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## Disasters and Deviant Behaviour: Risk Factors and Citizens' Perceptions in Serbia

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### Abstract

In addition to immediate material losses, disasters can trigger secondary psychosocial processes that increase the risk of various forms of deviant and violent behavior. This paper examines citizens' perceptions in Serbia regarding the association between disasters and violence and deviant behavior, as well as the factors related to awareness, self-assessed readiness to respond, and attitudes about the role of institutions in prevention. The study was conducted via an online survey of 106 respondents in Serbia. Likert-type items (P26–P30) and categorical variables (P12–P25) were analyzed using descriptive statis-

tics, Pearson correlations, chi-square tests of independence, one-way ANOVA, and multiple linear regression. The findings indicate a very high level of basic awareness of natural disasters and violence, but also a pronounced perception that a significant share of the Serbian population lacks adequate practical knowledge about post-disaster consequences and actions ( $M = 4.39$ ). Respondents strongly recognize the impact of disasters on mental health ( $M = 4.21$ ) and the importance of competent services in preventing violence ( $M = 4.12$ ), while self-assessed readiness to respond is moderate ( $M = 3.82$ ). The strongest association among attitudes is observed between support for education and the assessment of the impact of disasters on mental health ( $r = 0.40$ ;  $p < 0.001$ ). Chi-square analyses indicate several significant associations between gender and income (small to moderate effects). At the same time, ANOVA differences were confirmed in two cases: by gender for the PTSD/mental-health attitude and by income for self-assessed response readiness. Regression models suggest limited explanatory power of sociodemographics for attitudes, suggesting a likely greater role for experiential and contextual factors (disaster experience, trust in institutions, exposure to training). The results support the need for systematic risk communication and practically oriented educational programs, which—together with clear reporting protocols and inter-institutional coordination—can reduce the risk of escalation of violence and deviant behavior under crisis conditions.

### Keywords

Disasters; deviant behaviour; violence; gender-based violence; mental health; citizens' perceptions; awareness; readiness to respond; risk communication; Serbia.



## 1. Introduction

The frequency and intensity of disasters caused by natural and anthropogenic hazards in the contemporary period are increasingly associated with climate change. At the same time, it is important to emphasise that their consequences extend far beyond immediate material damage. In addition to infrastructure destruction and loss of life, disasters can trigger a range of secondary social processes that increase the vulnerability of individuals and communities, including risks of various forms of violence and deviant behaviour, especially among children and other vulnerable groups (Cerna et al., 2019). In crisis conditions, when everyday routines are disrupted, and access to resources is constrained, stress, uncertainty, and tensions intensify, creating favourable conditions for the escalation of conflicts and violent behavioural patterns within households and the broader community (Sloand et al., 2015).

Conceptually, a disaster is often defined as an extremely serious disruption in a community's functioning that results in human, material, economic, and/or environmental losses, the scale of which exceeds the affected community's capacity to cope independently (Cerna et al., 2019). This definition is important because it emphasises that a disaster is not merely an "event", but a process that includes disruption of normal life, weakening of support systems and institutional capacities, and the potential for these to become overwhelmed. In empirical analyses, natural disasters are often classified by hazard source (hydrometeorological, geophysical, and climatological), enabling more precise comparisons of risks and consequences across contexts.

From a psychosocial perspective, numerous studies indicate that exposure to disasters can significantly affect people's mental health and emotional functioning, especially amid increasingly pronounced climate risks (Chen et al., 2020). Among children and adolescents, impacts may be particularly strong; the literature highlights an elevated risk of post-traumatic stress disorder, depression, and anxiety following catastrophic events (Dyregrov, Yule, & Olf, 2018). Moreover, disasters can indirectly influence long-term life trajectories through interruptions in schooling and disruptions of developmental conditions, with potential lasting consequences for social inclusion and future risks (Kousky, 2016).

Within the broader social context, violence is not viewed as an isolated phenomenon but as a complex one shaped by power relations, social structures, and existing inequalities (Jovičić, 2013). Therefore, disasters may accelerate pre-existing tensions: in situations of scarcity, insecurity, and struggle for basic needs, the risk of conflict and violent behaviour may increase (Sloand et al., 2015). This perspective is important for understanding deviant behaviour in crises, as it points to the interaction between individual stress reactions and structural conditions that shape everyday life and opportunities for protection.

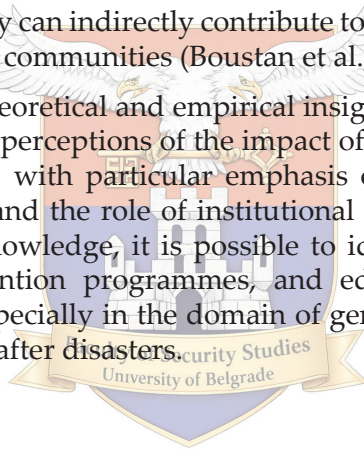
A specific dimension concerns gender-based violence and domestic violence in the context of disasters. Within the European legal and policy framework, the Istanbul Convention has set standards for preventing and combating violence against women and domestic violence, emphasising that gender equality is a key element of prevention and protection (Jovašević, 2018). At the same time, contemporary operationalisations of violence include a wide spectrum of forms—from physical and sexual to emotional, domestic, and cyber violence—which is important for a more precise interpretation of risks and mechanisms in crisis contexts (Sardoč, 2019).

Empirical evidence from different contexts suggests that major stressors and disasters may be accompanied by changes in the frequency and structure of violence, including intimate partner violence (Rao, 2020). In addition,

some studies emphasise that women, in certain situations, are more susceptible to post-traumatic and depressive consequences after disasters, and these outcomes may be associated with a higher risk of violence in intimate partner relationships (Bell & Folkerth, 2016). These findings are important because they indicate that the mechanisms linking disasters and violence can be multidimensional and mediated through mental-health consequences, social conditions, and access to support.

Beyond natural disasters, the experience of the COVID-19 pandemic has further demonstrated how prolonged social disruptions can alter the dynamics of violence and vulnerability. Under lockdowns and movement restrictions, children's and adolescents' exposure to domestic violence and other household risks became more pronounced, highlighting the need for systemic support and interventions (Mazza et al., 2020). At the same time, research on the economic effects of crisis events and climate risks suggests that economic insecurity can indirectly contribute to social tensions and risks within households and communities (Boustan et al., 2020).

Building on these theoretical and empirical insights, this paper examines factors associated with perceptions of the impact of disasters on deviant behaviours and violence, with particular emphasis on awareness, attitudes, readiness to respond, and the role of institutional actors. By analysing citizens' attitudes and knowledge, it is possible to identify areas where risk communication, prevention programmes, and educational interventions need strengthening, especially in the domain of gender-based violence and mental-health support after disasters.



### *1.1. Literature review*

Contemporary literature increasingly shows that, besides visible physical impacts, disasters also produce less noticeable but socially highly significant outcomes reflected in changes in social relations, increased stress, and heightened vulnerability of certain groups. In this framework, a disaster is defined as a serious disruption of community functioning that exceeds local capacities for response and recovery. In contrast, natural disasters in empirical studies are often classified by hazard source (hydrometeorological, geophysical, climatological), which enables more precise comparisons of risks and consequences (CRED & UNISDR, 2015; Cerna-Turoff et al., 2019).

