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Gender Differences in Nightmare Characteristics Following Trauma*

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Gender is one of the well-recognized risk factors for idiopathic nightmares, but rarely connected to posttraumatic nightmare characteristics. Thus, this study aims to test gender differences in (posttraumatic) nightmare characteristics after controlling for trauma-related psychopathology in a large sample of people who experienced trauma. Research participants were 707 soldiers (mean age 31.3 years, 19.5% women) admitted to a hospital-based treatment program for veterans who

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completed extensive assessments consisting of clinical interviews and self-rating measures with respect to socio-demographic characteristics and psychopathology, as well as dream-related variables. Results indicate no gender differences with respect to nightmare frequency, psychophysical and emotional involvement, reorientation, and dream recall after awakening. Differences between men and women in the amount of replicative content are fully, and in case of nightmare related impairment, explained mainly by the presence of PTSD diagnosis, nightmare frequency, and age. This study questions the significance of gender as a risk factor or predictor of specific (posttraumatic) nightmare characteristics in traumatized and military samples. Further research needs to test if our findings are restricted to military contexts or can be generalized to civilian samples.

Keywords: PTSD, nightmares, military, gender, replicativeness

Highlights:

- Male and female soldiers do not differ on the majority of nightmare characteristics.
- Gender doesn't predict replicativeness beyond the PTSD, nightmare frequency, and age.
- Male soldiers might experience more nightmare-related problems in everyday functioning.

Gender Differences and Posttraumatic Nightmares

Nightmares are defined as disturbing mental experiences that generally occur during REM sleep and often result in awakening (according to the International classification of sleep disorders – 2nd version (ICSD-2)). They are associated with the emotional burden (referred to as nightmare distress) and suicidality (Nadorff et al., 2014) and considered to be emotionally the most intense type of dreaming (Levin & Nielsen, 2007). In the study on large community sample, up to 5% of

the general population report to suffer from nightmares, typically defined as at least one nightmare per week (Schredl, 2010). Among the well-established risk factors for nightmares are age and gender (Schredl & Reinhard, 2011), traumatic events, and related psychopathology (Wittmann et al., 2007) and personality traits (e.g., neuroticism in Schredl et al., 2003). Namely, the frequency of recurrent nightmares increases in women and youngers, i.e., reported in 2 to 30% of children (Wiechers et al., 2011). Other populations with elevated nightmare incidences are psychiatric patients with percentages ranging from 16 to 70% depending on the psychiatric diagnosis, e.g., 27.7% in patients without PTSD (Swart et al., 2013) and 50-70% in PTSD patients (Wittmann et al., 2007).

Gender Differences in Nightmares Characteristics

Gender proved to be an important predictor of nightmare characteristics, such as frequency and distress. In a large German community sample, women reported higher nightmare prevalence than men, with an effect size of $d = 0.18$ (Schredl, 2010). A meta-analysis on 111 independent studies confirmed higher nightmare frequency in female adolescents, young adults, and middle-aged adults compared to men (effect sizes range was 0.15 – 0.26). In contrast, no gender differences were obtained in children and older persons (Schredl & Reinhard, 2011). These differences proved to be mediated by personality traits, more specifically neuroticism, and overall dream recall frequency (Schredl, 2014), which was connected to gender role orientation (expressivity/femininity) and gender-specific socialization processes (Schredl et al., 2010; Schredl, 2014).

Another line of research links the female gender to nightmare distress (that is, the impact of the nightmare on the individual during the following day). One study on a university student

sample (Purvey, 2001) showed that women reported significantly more nightmare distress than men, as well as that correlations between nightmare distress and indicators of psychopathology (psychological disturbance, overall psychological distress, and depression) were significantly higher in men than in women. Another large study on nightmare distress showed main effects of gender and age, as well as their interaction (Nielsen, 2010). On average, women reported more distress, and in both genders nightmare distress increased abruptly with age: in women when reaching the age 20–29 years and in men later, in the age 40–49 years. Furthermore, in a university sample, Levin (1994) found that women experienced nightmares with more realism and vividness, and were significantly stronger affected by their nightmares than men. Finally, a meta-analysis conducted on seven independent samples of non-clinical populations and 13 studies conducted in patients confirmed that women report more distress than men (effects sizes were 0.32 and 0.18, respectively) (Schredl & Reinhard, 2011).

