separation from other convicts. All were coded as binary variables (0 = not applied; 1 = applied), then summed and averaged. Participants also reported whether they had been punished with *solitary confinement* or subjected to control or physical restraint by security (each binary). Finally, we recorded the department in which the sentence is served (closed = 0, semi-open = 1); transfer to semi-open depends on adaptive behaviour, making this a reverse indicator of misconduct.

We obtained *risk assessments* based on the total score on the Offender Assessment System (OASys: Home Office, 2002; Serbian adaptation: Ministry of Justice, 2013, 2013a; Vujičić & Karić, 2020). Higher overall scores suggest a greater likelihood of reoffending. OASys is a comprehensive offender assessment tool that combines static and dynamic risk factors, including

accommodation, employment, relationships, lifestyle, substance misuse, thinking and behaviour, and attitudes. Facility staff carry out OASys assessments through interviews and information gathered from courts, police, and social workers; it is documented in each prisoner's file. The total score ranges from 0 to 160, with higher scores indicating increased risk.

The plan of data analysis

Our data analysis approach is guided by the research objectives. First, we examine the structure of coping by:

1) Performing Principal Component Analysis (PCA) on the 14 coping mechanisms measured by the Brief-COPE instrument. We also explore alternative solutions using factor analysis methods, such as maximum likelihood and principal axis factoring.

2) Showing descriptive statistics for the scales of coping provided by PCA. We also present their intercorrelations and associations with socio-demographic indicators such as sex, age, and education.

3) Conducting network analysis on the 14 Brief-COPE subscales. We estimate the network using the partial correlation method and display only significant edges. Bootstrapping is performed to examine the stability of estimated edges. We calculate four centrality measures: betweenness, closeness, strength, and expected influence. These help us analyse which

nodes are more central and important for network dynamics. General network analysis information is available in Costantini et al., 2015; Epskamp et al., 2018; Međedović, 2021. Readers can consult Međedović et al. 2024 for applications in the penitentiary context.

The following set of analyses aims to explain coping mechanisms, starting with social support and then using criminal history indicators as predictors. We employ two types of analyses: bivariate associations and multivariate regression models. Before conducting these analyses, social support and criminal history variables underwent PCA to reduce them to their common variation. Next, we examine the predictive potential of coping mechanisms for psychological adaptation to the prison environment. These factors include aggressiveness, depression, quality of prison life, and self-esteem. We also investigate specific indicators of institutional misconduct, such as disciplinary and special measures, control, solitary confinement, department, and risk of future reoffending. Correlation and regression analyses are used to evaluate these research objectives. Finally, we perform an integrative analysis of all measures previously explored. We estimate two network models: one based on bivariate correlations and another using a multivariate model with partial correlations. These models offer a more comprehensive view of the direct and indirect relationships between all measures.

RESULTS

LATENT AND NETWORK STRUCTURE OF BRIEF-COPE SUBSCALES

Descriptive statistics of the Brief-COPE subscales

Firstly, we present the descriptive statistics for the 14 Brief-COPE coping mechanisms. Each coping mechanism is assessed using two items, and the summed or averaged responses create the scale score for each mechanism. We also report the correlations between the two items comprising each scale as an estimate of scale reliability. These results are displayed in Table 1. We observe that most coping mechanisms have low mean scores and some, such as Substance use (mean = 1.24, SD = 0.64), also show low variability. All coping mechanisms demonstrate positive and significant correlations between their two items, suggesting adequate reliability.

Table 1

Descriptive statistics of the Brief-COPE subscales

	M (SD)	Skewness	Kurtosis	$r_{inter\text{-}item}$
Self-distraction	2.87(0.88)	-0.59	-0.48	0.33
Active coping	2.97(0.87)	-0.77	-0.09	0.53
Denial	1.79(0.90)	0.89	-0.29	0.46
Substance use	1.24(0.64)	2.94	8.06	0.64
Use emotional support	2.48(0.98)	0.01	-1.09	0.53
Use instrumental support	2.36(0.92)	0.08	-0.94	0.47
Behavioral disengagement	1.63(0.83)	1.33	0.94	0.48
Venting	2.23(0.87)	0.17	-0.77	0.21
Positive reframing	2.82(0.84)	-0.50	-0.30	0.33
Planning	3.04(0.83)	-0.84	0.22	0.50
Humor	2.64(1.01)	-0.26	-1.07	0.69
Acceptance	3.04(0.83)	-0.78	0.09	0.43
Religion	2.12(1.03)	0.46	-1.02	0.60
Self-blame	2.75(0.98)	-0.33	-1.02	0.52

Latent Structure of the Brief-COPE Subscales

We conducted PCA with promax rotation on the original 14 indicators of the Brief-COPE inventory. The Guttman-Kaiser criterion advised a three-component solution; the pattern matrix of extracted components is shown in Table 2 and Figure 1.

Table 2

Latent structure of the Brief-COPE inventory subscales

	Hybrid coping	Social support coping	Maladaptive coping
Eigenvalues	4.57	1.76	1.03
% of explained variation	32.63	12.56	7.36
Acceptance	.76		
Planning	.74		
Humor	.73		
Active coping	.68		
Positive reframing	.61		
Self-blame	.48		
Self-distraction	.48		
Venting	.39		.33
Use instrumental support		.79	
Use emotional support		.76	
Religion		.64	
Substance use		-.40	.77
Behavioral disengagement			.77
Denial			.74

The first component includes humour, acceptance, planning, active coping, positive reframing, self-blame, self-distraction, and

venting. This makes the component heterogeneous. Coping mechanisms with the highest loading on this component show successful attempts to resolve stressful situations. These are followed by self-blame, self-distraction, and venting. Therefore, this component mostly consists of adaptive coping processes, but it also contains some maladaptive mechanisms. For this reason, we labelled it as *hybrid coping*. The second component is based on seeking social support, including using instrumental support, emotional support, and religion; we labelled it *social support coping*. The third component represents *maladaptive coping, as it is characterised by behavioural* disengagement, denial, and substance use in response to stress.

It should be noted that parallel analysis suggested two latent variables as the most optimal solution for describing the latent space of Brief-COPE indicators. In this solution, support coping merges into hybrid coping, while maladaptive coping stays the same as in the three-component solution. We chose to accept the more liberal criterion for component extraction (Guttman-Kaiser in this analysis) because seeking social support is a psychologically relevant and distinct coping aspect. Although the Guttman-Kaiser criterion may provide more components than optimal, we selected this solution to allow a more detailed psychological depiction of coping mechanisms.

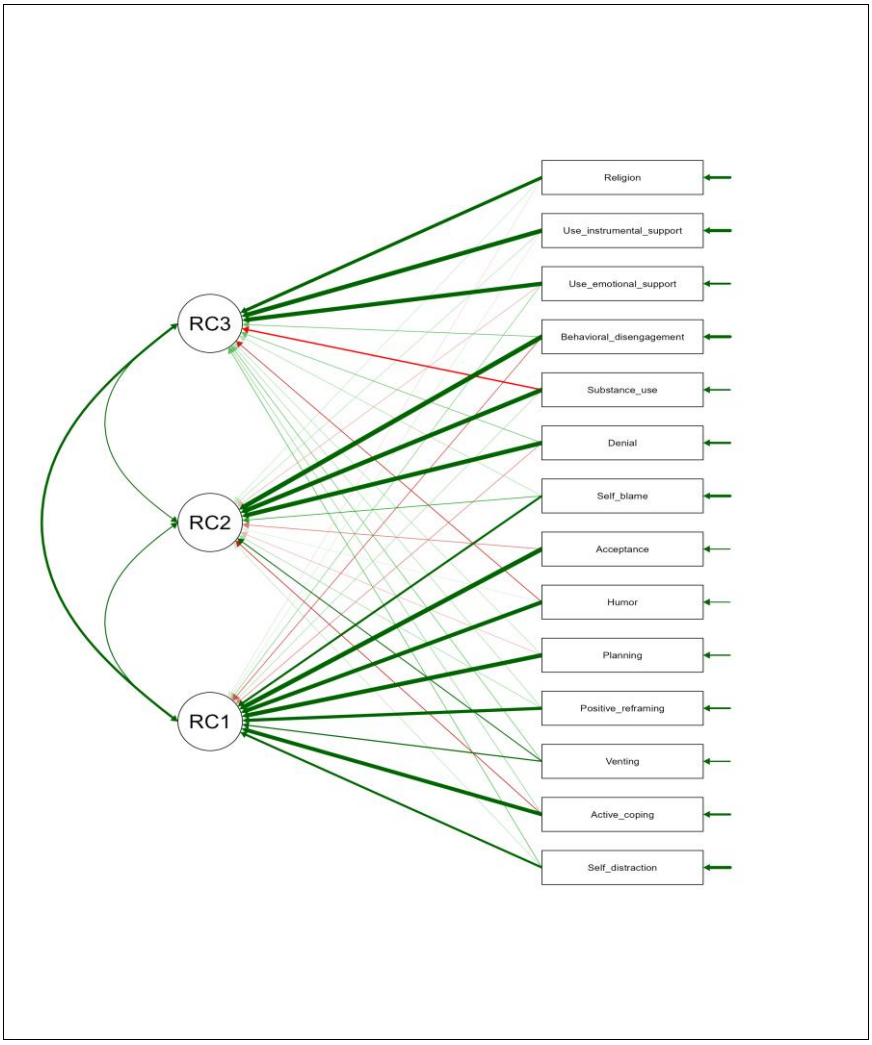

Figure 1

Graphical representation of the Brief-COPE inventory subscales' latent structure

We would also like to emphasise that we used PCA to maximise the percentage of explained variation in the original coping indicators. It is important to note that the factor analysis methods—Maximum Likelihood (ML) extraction and Principal Axis Factoring (PAF)—produced almost identical solutions. The only exception was Religion: as with PCA, PAF showed Religion loading highest on support coping with a secondary loading on adaptive coping, whereas ML showed the reverse for Religion. Aside from this, all three methods converged on a largely similar latent structure for the coping indicators.

Descriptive statistics, reliabilities, normality tests, and differences between the coping higher-order scales

Descriptive statistics, normality tests, and reliabilities (Cronbach's α coefficients) are shown in Table 3; graphical representations of the scales' distributions are shown in Figure 2. We can see that all scales have adequate reliabilities: this stands even for Social support coping and Maladaptive coping, considering that they have only three items.

Table 3
Descriptive statistics, reliabilities, and normality tests for three coping scales

	Mean(SD)	Skewness	Kurtosis	K-S z	α
Hybrid coping	2.79(0.58)	-0.72	0.69	0.09**	0.81
Social support coping	2.32(0.75)	0.09	-0.55	0.05	0.65
Maladaptive coping	1.55(0.61)	1.21	0.91	0.12**	0.65

Notes: ** - $p < .01$.

The differences between mean scores on all three scales are statistically significant. Specifically, $t(604) = 18.21$, $p < .001$ for Hybrid versus Social support coping; $t(604) = 42.46$, $p < .001$ for Hybrid versus Maladaptive coping; and $t(604) = 22.96$, $p < .001$ for Social support versus Maladaptive coping. These results show that participants scored highest on Hybrid coping, followed by Social support, and lowest on Maladaptive coping.

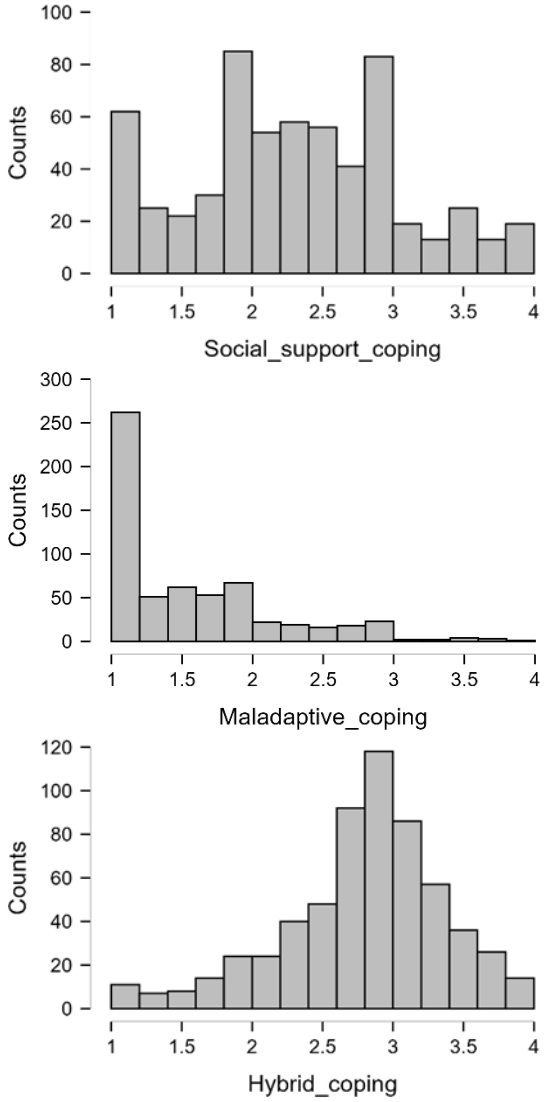

Figure 2

Distributions of the three coping scales' scores

Graphical analyses of the scales' distributions (including skewness and kurtosis) and the normality test showed that the Hybrid and Maladaptive coping variables are not normally distributed in the sample. Therefore, we used normalised scores for all three variables in subsequent analyses.

Correlations between the coping scales

Correlations between the three coping scales can be seen in Figure 3.