Studies addressing violence in the context of disasters particularly emphasise risks of violence against children and gender-based violence. Systematic reviews indicate a statistically and conceptually recognisable association between natural disasters and increases in child victimisation and

violence, confirming the need to integrate protection and prevention into all phases of disaster management (Cerna-Turoff et al., 2019). Beyond review studies, findings from specific crisis contexts further corroborate these risks and highlight barriers to protection and reporting.

An important segment of the literature focuses on psychological mechanisms that may mediate the relationship between disasters and deviant/violent behaviour. It is emphasised that children and adolescents, after exposure to disasters, are at higher risk of PTSD, depression, and anxiety (Dyregrov, Yule, & Olf, 2018), while disruptions to schooling and developmental conditions can have long-term consequences for social inclusion and future risks (Kousky, 2016). In the domain of intimate partner violence, studies suggest that women may be particularly vulnerable to post-traumatic and depressive outcomes after disasters, which can be associated with increased risk of violence (Bell & Folkherth, 2016).

Beyond psychological mechanisms, a growing number of studies emphasise the broader context in which disasters operate: climate change and extreme events can affect emotional states, social stability, and economic security, indirectly shaping relationships within households and communities (Chen et al., 2020; Boustan et al., 2020). In situations where resources are limited and populations strive to meet basic needs, tensions may rise, and the risk of conflict and violence may increase (Sloand et al., 2015).

In the area of standards and policies, the Istanbul Convention represents a key instrument that provides a framework for preventing and protecting against violence against women and domestic violence, highlighting gender equality as a preventive factor (Jovašević, 2018). At the same time, broader definitions of violence—covering physical, sexual, emotional, domestic, and cyber violence—support a more precise research approach and better interpretation of results in different crisis contexts (Sardoč, 2019). Finally, the disaster-education and preparedness literature emphasizes the importance of proactive learning and training in building resilience and reducing risks (Shiwaku & Shaw, 2008).

The literature emphasises that, besides immediate physical destruction, natural disasters create conditions that can intensify social tensions and increase the risk of conflict and violence in affected communities, especially under scarcity and difficulties in meeting basic needs (Sloand et al., 2015). In this framework, disasters are described as serious disruptions that cause significant losses and exceed local capacities, potentially straining informal support networks and services that usually protect vulnerable individuals.

A distinct body of work indicates that disasters are associated with increased risk of gender-based violence, including violence within households

and communities, particularly in post-disaster conditions of displacement, loss of shelter, and compromised safety (Sloand et al., 2015). For example, in the post-disaster context following the 2010 Haiti earthquake, risks and barriers to preventing gender-based violence were documented, as well as specific vulnerabilities of internally displaced adolescent girls (Sloand et al., 2015; Sloand et al., 2017). In addition, quantitative reviews emphasise that natural disasters are also linked to violence against children, highlighting the need to integrate prevention and protection across all phases of disaster management (Cerna et al., 2019).

Psychological mechanisms are central for understanding links between disasters and deviant/violent behaviour. Research shows that children's disaster exposure may increase risks of PTSD, depression, and anxiety (Dyregrov, Yule, & Olf, 2018), and that these impacts can be compounded by educational disruption and altered developmental trajectories (Kousky, 2016). In the domain of intimate partner violence, studies point to women's heightened vulnerability to post-traumatic and depressive outcomes after disasters, which may be associated with increased violence risk (Bell & Folkerth, 2016).

Beyond natural disasters, crises such as the COVID-19 pandemic have further highlighted the issue of violence under prolonged disruptions, pointing to the importance of continuity of psychiatric and social services and inter-agency cooperation in preventing domestic violence (Gulati & Kelly, 2020). At the same time, the literature underscores that the economic consequences of disasters and long-term disruptions of economic activity may indirectly affect social stability and household risks (Boustan et al., 2020), while the impacts of climate-related disasters have also been linked with anxiety and resilience as relevant psychological outcomes (Chen et al., 2020). In the domain of prevention, several authors stress the importance of education and strengthening community capacity, especially in schools and through models of co-learning and proactive risk education (Ocal & Topkaya, 2011; Shiwaku & Shaw, 2008), as well as the broader development of a culture of safety and resilience (UNESCO, 2005).

## 2. Methods

### 2.1. Research design and approach

The study was designed as a quantitative, non-experimental survey conducted using an online questionnaire. The selected approach enabled the collection, in a relatively short time, of data on (1) the level of awareness, (2) attitudes and perceptions regarding the link between disasters and deviant/

violent behaviour, (3) self-assessed readiness to respond, and (4) perceptions of the role of institutions in prevention.

## 2.2. Sample

The target population comprised all adult citizens of the Republic of Serbia. The sample included 106 respondents. Inclusion criteria were: (a) adulthood, (b) voluntary participation, and (c) a questionnaire completed to an extent that allows statistical analysis. In some analyses, the number of valid responses may vary due to missing values (listwise or pairwise, depending on the analysis). The gender structure indicates slightly higher participation among women ( $n = 55$ , 51.9%) than among men ( $n = 49$ , 46.2%). The largest share of respondents was in the 18–27 age group, followed by the 27–37 age group, while older age groups were less represented. Education levels were predominantly secondary and higher/university education.

**Table 1.** Sample characteristics (N=106).

Characteristic	Category	n (%)
Gender	Female	55 (51,9%)
	Male	49 (46,2%)
Age (years)	18-27	65 (61,3%)
	27-37	25 (23,6%)
	37-50	4 (3,8%)
	50-60	7 (6,6%)
	over 60	3 (2,8%)
Level of education	Three-year secondary school	8 (7,5%)
	Four-year secondary school	23 (21,7%)
	Higher education (college)	10 (9,4%)
	University education	42 (39,6%)
	Master's studies	20 (18,9%)
	Doctoral studies	2 (1,9%)
Father's education	Three-year secondary school	18 (17,0%)
	Four-year secondary school	53 (50,0%)
	Higher education (college)	10 (9,4%)
	University education	15 (14,2%)
	Master's studies	7 (6,6%)
	Doctoral studies	1 (0,9%)

Mother's education	Three-year secondary school	21 (19,8%)
	Four-year secondary school	55 (51,9%)
	Higher education (college)	10 (9,4%)
	University education	10 (9,4%)
	Master's studies	6 (5,7%)
	Doctoral studies	2 (1,9%)
Marital status	Single (unmarried)	60 (56,6%)
	In a relationship	24 (22,6%)
	Engaged	4 (3,8%)
	Married	15 (14,2%)
	Divorced	2 (1,9%)
Household size	One-member household	7 (6,6%)
	Two-member household	11 (10,4%)
	Three-member household	17 (16,0%)
	Four-member household	38 (35,8%)
	Five-member household	22 (20,8%)
	Households with more than five members	10 (9,4%)
Monthly household income (RSD)	up to 30,000	3 (2,8%)
	30.000-50.000	10 (9,4%)
	50.000-80.000	16 (15,1%)
	80.000-100.000	28 (26,4%)
	More than 100,000	47 (44,3%)
Employment status	Employed	61 (57,5%)
	Unemployed	44 (41,5%)
Number of employed household members	1	16 (15,1%)
	2	47 (44,3%)
	3	32 (30,2%)
	4	9 (8,5%)
	More than 4	1 (0,9%)
Occupation	Student	24 (22,6%)
	Administrative staff/Technician or associate professional	9 (8,5%)
	Craft worker/related occupation	7 (6,6%)
	Self-employed entrepreneur	5 (4,7%)
	Service or retail occupation	4 (3,8%)
	Manager	3 (2,8%)
	Professional/Artist	2 (1,9%)
Other	51 (48,1%)	