More prevalent nightmares and higher distress among women could be perceived as a reflection of broader gender differences, such as self-report biases, different coping styles, biological differences in emotional brain processes or vulnerability to certain risk factors thought to produce nightmares, especially PTSD (Levin & Nielsen, 2007).

Characteristics of Nightmares in Traumatized Samples

Although characteristics of posttraumatic nightmares have been investigated in several samples described as representative by their authors (e.g., Leskin et al., 2002; Neylanet al., 1998; Ohayon & Shapiro, 2000), few reports on gender-related differences can be found. Most of them addressed the differences in nightmare frequency, and their findings vary from those obtained in community samples. For instance, Babson and colleagues (2011) did not find gender-related

differences in nightmare frequency in a sample of 722 participants who were exposed to at least one DSM-IV-defined traumatic event. Accordingly, Hinton and colleagues found no gender difference in nightmare frequencies in Cambodian refugees (Hinton et al., 2009). Bosch and colleagues reported no gender differences on a broad measure of sleep quality after controlling for PTSD symptoms in the sample of veterans (Bosch et al., 2017). One study reported an elevated posttraumatic nightmare frequency in women (Kobayashi & Delahanty, 2013); however, this difference was no longer evident after controlling for posttraumatic stress severity (I. Kobayashi, personal communication with the last author, 09/03/2014). On the contrary, in U.S. military veterans with the same overall posttraumatic stress severity, more frequent nightmares were found in men (King et al., 2013). However, the effect size was small (d = 0.05) in comparison to the data obtained in non-traumatized samples. The results inconsistences in samples of war veterans may come from specific characteristics of military service. Recent meta-analysis on combat-related PTSD in military personnel and veterans (Xue et al, 2015) indicated that non-officer ranks, army service, combat specialization, high numbers of deployments, longer cumulative length of deployments, more adverse life events prior trauma expose are significant risk factors. Specific factors during trauma period, such as increased combat exposure, witnessing someone being wounded or killed, and deployment-related stressors may also contribute to PTSD development. Finally, data on dream and nightmare characteristics in community samples during COVID 19 pandemic has been reported: women reported more frequent nightmares than men even after controlling for experience of death of relatives or friends (Scarpelli et al., 2021).

Schreuder and colleagues (Schreuder et al., 2001) introduced a useful system for the categorization of trauma-related dreams. They differentiate three types of posttraumatic dreams: a) replicative dreams (posttraumatic reenactments) which are described by the affected persons as

a realistic repetition of the original traumatic event; b) mixed dreams which repeat parts of the traumatic experience, but also include deviations; and c) non-replicative dreams referring only symbolically to the original traumatic event. A growing amount of evidence (De Dassel et al., 2017; Freese et al., 2018; Gorzka et al. 2019; Wittmann et al., 2010) shows that it is the replicative dream, which is specifically related to posttraumatic psychopathology. To the best of our knowledge, only one study on a small military sample (n = 62, 11 women) has addressed the gender differences in replicativeness, and its results suggest no differences between men and women (de Dassel et al., 2017).

When it comes to nightmare distress, de Dassel and colleagues (2017) reported no gender differences concerning nightmare frequency nor distress. However, a recent study on a large veteran sample found that women endorsed greater nightmare and insomnia distress and nightmare intensity, but gender differences did not emerge for nightmare frequency (Sexton et al., 2017). However, no control for PTSD severity was included. Furthermore, while no gender difference in dream recall change before and after pandemic was found, women were more likely to report a change of dream emotions toward the negative and to report a COVID-19 dream than men after controlling for being personally affected during pandemic (Schredl & Bulkeley, 2020). These findings indicate that women may also experience higher level of dream-related distress during stressful period.

To the best of our knowledge, no additional studies on gender-related differences in nightmare distress in trauma samples have been published.

Rationale

This study aims at testing gender differences in nightmare characteristics in a large sample of people who experienced trauma. More specifically, we were interested in investigating if trauma

history and related psychopathology could explain gender differences in (posttraumatic) nightmare characteristics. We hypothesized that any eventually found gender differences in nightmare characteristics (i.e., nightmare frequency, replicativity, emotional and psychophysiological involvement, dream recall, reorientation after awakening, and impairment) would be fully explained by trauma history and PTSD symptomatology.

