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Nataša Dostanić¹, Željka Stamenković², Nataša Maksimović³, Aleksandra Đerić⁴ Bosiljka Đikanović²,*

Lifetime and periodic prevalence and characteristics of violence against women committed by their alcohol-dependent partners – a cross-sectional study

Целоживотна и периодична преваленција и карактеристике насиља према женама од стране њихових партнера који су зависни од алкохола – студија пресека

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*Correspondence to:

Bosilika ĐIKANOVIĆ

Institute of Social medicine, Faculty of Medicine University of Belgrade, Dr Subotića 8, 11000 Belgrade, Serbia Email: bosiljka.djikanovic@med.bg.ac.rs

¹Special Hospital for Addictions, Department for Alcoholism, Belgrade, Serbia;

²University of Belgrade, Faculty of Medicine, Institute of Social Medicine and Centre – School of Public Health, Belgrade, Serbia;

³University of Belgrade, Faculty of Medicine, Institute of Epidemiology, Belgrade, Serbia;

⁴Dr Laza Lazarević Clinic for Mental Disorders, Belgrade, Serbia

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Целоживотна и периодична преваленција и карактеристике насиља према женама од стране њихових партнера који су зависни од алкохола – студија пресека

SUMMARY

Introduction/Objective We aimed to investigate the lifetime and periodic prevalence (during a year) and characteristics of violence against women and health status of women whose partners have been treated for alcohol dependence.

Methods Cross-sectional study was conducted among women whose male partners were alcohol dependent and admitted to hospital for the inpatient treatment. Exposure to physical and sexual violence was measured by Conflict Tactics Scale (CTS-2). Mental health status was measured by Beck Depression Inventory (BDI-II), Beck Anxiety Inventory (BAI), Mini International suicidal risk (using Neuropsychiatric Interview or MINI scale) and alcohol consumption (AUDIT scale). Data were analyzed by descriptive and inferential statistical methods. We also constructed two logistic regression models to study associations between violence and SES, and violence and health-related variables.

Results The lifetime prevalence of physical partner violence against among women was 65.4%, while the periodic prevalence (during the 12 months prior to study) was 46.2% for physical; 20,2% for sexual, and 18% for both types of violence. None women were in risk of harmful alcohol consumption. Violence was more often among women not living in a town (OR 2,53, OR 95% CI 1.08-5.94, in univariate model), and among women with moderate/severe depression (OR 12.34, 95%CI 2.26-67.33, in multivariate model).

Conclusion Alcohol dependent men are very often violent toward their spouses, and inpatient treatment presents an opportunity to work with them on raising awareness on unacceptance of violence against women

Keywords: alcohol dependence, alcohol use disorders (AUD); violence; women; health, perpetuators

Сажетак

Увод/Циљ Циљ овог истраживања је утврђивање целоживотне и периодичне (12 месеци) преваленције и карактеристика партнерског насиља према женама чији се мужеви болнички лече од алкохолне зависности.

Методе Студија пресека међу женама чији се партнери хоспитално лече због алкохолне зависности. Изложеност физичком и сексуалном насиљу током живота и претходних 12 месеци мерена је Скалом за мерење тактика у конфликтима, а ментално здравље жена је процењивано Бековом скалом за депресију, Бековим упитником за анксиозност, Мини Интернационалним Неуропсихијатријским интервјуом за процену суицидалности, и тестом за идентификацију алкохолом узрокованих поремећаја. Изложеност насиљу и његова повезаност са социодемографским факторима и здравственим стањем анализирана је методама дескриптивне и инференцијалне статистичке анализе, као и помоћу два модела логистичке регресионе анализе.

Резултати Целоживотна преваленција физичког насиља међу женама чији се мужеви лече од алкохолизма била је 65,4%, док је изложеност насиљу током 12 месеци који су претходили истраживању (периодична преваленција) износила 46.2% за физичко; 20.2% за сексуално, и 18% за оба типа насиља. Међу женама није регистровано ризично конзумирање алкохола. Насиље је било чешће међу женама које нису живеле у градовима (OR 2.53, OR 95% CI 1.08–5.94, у униваријантном моделу), и међу женама са умереном/тешком депресијом (OR 12.34, 95% CI 2.26–67.33, у мултиваријантном моделу).