### 2.3. Questionnaire

For this study, a structured questionnaire was used, organised into three parts:

(A) The sociodemographic block (P1–P11) includes the basic characteristics of respondents and their households, treated in the analysis as independent variables and control factors. This section collected information on gender (including the option “prefer not to say”), age (using predefined categories), level of education, father’s and mother’s education, marital status, household size, approximate monthly household income, employment status, occupation, and the number of employed household members. In addition to its descriptive function and presentation of the sample structure, this set of variables enables comparisons of perceptions and attitudes across different sociodemographic groups, as well as identification of potential patterns in self-assessed preparedness and risk assessments.

(B) The awareness and perceptions block (P12–P25) is designed to assess several interrelated dimensions: basic awareness of key concepts (e.g., natural disaster and gender-based violence), perceptions of risk and the perceived connection between disasters and violence (including attitudes about a potential increase in aggression in partner relationships), perceptions of contextual experiences and social facts (e.g., within the COVID-19 context and related risks of violence), assessments of personal and collective exposure (e.g., the likelihood that natural disasters may occur in one’s surroundings), as well as assessments of readiness to help, volunteer, and attend educational programmes. Items in this block are formulated as questions with three response options (“Yes”, “No”, “Do not know”), which enables a clear distinction between respondents who have a formed opinion/knowledge and those who express uncertainty. This distinction is particularly important for planning risk communication and designing preventive-educational interventions aimed at increasing awareness and practical competencies.

(C) The Likert-scale attitudes block (P26–P30) measures the intensity of respondents’ agreement with key statements on a five-point scale. This section includes: assessment of the role of additional education (in the context of COVID-19) in mitigating post-disaster consequences; attitudes about the impact of disasters on mental health and the risk of post-traumatic outcomes; self-assessed ability to respond appropriately when violence is observed in communities affected by a disaster; assessment of the importance of competent authorities and services in preventing and suppressing violence against vulnerable groups; and the assessment that a significant part of the population lacks sufficient knowledge and awareness of possible post-disaster consequences. Compared to dichotomous items, this block allows more precise,

graded measurement of attitudes. It supports the application of more complex statistical procedures (correlational and regression analyses) to examine relationships among attitudes and their associations with sociodemographic characteristics.

#### *2.4. Variable operationalisation and coding*

The independent variables in the study comprise respondents' and households' sociodemographic characteristics (P1–P11), which were treated as predictors and control variables in the analyses. For analytical clarity and to ensure more stable statistical estimates, certain categories were, where justified, recoded into a smaller number of broader groups (for example: age into three analytic groups, education into three levels, and income into three levels), in line with the analysis plan and the frequency distributions in the sample. Categorical dependent variables include items P12–P25, with response options “Yes”, “No”, and “Do not know”. These variables were analysed as nominal categories, with the “Do not know” option, when relevant, additionally interpreted as an indicator of uncertainty, insufficient information, or indecision—particularly important for interpretation in the domain of risk communication and preventive education. Likert-dependent variables included items P26–P30 and were coded on a 1–5 scale, with higher values indicating greater agreement with the statement (1 = strongly disagree, 5 = strongly agree). This coding scheme enabled calculation of descriptive indicators (means and variability), examination of inter-item associations, and the application of procedures for testing group differences and modelling predictors.

#### *2.5. Data analysis*

Data processing and analysis were carried out through several interconnected steps. First, descriptive statistics were used to present the sample structure and basic distributions: sociodemographic variables were reported using frequencies and percentages; categorical items P12–P25 were presented through distributions of responses (“Yes/No/Do not know”); and for Likert items P26–P30, means, standard deviations, and ranges were calculated. Next, correlation analysis was performed to examine relationships among the Likert items (P26–P30) using Pearson's correlation coefficient. Subsequently, tests of differences and associations were applied: the chi-square test of independence was used to examine relationships between the categorical dependent variables (P12–P25) and sociodemographic characteristics, with Cramer's V reported as a measure of effect size; one-way analy-

sis of variance (ANOVA) was used to test differences in mean Likert scores across sociodemographic groups, with  $\eta^2$  reported as an indicator of effect size. Finally, multivariate analysis was conducted using multiple linear regression for selected Likert outcomes (P26–P30), including sociodemographic indicators as independent variables to estimate their unique contribution while controlling for other factors. Before applying parametric procedures, basic assumptions relevant to the applied tests were considered (distribution characteristics, presence of extreme values, and homogeneity of variances), and results were interpreted with methodological caution given the sample size and the measurement approach.

### *2.6. Ethical aspects*

The study was conducted in accordance with basic ethical principles applied in social research, including voluntary participation, anonymity, and data confidentiality. Before accessing the questionnaire, respondents were informed about the study's purpose and how the data would be used. Participation implied the right to withdraw at any time without any consequences.

## **3. Results**

Descriptive indicators for continuous variables (1–5) show a generally high level of respondents' agreement with the statements (Table 2). The highest mean value was obtained for the item: "A large part of the population of the Republic of Serbia does not possess adequate knowledge about potential consequences that may occur after a natural disaster." ( $M=4.39$ ), suggesting broad endorsement of this assessment. The lowest mean value was recorded for the item related to additional education about the COVID-19 pandemic and mitigating post-disaster consequences, indicating a more moderate level of agreement. Overall, respondents recognise the relevance of mental-health impacts and the role of institutions, while self-assessed readiness to respond is somewhat lower.

**Table 2.** Descriptive statistics for Likert dependent variables (P26–P30).

Variable	n	M	SD	Min	Max	Skewness	Excess kurtosis
Additional education about the COVID-19 pandemic can mitigate consequences after a natural disaster.	105	3,55	1,21	1,00	5,00	-0,51	-0,44
Natural disasters can become a major cause of post-traumatic stress disorder and substantially affect people's mental health.	105	4,21	0,94	1,00	5,00	-1,36	1,81
If I notice that violence has occurred in communities affected by a natural disaster, I would know how to respond appropriately.	105	3,82	0,91	1,00	5,00	-0,58	0,05
Competent authorities/services play an important role in preventing and eliminating phenomena such as violence against women, girls, and older persons.	105	4,12	0,93	2,00	5,00	-0,84	-0,16
A large part of the population of the Republic of Serbia lacks adequate knowledge of the potential consequences of a natural disaster.	105	4,39	0,70	2,00	5,00	-0,88	0,23

Frequency analysis of categorical dependent variables shows that awareness of basic concepts is very high. Almost all respondents reported having heard of the term natural disaster (Yes=99.0%) and knowing that violence includes physical, sexual, and emotional forms (Yes=96.2%). The percentage who have heard of gender-based violence is also high (Yes=89.5%). However, for some questions, a higher share of "Do not know" responses appears, indicating room for additional education and clearer risk communication. Respondents' perceptions also suggest that many recognise the possibility of increased violence after disasters and the need for institutional engagement in prevention.