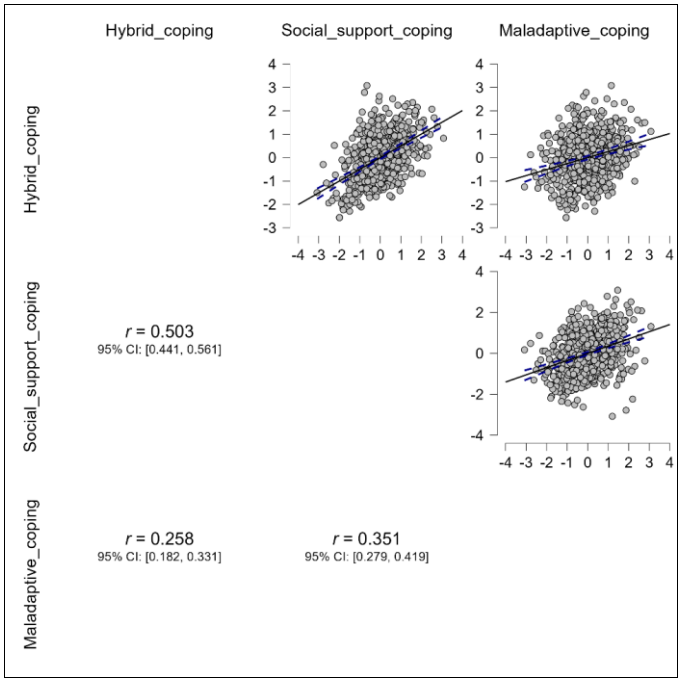

Figure 3
Correlations between the coping scales

We observe that all three scales are positively correlated. The relationship between Hybrid and social support is moderate, while the other two correlations are weak.

Associations between the coping mechanisms, and socio-demographic variables

We calculated the correlations between the coping scales, participants' age, and education. Results showed that Hybrid and Social support coping negatively correlate with age (r =- .15; $p < .01$ and r =- .09; $p < .05$, respectively), while Social support and Maladaptive coping are negatively associated with education (r = -.13; $p < .01$ and r =- .24; $p < .01$, respectively). To further explore group differences, we performed t-tests comparing coping mechanisms by sex. The t-tests revealed that all three coping mechanisms are more pronounced in females. However, since the coping mechanisms are positively correlated, we followed up by conducting a MANOVA to clarify the sex differences. This analysis confirmed the t-test results: women have significantly higher scores on all three scales: $M_{females}$ = 0.20 (SD = 0.94), M_{males} = -0.03 (SD = 1.00), $F_{(1, 604)}$= 4.03; $p < .05$; $\eta^2_{partial}$ = 0.01 for Hybrid coping; $M_{females}$ = 0.26 (SD = 0.97), M_{males} = -0.04 (SD = 1.00), $F_{(1, 604)}$= 6.66; $p = .01$; $\eta^2_{partial}$ = 0.01 for Social support coping, and $M_{females}$ = 0.46 (SD = 0.91), M_{males} = -0.07 (SD = 0.99), $F_{(1, 604)}$= 21.45; $p < .01$; $\eta^2_{partial}$ = 0.03 for Maladaptive coping.

Network model of coping mechanisms

We estimated the network using the initial 14 coping mechanisms from the Brief-COPE inventory as nodes. Partial correlations determined the edges, so only significant edges appear in the graph. Figure 4 displays the network model. The network is relatively dense, with most edges being positive, which is expected since the three higher-order scales are positively correlated. Despite this density, the network shows three distinctive clusters: Hybrid, Social support, and Maladaptive coping. Venting is an exception, forming multiple positive edges with both Maladaptive and Social support coping, and is placed between them in the network. Religion is also distinctive; it is relatively separate, having only one positive edge with Instrumental support.

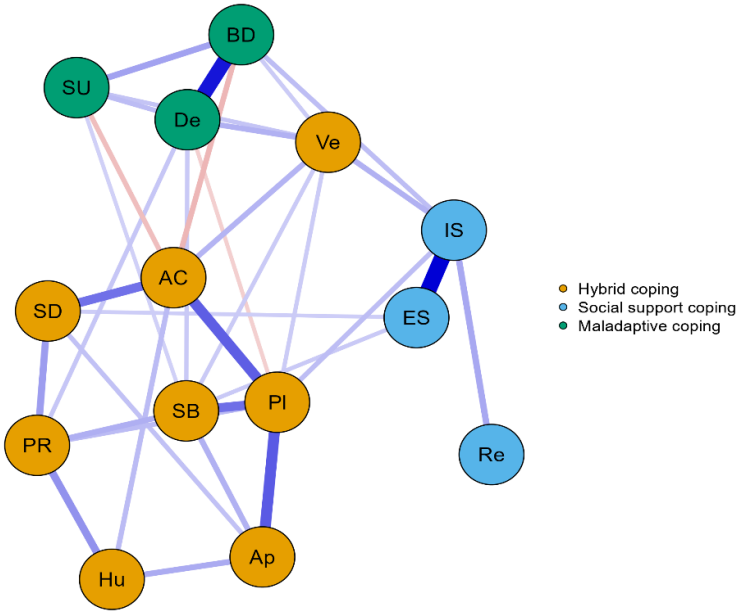

Figure 4
Network model of coping mechanisms

Notes: Blue edges represent positive associations and red edges negative associations; SD – Self-distraction; AC - Active coping; De – Denial; SU – Substance use; ES – Use emotional support; IS – Use instrumental support; BD – Behavioral disengagement; Ve – Venting; PR – Positive Reframing; Pl – Planning; Hu – Humor; Ap – Acceptance; Re – Religion; SB – Self-blame

We estimated the stability of network edges by producing the confidence intervals of edges' weights using bootstrapping. Confidence intervals are graphically shown in Figure 5. We can see that the estimations of edges' weights are highly stable because the edges considered statistically significant have confidence intervals that do not overlap zero.

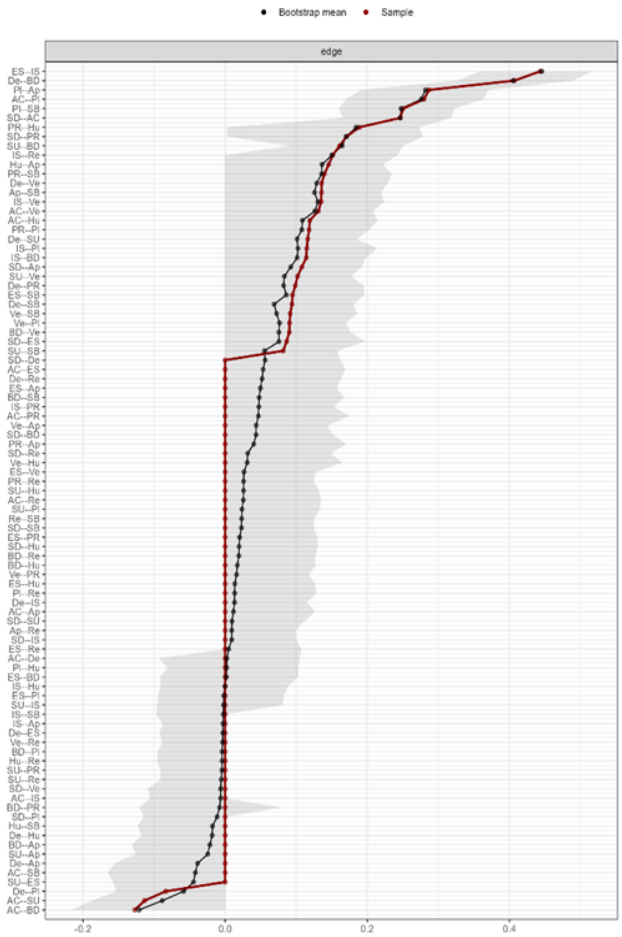

Figure 5

Bootstrap estimations of network edges' stability

Notes: SD – Self-distraction; AC - Active coping; De – Denial; SU – Substance use; ES – Use emotional support; IS – Use instrumental support; BD – Behavioural disengagement; Ve – Venting; PR – Positive Reframing; Pl – Planning; Hu – Humour; Ap – Acceptance; Re – Religion; SB – Self-blame.

Finally, we calculated centrality indices for the network nodes: betweenness, closeness, strength, and expected influence. Centrality indices are graphically presented in Figure 6. We can see that the nodes with the highest centrality across all four estimated indices are Planning, Use instrumental support, and Active coping. Conversely, the nodes with the lowest centrality are Religion, Substance use, and Humour.

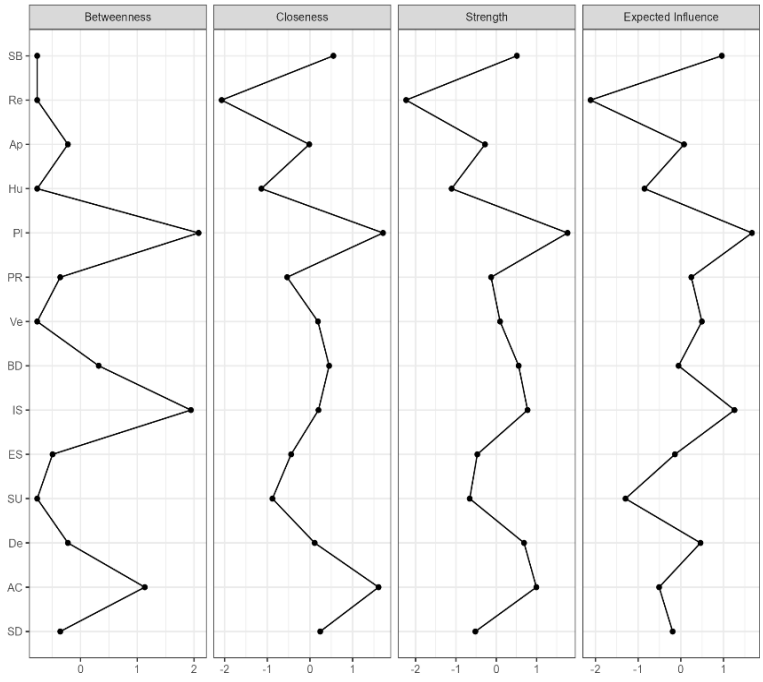

Figure 6

Centrality indices of the estimated network

Notes: SD – Self-distraction; AC - Active coping; De – Denial; SU – Substance use; ES – Use emotional support; IS – Use instrumental support; BD – Behavioural disengagement; Ve – Venting; PR – Positive Reframing; Pl – Planning; Hu – Humour; Ap – Acceptance; Re – Religion; SB – Self-blame.

EXPLAINING COPING VIA SOCIAL SUPPORT AND OPPORTUNITIES FOR VISITATIONS IN PRISON

To examine the associations between coping, support from different relevant social actors, visitations in prison, and proximity of prison to one's home, we first conducted a PCA on the items measuring social support. We rotated the extracted components in the promax position. The pattern matrix of these components is shown in Table 4. Three components emerged as the optimal solution to the social support indicators' latent structure. The first describes support from family members and friends. The second consists of support from members of the prison staff. The last describes spiritual counselling by priests and support from other prisoners. To examine the associations between coping, support from different relevant social actors, visitations in prison, and the proximity of prison to one's home, we first conducted a PCA on the items measuring social support. We rotated the extracted components in the promax position. The pattern matrix of these components is shown in Table 4. Three components emerged as the optimal solution for the social support indicators' latent structure. The first describes support from family members and friends. The second consists of support from members of the

prison staff. The last describes spiritual counselling by priests and support from other prisoners.

Table 4
Extracted components of different social support actors

	M(SD)	*Family and friends*	*Prison staff*	*Priest and peers*
Eigenvalues		*2.96*	*1.85*	*1.13*
% of explained variance		*29.60*	*18.46*	*11.25*
spouse/romantic partner	*4.45(1.20)*	*.82*		
friends	*4.10(1.27)*	*.66*		
parents	*4.75(0.88)*	*.65*		
biological children	*4.68(1.02)*	*.63*		
prison health workers	*2.91(1.65)*		*.84*	
prison treatment staff	*3.42(1.59)*		*.83*	
prison security staff	*3.65(1.40)*		*.64*	
Priest w.p.	*3.10(1.72)*			*.87*
priest o.p.r.	*3.38(1.69)*			*.74*
other convicts	*3.05(1.37)*			*.52*

Notes: w.p. – within prisons; o.p.r. – original place of residence; only the loadings > .30 are shown in the table.

Correlations between the social support, opportunity for visitations and the prison's proximity to the place of residence

We investigated the relationships between variables representing social support and opportunities for social support in prisons. Pearson's correlation coefficients were calculated to examine the association between the identified components of social support. Variables Visits and Distance are binary; therefore, we used the Point-biserial correlation coefficient to analyse the relationships between them and the social support components. Additionally, the contingency coefficient was calculated to estimate the associations between Visitations and Distance. These correlations are presented in Table 5. Support from the priest and peers is positively linked to support from family, friends, and prison staff. Visitations are positively related to support from family and friends and are also associated with the prison being closer to one's residence.

Table 5

Correlations between social support and opportunity for support

	1	2	3	4
1. Family and friends				
2. Prison staff	.06			
3. Priest and peers	.35**	.18**		
4. Distance	.08	.10	-.01	
5. Visitations	.26**	-.02	.05	.19**

We calculated associations between social support and opportunity for support indicators and coping mechanisms, which are shown in Table 6. Again, Pearson's correlation coefficients were calculated to examine the association between coping and social support, and Point-biserial correlation coefficients were used for the associations between coping, Visits, and Distance.

Table 6

Correlations between coping, social support and opportunity for support

	Hybrid coping	Social support coping	Maladaptive coping
Distance	.01	-.03	-.13**
Visitations	.02	-.03	-.14**
Family and friends	.02	.09	-.12*
Prison staff	-.03	.02	-.16**
Priest and peers	.04	.22**	.04

Social support coping is positively associated with the importance of support from the priest and peers; Maladaptive coping is lower in individuals who have better support from family, friends, and prison staff, who have more visits, and whose prison is closer to their original place of residence.

Regression models for the prediction of coping by social support and opportunity for support

We fitted three multiple linear regression models to predict coping mechanisms, using sex, age, education, social support, and opportunity for support as predictors. Prediction of the Hybrid coping as the criterion variable did not produce a statistically significant model ($F_{(8,266)}$= 1.22; p = .25); the prediction of the two remaining coping mechanisms is shown in Table 7.

Table 7
Prediction of coping by social support and opportunity for support

	Social support coping	Maladaptive coping
Sex	-0.11(0.17)	-0.20(0.18)**
Age	-0.03(0.01)	0.07(0.01)
Education	-0.16(0.09)**	-0.27(0.09)**
Distance	-0.02(0.12)	-0.03(0.12)
Visitations	-0.11(0.20)	-0.15(0.21)**
Family and friends	0.06(0.06)	-0.09(0.07)
Prison staff	-0.01(0.06)	-0.19(0.06)**
Priest and peers	0.20(0.06)**	0.11(0.07)
F	3.98**	8.09**
R^2	0.11	0.20

Notes: standardised coefficients with standard errors in parentheses are shown in the table; ** - $p < .01$.