Закључак Мушкарци зависни од алкохола су веома често насилни према својим супругама, и болничко лечење представља могућност да се са њима ради на подизању свести о недопустивости насиља према женама.

Кључне речи: алкохолизам; алкохолна зависност; насиље; жене; здравље; насилник

INTRODUCTION

Violence against women (later in the text: violence) is a worldwide phenomenon that is rooted in gender inequality. The most often perpetrator of violence is woman's intimate partner (a husband or spouse), either current or former one. According to World Health Organization (WHO), prevalence of physical and/or sexual violence among all ever-partnered women worldwide was 26% and 10% during the past 12 months [1].

In Serbia, last available data showed that 17% of women experienced physical violence and 5% sexual violence during their lifetime [2]. The frequency is even higher among women whose husbands/partners have alcohol dependence [3,4]. Intimate partner violence can manifest itself not just as a physical or sexual violence, but also psychological violence, which is very prevalent and even more difficult to bear, although it is challenging for validation and intercultural interpretation [5]. However, in real life, violence often simultaneously appears in many forms, which has a cumulative and negative consequences on women's health [6]. All forms of violence are associated with poor mental health of women, especially with occurrence of depression [6].

Alcohol consumption, especially heavy drinking, facilitates expression of violence [7]. According to the socio-ecological model, violence is a result of the interaction of four groups of factors that appear at the individual, partner's, community and society level [8, 9]. Men's excessive alcohol consumption is one of the risk factors for violence that belong to the individual partner's level, and it is associated with reduced reasoning and disinhibited behavior. Although not all men perpetuate violence under the influence of alcohol, it is well known that alcohol affects cognitive functions, alters perception, reduces inhibitory mechanisms, makes it difficult to constructively solve problems, and facilitates the manifestation of aggression [3,7].

In this paper, we investigated the frequency and characteristics of intimate partner violence against women whose partners have been treated for alcohol dependence.

Additionally, we examined the associations between violence against women and sociodemographic characteristics, and women's health status. In the same sample we used to study mental health as a main outcome variable, and published in the previous paper [10], while in this paper we focused on factors associated with the experience with violence.

METHODS

The research is designed as a cross-sectional study, using self-administered questionnaire among women older than 18 years whose partners (spouses) were under an inpatient treatment for alcohol dependence, with an established diagnosis of alcohol dependence F10.2, according to the International Classification of Diseases, 10th revision (ICD-10). The research was conducted at the Special Hospital for Addiction Diseases in Belgrade, and ethical committee of this hospital approved conducting of this study.

Recruitment of participants and inclusion criteria

Women who were older than 18, and who appeared at the department for the consultations related to treatment of their spouses, were approached and asked to fill in the questionnaire. The inclusion criteria were that they have been married or living in an unmarried community for at least a year with their male partners who were alcohol dependent and currently admitted to hospital for inpatient treatment. Prior to the start of the survey, respondents were informed that their participation in the survey was anonymous and on a voluntary basis, and women gave their informed consent. Data were collected between January and June 2018.

Main dependent variables

The main dependent variable in the study was exposure to physical and sexual violence that women experienced during the last 12 months by their partners who are currently under the inpatient treatment for alcohol dependence. The occurrence of physical and /or sexual male partner violence was measured by the Conflict Tactics Scale 2 (CTS 2) [11]. This scale included six behaviorally specific questions regarding exposure to physical violence, and three behaviorally specific questions related to the exposure to sexual violence (Supplement 1).

Independent variables

Independent variables were socio-demographic characteristics of both partners (age, level of education, employment status); characteristics of marital union (number of years spent in marital / extramarital union, number of children), and health characteristics of both partners (existence of somatic and psychiatric diseases, on a dichotomous scale yes/no). In addition to it, we measured mental health outcomes among women, such as depression, anxiety, suicidality and the occurrence of alcohol dependence.

Depression was measured using the Beck Depression Inventory (BDI-II) scale [12] that was standardized in Serbia as well [12]. The scale has 21 questions about how respondent might feel, with four options of answers, starting from 0 (does not agree at all) to 3 (agrees very much). The total score on the scale was obtained by simply adding all the answers obtained from the 1st to the 21st question. No depression is indicated by the score of up to 9 points; mild depression 10 to 19 points; moderate depression 20 to 29 points, and severe depression 30 to 63 points [12]. In later analyses, moderate and severe depression were summarized in one category.