Method

Participants

Participants were 707 patients, all active soldiers, out of which 19.5% were women, admitted to a hospital-based inpatient or outpatient treatment program for veterans with psychological trauma at the Centre for Mental Health (Department VIb), Military Hospital Hamburg, Germany. Official data says that female soldiers represent about twelve percent of the German military (22101 out of 182000 soldiers, www.bundeswehr.de, data from 22.3.2019), which is the cause of gender disproportion in this sample. Mean age was 31.3 years (SD = 9.2, *range* 17.0 – 65.0) with men being significantly older than women (M_{men} = 31.98 (SD_{men} = 9.46) versus M_{women} = 28.35 (SD_{women} = 7.40), $\chi^2(1) = 15.81$, $p < .001$). This finding was expected since the women were allowed to serve in the combat units as soldiers only in January 2001, while the noticeable increase of their number in the infantry happened only from 2005 onwards. Also, the women's willingness to commit to the Bundeswehr (infantry) for more than eight years was noticeable only ten years later, in 2015. When it comes to education level, 23.8% of participants had a university degree, 15.1% had A levels (the university entrance qualification), 60.9% finished middle and secondary school. No information on education level was provided in two cases. More women had the university entrance qualification while more men finished secondary school (χ^2(4)

= 23.51, $p < .001$).The vast majority of soldiers (95.8%) included in our sample received at least one ICD-10-F-diagnosis. Mean number of ICD-10 F-diagnoses was 1.6 (*SD* = 0.9, *range* = 0 – 6) and no gender differences were found ($\chi^2(1) = .001$, $p = .974$). Most frequently, diagnoses from clusters F1 (i.e., mental and behavioral disorders due to psychoactive substance use, *n* = 14.0%), F3 (i.e., mood (affective) disorders, *n* = 43.6%), F4 (i.e., neurotic, stress-related and somatoform disorders, *n* = 66.1%) and F6 (i.e., disorders of adult personality and behavior, *n* = 9.3%) were present (numbers refer to cases with at least one diagnoses from the respective cluster). In 50 cases (7.1%), a tentative or a differential diagnosis had been recorded.

Procedure

The Institutional Review Board of the International Psychoanalytic University Berlin, Germany approved the study. The study comprises a retrospective post hoc analysis of anonymized data acquired between 01/01/2014 and 31/12/2016 during routine clinical intake assessments of the Centre for Mental Health (Department VIb), Military Hospital Hamburg, Germany.

Research data represents the standard clinical diagnostic assessment battery of the Military Hospital Hamburg, Germany. Participants completed questionnaires upon admission to the program, and the treating psychiatric staff conducted clinical interviews with them. The clinical observations of multidisciplinary teams, including psychiatrists, psychologists, physiotherapists, and occupational therapists, in conjunction with psychometrics results and clinical interviews, contributed to the final ICD-10 diagnosis (World HealthOrganization, 2004).

Measures

Socio-demographic data

Soldiers provided data on their gender, age, and education.

Nightmares

Nightmare characteristics were assessed by applying the Hamburg Nightmare Questionnaire (HNQ, Gorzka et al.,2019), a German self-report measure on nightmare characteristics. It consists of 30 questions/items divided into four sections. The first two sections deal with socio-demographics and general information on nightmares, i.e., frequency of nightmares in general, as well as with percentages of replicative, mixed, and non-replicative nightmares out of the total nightmare frequency. In section three, 17 Likert-type items form five scales on specific nightmare characteristics: Replicativity, Emotional involvement, Dream recall, Reorientation, Psychophysiological involvement. The Replicativity content scale differentiates people by the amount of realistic and symbolic references in their nightmares. Emotional involvement measures fear, agony, and helplessness during a nightmare and after awakening. Dream Recall describes the level of detailed memory and clarity of nightmare content. The Reorientation scale captures Self-calming and orientation after awakening. Psychophysiological involvement refers to the experiences of sweat production, palpitations, and breathlessness after awakening. Finally, an Impairment scale can be derived from seven items presented in section four. Impairment assesses subjectively perceived impairment in the social, professional, family, physical, mental, and psychological context in the days after nightmares. The internal consistencies of the HNQ scales Replicativity, Emotional involvement, Dream recall, Reorientation, Psychophysiological involvement, and Impairment, in this study were .84, .89, .71, .78, .76, and .94.