**Table 3.** Frequencies of categorical dependent variables (P12–P25).

Variable	n (valid)	Yes (%)	No (%)	Do not know (%)
Have you ever heard of the term natural disaster?	105	104 (99,0%)	0 (0,0%)	1 (1,0%)
Have you heard of the term gender-based violence?	105	94 (89,5%)	8 (7,6%)	3 (2,9%)
Do you think women are more exposed to violence than men after the outbreak of a natural disaster?	104	51 (49,0%)	37 (35,6%)	16 (15,4%)
Are you aware that natural disasters can increase aggression in partner relationships?	104	59 (56,7%)	41 (39,4%)	4 (3,8%)
Did you know that violence includes physical, sexual, and emotional violence?	105	101 (96,2%)	4 (3,8%)	0 (0,0%)
Do you think gender-based violence increases after a natural disaster?	104	48 (46,2%)	32 (30,8%)	24 (23,1%)
Do you agree that there is a considerable correlation between natural disasters and violence?	104	51 (49,0%)	19 (18,3%)	34 (32,7%)
Are you aware that during the COVID-19 pandemic, there was an increase in domestic violence, according to the emergency medical service report?	105	71 (67,6%)	32 (30,5%)	2 (1,9%)
Did you know that one in three women is a victim of gender-based violence in the EU?	105	31 (29,5%)	63 (60,0%)	11 (10,5%)
Are you aware that gender-based violence is a health and social problem?	105	83 (79,0%)	17 (16,2%)	5 (4,8%)
Do you think natural disasters may occur in your surroundings?	105	68 (64,8%)	16 (15,2%)	21 (20,0%)
Are you sure you feel ready to help a person who finds themselves at the site of a natural disaster?	105	79 (75,2%)	16 (15,2%)	10 (9,5%)
Would you volunteer in the event of a natural disaster in your country?	104	85 (81,7%)	7 (6,7%)	12 (11,5%)
Do you feel ready to attend educational programmes aimed at preventing gender-based violence after a natural disaster?	105	75 (71,4%)	17 (16,2%)	13 (12,4%)

Pearson correlation analysis among Likert attitudes indicates mostly weak to moderate positive associations (Table 4). The strongest relationship is between the statements “Additional education about the COVID-19 pandemic can mitigate consequences after a natural disaster,” and “Natural disasters can become a major cause of post-traumatic stress disorder and substantially affect people’s mental health.” ( $r = 0.40, p < 0.001$ ). This suggests that respondents who more strongly support education also more strongly recognise mental-health impacts. Other correlations are lower but generally positive, indicating partially aligned perceptions across the measured dimensions.

**Table 4.** Pearson correlation matrix for Likert dependent variables (P26–P30).

Variable	1	2	3	4	5
1. Additional education about the COVID-19 pandemic can mitigate consequences after a natural disaster.	—				
2. Natural disasters can become a major cause of post-traumatic stress disorder and substantially affect people’s mental health.	0,40***	—			
3. If I notice that violence has occurred in communities affected by a natural disaster, I would know how to respond correctly and appropriately.	0,15	0,20*	—		
4. Competent authorities/services play an important role in preventing and eliminating phenomena such as violence against women, girls, and older persons.	0,26**	0,25*	0,10	—	
5. A large part of the population of the Republic of Serbia does not have adequate knowledge about the potential consequences that may occur after a natural disaster.	0,15	0,09	-0,01	0,27**	—

Chi-square tests of independence examined associations between categorical dependent variables (P12–P25) and key sociodemographic independent variables (gender, age, education, income, employment status, and marital status). In total, 84 relationships ( $14 \times 6$ ) were tested, of which 16 were statistically significant ( $p < 0.05$ ). Effect sizes in most significant findings were small to moderate (Cramer’s  $V \approx 0.22$ – $0.36$ ).

The most consistent pattern was as follows: gender was significantly associated with several indicators of knowledge and perception (e.g., awareness that natural disasters may increase aggression in partner relationships, awareness of increased domestic violence during COVID-19, and the per-

ceived association between natural disasters and violence), with moderate effects (Cramer's  $V \approx 0.30-0.36$ ). Income was significantly associated with perceptions that women are more exposed to violence after disasters, with perceptions that gender-based violence increases after disasters, and with perceptions that natural disasters may occur in one's surroundings ( $V \approx 0.23-0.27$ ). Age and marital status were associated with the perceived correlation between natural disasters and violence, as well as with knowledge that "one in three women" experiences gender-based violence in the EU ( $V \approx 0.22-0.25$ ). Education and marital status showed significant associations with willingness to volunteer in the event of a natural disaster ( $V \approx 0.25-0.27$ ). In contrast, employment status was associated with willingness to attend educational programmes ( $V \approx 0.30$ ).

**Table 5.** Chi-square tests of independence for categorical dependent variables (P12-P25) in relation to sociodemographic independent variables.

Dependent variable	Independent variable	n	$\chi^2$ (df)	p	Cramer's V
Have you ever heard of the term natural disaster?	Gender	104	0,00 (1)	0,954	0,01
	Age	104	0,61 (2)	0,739	0,08
	Education	105	1,03 (2)	0,598	0,10
	Income	104	2,74 (2)	0,254	0,16
	Employment status	105	0,03 (1)	0,869	0,02
	Marital status	105	0,76 (2)	0,685	0,08
Have you heard of the term gender-based violence?	Gender	104	0,52 (2)	0,773	0,07
	Age	104	2,67 (4)	0,615	0,11
	Education	105	4,70 (4)	0,320	0,15
	Income	104	1,46 (4)	0,834	0,08
	Employment status	105	0,17 (2)	0,918	0,04
	Marital status	105	2,53 (4)	0,640	0,11
Do you think women are more exposed to violence than men after the outbreak of a natural disaster?	Gender	103	15,28 (2)	<0,001	0,39
	Age	103	6,65 (4)	0,156	0,18
	Education	104	5,38 (4)	0,251	0,16
	Income	103	15,25 (4)	0,004	0,27
	Employment status	104	1,37 (2)	0,503	0,11
	Marital status	104	3,70 (4)	0,448	0,13