Social support coping is negatively predicted by education and positively by priest and peers coping; elevated Prison staff support, higher frequency of visits, increased education levels, and participants' sex negatively predict Maladaptive coping. The prediction model for explaining the variation in Maladaptive coping (20% of explained variation) demonstrated nearly twice the predictive power of the one predicting Social support coping (11% of explained variation).

EXPLAINING COPING VIA PREVIOUS CRIMINAL HISTORY

Latent structure of criminal behaviour's indicators

Similar to the previous section of analyses, we first subjected the indicators of criminal behaviour to PCA to avoid redundancy in the set of variables that measure criminal history. We analysed the latent space of all variables except the type of offence, as this represents qualitatively different indicators of criminal behaviour, and we wanted to analyse it separately. Extracted components are rotated in promax position once again; they are shown in Table 8.

Table 8
Extracted components of criminal behaviour

	M(SD)	Early and persistent offending	Imprisonment time
Eigenvalues		2.47	1.64
% of explained variation		41.20	27.33
Frequency of imprisonment	1.43(2.15)	.89	
Number of convictions	3.12(4.53)	.83	
Age of first sentence	28.33(10.61)	-.70	
Sentence length	95.45(95.12)		.89
Length of stay	3.13(1.08)		.84
Time spent in jails	3.31(1.27)	.43	.67

Notes: only the loadings > .30 are shown in the table.

We extracted two components from this set of indicators: the first represents an earlier age at first offence and a higher frequency of criminal relapse, which we labelled as Early and Persistent Offending. The second component relates to the total time participants spent in penitentiary institutions, which we named Imprisonment Time.

These two components are positively correlated ($r = .22$; $p < .01$). The type of criminal offence is positively associated with imprisonment time ($r = .34$; $p < .01$), indicating that individuals who committed violent offences spent more time in prison during their lifetime, but it is not related to early and persistent offending.

Correlations between coping mechanisms and criminal behaviour

Next, we examined the relationships between these three indicators of past criminal behaviour and coping. Pearson's correlation coefficients were calculated to assess the connection between coping, early and persistent offending, and imprisonment duration; the point-biserial correlation coefficient was used to analyse the relationship between coping mechanisms and the type of offence. Only two significant correlations were identified: early and persistent offending have positive associations with Hybrid ($r = .18$; $p < .01$) and maladaptive coping ($r = .23$; $p < .01$).

Regression models for the prediction of coping mechanisms via criminal behaviour

We conducted three multiple linear regression analyses to predict coping components using participants' sex, age, education, and criminal history as predictors. All regression models are statistically significant, and they are shown in Table 9. Regression models closely resemble bivariate correlations – Early and persistent offending positively predict Hybrid and Maladaptive coping. Regressions were the most successful in predicting maladaptive coping (15% of explained variation), with the lowest accuracy in predicting Social support coping (3% of explained variation).

We calculated interactions for these models as well, but besides interactions between criminal behaviour and sex, we analysed interactions between the Type of offence and other indicators of criminal history. We found an interaction between the Type of offence and Early and persistent offending in the prediction of Social support coping, as shown in Figure 7.

Table 9

Prediction of coping mechanisms via criminal behaviour

	Hybrid coping	Social support coping	Maladaptive coping
Sex	-0.14(0.12)**	-0.11(0.12)**	-0.26(0.11)**
Age	-0.15(0.00)**	-0.06(0.00)	0.05(0.00)
Education	0.07(0.06)	-0.11(0.06)*	-0.18(0.06)**
Type of offence	-0.02(0.08)	0.01(0.09)	0.02(0.08)
EPO	0.20(0.04)**	0.04(0.04)	0.25(0.04)**
Imprisonment time	0.08(0.04)	-0.02(0.04)	0.04(0.04)
F	8.10**	3.37**	17.20**
R^2	0.08	0.03	0.15

Notes: EPO – Early and persistent offending; standardised coefficients with standard errors in parentheses are shown in the table; * - $p < .05$; ** - $p < .01$

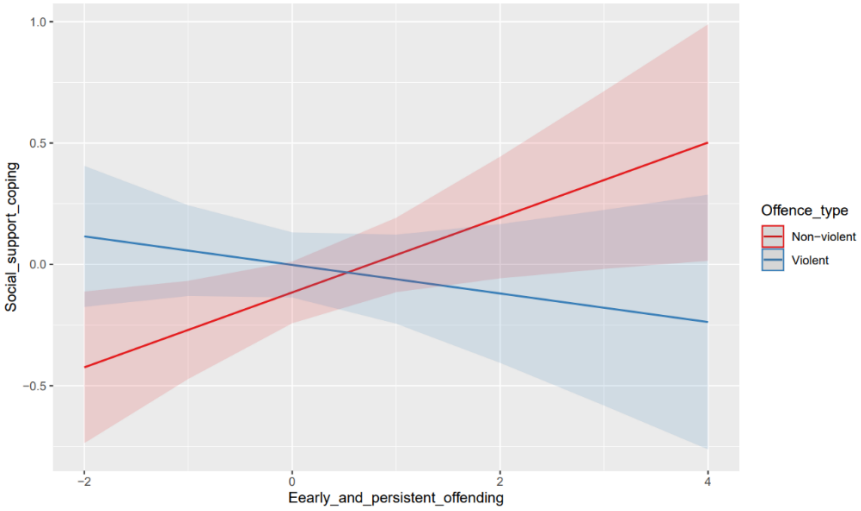

Figure 7

Interaction between Early and persistent offending and offence type in the prediction of Social Support coping

The interaction indicates that the highest Social Support coping is observed in participants with non-violent offences, but who exhibit high early and persistent offending. Participants with non-violent offences paired with low early and persistent offending, along with violent offences, and who have high early and persistent offending, tend to predict lower Social Support coping.

COPING MECHANISMS AND PSYCHOLOGICAL TRAITS ASSOCIATED WITH ADJUSTMENT TO THE PRISON ENVIRONMENT

Correlations between the aggression, depression, quality of life in prison, and self-esteem

Next, we analysed the associations between coping strategies and psychological traits related to adapting to prison environments. Firstly, we show the correlations between aggressiveness, self-esteem, depression, and quality of prison life; these are presented in Table 10. We can see that all scales have high reliability; quality of life in prison is positively associated with self-esteem, and the same applies to depression and aggression. Quality of life and self-esteem are negatively correlated with depression and aggressiveness.

Table 10
Correlations between the psychological traits associated with prison adjustment

	M(SD)	α	1	2	3
1. QPL	3.17(0.72)	.99			
2. Self-esteem	3.21(0.52)	.76	.17**		
3. Depression	0.96(0.73)	.88	-.49**	-.46**	
4. Aggression	2.67(0.74)	.92	-.39**	-.28**	.39**

Correlations between coping strategies and psychological traits linked to adjustment

We analysed bivariate associations between coping and psychological traits related to adjustment; these correlations are shown in Table 11. Depressiveness and aggression are positively associated with all coping strategies. Self-esteem has negative correlations with Social support and Maladaptive coping; quality of life in prison is lower in individuals with pronounced Hybrid and Maladaptive coping.

Table 11
Correlations between the psychological traits associated with adjustment and coping

	Hybrid coping	Social support coping	Maladaptive coping
QPL	-.14**	-.05	-.32**
Self-esteem	.00	-.12**	-.40**
Depression	.19**	.24**	.56**
Aggression	.29**	.10*	.34**

Notes: QPL – Quality of prison life; * - $p < .05$; ** - $p < .01$.

Regression models for the prediction of psychological traits associated with adjustment

We conducted four multiple linear regression analyses to predict quality of life in prison, self-esteem, depression, and aggressiveness, using socio-demographic variables and coping strategies as predictors. All regression models are statistically significant and are presented in Table 12. The most notable predictor is Maladaptive coping, which has the most significant influence on all outcome measures: it negatively predicts quality of life and self-esteem, while positively predicting depression and aggressiveness. Hybrid coping positively predicts self-esteem and aggressiveness, while social support coping independently contributes positively to predicting quality of life and negatively to predicting aggressiveness. The predictors explained the most variance in depression (33%) and the least in quality of life in prison (17%).

Table 12

Prediction of the psychological traits associated with adjustment

	QPL	Self-esteem	Depression	Aggressiveness
Sex	.06(.08)	-.06(.06)	-.08(.07)*	.03(.08)
Age	.23(.00)**	-.02(.00)	-.05(.00)	-.27(.00)**
Education	-.08(.04)	.07(.03)	-.04(.04)	-.00(.04)
Hybrid coping	-.07(.03)	.12(.02)**	.03(.03)	.24(.03)**
Social support coping	.13(.03)**	-.03(.02)	.02(.03)	-.16(.03)**
Maladaptive coping	-.35(.03)**	-.41(.02)**	.53(.03)**	.34(.03)**
F	20.18**	21.92**	49.05**	32.59**
R^2	.17	.18	.33	.25

Notes: EPO – Early and persistent offending; standardised coefficients with standard errors in parentheses are shown in the table; * - $p < .05$; ** - $p < .01$.

COPING MECHANISMS, INSTITUTIONAL MISCONDUCT, AND THE RISK OF FUTURE OFFENDING

Correlations between misconduct and risk indicators

Associations between the indicators of institutional misconduct and risk of future offending are shown in Table 13.

Table 13

Correlations between the measures of misconduct and risk

	M(SD) or %	1	2	3	4	5
1. Disciplinary measures	0.06(0.78)					
2. Special measures	0.07(0.77)	.55**				
3. Control	17.20%	.36**	.50**			
4. Department	27.40%	-.34**	-.29**	-.22**		
5. Solitary confinement	21.80%	.55**	.57**	.38**	-.30**	
6. Risk assessment	2.49(0.65)	.34**	.32**	.27**	-.53**	.32**

Notes: ** - $p < .01$; the percentage of participants who were subjected to control measures, solitary confinement, and who serve their sentences in semi-open departments is shown in the first column

We can see that these indicators form a fairly coherent space of measures: all correlations are significant and positive, except for those between the Department and other measures—higher misconduct and estimated risk are more common in closed compared to semi-open departments.

Correlations between misconduct, risk, and coping

Next, we analysed the associations between indicators of institutional misconduct, the risk of future offending, and coping mechanisms, as shown in Table 14. Hybrid and Maladaptive coping are systematically associated with all examined indicators of misconduct and risk, showing positive correlations with breaking institutional rules and norms and the estimated risk of future criminal behaviour. Social support coping is almost entirely unassociated with the measures of misconduct and risk. There are only two negative associations, indicating lower risk of future offending and decreased social support coping in semi-open departments; however, these associations have very low magnitudes.

Table 14
Correlations between misconduct, risk, and coping

	Hybrid coping	Social support coping	Maladaptive coping
Disciplinary measures	.17**	-.01	.18**
Special measures	.21**	-.03	.18**
Control	.11**	.05	.25**
Department	-.14**	-.09*	-.22**
Solitary confinement	.16**	-.01	.15**
Risk assessment	.21**	.09*	.25**

Notes:* - $p < .05$; ** - $p < .01$.

Predictions of misconduct and risk

We fitted six multiple regression models to predict misconduct and risk variables: three multiple linear regressions (for Disciplinary measures, Special measures, and risk) and three binary logistic regressions (for Control, Department, and Solitary confinement). All regressions are statistically significant, as shown in Table 15. The most prominent predictor is Maladaptive coping, which consistently predicts all misconduct indicators and risk assessments positively. Hybrid coping plays a similar role in the prediction models; the only difference is that Hybrid coping does not significantly predict Control measures. Social support coping negatively predicts institutional misconduct measures (Disciplinary and Special measures, and Solitary confinement) as well as estimates of future criminal behaviour risk. The proportion of

explained variance is relatively modest, with the highest predictive power in estimating the risk of future offending (14%) and the lowest in predicting the department where prisoners serve their sentences (6%).

We also identified two interactions between participants' sex and coping mechanisms in predicting criterion measures: both involve Social support coping. Women with low Social support coping displayed particularly high levels of Special measures, whereas women with high Social support coping showed the opposite trend (β =- .27 [SE = .10]; p = .007). Similarly, women with low Social support coping are more likely to serve their sentence in closed departments; if Social support coping is high, there is an increased likelihood of being transferred to a semi-open department for women (β = .80 [SE = .37]; p = .03). These interactions are illustrated in Figure 8.

Table 15
Regression models for the prediction of misconduct and risk

	Disciplinary measures	Special measures	Control measures	Department	Solitary confinement	Risk assessment
Sex	.00(.09)	.01(.09)	-.05(.30)	-.20(.28)	-.17(.28)	.03(.07)
Age	-.11(.00)**	-.15(.00)**	-.04(.01)**	.00(.01)	-.02(.01)	-.09(.00)*
Education	-.09(.05)*	.03(.04)	.16(.17)	.21(.15)	-.29(.15)	-.18(.04)**
Hybrid coping	.22(.04)**	.26(.04)**	.18(.13)	-.29(.12)*	.50(.12)**	.21(.03)**
Social support coping	-.20(.04)**	-.24(.04)**	-.20(.13)	.12(.12)	-.43(.12)**	-.12(.03)*
Maladaptive coping	.18(.03)**	.21(.03)**	.75(.13)**	-.49(.11)**	.33(.11)**	.20(.03)**
F or χ^2	10.62**	13.64**	53.02**	39.23**	43.97**	15.85**
R^2	.10	.12	.08	.06	.07	.14

Notes: Standardised regression coefficients are shown for Disciplinary measures, Special measures, and Risk assessment; unstandardized regression coefficients are shown for Control measures, Department, and Solitary confinement; standard errors are shown in parentheses.