Trauma exposure

Trauma exposure was measured using the German version of the Posttraumatic Diagnostic Scale (PDS; Foa, 1995; Steil & Ehlers, 2000), which assesses Criterion A from the DSM-IV PTSD diagnostic criteria. The questionnaire asks which out of a list of 11 potentially traumatizing event

types the respondent has experienced and includes an opportunity for participants to add any other traumatic event type not listed. Participants answered yes or no to each item. Amount of time elapsed since the occurrence of the worst traumatic event (henceforth described as "time since trauma"), as well as PTSD symptom severity, were also derived from the PDS.

As the assessment was part of the official routine intake procedure of Centre for Mental Health (Department VIb), Military Hospital Hamburg, Germany, PDS was filled by 56.3% patients, following internal medical guidelines and decisions.

Data Analysis

Data were analyzed using SPSS for Windows (version 23.0, SPSS Inc., Chicago, IL, USA). Descriptive statistics illustrate demographic, diagnostic, and nightmare characteristics in the total sample and by gender. For several variables, the assumption of normality was not met, even after applying a range of transformations, including log, square-root, and inverse transformations to the scores. Thus, non-parametric analyses, such as Kruskal-Wallis, binary-logistic regression, and χ^2-tests, were used to examine gender differences in nightmare characteristics and mental health outcomes. Additional analyses were applied on both the whole sample of soldiers and the subsample of soldiers who filled in PDS in order to check if trauma-related variables could explain the obtained gender differences in nightmare characteristics. Namely, the prediction power of gender on Impairment and Replicativity as dependent variables, with age, nightmare frequency, and trauma-related variables (PTSD diagnosis or PTSD symptom severity, time since trauma, and the number of trauma types) as covariates, was tested using the General Linear Model Analysis for ordinal scales.

Results

Gender Differences in Trauma-related Psychopathology

Out of the total sample, 56.3% of the participants (*n* = 398, 14.6% of women) filled in the PDS. Only 3.0% of them (*n* = 12, excluded only from analyses in this subsample) reported having no experience of traumatic event and median score for the number of trauma types was 3.0 (*range*: 0 – 11, 2.5% (*n* = 10) had some missing values). No gender differences in the number of traumatic event types were found (χ^2 (1) =.984, *ns*). However, data displayed in Table 1 indicate that men and women did differ in the frequency of specific types of trauma: war and sexual trauma, as well as serious accidents. After including age as covariate, gender still predicted all types of sexual trauma (all *B* > .79, all *p* < .050, all *OR* > 2.215), as well as war trauma (*B* = .861, *p* = .007, *OR* = 2.365) and serious accidents (*B* = -1.14, *p* < .001, *OR* = .320).

The median time interval for the time since trauma was "three to five years ago" in the whole sample (17 missing values), as well as in men and women separately. Although women were younger, no difference in time since trauma was found (χ^2 (1) = 3.14, *ns*).

A diagnosis of PTSD was found in 190 soldiers (missing data found in 10 cases): 175(44%) of those who filled in PDS and 15 who did not. Men and women did not significantly differ in respect to PTSD incidence (46.5% versus 46.6%, χ^2 (1) < 0.00, *ns*).

Gender Differences in Nightmare Characteristics

Out of the total sample, 67.2% (475 soldiers) reported having replicative nightmares (7 missing values). No gender differences in the percentage of those who have and do not have replicative nightmares were found (69.6% versus 62.7%, χ^2 (1) = 2.37, *ns*).

Table 2 depicts nightmare characteristics for the total sample as well as for men and women separately, together with tests of gender differences. Results indicate that men reported more trauma-related content of nightmares and more everyday life impairment due to nightmares.

GLM regression models were created to test the predictive power of gender on the two dimensions with gender-related differences, i.e., Replicativity and Impairment. Age, nightmare frequency, and trauma-related variables were included as covariates. First, the model 1 predicting Replicativity was tested on the total sample with PTSD diagnosis as the only possible trauma-related variable. The χ^2 of the regression model was significant (Ratio $\chi^2(4)= 152.82$, $p < .001$) with a solid model fit. Table 3 shows that higher scores on Replicativity were associated with higher age, PTSD diagnosis, and elevated nightmare frequency. Gender did not prove to be a significant predictor of Replicativity scale after all selected covariates were included (Wald $\chi^2(1) = 1.75$,*ns*).