Anxiety was measured using Beck Anxiety Inventory (BAI) [14] that was standardized in Serbia as well [13]. This instrument consists of 21 questions related to the symptoms of general anxiety. Respondents answered each question by estimating the intensity of symptoms, on a Likert scale from 0 (not present) to 3 (very much presented). The sum of all responses (maximum = 63) represents the intensity of the symptoms of general anxiety. The overall score was graded into four categories: no anxiety (0-9), mild and mild to moderate (10-19), moderate (20-29) and severe anxiety (30-64). In later analyses, moderate and severe anxiety were summarized in one category.

Suicidality among women was measured using Mini International Neuropsychiatric Interview (MINI) that has 6 questions, with binary options of response (yes / no) [13]. Positive response on the first, second and third statement indicated high level of suicidality risk.

Women's alcohol drinking was measured using The Alcohol Use Disorders Identification Test (AUDIT) [15]. AUDIT is a screening test designed for the early identification of risky and harmful drinking as well as alcohol dependence in the adult population, developed and recommended by the WHO. Developed and evaluated over a period of two decades, it has been found to provide accurate risk measurement by both gender and age in different cultures. It consists of 10 questions related to recent alcohol consumption, the existence of symptoms of alcohol dependence and problems related to alcohol consumption. It complies with ICD 10 definitions of alcohol dependence and harmful alcohol use. It can be used through an oral interview or as a written questionnaire. Answers are scored in the range of 0-4. The values of all responses are summed up and grouped into the five levels: no alcohol consumption at all; zone I (1 to 7 points); zone II (8-15 points); zone III (16-19 points), and zone IV (20-40 points) [15]. No alcohol consumption risk is comprised of two categories: no alcohol consumption at all, and zone I (1 to 7 points) [15].

Statistical analysis

The statistical analyses were done using the methods of descriptive and analytical statistics. Frequency of exposure to physical and sexual violence against women was expressed in absolute numbers (n) and percentages (%). We used chi square test to identify the differences in occurrence of physical and/or sexual violence among women and wide range of socioeconomic and health variables. We run two logistic regression models with the exposure to violence as an outcome variable: one model with all SES variables, and the other one with all health-related variables. For both models we run both univariate and multivariate model, and results were expressed as odds ratios (OR) with 95% confidence intervals (CI).

Probability of results was set up at 0.05 and 0.01 level (significant and highly significant results). The analyses were done by using the statistical software package SPSS 26.

RESULTS

A total of 104 women whose husbands / partners / spouses have been under the treatment for alcohol dependence completed the questioneirre. The age of respondents were in range of 26 to 66 years, (mean age 48.19 years, SD 9.17). The age of their current partners who were on a treatment for the alcohol dependence were in range of 33 to 67 years (mean age 50.09, SD 10.94). The structure of the sample in relation to the age, education and employment status of spouses is shown in Table 1.

The lifetime and periodic prevalence of physical and/or sexual violence

The prevalence of either physical or sexual partner violence during the lifetime of women whose partners are under the treatment for alcohol addiction was 69.2% (Figure 1).

When looking at the last 12 months, almost half of women (48.1%) confirmed either physical or sexual violence (Figure 2).

The most frequent acts of violence during the last 12 months were *slapping or* throwing something that could hurt women, and pushing or shoving or pulling women's hair, which were experienced by 37.5% each (Supplement 1).

Characteristics of women's mental health

No depression was found in 29.8% women, while mild and moderate / severe depression were found in two of three women (35.5% and 34.6%, respectively) (Table 2). No anxiety was found in 44.7% of women, and every fourth women had moderate/severe anxiety (25.2%). More than one in four women had some level of suicidal risk (27.2%). None women had the risk of harmful alcohol consumption (Table 2).

The results showed that there is statistically significant difference in the exposure of women to violence during the past 12 months compared to the age of the husband (p=0.029) and place of residence other than the city (p=0.030) (Table 3). Living in other than urban areas was associated with higher chances for experiencing violence (OR 2.53, 95%CI 1.08-5.94), which was even higher in multivariate logistic regression model, although statistical significance was lost (OR 3.40, 95% CI 0.81-14.20).