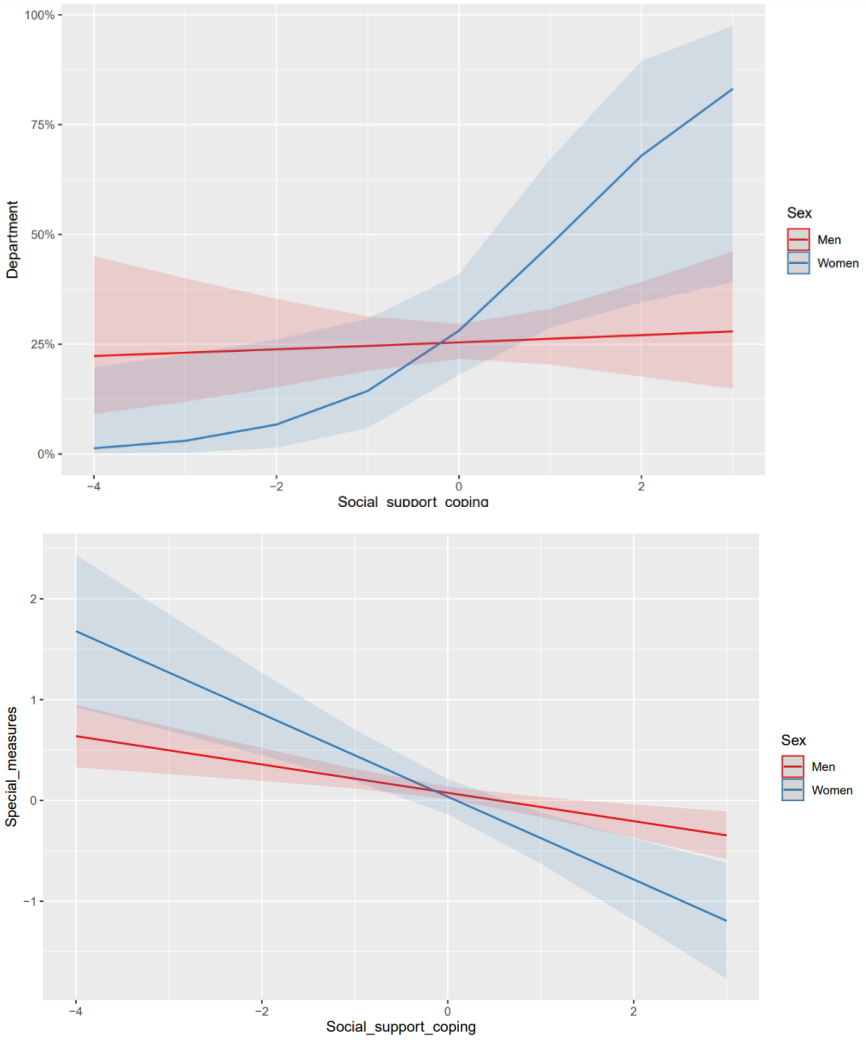

Figure 8

Interactions between Social support coping and participants' sex in the prediction of Special measures (upper panel) and Department (lower panel)

INTEGRATIVE ANALYSIS: THE NETWORK MODELS COMPRISING ALL ANALYSED MEASURES

Previous analyses were arranged conceptually: firstly, we explored the psychometric and network properties of the Brief-COPE inventory; secondly, we examined the nomological network of coping mechanisms through their associations with social support, history of criminal behaviour, other relevant psychological traits, institutional misconduct, and risk of future reoffending. Finally, we aimed to analyse all these variables together, both in a bivariate and a multivariate manner: we believe that such an analysis could offer an integrated and comprehensive view of the traits examined, which might facilitate further insights into the dynamics of coping mechanisms within prison environments.

Once again, we decided to estimate a network model using the analysed measures. The only alternatives are a structural equation model or a path analysis; however, we lack a clear conceptual position regarding our variables as predictors, mediators, and criterion variables. Therefore, if we construct a path analysis, we would need to make several relatively arbitrary decisions without a clear theoretical rationale; this is why we

decided to analyse the network as an exploratory model that can estimate associations between all measures of interest. Firstly, we used Pearson's coefficients to calculate bivariate associations between all measures: significant correlations are shown as edges in Figure 9.

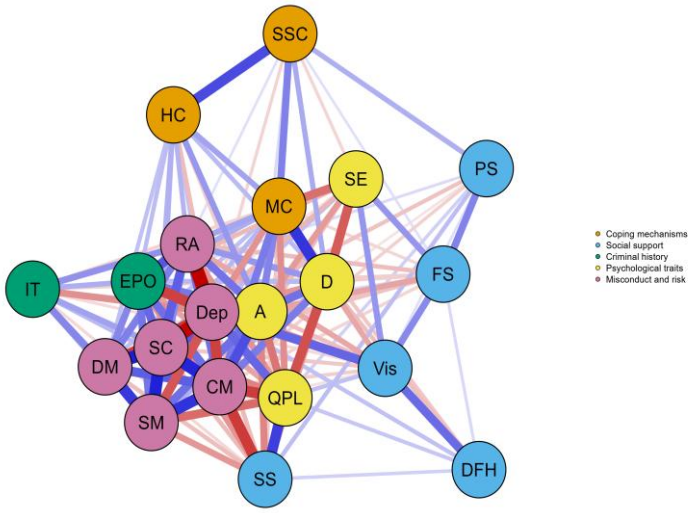

Figure 9

Network model of all analysed variables estimated by bivariate correlations

Notes: HC – Hybrid coping; SSC – Social support coping; MC - Maladaptive coping; DFH – Distance from home; Vis – Visitations; FS – Family support; SS – Staff support; PS – Priest support; EPO – Early and persistent offending; IT – Imprisonment time; QPL – Quality of prison life; SE – Self-esteem; D – Depression; A – Aggression; CM – Control measures; Dep – Department; SC – Solitary confinement; DM – Disciplinary measures; SM – Special measures; RA – Risk assessment.

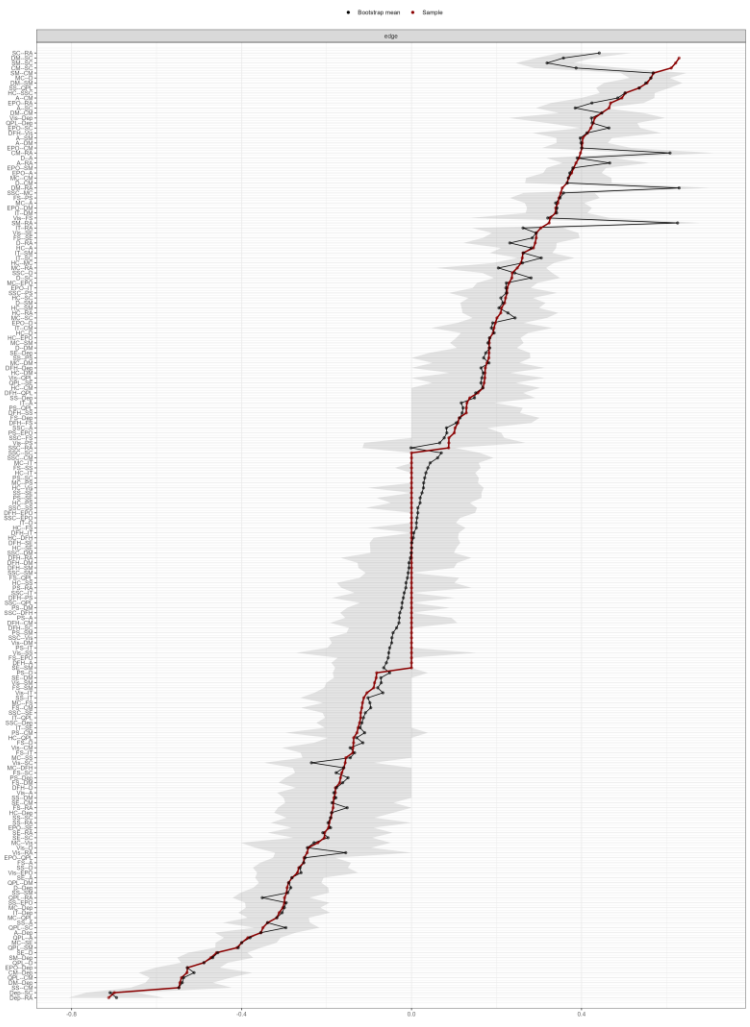

Figure 10

Stability of the network nodes (bivariate correlations)

By analysing their graphical (Figure 9) representations and numerical estimates of network edges' weights (Table 16), we can understand the dynamics of coping mechanisms within the larger network of analysed traits and events. Hybrid coping is positively associated with early and persistent offending, negatively with quality of life in prison, and positively with depression, anxiety, as well as all measures of institutional misconduct and the risk of future reoffending. A very similar pattern is observed for maladaptive coping, with additional links that align with its maladaptive nature: negative associations with social support—including lower visitations (despite the prison being closer to participants' homes)—and lower self-esteem. Social support coping is positively associated with support from a priest, negatively with self-esteem, and positively with depression and aggressiveness. There are also low-magnitude negative correlations with Department (more pronounced in closed departments) and positive correlations with risk assessment.

Table 16. *Coefficients of the network' s edges*

RA	SC	De	CM	SM	D	A	D	SE	QP	IT	EP	PS	SS	FS	Vis	DF	MC	SS	HC	
.13	.10	.08	0	.09	0	.16	0	.17	0	0	.13	-.11	.13	0	.11	0	0	.51		HC
-.14	0	-.12	0	0	0	0	.08	0	.10	0	-.13	.18	0	0	0	0	.17		.50*	SSC
-.13	0	0	.21	0	0	0	.32	-.19	0	0	0	0	.10	0	0	-.10		.35*	.26*	MC
0	0	.11	.11	0	0	0	-.09	-.17	0	0	.22	-.08	.23	0	.38		-.13*	-.03	.01	DFH
.19	.21	.41	0	0	.20	-.11	0	.18	0	0	-.22	.23	-.20	.23		.19*	-.14*	-.03	.02	Vis
0	-.11	0	0	0	-.11	-.15	0	.19	-.20	0	.09	.30	0		.26*	.08	-.12*	.09	.02	FS
0	-.09	-.20	-.41	0	0	0	0	0	.39	0	-.30	0		.06	-.02	.10	-.16*	.02	-.03	SS
-.13	-.11	-.32	-.13	0	0	.14	0	-.10	.15	0	.11		.18*	.35*	.05	-.01	.04	.22*	.04	PS
0	.09	-.17	0	.11	0	.11	0	0	.16	0		.10	-.30*	-.08	-.19*	.02	.23*	.03	.18*	EPO
0	.11	0	0	.09	.19	0	-.10	-.12	0		.23*	-.06	-.11	-.14*	-.07	.01	.07	-.04	.06	IT
.13	.13	.30	0	-.15	0	-.11	-.28	0		-.12*	-.25*	.13*	.53*	-.01	.11*	.12*	-.32*	.15*	-.14*	QPL
-.19	0	-.15	0	0	0	0	-.29		.17*	-.13*	-.20*	.03	.04	.28*	.19*	-.01	-.40*	-.12*	.00	SE
0	.10	0	0	0	0	.08		-.46*	-.49*	.04	.20*	-.08	-.27*	-.14*	-.17*	-.14*	.56*	.24*	.19*	D
.19	.20	.24	.12	0	.17		.39*	-.28*	-.39*	.13*	.38*	-.05	-.34*	-.26*	-.12*	-.06	.34*	.10*	.29*	A
.17	-.14	-.23	0	.21		.40*	.18*	-.08*	-.29*	.34*	.34*	-.04	-.18*	-.17*	-.04	-.01	.18*	-.01	.17*	DM
.24	0	0	0.2		.55*	.40*	.22*	-.08	-.41*	.26*	.38*	-.06	-.29*	-.09	-.06	-.01	.18*	-.03	.21*	SM
.24	0	0.15		.50*	.36*	.35*	.27*	-.13*	-.37*	.13*	.30*	-.08	-.39*	-.08	-.06	-.02	.25*	.05	.11*	CM
-.50	-.62		-.22*	-.29*	-.34*	-.26*	-.21*	.13*	.32*	-.23*	-.36*	-.13*	.10	.08	.17*	.10*	-.22*	-.60*	-.14*	Dep
-.22		-.30*	.38*	.57*	.55*	.35*	.18*	-.16*	-.25*	.19*	.32*	-.02	-.13*	-.12*	-.07	.01	.15*	-.01	.16*	SC
	.32*	-.53*	.27*	.32*	.36*	.39*	.29*	-.21*	-.30*	.30*	.47*	.05	-.19*	-.18*	-.15*	-.05	.25*	.09*	.21*	RA

Notes: bivariate associations are provided above the diagonal (all significant associations, at least on the p<.05 level are marked by *); partial correlations are shown below the diagonal (significant correlations are differnt from zero). HC – Hybrid coping; SSC – Social support coping; MC - Maladaptive coping; DFH – Distance from home; Vis – Visitations; FS – Family support; SS – Staff support; PS – Priest support; EPO – Early and persistent offending; IT – Imprisonment time; QPL – Quality of prison life; SE – Self-esteem; D – Depression; A – Aggression; CM – Control measures; Dep – Department; SC – Solitary confinement; DM – Disciplinary measures; SM – Special measures; RA – Risk assessment

The nodes' centralities are displayed in Figure 11. We observe that the Department variable exhibits notably high betweenness, closeness, and strength. Quality of prison life, along with Aggressiveness, shows increased closeness and strength. Hybrid coping and all other measures of misconduct and risk, apart from the Department, have a significant expected influence on the network dynamics.