Are you aware that natural disasters can increase aggression in partner relationships?	Gender	103	9,29 (2)	0,010	0,30
	Age	103	7,45 (4)	0,114	0,19
	Education	104	2,93 (4)	0,569	0,12
	Income	103	6,44 (4)	0,169	0,18
	Employment status	104	5,88 (2)	0,053	0,24
	Marital status	104	7,90 (4)	0,095	0,19
Did you know that violence includes physical, sexual, and emotional violence?	Gender	104	0,15 (1)	0,694	0,04
	Age	104	1,52 (2)	0,469	0,12
	Education	105	1,46 (2)	0,481	0,12
	Income	104	3,43 (2)	0,180	0,18
	Employment status	105	0,00 (1)	1,000	0,00
	Marital status	105	0,39 (2)	0,823	0,06
Do you think gender-based violence increases after a natural disaster?	Gender	103	11,92 (2)	0,003	0,34
	Age	103	4,20 (4)	0,380	0,14
	Education	104	9,51 (4)	0,050	0,21
	Income	103	11,20 (4)	0,024	0,23
	Employment status	104	1,45 (2)	0,485	0,12
	Marital status	104	7,90 (4)	0,095	0,19
Do you agree that there is a considerable correlation between natural disasters and violence?	Gender	103	13,65 (2)	0,001	0,36
	Age	103	10,56 (4)	0,032	0,23
	Education	104	6,17 (4)	0,187	0,17
	Income	103	7,08 (4)	0,132	0,19
	Employment status	104	1,36 (2)	0,507	0,11
	Marital status	104	10,62 (4)	0,031	0,23
Are you aware that during the COVID-19 pandemic, there was an increase in domestic violence, according to the emergency medical service report?	Gender	104	11,91 (2)	0,003	0,34
	Age	104	3,48 (4)	0,481	0,13
	Education	105	8,94 (4)	0,063	0,21
	Income	104	1,69 (4)	0,792	0,09
	Employment status	105	0,40 (2)	0,819	0,06
	Marital status	105	3,24 (4)	0,519	0,12
Did you know that one in three women is a victim of gender-based violence in the EU?	Gender	104	3,54 (2)	0,171	0,18
	Age	104	12,54 (4)	0,014	0,25
	Education	105	7,22 (4)	0,125	0,19
	Income	104	4,51 (4)	0,341	0,15
	Employment status	105	2,01 (2)	0,366	0,14
	Marital status	105	9,90 (4)	0,042	0,22

Are you aware that gender-based violence is a health and social problem?	Gender	104	5,14 (2)	0,076	0,22
	Age	104	1,34 (4)	0,855	0,08
	Education	105	1,08 (4)	0,898	0,07
	Income	104	4,73 (4)	0,317	0,15
	Employment status	105	1,06 (2)	0,588	0,10
	Marital status	105	3,03 (4)	0,553	0,12
Do you think natural disasters may occur in your surroundings?	Gender	104	0,71 (2)	0,702	0,08
	Age	104	3,48 (4)	0,481	0,13
	Education	105	5,22 (4)	0,265	0,16
	Income	104	11,56 (4)	0,021	0,24
	Employment status	105	6,24 (2)	0,044	0,24
	Marital status	105	1,63 (4)	0,803	0,09
Are you sure you feel ready to help a person who finds themselves at the site of a natural disaster?	Gender	104	10,38 (2)	0,006	0,32
	Age	104	3,26 (4)	0,515	0,13
	Education	105	1,30 (4)	0,861	0,08
	Income	104	2,37 (4)	0,669	0,11
	Employment status	105	0,51 (2)	0,775	0,07
	Marital status	105	7,50 (4)	0,112	0,19
Would you volunteer in the event of a natural disaster in your country?	Gender	103	2,87 (2)	0,238	0,17
	Age	103	20,17 (4)	<0,001	0,31
	Education	104	12,65 (4)	0,013	0,25
	Income	103	1,41 (4)	0,843	0,08
	Employment status	104	0,60 (2)	0,743	0,08
	Marital status	104	14,81 (4)	0,005	0,27
Do you feel ready to attend educational programmes aimed at preventing gender-based violence after a natural disaster?	Gender	104	1,82 (2)	0,403	0,13
	Age	104	1,97 (4)	0,741	0,10
	Education	105	2,04 (4)	0,728	0,10
	Income	104	3,63 (4)	0,458	0,13
	Employment status	105	9,37 (2)	0,009	0,30
	Marital status	105	5,79 (4)	0,215	0,17

One-way ANOVA examined differences in mean ratings of Likert dependent variables (P26–P30) across sociodemographic groups. Out of 30 tested effects (5×6), significant differences were found in 2 cases ( $p < 0.05$ ), with small to moderate effect sizes ( $\eta^2 = 0.055\text{--}0.085$ ). Specifically, significant findings were obtained for the item on PTSD/mental-health impacts by gender and for the item on responding to violence in disaster-affected communities by income group.

**Table 6.** One-way ANOVA for Likert dependent variables (P26–P30) in relation to sociodemographic independent variables.

Dependent variable	Independent variable	n	F (df1,df2)	p	$\eta^2$
Additional education about the COVID-19 pandemic can mitigate consequences after a natural disaster.	Gender	104	3,44 (1,102)	0,066	0,033
	Age	104	2,47 (2,101)	0,089	0,047
	Education	105	2,63 (2,102)	0,077	0,049
	Income	104	1,12 (2,101)	0,330	0,022
	Employment status	105	1,20 (1,103)	0,275	0,012
	Marital status	105	2,58 (2,102)	0,080	0,048
	Disasters can become a major cause of post-traumatic stress disorder and substantially affect people's mental health.	Gender	104	5,89 (1,102)	0,017
Age		104	0,54 (2,101)	0,582	0,011
Education		105	1,52 (2,102)	0,223	0,029
Income		104	2,08 (2,101)	0,131	0,040
Employment status		105	1,02 (1,103)	0,315	0,010
Marital status		105	0,38 (2,102)	0,686	0,007
If I notice that violence has occurred in communities affected by a natural disaster, I would know how to respond appropriately.		Gender	104	0,44 (1,102)	0,511
	Age	104	0,60 (2,101)	0,550	0,012
	Education	105	0,06 (2,102)	0,940	0,001
	Income	104	4,66 (2,101)	0,012	0,085
	Employment status	105	1,17 (1,103)	0,281	0,011
	Marital status	105	0,62 (2,102)	0,540	0,012
	Competent authorities/services play an important role in preventing and eliminating phenomena such as violence against women, girls, and older persons.	Gender	104	0,01 (1,102)	0,942
Age		104	2,75 (2,101)	0,069	0,052
Education		105	0,28 (2,102)	0,754	0,006
Income		104	1,70 (2,101)	0,188	0,033
Employment status		105	0,54 (1,103)	0,465	0,005
Marital status		105	1,10 (2,102)	0,336	0,021
A large part of the population of the Republic of Serbia lacks adequate knowledge of the potential consequences of a natural disaster.		Gender	104	2,24 (1,102)	0,138
	Age	104	0,55 (2,101)	0,579	0,011
	Education	105	0,22 (2,102)	0,803	0,004
	Income	104	0,64 (2,101)	0,529	0,013
	Employment status	105	0,63 (1,103)	0,429	0,006
	Marital status	105	0,36 (2,102)	0,699	0,007

Multiple linear regression indicates that the set of sociodemographic predictors explains 15.1% of the variance in ratings for the item "Natural

disasters can become a major cause of post-traumatic stress disorder and substantially affect people's mental health." ( $R^2=0.151$ , adjusted  $R^2=0.060$ ,  $F(10,93)=1.66$ ,  $p = 0.103$ ;  $n = 104$ ). The most notable predictor is gender (male vs. female) ( $B=-0.46$ ,  $p = 0.022$ ), which is associated with a lower average rating. In addition, the 27–37 age group (vs. 18–27) appears as a significant predictor in this model, while other predictors do not reach conventional significance levels.