Statistically significant difference was observed in the exposure of women to violence and the presence of depression (p <0.001), anxiety (p <0.001) and suicidality (p <0.001) (Table 4). These health conditions were associated with several times higher odds for violence (starting from OR 3.92, 95% CI 1.48-10.35 for mild anxiety, to OR 27.96, 95% CI 7.35-106.33 for moderate/severe depression). In multivariate logistic regression model direction of these associations remained, although weakened and without statistical

significance, while moderate/severe depression remained to be strongly associated with violence (OR 12.34, 95% CI 2.26-67.33).

DISCUSSION

In this paper we investigated the lifetime and periodic prevalence and factors associated with intimate partner violence against women whose spouses have been under the treatment for alcohol dependence. We found that almost half of women/spouses experienced violence in the previous one year (46.2%). Other studies that also addressed alcohol dependent men and their abusive behavior, revealed that even in pregnancy or antenatal period women are not protected from violence: 27% of women who just delivered experienced violence [16], and Bhatta et all [17] found that pregnant women whose partners are alcohol-dependent are exposed to violence as twice as often than women whose partners are not alcohol-dependent. These findings suggest that alcohol dependent partners appeared to present an extremely high risk for perpetuation of violence, and a "red flag" that calls for an action to enhance women's protection and safety, by providing immediate protection and a long-term support. However, these figures might be just "the top of the iceberg", as during the research, many women might still hesitate to confirm that partners perpetuated violence against them, or even they are not aware that such partner' behavior constitute violent acts that are forbidden and unjustifiable.

When we talk about partners age, we found that older men are more violent, while some other authors identified that violence occurred more often among young married couples and young parents [3, 18]. Although in our study we did not inquiry about the timing of the first violent acts that happened during the marital life, other research indicated that is happens early, at the beginning of the union [3, 17, 18].

Our results corroborate findings related to the associations between women's mental health, especially depression, and exposure to partner violence [10, 19-20], which actually might presents a *circulus vitiosus* which is very difficult to escape without comprehensive treatment and support. As identified in the previous paper published by the author Dostanic et al, occurrence of depression in women whose partners have alcohol dependence are associated with the older partners, and if they spent more than 20 years together [10], which was also found in other studies [21, 22]. The link between violence and older age of husbands with alcohol dependence can be explained by the fact that these men probably hold traditional values that justify gender-based violence, along with the cognitive deficits they developed over time as a consequence of the continuous and excessive use of alcohol.

We found that women who are living in settlements that are not cities (rural areas) have more often experienced violence. It can be explained by the fact that women living in rural areas in Serbia are much more vulnerable due to the adverse socio-economic conditions and lower social status they have [23]. Therefore, particular attention has to be given to recognize and timely protect and support this population group.

CONCLUSION

Alcohol dependent men are very often perpetuating violence toward their female spouses. An inpatient treatment presents a window of opportunities to work with them, and professionals who are focused on the treatment should extend their professional competencies in a way to acquire knowledge and skills that are relevant for the identification and work with violent alcohol-dependent patients [24]. This would be particularly important when dealing with younger alcohol dependent men, whose brain structure and cognitive functions are not yet compromised in a large extent, and who therefore might have a largest potential for

change. They have to be aware that violence is completely unacceptable and to learn how to control their impulses for violent behavior.