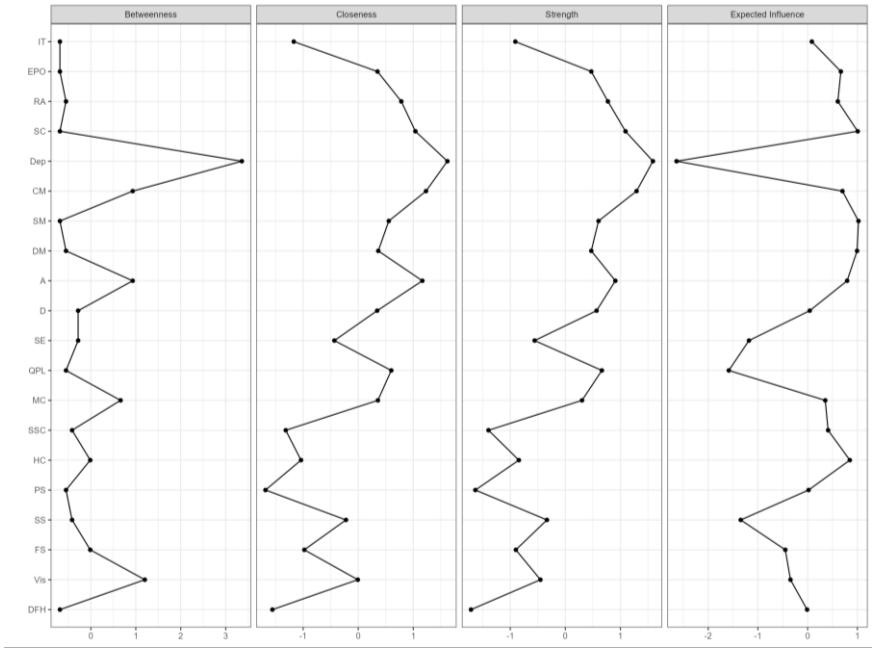

Figure 11

Centrality indices for the nodes of the bivariate associations network

Secondly, we estimated the network using partial correlations to understand multivariate associations between the network nodes. By examining the network graph (Figure 12) and the edges' weights (Table 16), we observe that Hybrid coping is positively linked with Social support coping, Visitations, and Support from staff. It is characterised by earlier and more persistent offending, higher Self-esteem and Aggressiveness. Generally, it shows positive associations with indicators of misconduct and risk, except for lower levels of Hybrid coping in closed departments. Hybrid coping is negatively associated only with the support provided by prison priests. Social support coping has mild positive links with Maladaptive coping, Priest support, Quality of prison life, and Depression; it is negatively related to Early and persistent offending, Risk assessment, and is more prominent in closed departments. Lastly, maladaptive coping is positively connected with Staff support, Depression, and a higher number of Control measures; it exhibits negative relationships with the Distance of prison from participants' homes, Self-esteem, and lower estimated risk of future reoffending. These findings are depicted in Figure 12.

Both the graph and the matrix of edge weights show that Social support coping and Hybrid coping are more closely connected due to a strong association between them. However, their links with other nodes differ significantly and are almost opposite. Conversely, Maladaptive coping is quite distant from the first two coping mechanisms. It is more closely related to

Depression, low Self-esteem, and increased institutional misconduct, mainly evidenced by more frequent use of control measures by prison staff.

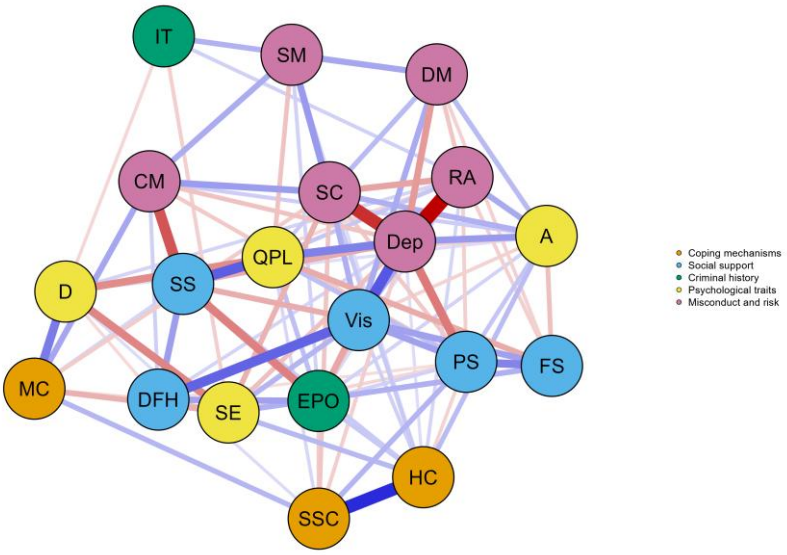

Figure 12

Network model of all analysed variables estimated by partial correlations

Notes: HC – Hybrid coping; SSC – Social support coping; MC - Maladaptive coping; DFH – Distance from home; Vis – Visitations; FS – Family support; SS – Staff support; PS – Priest support; EPO – Early and persistent offending; IT – Imprisonment time; QPL – Quality of prison life; SE – Self-esteem; D – Depression; A – Aggression; CM – Control measures; Dep – Department; SC – Solitary confinement; DM – Disciplinary measures; SM – Special measures; RA – Risk assessment.

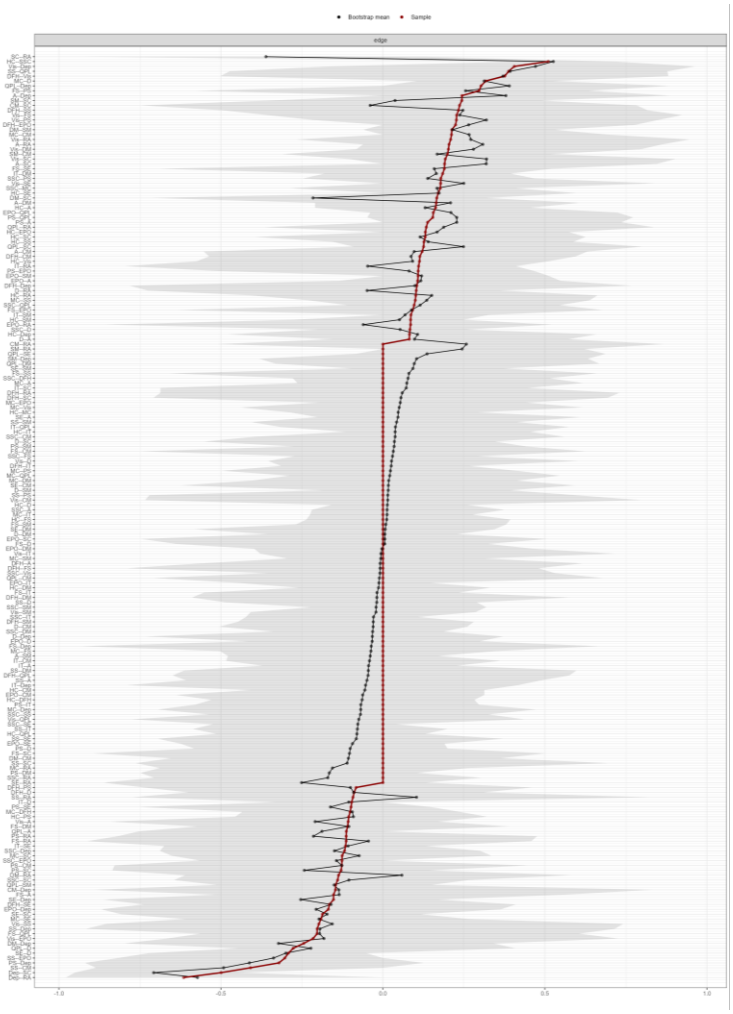

Figure 13
Stability of the network nodes (partial correlations)

The nodes' centralities are illustrated in Figure 14. Similar to the network estimated by Pearson's correlation coefficients, it is evident that the Department variable exhibited the highest betweenness, closeness, and strength. Quality of prison life, along with the frequency of visitations, has increased both closeness and strength. Hybrid coping strategies and visitation frequencies are expected to have a significant influence on network dynamics.

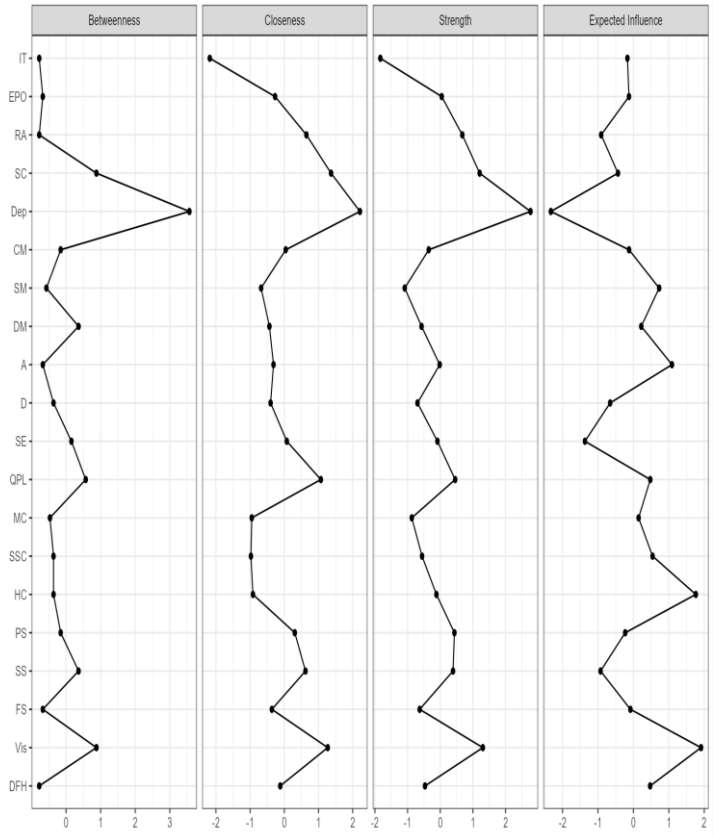

Figure 14

Centrality indices for the nodes of the partial correlations network

DISCUSSION

LATENT STRUCTURE AND NETWORK DYNAMICS OF BRIEF COPE INDICATORS

Brief COPE evaluates coping strategies through 14 different approaches (Carver, 1997; Carver et al., 1989). The authors created this inventory to measure three broader coping styles: problem-focused coping, emotion-focused coping, and avoidant coping. However, studies have shown that this expected structure rarely appears in empirical data (Solberg et al., 2022; Rodrigues et al., 2022). Moreover, the structure obtained is unstable, as the number of extracted latent components varies significantly.

Our analyses highlight this variability: the expected factor structure was not observed in the current data. The first extracted component encompassed several adaptive coping mechanisms, such as humour, acceptance, planning, active coping, and positive reframing. It also included some maladaptive ones: self-blame, self-distraction, and venting. We named it Hybrid coping. Although the name is not ideal, it reflects the complex and diverse nature of this component. Extracting this component represents the primary limitation of coping measurement in our study and a broader limitation for the research itself. Due to the nature of Hybrid coping, we could not establish clear hypotheses beforehand regarding its associations with other variables. We

could only interpret these relationships after analysing the mostly maladaptive results. Ideally, the structure would distinguish between adaptive and maladaptive components. However, this was not achieved here. The other two components are more specific and easier to interpret. Social support coping involved using instrumental support, emotional support, and religion. Past studies suggest this is adaptive coping and the best indicator of an adaptive stress response. The Maladaptive coping component included behavioural disengagement, denial, and substance use. Similar structures have been observed in other studies. For instance, Hsu and Tung (2011) found that acceptance and action, venting and avoidance, and support seeking are related. Hur et al. (2012) identified problem-solving, support seeking, and avoidance. Prado et al. (2004) reported a three-component solution: active, support-seeking, and avoidant coping. Schottenbauer et al. (2006) described problem engagement, avoidant coping, and social support. When mean scores from items loading onto these three components are used, each demonstrates satisfactory reliability, even though Social Support and Maladaptive Coping involve only three items each.

Interestingly, these three coping styles show positive correlations with each other. Although this is unexpected, it is common in the literature (e.g., Cramer et al., 2020; Međedović, 2024b; Sarid et al., 2025; Simpson et al., 2025; Shukri et al., 2024). Some people tend to use more coping behaviours overall, while others use fewer. This can lead to positive correlations between

the components. Theoretically, negative correlations might be expected, given how coping behaviours relate to basic personality traits. For example, adaptive coping is linked to trait Extraversion, while maladaptive coping is associated with Neuroticism (Carver & Connor-Smith, 2010; Connor-Smith & Flachsbart, 2007; Guadalupe & DeShong, 2025). These two traits are negatively correlated (e.g., Van der Linden et al., 2010). Although coping can reflect stable personality traits, much of the variation in coping arises from environmental factors. These factors may also explain the specific latent structure identified here. Prisons are unique environments with high stress levels for inmates. Stressors include restrictions on freedom, living conditions, and interactions with other prisoners. The prison environment likely influences the latent structure of the Brief COPE in these settings, emphasising the need for further research on coping among prisoners. Researchers might consider using alternative inventories for this population. These could be better adapted to the environment and sample. Alternatively, utilising the original inventory, which contains more items, may help establish a more stable latent structure because it provides a more reliable measurement of the 14 coping mechanisms.

We used network analysis to estimate the multivariate associations between narrower coping mechanisms. Centrality metrics in the network are practically valuable because they identify the most central nodes. These statistics assist practitioners in determining which nodes are most significant for

network dynamics. Targeting these central nodes in interventions can influence the entire network. Such approaches have been employed in psychopathology (Borsboom & Cramer, 2013; Contreras et al., 2019; McNally, 2021) and in examining prison life quality (Međedović et al., 2024). In contrast, modifying peripheral nodes should not be the goal for therapists or educators, as this would not effectively shift other nodes in the desired direction.

Centrality indices showed that Planning, along with Instrumental support and Active coping, are the most central nodes in the network. Interpreting these is simple—they represent adaptive coping through active confrontation with stress, planning to address stress, adopting a problem-focused approach, exercising prudence in decisions, and seeking help from others. Planning was the most central element. All indices confirmed their importance. It connects other Hybrid coping nodes and links them to Social support and Maladaptive coping. Planning's influence is adaptive: increased planning correlates with less Maladaptive coping through a negative link with Denial. Planning also connects to increased social support coping through a positive link with Instrumental support. Similarly, higher levels of Active coping relate to less Maladaptive coping due to negative links with behavioural disengagement and Substance use. Instrumental support is less central. While it has positive links with Planning and other support mechanisms, it also connects to Venting and Behavioural disengagement, which may not always be adaptive. Based on these findings, the network model suggests that

Planning and Active coping are promising targets for intervention in Serbian prisons. Improving these could guide the entire coping network towards more functional and adaptive responses to imprisonment.