Further, we wanted to investigate whether the PTSD symptom severity alone (Model 1a) or together with the number of traumatic event types and the time since the worst event (Model 1b) would predict a significant amount of unique variance in Replicativity in the PDS subsample – those who reported trauma experience. χ^2 statistic for model 1a was statistically significant (Ratio $\chi2(4)= 90.50$, $p < .001$) with a good model fit. PTSD symptom severity and nightmare frequency proved to be significant predictors, while gender did not explain significant amount of variance in Replicativity scale (Wald $\chi^2(1)= .04$, *ns*). Age was on the edge of our statistical significance threshold (see table 3). We created model 1b to check if additional trauma-related variables (number of traumatic event types and the time since the worst event) would be more relevant than trauma-related psychopathology (PTSD symptom severity) or nightmare characteristics. χ^2 statistic for model 1b was statistically significant as well (Ratio $\chi^2(10)= 78.40$, $p < .001$). Neither the number of traumatic event types nor the time since the worst event (nor age) were significant predictors, while PTSD symptom severity (Wald $\chi^2(1)= 28.20$, $p < .001$) and nightmare frequency

were (Wald $\chi^2(1)= 13.23$, $p < .001$). Once more, gender did not turn out to be a significant predictor of the Replicativity scale after all selected covariates were included (Wald $\chi^2(1)= .01$, *ns*).

We conducted a GLM analysis on the total sample to test the predictive power of gender on the Impairment scale with PTSD, nightmare frequency, and age as covariates (Model 2). χ^2 statistic of model 2 was statistically significant (Ratio χ^2 (4) = 233.05, $p < .001$), indicating a moderate model fit. Higher Impairment was reported by men, by those with PTSD diagnosis, and was linked to more nightmares per month (see Table 4).

Model 2a predicting Impairment with gender, age, nightmare frequency and PTSD symptom severity, as predictors was tested (data is given in Table 4). The χ^2 statistic of the regression model was statistically significant (Ratio χ^2 (4) = 201.08, $p < .001$) with a moderate model fit. Impairment was linked to PTSD diagnosis and higher nightmare frequency in general. Gender was near our statistical significance threshold (Wald $\chi^2(1) = 3.76$,$p = .052$). Finally, the number of traumatic event types and the time since the worst event were added (model 2b). $\chi 2$ statistic of model 2b was statistically significant (Ratio $\chi 2$ (10)= 198.33, $p < .001$). Gender did not explain any variance of Impairment (Wald $\chi^2(1)= 2.94$, *ns*), in contrast to PTSD symptom severity (Wald $\chi^2(1) = 87.04$, $p < .001$) and nightmare frequency (Wald $\chi^2(1) = 27.63$, $p < .001$).

Discussion

The aim of this study was to examine the contribution of gender differences to the experience of (posttraumatic) nightmares after controlling for trauma-related psychopathology and variables. In line with previous studies in samples of traumatized persons and in military samples (e.g., Babson et al., 2011; Hinton et al., 2009), and contrary to results in community samples (e.g., Schredl & Reinhard, 2011), findings suggest no gender differences in nightmare frequency per month. Furthermore, men and women did not differ in the extent of emotional and

psychophysiological distress, which was again in accordance with results on traumatized soldiers (de Dassel et al., 2017), but in contrast with data obtained in the veteran study by Sexton and colleagues (2017) and with data from community samples (e.g., Nielsen, 2010). For the interpretation of the results obtained by Sexton and colleagues, it is important to keep in mind that this study did not control for psychopathology, although authors reported that the associations between nightmare characteristics and PTSD severity were significant for both genders and that effects were generally stronger for women (Sexton et al., 2017). Furthermore, no significant effects of gender were found in the orientation after awakening and in the dream recall, i.e., detailed memory and clarity of nightmare content, again in contrast to findings in non-clinical samples (Levin, 1994).