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REFERENCES

- 1. Violence against women prevalence estimates, 2018: global, regional and national prevalence estimates for intimate partner violence against women and global and regional prevalence estimates for non-partner sexual violence against women. Geneva: World Health Organization; 2021
- 2. Serbia Results Report. Well-being and safety of women. OSCE-lead survey on violence against women. OSCE 2019. ISBN: 978-3-903128-20-0.
- 3. Wilson IM, Graham K, Taft A. Living the cycle of drinking and violence: A qualitative study of women's experience of alcohol-related intimate partner violence. Drug Alcohol Rev. 2017 Jan;36(1):115-124. doi: 10.1111/dar.12405. Epub 2016 May 19. PMID: 27194021.
- 4. Leite FMC, Luis MA, Amorim MHC, Maciel ELN, Gigante DP. Violence against women and its association with the intimate partner's profile: a study with primary care users. Rev Bras Epidemiol. 2019 Dec 5;22:e190056. Portuguese, English. doi: 10.1590/1980-549720190056. PMID: 31826112.
- Karakurt G, Smith D, Whiting J. Impact of Intimate Partner Violence on Women's Mental Health. J Fam Violence. 2014 Oct 1;29(7):693-702. doi: 10.1007/s10896-014-9633-2. PMID: 25313269; PMCID: PMC4193378.
- 6. Esie P, Osypuk TL, Schuler SR, Bates LM. Intimate partner violence and depression in rural Bangladesh: Accounting for violence severity in a high prevalence setting. SSM Popul Health. 2019 Jan 28;7:100368. doi: 10.1016/j.ssmph.2019.100368. PMID: 30766911; PMCID: PMC6360402.
- 7. Leonard KE, Quigley BM. Thirty years of research show alcohol to be a cause of intimate partner violence: Future research needs to identify who to treat and how to treat them. Drug Alcohol Rev. 2017 Jan;36(1):7-9. doi: 10.1111/dar.12434. Epub 2016 Jun 16. PMID: 27305859.
- 8. Abramsky T, Watts CH, Garcia-Moreno C, Devries K, Kiss L, Ellsberg M, Jansen HA, Heise L. What factors are associated with recent intimate partner violence? findings from the WHO multi-country study on women's health and domestic violence. BMC Public Health. 2011 Feb 16;11:109. doi: 10.1186/1471-2458-11-109. PMID: 21324186; PMCID: PMC3049145.
- 9. Djikanovic B, Jansen HA, Otasevic S. Factors associated with intimate partner violence against women in Serbia: a cross-sectional study. J Epidemiol Community Health. 2010 Aug;64(8):728-35. doi: 10.1136/jech.2009.090415. Epub 2009 Aug 24. PMID: 19703907.
- Dostanic N, Djikanovic B, Jovanovic M, Stamenkovic Z, Deric A. The Association Between Family Violence, Depression and Anxiety Among Women Whose Partners Have Been Treated for Alcohol Dependence. J Fam Violence. 2021 Jan 2:1-12. doi: 10.1007/s10896-020-00238-1. Epub ahead of print. PMID: 33424110; PMCID: PMC7778496.
- 11. Straus MA, Hamby SL, Boney-McCoy S, Sugarman DB. The Revised Conflict Tactics Scales (CTS2): Development and Preliminary Psychometric Data. Journal of Family Issues. 1996;17(3):283–316. https://doi.org/10.1177/019251396017003001.
- 12. Beck AT, Beamesderfer A. Assessment of depression: the depression inventory. Mod Probl Pharmacopsychiatry. 1974;7(0):151-69. doi: 10.1159/000395074. PMID: 4412100.
- 13. Timotijević I, Paunović V. Instrumenti kliničke procene u psihijatriji. 2010. Beograd: Naša knjiga.
- 14. Beck AT, Epstein N, Brown G, Steer RA. An inventory for measuring clinical anxiety: psychometric properties. J Consult Clin Psychol. 1988 Dec;56(6):893-7. doi: 10.1037//0022-006x.56.6.893. PMID: 3204199.
- 15. Babor TF, Biddle-Higgins JC, Saunders JB, Monteiro MG. AUDIT: The Alcohol Use Identification Test: Guidelines for use in primary health care. 2001; Geneva: World Health Organization.
- Wagman JA, Donta B, Ritter J, Naik DD, Nair S, Saggurti N, Raj A, Silverman JG. Husband's Alcohol Use, Intimate Partner Violence, and Family Maltreatment of Low-Income Postpartum Women in Mumbai, India. J Interpers Violence. 2018 Jul;33(14):2241-2267. doi: 10.1177/0886260515624235. Epub 2016 Jan 21. PMID: 26802047; PMCID: PMC6886467.
- 17. Bhatta N, Assanangkornchai S, Rajbhandari I. Does husband's alcohol consumption increase the risk of domestic violence during the pregnancy and postpartum periods in Nepalese women? BMC Public Health. 2021 Jan 4;21(1):5. doi: 10.1186/s12889-020-10021-y. PMID: 33390166; PMCID: PMC7780634.
- 18. Wong J, Mellor D. Intimate partner violence and women's health and wellbeing: impacts, risk factors and responses. Contemp Nurse. 2014;46(2):170-9. doi: 10.5172/conu.2014.46.2.170. PMID: 24787250.
- Sanz-Barbero B, López Pereira P, Barrio G, Vives-Cases C. Intimate partner violence against young women: prevalence and associated factors in Europe. J Epidemiol Community Health. 2018 Jul;72(7):611-616. doi: 10.1136/jech-2017-209701. Epub 2018 Mar 8. PMID: 29519883.
- 20. Lövestad S, Löve J, Vaez M, Krantz G. Prevalence of intimate partner violence and its association with symptoms of depression; a cross-sectional study based on a female population sample in Sweden. BMC