COPING, DEPRESSION, SELF-ESTEEM, AGGRESSION, AND QUALITY OF LIFE

We have selected these four behavioural dispositions because they are crucial for adjusting to imprisonment. Therefore, we will explore how each disposition—coping, depression, self-esteem, and aggression—is related to social support in prisons, criminal history, institutional misconduct, and the risk of future antisocial behaviour. Our interpretations focus only on associations clearly identified both in the bivariate correlation network and the partial correlation network. Specifically, the quality of prison life is positively linked to support from staff and the prison priest, and negatively linked to depression, aggressiveness, and special measures. It is also higher in semi-open prisons. Self-esteem tends to be higher among prisoners with more visitations, friend support, and those in semi-open environments. Conversely, self-esteem is negatively related to early and persistent offending, depression, and future risk assessments. Depression levels are lower in prisoners living closer to home, but higher among more aggressive individuals and those subjected to more special measures. Aggressiveness shows a positive correlation with earlier and persistent offending, disciplinary and control measures, solitary confinement, and risk

assessments, and a negative correlation with visitations and friend support. These findings confirm that lower self-esteem and quality of life in prison, alongside greater aggressiveness and depressive symptoms, collectively form a psychological profile typical of maladaptation in prison environments.

Depression showed positive associations with all coping mechanisms at the zero-order level, but regression analyses identified maladaptive coping as the key driver of these associations, as conceptually expected. This aligns with existing findings: escapism and blaming others as coping mechanisms relate to depressive symptoms and suicidal ideation in incarcerated and juvenile populations. Studies in other groups also support these associations: depression relates to negative self-talk, self-blame, and substance abuse, and disengagement coping predicts psychological distress. Maladaptive coping, common in low-income samples and often present among those with criminal histories, predicts a range of internalising dysfunctions, including anxiety, stress, and depression. It can also mediate the link between maladaptive cognitive schemas from experienced violence and depression, as well as between substance abuse and depressive symptoms. Additionally, there is a heightened risk of comorbidity between maladaptive coping (such as substance use) and personality disorders as predictors of depression, which may be especially relevant for our sample compared to the general population.

Self-esteem is strongly associated with lower maladaptive coping, as expected. However, connections with other coping mechanisms are less definitive. There was a positive regression coefficient but no significant zero-order association with hybrid coping, while social support coping showed a negative zero-order correlation but a non-significant regression coefficient. Previous research has similarly identified negative links between avoidance or emotion-focused coping and self-esteem, especially when the coping style involves blaming others or escaping—elements similar to our maladaptive coping component. Maladaptive coping may also act as a mediator between increased non-medical prescription drug use and self-esteem. The positive zero-order correlation between social support coping and self-esteem aligns with existing data, although regression analysis indicates that low maladaptive coping is the most robust predictor of higher self-esteem in this sample.

Social support coping positively predicts quality of prison life (QPL), while maladaptive coping predicts lower QPL. Although hybrid coping had a negative zero-order association with QPL, this was not significant in regression analysis. Therefore, adaptive coping—seeking support from others—is linked to a better quality of life in prison, while maladaptive coping based on disengagement, denial, and substance use is associated with a poorer quality of life. These results are consistent with findings in various other populations, such as patients and care providers: adaptive coping supports a higher quality of life, whereas maladaptive coping

undermines it, possibly due to internalising symptoms or specific personality traits like neuroticism.

Aggressiveness consistently correlates with coping styles in both zero-order and multivariate analyses: higher aggression is linked to increased hybrid and maladaptive coping and reduced social support coping. Therefore, unlike QPL, aggression is associated with more maladaptive and less adaptive coping. Previous studies support this pattern: aggression is positively linked to distancing, avoidance, and emotion-focused coping, and negatively linked to planful problem solving and emotion regulation. Emotional instability and a lack of empathy may heighten aggression through less problem-focused and more emotion-focused coping. Environmental stressors, such as community violence and perceived stress, can intensify this effect via maladaptive coping.

Our current approach to operationalising aggressiveness does not distinguish between proactive and reactive aggression. Earlier findings suggest that emotional, avoidant, passive, and maladaptive coping are linked to both types of aggression, possibly affecting reactive aggression more strongly. It would be valuable to examine coping profiles associated with both proactive and reactive aggression, especially within the prison population, considering common offender traits such as increased impulsivity and antagonism, as well as the specific penitentiary environment. Indirectly, this relationship can be explored through Dark Tetrad (DT) traits: previous research shows that maladaptive coping relates to more harmful DT traits like psychopathy and sadism,

whereas less malicious traits like narcissism may be connected to adaptive coping. Our results indicate that aggression is predicted by higher maladaptive and lower adaptive coping, which might reflect links to more proactive forms of aggression. Nonetheless, further research is required to better understand these associations within prison settings and among individuals demonstrating criminal behaviour.

To gain a more comprehensive understanding of the broader connections among coping, aggression, self-esteem, quality of prison life, depression, and behavioural aspects of maladaptive conduct in prisons (such as misconduct and risk), we can examine the networks with all studied variables as nodes again, considering the convergence between networks based on correlations and partial correlations. The indirect links between coping and misconduct through these four analysed traits hold particular conceptual and practical significance, but the reverse pathways—from the traits to misconduct and risk via coping—are also important. For example, previous research indicated that lower quality of prison life correlates with various forms of institutional misconduct (Međedović et al., 2024). In our data, we observed this for all misconduct measures but confirmed these links only for a lower number of prisoners' special measures in the partial correlation network, due to an increased number of effects resulting from statistical suppression (e.g., for Department, Solitary confinement, and risk of future reoffending). This highlights an important caveat and downside of networks derived

from multivariate statistics with many nodes. Social support coping does not directly link to fewer special measures in the network; instead, it is indirectly connected to a higher quality of life facilitated by this coping mechanism. Similarly, social support and maladaptive coping are not associated with how often participants are placed in solitary confinement; however, both coping strategies are positively linked to this misconduct via higher depression—a result expected for maladaptive coping but not for social support coping. We also see that participants serving their sentences in semi-open departments display lower maladaptive coping, likely due to higher self-esteem among individuals in these prison wards. Lastly, hybrid coping is positively associated with various misconduct and risk measures but not with disciplinary or control measures; nevertheless, it is indirectly connected to these indicators because hybrid coping fosters more aggressive behaviour, which can facilitate institutional misconduct leading to disciplinary and control measures. These findings shed light on the broader dynamics between dysfunctional coping, psychological maladjustment in prison environments, and maladaptive conduct that can harm both prisoners and staff.

In summary, the data on the links between coping mechanisms, depression, aggressiveness, quality of prison life, and self-esteem reveal the adaptive characteristics of social support coping and the potential for maladaptive coping to lead to lower adjustment in prison settings through increased aggressive behaviour and depressive symptoms. This is followed by reduced

quality of life and lower self-esteem. The findings on Hybrid coping are somewhat ambiguous due to its complex and opposing nature, but it appears to exhibit more maladaptive features. Therefore, practical interventions should focus on promoting more functional coping behaviour in prisoners by first reducing maladaptive coping and then strengthening social support coping. This approach helps retain other psychological traits that positively contribute to adaptation, which may, in turn, reduce the risk of violence and rule-breaking that threaten the stability of the entire prison community.

CORRELATIONS BETWEEN SOCIAL SUPPORT, VISITATION OPPORTUNITIES, AND THE PROXIMITY OF THE PRISON TO THE PLACE OF RESIDENCE

The correlation analysis between social support, visitation opportunities, and prison proximity to the place of residence (see Table 5) shows that support from clergy and other inmates is positively connected to support from family, friends, and prison staff. Additionally, visitation opportunities are positively associated with the support inmates receive from family and friends, and are also linked to a shorter distance between the prison and the place of residence.

The findings highlight the crucial role of social support within the prison environment, identifying three primary sources: support from family and friends, support from prison staff, and support from the priest and peers. These sources represent different types of assistance that, as previous research has indicated, collectively help individuals better manage the stress of institutionalised prison life and social isolation (Liebling & Maruna, 2013; Haney, 2001).

Positive intercorrelations among social support components suggest that receiving support from one source, such as family, is linked to support from others, like institutional staff. This

demonstrates a synergistic effect among support sources and underpins the cumulative protection model in stressful environments (Cohen & Wills, 1985). For example, family support can enhance inmates' perception that institutional support is legitimate and beneficial (Tewksbury & DeMichele, 2005).

The frequency of visits is positively associated with support from family and friends and tends to increase when the prison is located close to the inmate's home. Cochran (2012) also states in his research that the distance of the prison from one's home is one of the most significant barriers to maintaining regular social and family visits. Empirical studies suggest that a greater distance between the prison and the inmate's home is linked to a lower frequency of visits (Ilijić et al., 2025; Rubinstein et al., 2019; Cochran et al., 2016; Tasca, 2014). The socio-economic capabilities of the family are one of the factors that influence maintaining contact with a family member who is in prison. Additionally, as important factors for achieving visits and maintaining contact, the type of crime (especially if it is a violent crime or a crime that started against a family member) is also mentioned (Pavićević & Ilijić, 2025; Milićević & Ilijić, 2022).

Conversely, the beneficial effects of maintaining family ties and visits are numerous. Inmates who receive regular visits have a better chance of preserving emotional and social bonds, which can help reduce anxiety, depression, and recidivism after release (Bales & Mears, 2008). Our study emphasises the importance of developing methods that make it easier for inmates to access

social support. This includes reducing barriers—whether administrative or spatial—and encouraging visits, as well as running programmes that foster positive relationships between inmates and prison staff (Liebling, 2004).

In our study, we examined how indicators of social support, opportunities for support, and coping mechanisms relate to each other (see Table 6). We found that inmates who cope by seeking social support place greater importance on support from priests and peers. Maladaptive coping is less common among inmates with strong support from family, friends, and prison staff, as well as those who receive frequent visits and are housed in prisons closer to their previous residence.

These findings, along with prior research, emphasise the crucial role of social support in helping inmates manage prison life. Earlier studies confirm a positive relationship between coping through social support and the importance of assistance from the priest and peers. These studies found that spiritual support and help from fellow inmates are vital resources for adaptation within prison (Clear & Sumter, 2002; Koenig, 2009). Inmates who perceive greater spiritual and peer support are more likely to handle prison stress and challenges constructively. Research by other authors indicates that spiritual support from a priest significantly reduces feelings of guilt, meaninglessness, and isolation among inmates. Religion and spirituality offer structure, routine, and a moral framework that aid in building personal identity and fostering hope (Koenig, 2009). Earlier studies (Clear & Sumter, 2002) also demonstrate that religious

activities and communication with priests in prison are associated with lower levels of depression and aggression, as well as greater psychological resilience.

Peer support can also promote a sense of belonging and understanding, alleviating loneliness. When inmates form positive relationships with others facing similar challenges in the same environment, they gain emotional comfort and share strategies for daily prison life.

Finally, our findings indicate that both priest and peer support ease daily life in prison and lead to long-term improvements in inmates' emotional well-being and rehabilitation outcomes.

Conversely, our findings indicate that maladaptive coping is less evident among inmates who receive stronger support from family, friends, and prison staff. It is also less prevalent among those who have more frequent visits and whose prison is located closer to their residence. These results align with theories emphasising the importance of social connectedness and maintaining contact with the outside world in preventing psychological decline in prison (Liebling & Maruna, 2013; Bales & Mears, 2008). Maintaining family contacts and visits from friends enhances emotional stability and nurtures a sense of hope and identity beyond the prison system (Hairstone, 1991).

As previously mentioned, support from prison staff has proven to be a significant protective factor. Earlier studies confirm that positive relationships between inmates and prison staff can

reduce stress, aggression, and feelings of isolation among inmates (Liebling, 2004; Toch, 2000). Finally, our findings support the idea that enhancing both institutional support and support from the social environment can help develop positive coping strategies among inmates.

Regression models for predicting coping based on social support and opportunities for assistance

We carried out three separate multiple linear regression analyses to investigate how various sociodemographic and psychosocial factors influence coping mechanisms. Different types of coping mechanisms served as dependent (criterion) variables, while predictor variables included gender, age, education level, perceived social support, and the perceived availability of support. The goal of these models was to determine the extent to which and how these predictors explain the variability in coping strategies used by the respondents. The prediction of the hybrid coping mechanism as a criterion variable did not produce a statistically significant model ($F_{(8,266)} = 1.22$; $p = .25$). For the other two coping mechanisms, one model showed statistically significant results, while the other did not, indicating inconsistent predictive strength across different coping strategies.

The results (see Table 7) indicate that higher education is associated with a reduced likelihood of using social support as a coping strategy. Inmates with more education are less inclined to

depend on social support to manage stress. However, higher perceived support from priests and peers predicts greater use of social support coping. Inmates who feel more supported by these sources are more likely to seek social support during stressful times.

Furthermore, the variables of prison staff support, frequency of visits, higher education level, and gender emerged as negative predictors of maladaptive coping. In other words, prison staff support and frequency of visits as negative predictors suggest that inmates with greater levels of institutional and social integration rely less on maladaptive coping strategies. Additionally, a higher education level is associated with a reduced use of maladaptive strategies. Finally, concerning gender, its status as a negative predictor indicates the existence of gender differences in the choice of coping strategies.

Finally, we found that the model predicting maladaptive coping explains 20% of the variance, which is almost twice as much as the model predicting coping through social support (11%). These findings suggest a distinction: the analysed sociodemographic and institutional factors (such as gender, education level, etc.) have greater predictive power for maladaptive coping patterns, whereas understanding adaptive, socially oriented coping likely requires the inclusion of additional psychological variables.

The results indicate that different types of support from various sources—the prison and social environments—affect inmates' coping strategies in distinct ways. The negative link between coping through social support and education might mean that inmates with higher education rely less on emotional support

from their social surroundings. Other researchers have reported similar findings. For example, Compas et al. (2001) note that education enhances psychological autonomy, leading to a greater dependence on cognitive and rational coping strategies.

The positive connection between coping through social support and perceived support from priests and peers emphasises the roles of spiritual and interpersonal factors in adjusting to restrictive environments such as prison. Research on religiosity shows that spirituality can lower stress, promote purpose and a sense of belonging, and enhance psychological resilience, which is essential in prison (Koenig, 2009; Clear & Sumter, 2002; Johnson, Larson & Pitts, 1997). Peer support is also vital, as additional studies confirm. Liebling & Arnold (2004) discovered that support from peers helps regulate emotions and reduce anxiety.