On the other hand, men and women did differ in the Replicativity scale (but not on the percentage of replicative nightmares), and in the experience of impairment in the social, professional, family, physical, mental, and psychological context due to nightmares. More specifically, men reported more replicative nightmare content and higher impairment related to the nightmares. However, after controlling for trauma-related psychopathology (and trauma-related variables: time since traumatic event and number of trauma), as well as age and nightmare frequency, the contribution of gender in the multivariate context of GLM analysis did not turn out to be significant. Thus, the association between gender and Replicativity was fully explained by PTSD diagnosis or PTSD symptom severity (in clearly traumatized subsample), nightmare frequency, and age, which is in line with data obtained in the study by de Dassel and colleagues (2017). When it comes to Impairment, the situation was not that clear, as the p-value for gender was bellow or just above the threshold of .05 after including only trauma-related psychopathology (PTSD diagnosis or PTSD symptom severity). However, after including the number of trauma

event types and time since the worst event gender differences have vanished. Because of the number of the included variables and only moderate model fit, it still might be possible that military men experience more problems in everyday functioning than women in the army.

We may conclude that our hypothesis about trauma-related variables explaining eventual gender differences in nightmare characteristics in the sample of traumatized soldiers is confirmed. This finding could be interpreted in two directions. The first one implies that there are generally no gender differences in nightmare characteristics in traumatized samples, which would be in line with the results of the majority of the studies in traumatized samples (Babson et al., 2011; Hinton et al., 2009). The other possibility is that the absence of gender differences in our and different military-based samples is, in fact, a specific phenomenon in soldiers. As Schredl (2014) posits that gender-specific socialization processes may play an important role in explaining gender differences in idiopathic nightmares, we may assume that in this specific sample, that is, a group of men and women enrolling in the military may not possess the broad range of gender differences, nor gender-specific socialization processes captured in a general non-military sample. Future research including mixed (civilian and military) samples, as well as some important data regarding military service (ranks, age of military experience, data about special units, etc.) could give us more clarifications concerning these assumptions (Xue et al, 2015).

This study is not without limitations, which need to be considered for any interpretation of the results. The first one is related to a significantly lower number of women in this sample, although this gender disproportion reflects the current situation in the German military (www.bundeswehr.de, from 22.3.2019) and it is usual when military samples have been investigated (e.g., Bosch et al., 2017). Due to the cross-sectional nature of the study, we are not able to postulate causal relationships between variables. In addition, all variables, excluding

diagnoses, were assessed with self-report measures. Finally, nightmare frequency and characteristics were measured retrospectively, which might be avoided by longitudinal studies using dream diaries.

Conclusion

Notwithstanding the limitations stated above, our results give an insight into rarely investigated gender differences in idiopathic and posttraumatic dreams in traumatized samples. It seems that although gender differences have been recognized as a significant correlate of idiopathic nightmares (Schredl & Reinhard, 2011), they do not play a comparably relevant role in explaining the characteristics of (posttraumatic) nightmares in the sample of (traumatized) soldiers. These results would then have implications for both nightmare theory and treatment, while nightmares could be used as a control variable in other gender-related investigations in trauma samples. Still, repeating the analyses in the civilian as well as mixed samples should be the next step in order to generalize this data on other traumatized groups. Furthermore, it would be informative to test effects of specific trauma types (e.g., war trauma, sexual abuse, physical abuse), as well as socialization on PTSD development and its impact on nightmare characteristics. Future studies could also include more potentially relevant mediators (e.g., self-report biases, different coping styles, biological differences in emotional brain processes), in addition to psychopathology, applying the longitudinal design and prospective assessment of nightmares characteristics.

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Rodne razlike u karakteristikama noćnih mora nakon traume

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Rod je jedan od dobro poznatih faktora rizika za idiopatske noćne more, ali je retko povezivan sa karakteristikama postraumatskih noćnih mora. Usled toga, cilje ove studije je da ispita rodne razlike u pogledu karakteristika (posttraumatskih) noćnih mora, kada se kontroliše psihopatologija povezana sa traumom, na velikom uzorku ljudi koji su imali traumatično iskustvo.