- Public Health. 2017 Apr 20;17(1):335. doi: 10.1186/s12889-017-4222-y. PMID: 28424072; PMCID: PMC5397670.
- 21. Machisa M, Shamu S. Mental ill health and factors associated with men's use of intimate partner violence in Zimbabwe. BMC Public Health. 2018 Mar 20;18(1):376. doi: 10.1186/s12889-018-5272-5. PMID: 29558887; PMCID: PMC5859758.
- 22. Izugbara CO, Obiyan MO, Degfie TT, Bhatti A. Correlates of intimate partner violence among urban women in sub-Saharan Africa. PLoS One. 2020 Mar 25;15(3):e0230508. doi: 10.1371/journal.pone.0230508. PMID: 32210457; PMCID: PMC7094863.
- 23. Janković B, Zajić G, Vračević M, Todorović N. Položaj starijih na selu. Beograd: Crveni krst Srbije, 2016. ISBN 978-86-80205-55-7
- 24. Travers Á, McDonagh T, Cunningham T, Armour C, Hansen M. The effectiveness of interventions to prevent recidivism in perpetrators of intimate partner violence: A systematic review and meta-analysis. Clin Psychol Rev. 2021 Jan 14;84:101974. doi: 10.1016/j.cpr.2021.101974. Epub ahead of print. PMID: 33497921.

Table 1. Sociodemographic and health characteristics of women, their partners/spouses and characteristics of marital union

Parameters	Women (respondents) N = 104 (100%)	Partners/spouses N = 104 (100%)		
	n (%)	n (%)		
Age				
Under or 39 years old	17 (16.5)	14 (14)		
40–49 years old	38 (36.9)	35 (35)		
50–59 years old	33 (32)	37 (38)		
60 and over	15 (14.6)	14 (13)		
Education				
Primary school	6 (5.8)	9 (8.7)		
High school (9–12years)	56 (53.9)	64 (61.6)		
Higher education (12 years and more)	42 (40.4)	31 (29.8)		
Working status				
Employed	67 (64.4)	69 (66.3)		
Unemployed	26 (25)	26 (25)		
Retired	11 (10.6)	9 (8.7)		
Presence of physical disease				
Yes	11 (10.6)	19 (18.3)		
No	93 (89.4)	85 (81.7)		
Presence of psychiatric disease				
Yes	1(1)	2 (1.9)		
No	103 (99)	102 (98.1)		
Characteristics of marital union and				
number of partners treatments for	N = 104 (1	00%)		
alcohol dependence	n (%)			
Length of marital union				
10 years or less	21 (20.4)			
11–20 years	37 (35.9)			
21–30 years	26 (25.2)			
31 years and over	19 (18.4)			
Number of children				
0	12 (11.7)			
1	31 (30.1)			
2	54 (52.4)			
3 and more	6 (11.7)			
Place of living	·			
City	71 (68.	3)		
Country	11 (10.	6)		
Suburb	22 (21.	2)		
Differences in the level of education				
among spouses				
The same level of education	65 (63.	65 (63.7)		
The man is more educated	13 (12.7)			
The woman is more educated	24 (23.5)			
The number of treatments for alcohol				
addiction				
The first treatment	72 (69.9)			
Second treatment	25 (24.3)			
Third treatment or more	6 (5.8)			