Our findings demonstrate that higher education levels, more frequent visits from family and friends, support from prison staff, and gender significantly diminish maladaptive coping strategies. These results are consistent with prior research. For instance, Bales and Mears (2008) found that inmates who received at least one family visit in the year before release had a 30.7% lower risk of recidivism. Each additional visit further reduced this risk by approximately 3.8%. Although this incremental effect seems minor, the cumulative impact of multiple visits can be substantial (Bales & Mears, 2008: 18). However, it is important to note that these findings are not uniform across all visit types or inmate populations (De Claire & Dixon, 2015). Their research shows that various types of visits—spouses,

other significant persons, relatives, and friends—are linked to reduced recidivism, with spousal visits having the strongest effect (De Claire & Dixon, 2015 according to Ilijić et al., 2025: 38). Moreover, several studies have concluded that family visits are associated with lower stress levels (Bales & Mears, 2008), fewer violations of prison rules (Cochran, 2012, 2013; Duwe & Clark, 2013; Mears et al., 2012; Jiang, Fisher-Giorlando & Mo, 2005), improved adaptation to prison life, and more successful reintegration (Duwe & Clark, 2013). Supporting this, a meta-analysis by Mitchell et al. (2016) highlights that strengthening social bonds is vital for adjustment and reducing reoffending risks.

Liebling (2004) and Toch (2000) show that high-quality, trust-based relationships between inmates and staff improve inmates' emotional well-being and reduce prison violence.

Building on this, it is important to again emphasise that the regression model predicting maladaptive coping explained 20% of the variance, nearly twice as much as the model predicting coping through social support (11%). These results indicate that the analysed factors—education, visits, and institutional support—are particularly important for preventing negative or maladaptive coping strategies, such as denial, passivity, or aggression. Our findings align with theoretical models that underscore the significance of the environment and adequate support for adaptive coping under stressful conditions (Lazarus & Folkman, 1984; Carver, Scheier, & Weintraub, 1989).

EXPLAINING COPING STRATEGIES BASED ON PREVIOUS CRIMINAL HISTORY

The principal component analysis identified two components: early and persistent offending (a component describing earlier age at first criminal offence and higher frequency of recidivism) and time spent in prison (a component describing the total time an individual has spent in prison, including the length of the imposed sentence, length of stay, and total lifetime time spent incarcerated).

The results we obtained (Table 8) show that these two components are positively linked. The type of criminal offence is positively connected with the Time Spent in Prison component, indicating that inmates convicted of violent crimes have spent more time in prison throughout their lives.

However, the type of criminal offence is not linked to the Early and Persistent Offending component. This component accounts for 41.2% of the variance, while the Time Spent in Prison component explains 27.33%. Together, they make up about 68.5% of the overall variance. The frequency of incarcerations and number of convictions are strongly connected to Early and Persistent Offending, whereas age at first conviction is negatively related to it. These patterns imply that offenders may develop coping strategies in response to early, persistent criminal activity,

characterised by more convictions, more incarcerations, and a younger age at first offence.

Previous results reveal two clear dimensions of criminal behaviour among offenders: early and persistent offending, and time spent in prison. These dimensions are positively correlated. Our findings align with previous research, indicating that an earlier start to a criminal career increases the likelihood of chronic offending and more frequent contact with criminal justice and corrections (Moffitt, 1993; Piquero et al., 2003).

The first component—early and persistent offending—involves an earlier age at first criminal act, a higher number of convictions, and more frequent criminal recidivism. Our study's findings align with developmental theories of delinquency. These theories emphasise that early behavioural problems and antisocial development in childhood are major predictors of later criminal behaviour (Loeber & Farrington, 2000; Moffitt, 2006). This pattern often relates to stable traits, such as impulsivity, low behavioural control, and exposure to a risky family environment during childhood (Caspi et al., 1994), and may shape maladaptive coping strategies that persist into adulthood.

Theories of delinquency development, particularly those by Loeber and Farrington (2000) and Moffitt (1993, 2006), emphasise that criminal behaviour often starts in childhood. It initially manifests as oppositional behaviour, aggression, and issues with authority. Moffitt's developmental theory (2006) describes two main pathways. The life-course persistent pathway involves

consistent antisocial behaviour from childhood into adulthood. The adolescence-limited pathway features temporary offending related to adolescent development.

These theories are significant because they emphasise early interventions to prevent negative behaviours from becoming deeply rooted or more severe. Besides impulsivity and low control, researchers say emotional issues, poor social skills, and low academic achievement are also risk factors for persistent antisocial behaviour. Caspi et al. (1994) note that both biological tendencies and negative environments, such as neglect, abuse, or poverty, together can foster a personality more prone to criminality.

In other words, the interaction of these risk factors—merging individual traits and environmental influences—supports biosocial models of delinquency, which suggest that antisocial behaviour develops through a complex interaction of innate and acquired characteristics.

The second key component, time spent in prison, is positively linked to the type of criminal offence, which may affect how individuals develop coping strategies to deal with incarceration. Our results indicate that individuals who have committed violent crimes have spent more time incarcerated over their lifetime, which corroborates previous research showing that violent offenders face harsher and longer prison sentences (Blumstein et al., 1986; Nagin & Pogarsky, 2001).

We did not find a link between the type of crime and early or persistent offending. Early involvement in crime does not always lead to violent acts. Developmental criminology literature supports this, noting that different paths of criminal behaviour can result in different types of delinquency (Laub & Sampson, 2003) and that factors driving early offending may differ from those influencing the type of crime.

The results we presented reaffirm the importance of adopting an individual approach when planning treatment and rehabilitation programmes for offenders. Recognising key risk factors for criminal behaviour, along with the personal characteristics, capacities, and needs of the individual, enables the selection of the most effective treatment options. For example, individuals who begin criminal activities early may benefit significantly from targeted programmes focused on developing social skills, education, acquiring professional qualifications, and impulse control. Conversely, offenders who commit violent crimes should be directed towards more intensive and long-term treatments that include cognitive-behavioural methods, as well as work on emotional regulation, managing aggression, and anger management. Tailoring treatment according to specific criminal patterns is essential for successful reintegration and recidivism prevention.

Correlations between coping strategies and criminal behaviour

By analysing the relationship between indicators of earlier criminal behaviour and coping mechanisms, we identified two significant correlations. Early and persistent offending is positively associated with maladaptive and hybrid coping strategies. Our findings suggest that individuals who engage in delinquent behaviour from an early age and continue these patterns through adolescence and adulthood often demonstrate a blend of antisocial and emotionally dysfunctional traits. They also tend to use ineffective methods of coping with stress.

Reviewing the literature, we note that Moffitt (1993; 2002) identified the life-course-persistent (LCP) offender, characterised by long-term antisocial behaviour, emotional dysregulation, and neurocognitive deficits. Additional studies confirm that persistent offenders show lower psychosocial adjustment and employ inadequate coping mechanisms (Pulkkinen et al., 2009; Tobin et al., 2011). For example, Pulkkinen et al. (2009) conducted a longitudinal study in Sweden examining how different trajectories of antisocial behaviour—persistent, adolescence-limited, adult-onset, and non-offenders—relate to adult life outcomes in men. The study specifically found that persistent offenders experienced the poorest academic and psychosocial functioning, demonstrated high aggression and hyperactivity, and exhibited increased rates of

alcoholism and psychiatric problems in adulthood. These difficulties were preceded by childhood traits such as low self-control and aggression. The findings support the theory of distinct developmental pathways in delinquency, clearly identifying persistent offenders by early-emerging traits and poorer adult adjustment.

Research in prisons indicates that coping mechanisms like denial and avoidance are associated with heightened aggression and emotional issues (Shulman & Cauffman, 2011; Tobin et al., 2011). Shulman & Cauffman (2011) studied 373 juvenile offenders aged 14 to 17 during the early weeks of incarceration. The aim was to understand how various coping strategies affect juveniles' psychological states (internalising and externalising symptoms) and behaviour in prison. Results show that seeking social support reduces internalising problems such as anxiety and depression, and also lowers externalising issues. Acceptance acts as a "stress buffer," supporting internal psychological adjustment. Conversely, denial leads to more severe internalising symptoms, indicating it is a maladaptive coping mechanism. Active coping—thinking positively, planning, and taking action—is the only strategy proven to help decrease violent behaviour among youths with violent tendencies during incarceration (Shulman & Cauffman, 2011, p. 824). Seeking social support, which reduces internalising symptoms over time, helps young people adapt to new environments. These findings suggest that seeking social support enhances psychological well-being and highlight the importance of

developing adaptive coping strategies in prisons to promote emotional stability and reduce violence.

Simultaneously, the results of the study carried out within the prison setting by Shulman and Cauffman (2011) show that denial and avoidance, as maladaptive coping mechanisms, are linked to increased emotional distress and aggression. These findings directly support our research's connection between maladaptive coping and risky behavioural patterns and highlight the importance of developing adaptive strategies among adult offenders and youth at risk of persistent offending. Such strategies help lower recidivism, enhance emotional regulation, and aid in reintegration. Evidence indicates that offenders who use constructive coping methods (such as seeking support, planning, and problem-solving) are less likely to reoffend and tend to have better psychosocial functioning after release (Dobson, 2024).

Regression models for predicting coping mechanisms through criminal behaviour

Using multiple regression analysis, we predicted coping components by including gender, age, education, and criminal history as predictors. Notably, the regression models mirrored the results of bivariate correlations: early and persistent offending positively predicted maladaptive and hybrid coping. These findings indicate that individual characteristics and criminal history significantly contribute to explaining coping styles. Specifically, the predictors were most successful in explaining maladaptive coping (15% of the variance explained), while they were least successful in predicting coping through social support (3%). This pattern is consistent with previous research, which has shown that individuals with a history of early and persistent delinquency are more likely to adopt ineffective, maladaptive coping strategies (Moffitt, 1993; Agnew, 2006).

Gender emerged as a significant negative predictor of hybrid coping, indicating that men, compared to women, utilise this coping strategy less frequently. Previous research has shown that men are more likely to employ maladaptive coping strategies (Carver, Scheier & Weintraub, 1989; Matud, 2004; Ptacek, Smith & Dodge, 1994), such as distancing, avoidance, denial, and substance abuse. Conversely, women tend to seek social support and express their emotions (Tamres, Janicki, & Helgeson, 2002). In our

study, men generally employed fewer of all the examined coping styles, including both hybrid and maladaptive strategies.

The results show that men use both adaptive and maladaptive coping strategies less often, whereas women tend to use these strategies more frequently. This difference may indicate that men generally engage in passive avoidance, emotional inhibition, and internalisation of stress. Such a pattern aligns with previous research indicating that, due to gender socialisation, men tend to suppress emotions and utilise explicit coping mechanisms less often (Addis & Mahalik, 2003; Carver et al., 1989). Male socialisation suggests that men learn not to "show weakness," to suppress emotions, and to avoid seeking help (Addis & Mahalik, 2003). Rather than favouring particular coping styles, men may simply respond to stress less often through strategies that standard instruments can easily measure. Our findings do not imply that men do not experience stress. Instead, they suggest that men may be less likely to report using recognisable coping strategies than women.

Age

In our study, age was a significant negative predictor only for hybrid coping; it did not notably affect social or maladaptive coping. Older participants employed hybrid coping strategies less frequently, indicating diminished flexibility in selecting coping strategies as they age.

Previous research (Folkman et al., 1987; Blanchard-Fields et al., 2004) indicated that older adults tend to utilise emotional regulation and avoidance strategies more often, while they are less inclined to engage in active problem-solving approaches. The absence of significant links between age and either adaptive or maladaptive coping mechanisms may reflect the influence of personal factors, life experiences, or specific prison circumstances, rather than age alone.

Our findings indicate that respondents' education level is a significant negative predictor of maladaptive coping, implying that those with lower educational attainment tend to use less effective coping strategies more often. A study by Park & Folkman (1997), which explored how individuals find personal meaning in stressful situations and how the presence of "meaning" influences coping styles, concluded that individuals with lower education levels also have a reduced ability to reflect on stressful situations and less developed strategies for constructive problem-solving.

Conversely, our results indicate that respondents with higher education levels tend to use coping strategies that involve seeking social support. This may partly be due to greater independence and more developed intrapersonal skills among the more educated, making them less dependent on their environment to manage stress. Furthermore, individuals with higher education may prefer internal problem-solving methods and be less willing to show vulnerability by asking for help. Conversely, for those with lower education levels, relying on others may serve as an

important compensation for lacking independent coping strategies, a pattern also observed in some previous studies (Thoits, 1995).

Interestingly, neither the type of criminal offence nor the length of time an individual spent in prison significantly contributed to predicting any of the coping models. This may be because personal characteristics of the individuals and/or other socio-psychological factors have a greater influence on coping styles than the nature of the crime committed or the duration of imprisonment.

Early and Persistent Offending

Early and persistent offending (EPO) is linked to both hybrid and maladaptive coping strategies, but does not significantly relate to coping through social support. The positive association between EPO and maladaptive coping is expected and aligns with previous research. Studies indicate that individuals with chronic delinquent behaviour often develop dysfunctional ways of managing stress (Ireland, Boustead & Ireland, 2005; Slade & Forrester, 2013). This has been discussed in earlier chapters.

Our findings are notable in that early and persistent offending is linked to a hybrid coping style. This suggests that individuals with criminal tendencies do not rely solely on maladaptive mechanisms. Instead, they employ a combination of adaptive and maladaptive coping strategies. This may demonstrate strategic flexibility or adaptation to circumstances. For instance,

individuals might utilise social or instrumental strategies while in prison. It could also indicate instability in emotional regulation.

The lack of a significant link between early and persistent offending and social coping indicates that individuals with ongoing criminal behaviour often do not regard social support as a helpful or accessible resource. This may arise from unreliable past relationships, antisocial attitudes, or mistrust of others (Agnew, 2006; Thoits, 1995). Dependence on others might also be viewed as a sign of weakness in delinquent subcultures, further discouraging the use of such strategies.

The results indicate that individuals with a non-violent offence, alongside a clear pattern of early and persistent offending, report the highest use of social support as a coping mechanism. This suggests that such individuals may have greater exposure to institutional assistance and possibly better skills in seeking support. A significant relationship was found between crime type, offending history, and the use of social support.