**Table 7.** Multiple linear regression: dependent variable – Disasters can become a major cause of post-traumatic stress disorder and substantially affect people's mental health.

Predictor	B	SE	$\beta$	t	p
Gender: male (ref.=female)	-0,46	0,20	-0,24	-2,33	0,022
Age: 27–37 (ref.=18–27)	0,53	0,24	0,24	2,19	0,031
Age: 37+ (ref.=18–27)	0,35	0,60	0,13	0,58	0,566
Education: higher/university (ref.=secondary school)	-0,41	0,24	-0,22	-1,75	0,083
Education: postgraduate (ref.=secondary school)	-0,20	0,28	-0,09	-0,74	0,464
Income: 80,000–100,000 (ref.=≤80,000)	0,07	0,25	0,03	0,28	0,781
Income: >100,000 (ref.=≤80,000)	-0,18	0,23	-0,09	-0,78	0,435
Employment status: employed (ref.=unemployed)	-0,11	0,19	-0,06	-0,58	0,561
Marital status: married (ref.=single)	-0,27	0,58	-0,10	-0,46	0,645
Marital status: other (ref.=single)	0,15	0,22	0,07	0,68	0,496

Note. B – unstandardised coefficient; SE – standard error;  $\beta$  – standardised coefficient; t – t-statistic; p – significance level. Model:  $n=104$ ,  $R^2=0.151$ , adjusted  $R^2=0.060$ ,  $F(10,93)=1.66$ ,  $p=0.103$ . Reference categories are indicated in the predictor descriptions.

Multiple linear regression indicates that the set of sociodemographic predictors explains 12.3% of the variance in ratings for the item "If I notice that violence has occurred in communities affected by a natural disaster, I would know how to respond correctly and appropriately." ( $R^2=0.123$ , adjusted  $R^2=0.027$ ,  $F(10,93)=1.28$ ,  $p=0.250$ ;  $n=104$ ). Overall model fit is limited, and only a small number of predictors make noteworthy contributions, suggesting that experiential and situational factors may more strongly shape readiness to respond than basic sociodemographics.

**Table 8.** Multiple linear regression: dependent variable – If I notice that violence has occurred in a community affected by a natural disaster, I would know how to respond appropriately.

Predictor	B	SE	$\beta$	t	p
Gender: male (ref.=female)	0,15	0,19	0,08	0,78	0,435
Age: 27–37 (ref.=18–27)	0,22	0,23	0,10	0,94	0,352
Age: 37+ (ref.=18–27)	-0,24	0,58	-0,09	-0,41	0,679
Education: higher/university (ref.=secondary school)	-0,05	0,23	-0,03	-0,24	0,814
Education: postgraduate (ref.=secondary school)	0,07	0,27	0,03	0,25	0,807
Income: 80,000–100,000 (ref.=≤80,000)	-0,08	0,24	-0,04	-0,31	0,760
Income: >100,000 (ref.=≤80,000)	-0,60	0,22	-0,34	-2,74	0,007
Employment status: employed (ref.=unemployed)	-0,06	0,19	-0,03	-0,31	0,759
Marital status: married (ref.=single)	0,37	0,56	0,14	0,66	0,510
Marital status: other (ref.=single)	-0,08	0,22	-0,04	-0,37	0,709

Note. B – unstandardised coefficient; SE – standard error;  $\beta$  – standardised coefficient; t – t-statistic; p – significance level. Model: n=104,  $R^2=0.123$ , adjusted  $R^2=0.028$ ,  $F(10,93)=1.30$ ,  $p=0.242$ . Reference categories are indicated in the predictor descriptions.

Multiple linear regression indicates that the set of sociodemographic predictors explains 15.3% of the variance in ratings for the item “Competent authorities/services play an important role in preventing and eliminating phenomena such as violence against women, girls, and older persons.” ( $R^2=0.153$ , adjusted  $R^2=0.062$ ,  $F(10,93)=1.68$ ,  $p=0.096$ ; n=104). The model shows limited overall explanatory power, with only some predictors showing modest effects. This pattern again underscores the importance of contextual determinants such as institutional trust, prior experience, and exposure to information.

**Table 9.** Multiple linear regression: dependent variable – Competent authorities/services play an important role in preventing and eliminating violence against women, girls, and older persons.

Predictor	B	SE	$\beta$	t	p
Gender: male (ref.=female)	0,00	0,19	0,00	0,02	0,982
Age: 27–37 (ref.=18–27)	0,07	0,24	0,03	0,30	0,765
Age: 37+ (ref.=18–27)	1,68	0,59	0,62	2,84	0,006
Education: higher/university (ref.=secondary school)	0,26	0,23	0,14	1,13	0,260

Education: postgraduate (ref.=secondary school)	0,14	0,27	0,06	0,53	0,600
Income: 80,000–100,000 (ref.=≤80,000)	-0,13	0,25	-0,06	-0,50	0,616
Income: >100,000 (ref.=≤80,000)	-0,49	0,22	-0,26	-2,17	0,033
Employment status: employed (ref.=unemployed)	0,21	0,19	0,11	1,09	0,277
Marital status: married (ref.=single)	-1,13	0,57	-0,43	-2,00	0,048
Marital status: other (ref.=single)	-0,33	0,22	-0,16	-1,51	0,133

Note. B – unstandardised coefficient; SE – standard error;  $\beta$  – standardised coefficient; t – t-statistic; p – significance level. Model: n=104,  $R^2=0.153$ , adjusted  $R^2=0.062$ ,  $F(10,93)=1.68$ ,  $p=0.097$ . Reference categories are indicated in the predictor descriptions.

Multiple linear regression for the item “A large part of the population of the Republic of Serbia does not possess adequate knowledge...” indicates that sociodemographic predictors explain a limited share of variance. This suggests that perceptions of population-level preparedness and knowledge may be shaped more strongly by broader societal narratives, media exposure, and general trust in institutions than by respondents’ individual socio-demographic characteristics alone.

**Table 10.** Multiple linear regression: dependent variable – A large part of the population of Serbia does not possess adequate knowledge about potential consequences after a disaster.

Predictor	B	SE	$\beta$	t	p
Gender: male (ref.=female)	-0,24	0,15	-0,17	-1,55	0,124
Age: 27–37 (ref.=18–27)	0,18	0,19	0,11	0,95	0,345
Age: 37+ (ref.=18–27)	0,38	0,47	0,19	0,81	0,422
Education: higher/university (ref.=secondary school)	-0,02	0,19	-0,01	-0,10	0,918
Education: postgraduate (ref.=secondary school)	0,09	0,22	0,05	0,41	0,680
Income: 80,000–100,000 (ref.=≤80,000)	-0,22	0,20	-0,14	-1,12	0,268
Income: >100,000 (ref.=≤80,000)	-0,12	0,18	-0,09	-0,70	0,487
Employment status: employed (ref.=unemployed)	-0,09	0,15	-0,07	-0,61	0,542
Marital status: married (ref.=single)	-0,17	0,45	-0,09	-0,38	0,703
Marital status: other (ref.=single)	-0,03	0,18	-0,02	-0,19	0,847

Note. B – unstandardised coefficient; SE – standard error;  $\beta$  – standardised coefficient; t – t-statistic; p – significance level. Model: n=104,  $R^2=0.058$ , adjusted  $R^2=-0.043$ ,  $F(10,93)=0.57$ ,  $p=0.831$ . Reference categories are indicated in the predictor descriptions.