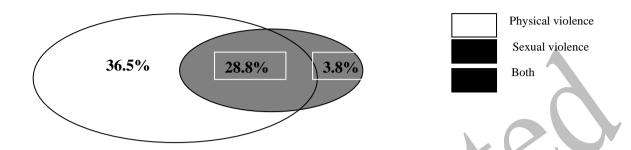


Figure 1. Exposure to violence against women during the lifetime

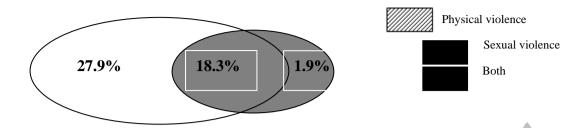


Figure 2. Exposure to violence against women during the last 12 months

Table 2. Women's mental health status

Parameters	N = 104 (100%)
	n (%)
Women's depression	
Normal (0–9 points)	31 (29.8)
Mild depression (10–19 points)	37 (35.5)
Moderately depressed state (20–29 points)	26 (25)
Severe depression (> 30 points)	10 (9.6)
Women's anxiety	
Normal (0–9 points)	46 (44.7)
Mildly anxiety (10–19 points)	31 (30.1)
Moderately anxiety (20–29 points)	16 (15.5)
Severe anxiety (> 30 points)	10 (9.7)
Women's suicidal risk	
No risk	73 (72.3)
Low risk	25 (24.8)
Moderate risk	1(1)
High risk	2(2)
Risk of harmful alcohol consumption	
Never consume alcohol	67 (64.4)
Zone I (1–7 points) low level of alcohol related problems	37 (35.6)
Zone II (8–15 points) medium level of alcohol related	0
problems (hazardous drinking)	
Zone III (16–19 points) high level of alcohol related problems	0
Zone IV (20–40 points) high risk for alcohol dependence	0

Table 3. Distribution of socio-demographic variables among women who are exposed to violence, along with univariate and multivariate logistic regression model

Exposure to violence during the previous 12 months						
Parameters	Total	Yes	Univariate OR	Adjusted OR		
	n (%)1	n (%) ²	(95%CI)	(95% CI)		
		Women's ago	e			
Under or 39 years old	17 (16.3)	9 (52.9)	1.00	1.00		
40–49 years old	38 (36.5)	12 (31.6)	0.41 (0.13-1.32)	1.20 (0.11–12.78)		
50–59 years old	33 (32.7)	20 (60.6)	1.37 (0.42–4.45)	4.22 (0.15–117.44)		
60 years or over	15 (14.5)	9 (60)	1.33 (0.33–5.43)	16.86 (0.29–971.20)		
Women's education						
Primary school	6 (5.8)	5 (83.3)	1.00	1.00		
High school (9-12 years)	56 (53.8)	28 (50)	0.20 (0.02–1.82)	0.33 (0.02–5.70)		
Higher education	42 (40.4)	17 (40.5)	0.14 (0.01–1.27)	0.40 (0.02-8.58)		
(12 years and more)				KK		
	W	omen's working				
Employed	67 (64.4)	33 (49.3)	1.00	1.00		
Unemployed	26 (25)	10 (38.5)	0.64 (0.26–1.62)	0.24 (0.05–1.05)		
Retired	11 (10.6)	7 (63.6)	1.80 (0.48–6.74)	2.63 (0.20–35.40)		
		Partner's age	*			
Up to 39 years old	14 (14)	8 (57.1)	1.00	1.00		
40–49 years old	35 (35)	10 (28.6)	0.30 (0.08–1.09)	0.07 (0.01–0.98)*		
50–59 years old	38 (38)	23 (60.5)	1.15 (0.33–3.98)	0.16 (0.01–4.42)		
60 years or over	13 (13)	8 (61.5)	1.20 (0.26–5.59)	0.08 (0.00–4.78)		
		Partner's educa	tion			
Primary school	9 (8.6)	5 (55.6)	1.00	1.00		
High school (9–12 years)	64 (61.6)	30 (46.9)	0.71 (0.17–2.87)	0.52 (0.07–3.51)		
Higher education	31 (29.8)	15 (48.4)	0.75 (0.17–3.33)	0.41 (0.05–3.49)		
(12 years and more)						
		artner's working		T		
Employed	69 (66.4)	34 (49.3)	1.00	1.00		
Unemployed	26 (25)	12 (46.2)	0.88 (0.36–2.18)	0.69 (0.16–3.02)		
Retired	9 (8.6)	4 (44.4)	0.82 (0.20–3.33)	0.03 (0.00–1.24)		
		ength of marital				
Up to 10 years	21 (20.4)	6 (28.6)	1.00	1.00		
11-20 years	37 (35.9)	17 (45.9)	2.12 (0.67–6.68)	6.46 (0.89–46.95)		
21-30 years	26 (25.2)	16 (61.5)	4.00 (1.17–13.73)	4.03 (0.38–42.68)		
31 years end more	19 (18.4)	11 (57.9)	3.44 (0.92–12.79)	4.39 (0.17–120.42)		
	T	Number of child				
0	12 (11.6)	5 (41.7)	1.00	1.00		
1	31 (30.1)	12 (38.7)	0.88 (0.23–3.43)	0.41 (0.04–4.20)		
2	54 (52.5)	28 (51.9)	1.50 (0.42–5.35)	0.79 (0.08–8.02)		
3 and more	6 (5.8)	4 (66.7)	2.80 (0.36–21.73)	1.90 (0.07–49.02)		
	T = 2 2 1 = =:	Place of living		T		
City	71 (68.3)	29 (40.8)	1.00	1.00		
Else	33 (31.7)	21 (63.6)	2.53* (1.08–5.94)	3.40 (0.81–14.20)		
Differences in the level of education among spouses ³						
The same level of education	65 (63.7)	32 (49.2)	1.00	-		
The man is more educated	13 (12.7)	8 (61.5)	1.64 (0.49–5.58)	-		
The woman is more	24 (23.6)	9 (37.5)	0.62 (0.24–1.61)	=		
educated *n < 0.05						