In contrast, individuals with violent offences and a history of early and persistent offending, as well as those with non-violent crimes without persistent offending, rely less on social support. This reduced reliance may result from interpersonal difficulties, low trust, or undeveloped coping strategies.

Our findings show that early and persistent offending, when combined with the specific type of criminal offence, influences whether individuals use social support to cope. This underscores

the complex psychosocial factors shaping criminal behaviour. Therefore, treatment and rehabilitation should be tailored to reflect both the nature of the offence and an individual's developmental history of criminal behaviour.

It is especially important to strengthen social support capacity among high-risk groups, such as offenders with violent behaviour and long criminal histories, to improve treatment and rehabilitation outcomes.

CORRELATIONS BETWEEN MISCONDUCT AND RISK INDICATORS

Our study revealed a notable positive correlation between disciplinary measures and misconduct, a significant negative association between closed-type prison units and misconduct, and an increased risk of future criminal behaviour. The positive correlation between disciplinary measures and the strong predictive value of risk for future criminal behaviour, depending on the type of prison unit (closed, semi-open, and open), emphasises the connection between disciplinary violations, misconduct, and the likelihood of future offending.

Although it seems logical to believe that inmates who repeatedly breach disciplinary rules are at higher risk of future punishment and criminal activity, a closer examination of how the prison disciplinary system functions suggests the possibility of a negative feedback loop. This cycle indicates that applying harsher punitive measures within prison might actually diminish the rehabilitative and deterrent effectiveness of incarceration.

Particularly strong correlations were observed between special measures and disciplinary measures, between control and special measures, between solitary confinement and all types of measures, and between closed prison units and both solitary

confinement and the risk of future offending. A higher estimated risk of future crime was consistently associated with an increased use of disciplinary measures, isolation, and control.

The causes of disciplinary violations vary. They may originate from prison conditions, institutional traits, inmates' characteristics, or even from shortcomings in prison management (Ilijić & Jovanić, 2014). Research examining the criminogenic effects of harsher incarceration conditions has shown that negative prison experiences often lead to adverse outcomes (Listwan et al., 2013, p. 146). Studies on the criminogenic, non-deterrent impacts of prison environments further illustrate that harsher conditions do not reliably prevent future crimes. Contrary to the common belief that inmates are "scared straight" by negative experiences, evidence indicates that exposure to physically risky or threatening prison conditions may actually increase the likelihood of reoffending (Listwan et al., 2013, p. 163). The severity of punishment seems inversely related to the sense of safety, which emerges as one of the most important protective factors against recidivism.

The disciplinary policy of correctional institutions sets out rules, procedures, and sanctions to organise the daily lives of inmates, protect their safety and security, and sustain order through disciplinary penalties for misconduct. However, the effectiveness of the disciplinary system—and especially the unquestioning reliance on disciplinary sanctions—has been increasingly questioned.

Nan-Sonenstein and Haney (2025) provide a comprehensive report and review of disciplinary sanctions across 50 prison

systems in the United States, examining how these systems are designed and how they function as a core aspect of prison life—a dimension which, in their view, has long been neglected. In this detailed and critical account of the U.S. prison disciplinary system, the authors highlight significant similarities between the issues seen in the "external" criminal justice system and those embedded within the internal prison disciplinary structures (Nan-Sonenstein & Haney, 2025).

Their conclusions about the counterproductive effects of disciplinary systems are based on several structural weaknesses: limited legal protections for inmates within prisons; the administrative nature of disciplinary procedures, which can be amended more quickly than the wider criminal justice system; insufficient awareness among inmates of the rules regulating their conduct; and the excessive number of such rules. These flaws create conditions for inconsistent, arbitrary, and non-transparent practices by prison staff, often influenced by personal attitudes towards inmates, leading to unequal and unfair treatment.

Correctional officers, as the authors note, frequently enforce rules arbitrarily, sanctioning even everyday behaviours and survival strategies of inmates. Such practices not only undermine fairness but also cause far-reaching and harmful consequences for prisoners (Nan-Sonenstein & Haney, 2025). Disciplinary measures often obstruct prisoners' access to programmes and services that could improve their quality of life, prolong their incarceration, weaken their standing in parole and clemency hearings, and—particularly in the

case of traumatic sanctions such as solitary confinement—increase the likelihood of re-arrest (Nan-Sonenstein & Haney, 2025).

According to the report's authors, prisoners have very limited ways to contest disciplinary charges. Most rules cover behaviours that are not considered crimes outside prison. Their application reveals racial and gender disparities (Nan-Sonenstein & Haney, 2025).

The lack of oversight and the arbitrary, traumatic nature of disciplinary practices cause long-term effects on prison life and after release. The authors call for urgent reforms: reduce disciplinary rules, limit officers' discretion, ensure due process, eliminate harsh punishments such as solitary confinement, and lessen the impact of disciplinary records (Nan-Sonenstein & Haney, 2025). Misconduct records are given more importance than good behaviour in decisions about prisoners' status. These outcomes are rarely viewed as system flaws but rather as prisoners' personal failings (Nan-Sonenstein & Haney, 2025).

The notion that disciplinary measures ensure a safe and orderly prison environment by reducing misconduct, victimisation, and violence has become little more than a display of powerlessness. This undermines the principles of rehabilitative prison practice. From a policy perspective, crime-prevention strategies that focus on harsher prison sentences and disciplinary sanctions overlook deeper consequences. Prisons influence emotions, thinking patterns, and individuals' capacity for reintegration into society. Harsh conditions can fuel anger and

defiance, which in turn undermine rehabilitation and increase recidivism (Listwan et al., 2013).

Strain theory (Agnew, 1992) offers a theoretical framework for understanding these findings on the impacts of disciplinary measures in prisons. Specifically, strains caused by events, practices, and circumstances linked to negative or unpleasant treatment—such as perceived injustice, lack of control, and unpredictability associated with inconsistent and overly harsh disciplinary punishments—trigger anger and act as a catalyst for criminal behaviour (Listwan et al., 2013). Building on this, research on adolescent male prison populations has also shown that recent stress significantly increases violent rule violations (Shulman & Cauffman, 2011).

Misconduct manifesting as violence is a pressing issue in prison communities. Ann Marie Rocheleau emphasises the seriousness of violence in U.S. prisons. She explores how inmates' coping strategies relate to violent behaviour (Rocheleau, 2013). Using a social-psychological perspective, she questions whether certain coping skills can decrease the likelihood of violence. She also considers whether differences exist between those who engage in violence and those who adopt other outcomes. If some coping strategies are linked to violent acts, prisons could develop targeted programmes to enhance these skills (Rocheleau, 2013, p. 2). Qualitative studies of prisoners' coping offer insights into why some, under stress, resort to deviant behaviours while others do not (Leban et al., 2015, p. 6).

Correlations among Misconduct, Risk, and Coping

The relationships between misconduct, risk, and coping in our study showed the expected strong positive links among all indicators of misconduct, risk, and maladaptive coping. The results also revealed an unexpected and weak connection between adaptive coping, disciplinary measures, and risk. This suggests that even adaptive coping mechanisms, usually considered beneficial, might be associated with disciplinary violations under certain prison conditions. Therefore, adaptability must be understood within the complex context of prison life and the factors that influence how coping strategies develop and change.

Coping with support from others did not show any link to disciplinary actions or the estimated likelihood of reoffending. Two weak negative links were found between semi-open units and the social support coping mechanism. These suggest that stronger social support might, to some extent, lower the risk of future infractions. These results align with previous research. Inmates who use social support–oriented coping strategies in stressful situations tend to have better mood, mental health, and psychological well-being (Shulman & Cauffman, 2011; Van Harreveld et al., 2007). Studies documenting the positive effects of social support as a coping strategy have found that it decreases feelings of social isolation (Cochran & Mears, 2013). It also encourages better adaptation (Rogers, 2019), supports adaptive

and positive coping techniques, and lowers violent infractions in prison (Shulman & Cauffman, 2011; Kovács, 2019).

Rocheleau (2013) found that social support in prisons has multiple, ambivalent effects, depending on its type. Good relationships with children and contact with caregivers (usually mothers) reduced stress and violence among fathers. Emotional support from family helped inmates cope with prison. However, seeking support through active coping in negative or violent situations could lead to negative support from other inmates and result in violence. Direct action was linked to both positive and negative behaviour, with outcomes varying by the specific problems inmates faced.

As the author emphasises, nearly everyone agreed on two points. They could neither ignore nor resolve disrespect or threats from others. Using violence in situations of potential life threat was often seen as the only option (Rocheleau, 2014, p. 18). In this context, recommendations include structuring prison time and providing meaningful activities—such as reading, sports, or creative programmes. These activities could foster a positive and rational outlook on situations and help alleviate negative emotions (Pleško et al., 2024, p. 33).

Our study showed that inmates who utilise maladaptive or mixed coping strategies are more likely to breach prison rules. They also have a higher estimated risk of future criminal activity. Specific characteristics of the prison unit, especially its level of openness, were negatively associated with all three types of coping

mechanisms. Strict units reduce both adaptive and maladaptive coping strategies. The results indicate that maladaptive coping strategies are most strongly linked to disciplinary infractions and a high risk of recidivism. Previous research shows that dysfunctional coping with prison stressors is ineffective and leads to many negative outcomes. These include poor psychological health, higher stress levels, anxiety, aggression, and disciplinary violations (Reid & Listwan, 2018; Rocheleau, 2014; Shulman & Cauffman, 2011).

Adaptive coping mechanisms are positively linked to risk, which can be understood by viewing adaptation as a process (Agnew, 2013). Individuals do not respond to stress with a single strategy; instead, they try multiple strategies until they find one that works. They may favour positive coping styles. However, a lack of resources or opportunities can hinder the effectiveness of these strategies (Leban et al., 2015, p. 22). Research findings (Leban et al., 2015) also indicate that the context of situations and stressors affects coping strategies. Building on these findings, it is crucial to consider how the availability of resources influences the ways individuals cope.

As Celinska and colleagues summarise: "Coping techniques are determined by the resources an individual has available. These include health, energy, positive beliefs, problem-solving skills, social skills, social support, and material resources. Conversely, limitations in utilising coping resources include personal constraints, such as internalised cultural values, beliefs, and

psychological deficits. Environmental constraints also play a role, such as the lack of assistance from agencies or institutions. The level of threat, including injury, illness, or fear, further limits coping resources" (Celinska et al., 2022, p. 327).

Using a multiple regression model, our results led to several important conclusions. Consistent with previous research, maladaptive coping strategies were strongly associated with higher levels of disciplinary infractions and an increased risk of future criminal behaviour. Maladaptive strategies are approaches that fail to improve conditions or reduce stress. Instead, they often exacerbate the individual's situation (Celinska et al., 2022, p. 327).

Building on these findings, a hybrid coping model that combines maladaptive and adaptive elements was also linked to increased infractions and risk. This indicates that even partly maladaptive strategies can lead to negative outcomes. Therefore, effective stress management is essential for reducing infractions and the likelihood of future criminal behaviour. Conversely, coping strategies that involve social support—such as seeking help from staff, family, or fellow inmates—were associated with fewer infractions and a reduced estimated risk of recidivism. Social support acts as a protective factor in the adjustment process and should be regarded as a multidimensional concept, encompassing not only the number of contacts but also the quality of relationships, the types of support offered, and the individual's perception of its availability (Ireland, 2001, p. 18).

Accurate measurement of social support requires a clear distinction between its dimensions—emotional, instrumental, informational, and evaluative—because they frequently overlap. Merging these into a single category of "social support" conceals how each type specifically influences health and behaviour (Cutrona & Russell, 1987). For female inmates, supportive relationships (Pierce et al., 1996), emotional care (Gentry & Kobasa, 1984), and attachment (Weiss, 1998) are particularly important, directly shaping how women experience and respond to incarceration.

Building on the importance of social support, research shows that women in prison experience incarceration more intensely than male inmates (Crewe et al., 2017), making coping strategies especially essential. Consequently, women need to depend on a range of coping techniques to manage the significant changes and challenges of prison life (Celinska et al., 2022, p. 237).

Our research shows that low social support among women directly leads to increased disciplinary actions and a higher chance of placement in more secure prison units. Conversely, strong social support significantly reduces the risk of adverse outcomes and promotes transfers to semi-open units. These findings highlight the crucial role of social support in decreasing punitive measures and supporting rehabilitation among female inmates. The intense stress women face from separation from motherhood further underlines social support as an essential factor (Celinska & Siegel, 2010; Špadijer Džinić et al., 2009).

Most female inmates enter prison with backgrounds characterised by family and intimate partner violence, social vulnerability, impaired mental health, and substance use disorders (Lynch et al., 2012; Batrićević et al., 2023). These factors result in family-based, emotion-focused coping strategies being predominant, highlighting the crucial importance of ongoing support in improving incarcerated women's well-being (Pamungkas et al., 2024).

Regression analysis indicated that coping models most accurately predicted future criminal behaviour. Gender was not a significant factor in disciplinary measures or risk assessment. Nonetheless, younger and less-educated inmates were more prone to disciplinary violations and faced a greater risk of future criminal behaviour compared to older, more educated inmates.

Coping models differ significantly in their predictive importance. The hybrid coping model is linked to increased disciplinary and special measures, which elevates the estimated risk of future criminal behaviour. Conversely, using social support as a coping strategy results in fewer punishments and reduces the likelihood of future offences, acting as a protective factor for prison adaptation. On the other hand, the maladaptive coping model leads to entirely negative outcomes, such as disciplinary sanctions and a higher estimated risk. Implementing this model fosters dysfunctional behaviour both during incarceration and after release.

Coping models, identified as the most significant predictors of coping in our study, arise from a combination of sociodemographic, psychological, situational, and other factors. Exploring how these models are formed, how they operate, and what can improve them remains an area underexplored in prison environment research. Recognising their role in an individual's adaptation to incarceration is crucial for rehabilitation success, as it positions the prison sentence as preparation for a prosocial life after release. In our study, social support as a coping model proved to be the most effective strategy for managing stress in prison. These findings offer valuable insight for future research into the types, dimensions, and impacts of social support as a coping mechanism that fosters inmate well-being.

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