## 4. Discussion

This study confirms that respondents recognize that disasters cause not only material damage but also secondary psychosocial effects that can heighten the risks of conflict, deviant behavior, and violence in communities. This perception aligns with the fact that disasters provoke sudden changes in living conditions—such as income loss, routine disruptions, displacement, and limited access to services (Chan, 2017; Gousse-Lessard et al., 2022; Kiran et al., 2020; Yofrido & Harjana, 2019). These changes can increase stress and diminish capacities for self-control and social support, especially within families and close relationships (Cerna-Turoff, Fischer, Mayhew, & Devries, 2019; Chan & Zhang, 2011; Molyneaux et al., 2019; Sheikhi et al., 2025; Weitzman & Behrman, 2016).

Nevertheless, the two significant findings are theoretically and practically relevant. First, a gender difference was found for the attitude that natural disasters can be a major reason for the occurrence of post-traumatic stress disorder and deterioration of mental health. This can be interpreted through differences in: (a) recognising and verbalising psychological consequences; (b) gender-conditioned roles and burdens during crises (care for children, older persons, household responsibilities); and (c) greater exposure to gender-based risks and “invisible” forms of violence when support systems are disrupted (Czepiel et al., 2024).

Second, a significant difference by income appears in respondents’ attitudes toward how they would react if they noticed violence in communities affected by a disaster. This finding can be interpreted through the concept of self-efficacy and access to resources: higher income is often associated with better access to information, support networks, and institutions, as well as a stronger sense of personal control and knowledge of procedures (whom to report to, how to react safely) (Johnston, Kung, & Shields, 2021; Rhodes et al., 2010).

An opportunity to leverage this readiness to target interventions that address the specific operational gaps in the population’s understanding of post-disaster protocols (Cerchiello, Ceresa, & Monteiro, 2017). This readiness highlights a critical entry point for authorities to design and implement training modules that specifically bridge the gap between general awareness and practical application of safety measures. At the same time, lower income may be associated with greater exposure to stressors and less trust that reporting violence leads to effective protection mechanisms, particularly in contexts where social safety nets are less robust (Cerna-Turoff, Fischer, Mansourian, & Mayhew, 2021). These interventions should therefore go beyond general awareness to equip individuals with concrete skills for identifying risks, reporting incidents, and accessing support services (Reddy & Goodman, 2019).

The regression analysis also provided valuable insight regarding the attitude that “a large part of the population lacks adequate knowledge,” which was not statistically significant. This indicates that demographics alone do not explain perceptions of insufficient knowledge (Chan, 2017; Johnston, Kung, & Shields, 2021; Rhodes et al., 2010), and that other factors—such as prior disaster experience, awareness levels, trust in institutions, media exposure, and participation in preparedness programs (Johnston, Kung, & Shields, 2021; Molyneaux et al., 2019; Reddy & Goodman, 2019; Weitzman & Behrman, 2016)—likely play a more important role, even though they were not included in the model. This highlights a key area for future research: rather than adding more demographic variables, it seems more beneficial to incorporate indicators related to experience, knowledge, and engagement in preparedness activities (Johnston, Kung, & Shields, 2021; Molyneaux et al., 2019; Rhodes et al., 2010; Weitzman & Behrman, 2016).

The findings suggest that a notable portion of respondents are willing to attend educational programs aimed at preventing gender-based violence after disasters. This presents a valuable opportunity for prevention: developing short, repeatable, and well-structured programs—whether in schools, local communities, workplaces, or online—that go beyond general messages to teach concrete actions such as recognizing violence, responding safely, reporting incidents, and accessing services and support. Such efforts can strengthen community resilience and reduce the risk of a crisis triggering violence or secondary victimization (Cvetković et al., 2025; Cvetković, Nikolić, & Lukić, 2024; Cvetković & Martinović, 2020; Ivanov & Cvetković, n.d.; Renner, Cvetković, & Lieftenegger, 2025). Additionally, incorporating gender-sensitive approaches into training curricula is crucial, as research shows women often report lower confidence in preparedness despite engaging in more household safety behaviors, while men perceive themselves as more prepared and actively involved in the community (Cvetković, Roder, Öcal, Tarolli, & Dragičević, 2018). Therefore, educational efforts should aim to empower women, educate men, and foster cooperation to challenge gender stereotypes and strengthen household and community resilience (Cvetković & Ivković, 2022; Cvetković, Roder, Öcal, Tarolli, & Dragičević, 2018).

## **5. Conclusion**

This study showed that citizens, to a considerable extent, recognise that disasters may be accompanied by an increase in psychosocial risks and deviant behaviour, and that there is a pronounced perception of insufficient awareness and knowledge about potential post-disaster consequences. This finding indicates that prevention in non-crisis periods is critical: without

continuous education and clear response protocols, the risk of incorrect reactions, increased conflict, and violence may be higher when everyday life is disrupted. Analyses of differences and predictors suggest that, overall, socio-demographic characteristics have limited explanatory power for attitudes. ANOVA identified only two significant effects out of 30 tested, suggesting that attitudes are more shaped by factors such as experience, information, exposure to education, and self-efficacy than by gender, age, or education as isolated categories. In addition, the regression model for the assessment that “citizens do not have adequate knowledge” did not identify significant demographic predictors, strengthening the need for future studies to include variables measuring knowledge, experience, and educational exposure. From a practical perspective, the findings support recommendations from the master’s thesis that it is necessary to design and implement new programmes for “developing and raising awareness” among citizens of all generations, through social-media campaigns, programmes in schools and universities, as well as periodic trainings/lectures (e.g., every six months) in the public and private sectors.

These programmes must be linked to concrete procedures: what citizens should do when they notice violence in the community after a disaster, whom they should report to, how inter-institutional coordination works, and what support is available to victims. Overall, the paper indicates that the following are key to reducing the risk of deviant behaviour after disasters: (1) systematic education and risk communication, (2) clear mechanisms for reporting and responding to violence in crisis conditions, and (3) strengthening the role of institutions through coordination and visible support measures. Such an orientation can contribute not only to reducing the consequences of disasters but also to strengthening community resilience through better preparedness, greater trust, and more effective prevention of violence escalation under crisis conditions.

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**Institutional Review Board Statement:** The study was conducted in accordance with the Declaration of Helsinki and was approved by the Institutional Review Board of the Scientific–Professional Society for Disaster Risk Management and the International Institute for Disaster Research.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** Data are contained within the article.