^{*}p < 0.051 % of total in that variable

²% of total in that category

³ the variable was not included in the multivariate model due to the collinearity level of education variables at individual level

Table 4. Distribution of health-related variables among women who are exposed to violence, along with univariate and multivariate logistic regression model

Exposure to violence during the previous 12 months								
Parameters	Total	Yes	OR	Adjusted OR				
	n (%) ¹	n (%) ²	(95% CI)	(95% CI)				
	Presence of physical disease in women							
No	93 (89.42)	43 (46.2)	1.00	1.00				
Yes	11 (10.58)	7 (63.6)	2.03 (0.56–7.42)	1.51 (0.26–8.79)				
	Presence of psychiatric disease in women							
No	103 (99.03)	49 (47.6)	1.00	-				
Yes	1 (0.97)	1 (100)	-	-				
Presence of physical disease in partner								
No	85 (81.73)	41 (48.2)	1.00	1.00				
Yes	19 (18.27)	9 (47.4)	0.97 (0.36–2.61)	1.00 (0.24-4.24)				
	Presence of	psychiatric di	sease in partner					
No	102 (98.08)	49 (48.0)	1.00	1.00				
Yes	2 (1.92)	1 (50.0)	1.08 (0.07–17.77)	0.00 (0.00)				
The number of treatments for alcohol dependence								
The first treatment	72 (69.23)	32 (44.4)	1.00	1.00				
Second treatment or more	31 (30.77)	18 (58.1)	1.73 (0.74–4.05)	1.07 (0.33–3.43)				
Women's depression**								
Normal	31 (29.81)	4 (12.9)	1.00	1.00				
Mild	37 (35.58)	17 (45.9)	5.74 (1.67–19.69) **	2.58 (0.62–10.74)				
Moderate/Severe	36 (34.61)	29 (80.6)	27.96 (7.35–106.33) **	12.34 (2.26–67.33) **				
Women's anxiety								
Normal	46 (44.66)	12 (26.1)	1.00	1.00				
Mild	31 (30.09)	18 (58.1)	3.92 (1.48–10.35) *	1.74 (0.49–6.22)				
Moderate/Severe	26 (25.24)	19 (73.1)	7.69 (2.59–22.83) **	1.44 (0.33–6.33)				
Women's suicidal risk**								
No	73 (72.28)	24 (32.9)	1.00	1.00				
Yes	28 (27.72)	23 (82.1)	9.39 (3.18–27.75) **	3.33 (0.89–12.48)				

^{*}p < 0.05

^{**}p < 0.01

¹% of total in that variable

²% of total in that category