Ispitanike je činilo 707 vojnika (prosečne starosti 31.3 godina, 19.5% žena) primljenih na bolnički program lečenja za veterane, na kojima je obavljena ekstenzivna procena koja se sastojala od kliničkih intervjua mera samoprocene koje su uzele u obzir sociodemografke karakteristike i psihopatologiju, kao varijable povezane sa snovima. Rezultati nisu ukazali na postojanje rodnih razlika u pogledu učestalosti noćnih mora, psihofiziološke i emocionalne involviranosti, reorijentacije (eng. reorientation), kao ni u pogledu sećanja na snove posle buđenja. Razlike između muškaraca i žena u pogledu količine repliciranog sadržaja trauma u snovima su u potpunosti, a u slučaju smetnji povezanih sa noćnim morama, uglavnom objašnjene dijagnozom PTSPa, učestalošću noćnih mora i starošću osobe. Ova studija dovodi u pitanje značaj roda kao faktora rizika ili prediktora specifičnih karakteristika (postraumatskih) noćnih mora, na uzorcima traumatizovanih i uzorcima vojnika. Buduća istraživanja bi trebalo da ispitaju da li su ovi nalazi vezani isključivo za vojni kontekst ili mogu da se generalizuju i na uzorke koje čine civili.

Ključne reči: PTSP, noćne more, vojska, rod, replikativnost

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Table 1

Frequency of Traumatic Event Types by Gender

PDS items (n = 398)	Men (%)	Women (%)	$\chi^2(1)$
Serious accident	74.1	44.8	20.18**
Natural disaster	32.4	20.7	3.17
Violent attack by family member	29.1	37.9	1.82
Violent attack by a stranger	59.7	44.8	4.49
Sexual attack by family member	10.9	22.4	6.00*
Sexual attack by strangers	14.4	34.5	13.93**
War trauma	73.5	43.1	21.48**
Sexual contact under the age of 18	16.5	34.5	10.40**
Imprisonment	10.0	3.4	2.58
Torture	7.4	5.2	0.36
Life-threatening illness	34.7	37.9	0.23
Other	6.9	6.2	0.04

Note. * $p < .05$, ** $p < .01$

Table 2

Nightmare Descriptive Statistics and Gender differences

	n	Total Sample Mdn	Gender – Median		Gender differences
			Men	Women	
			Mdn	Mdn	$\chi^2(1)$
Monthly nightmare frequency	669	5.00	5.00	5.00	0.06
Percentage of replicative nightmares	669	20.00	20.00	10.00	2.23
Emotional involvement	707	3.00	3.25	3.00	1.02
Psychophysiological involvement	707	3.00	3.00	3.00	<0.01
Replicativity	707	3.25	3.25	3.00	5.61*
Reorientation	707	2.50	2.50	2.50	0.06
Dream Recall	707	3.00	3.00	3.00	0.03
Impairement	707	1.86	2.00	1.43	16.69**

Note. * $p < .05$, ** $p < .01$; Mdn = Median.

Table 3

Model predicting the Replicativity Scale

Model 1 (*n* = 659)	B	Std. Error	Wald χ^2	p
Gender				
Women	-0.13	.10	1.82	.18
PTSD				
No PTSD	-0.72	.09	58.13	<.01
Monthly nightmare frequency	0.02	.005	28.53	<.01
Age	0.01	.005	10.18	<.01
Model 2 (*n* = 375)	B	Std. Error	Wald χ^2	p
Gender				
Women	0.03	.15	0.45	.83
PTSD symptom severity	0.02	.004	38.26	<.01
Monthly nightmare frequency	0.02	.006	14.81	<.01
Age	0.01	.005	3.89	.05

Note. Model 1: Goodness of fit: *Deviance* = 746.99,*df* = 654,*Deviance/df* = 1.14

Model 2: Goodness of fit: *Deviance* = 369.01, *df* = 370, *Deviance/df* = .997

Table 4

Model predicting the Impairment Scale

Model 2 (*n* = 659)	B	Std. Error	Wald χ^2	p
Gender				
Women	-0.29	.10	8.32	<.01
PTSD				
No PTSD	-0.63	.09	45.65	<.01
Monthly nightmare frequency	0.05	.01	113.98	<.01
Age	0.01	.004	3.91	.05
Model 2a (*n* = 375)	B	Std. Error	Wald χ^2	p
Gender				
Women	-0.29	.15	3.76	.05
PTSD symptom severity	.04	.004	93.20	< .01
Monthly nightmare frequency	0.03	.01	31.23	< .01
Age	0.01	.01	1.11	.29

Note. Model 2: Goodness of fit: *Deviance* = 483.27,*df* = 654,*Deviance/df* = 0.74.

Model 2b: Goodness of fit: *Deviance* = 249.21, *df* = 370, *Deviance/df* = 0.68