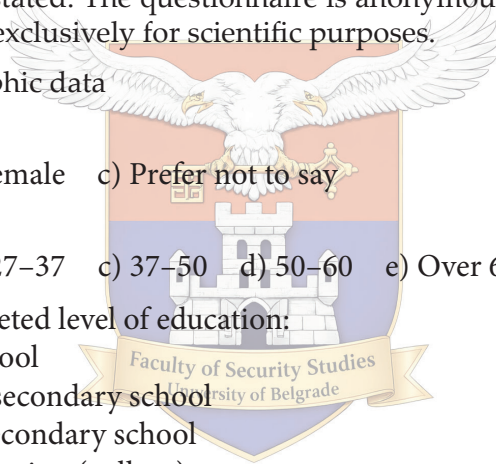
**Acknowledgements:** This study was supported by the Scientific-Professional Society for Disaster Risk Management and ProSafeNet – The Global Hub for Safety, Security, Risk & Emergency Professionals and Scientists (<https://prosafenet.com/>). The authors acknowledge the use of Grammarly Premium and ChatGPT 5.2 to improve the English in this manuscript. The AI tools were used to assist with language enhancement but were not involved in developing the scientific content. The authors take full responsibility for the originality, validity, and integrity of the manuscript.

**Appendix A.** Survey questionnaire – Examining factors of disaster impact on the increase of deviant behaviour among people

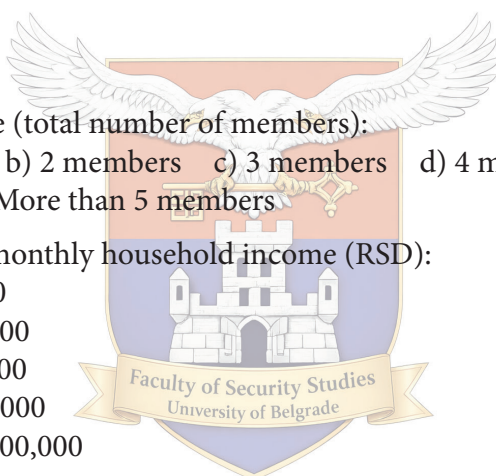
Instructions for respondents: Please circle one answer for each question, unless otherwise stated. The questionnaire is anonymous, and the collected data will be used exclusively for scientific purposes.

A) Sociodemographic data

1. Gender:
  - a) Male
  - b) Female
  - c) Prefer not to say
2. Age (in years):
  - a) 18–27
  - b) 27–37
  - c) 37–50
  - d) 50–60
  - e) Over 60
3. Highest completed level of education:
  - a) Primary school
  - b) Three-year secondary school
  - c) Four-year secondary school
  - d) Higher education (college)
  - e) University education
  - f) Master's studies
  - g) Doctoral studies
4. Highest completed level of father's education:
  - a) Incomplete primary school
  - b) Three-year secondary school
  - c) Four-year secondary school
  - d) Higher education (college)
  - e) University education
  - f) Master's studies
  - g) Doctoral studies



5. Highest completed level of mother's education:
  - a) Incomplete primary school
  - b) Three-year secondary school
  - c) Four-year secondary school
  - d) Higher education (college)
  - e) University education
  - f) Master's studies
  - g) Doctoral studies
6. Marital status:
  - a) Single (unmarried)
  - b) Married
  - c) Divorced
  - d) Engaged
  - e) Widowed
7. Household size (total number of members):
  - a) 1 member
  - b) 2 members
  - c) 3 members
  - d) 4 members
  - e) 5 members
  - f) More than 5 members
8. Approximate monthly household income (RSD):
  - a) Up to 30,000
  - b) 30,000–50,000
  - c) 50,000–80,000
  - d) 80,000–100,000
  - e) More than 100,000
9. Employment status:
  - a) Employed
  - b) Unemployed
10. Occupation (closest to yours):
  - a) Student
  - b) Craft worker/related occupation
  - c) Service or retail occupation
  - d) Administrative staff/Technician or associate professional
  - e) Self-employed entrepreneur
  - f) Manager
  - g) Professional/Artist
  - h) Other



11. Number of employed household members:  
a) 1 b) 2 c) 3 d) 4 e) More than 4

B) Awareness, perceptions, and readiness  
(circle: Yes / No / Do not know)

12. Have you ever heard of the term natural disaster?  
Yes / No / Do not know

13. Have you heard of the term gender-based violence?  
Yes / No / Do not know

14. Do you think women are more exposed to violence than men after the outbreak of a natural disaster?  
Yes / No / Do not know

15. Are you aware that natural disasters can increase aggression in partner relationships?  
Yes / No / Do not know

16. Did you know that forms of violence include physical, sexual, and emotional violence?  
Yes / No / Do not know

17. Do you think gender-based violence increases after a natural disaster?  
Yes / No / Do not know

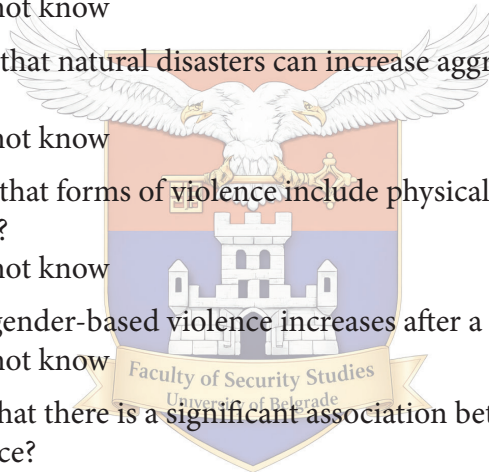
18. Do you agree that there is a significant association between natural disasters and violence?  
Yes / No / Do not know

19. Are you aware of the claim that during the COVID-19 pandemic, there was an increase in reports/calls related to domestic violence?  
Yes / No / Do not know

20. Did you know that “one in three women” is a victim of gender-based violence in the EU?  
Yes / No / Do not know

21. Are you aware that gender-based violence is a health and social problem?  
Yes / No / Do not know

22. Do you think natural disasters may occur in your surroundings?  
Yes / No / Do not know



23. Do you feel ready to help a person who finds themselves at the site of a natural disaster?  
Yes / No / Do not know
24. Would you volunteer in the event of a natural disaster in Serbia?  
Yes / No / Do not know
25. Do you feel ready to attend educational programmes aimed at preventing gender-based violence after a natural disaster?  
Yes / No / Do not know

C) Attitudes

(Likert scale – circle one number for each statement)

Scale (circle a number):

1 = Strongly disagree | 2 = Disagree  
| 3 = Neither agree nor disagree | 4 = Agree | 5 = Strongly agree

26. Additional education about the COVID-19 pandemic can mitigate consequences after a natural disaster.  
1 2 3 4 5
27. Natural disasters can contribute to the development of post-traumatic reactions and significantly affect people's mental health.  
1 2 3 4 5
28. If I notice that violence has occurred in a community affected by a natural disaster, I would know how to respond correctly and appropriately.  
1 2 3 4 5
29. Competent authorities/services have an important role in preventing and suppressing violence against women, girls, and older persons.  
1 2 3 4 5
30. A significant share of citizens of the Republic of Serbia does not have sufficient knowledge and awareness of potential consequences after a natural disaster.  
1 2 3 4 5

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