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Abstract

According to the World Health Organization (WHO, 2018), one in three women has experienced physical or sexual violence at one point in their lives. This situation is hardly any different in Turkey. Studies in the literature suggest that the greatest threat for women in Turkey are mostly inside their houses and the hands they fall prey to mostly belong to their partners. This study aims to understand the factors associated with the probability of experiencing not only physical or sexual violence but also emotional, psychological and economic abuse by women in Turkey who got married at least once, using a nationwide household survey. Firstly, theory of exposure reduction is not fully satisfied because we find that it is not only employment but also the quality of it that also matters for the violence. Secondly, theory of male backlash and extraction effect hypothesis are confirmed in cases of physical and sexual violence. Thirdly, in terms of testing the household bargaining model, we conclude that there is a U-shape relationship between economic abuse and income gap. Fourthly, women who are the only income earners in the household faces higher likelihood of physical and sexual violence compared to those who have same income with their husbands or who do not contribute to household income at all. Lastly, we establish that the cycle of violence theory plays the dominating role in the Turkish case among all other theoretical explanations used to explain the domestic violence.

Keywords: Abuse, domestic violence, female employment, income inequality. **JEL Classifications:** J12; J16; J31.

1. Introduction

According to the World Health Organization (WHO, 2018), one in three women has experienced physical or sexual violence at one point in their lives. Domestic violence whether emotional, psychological, economic, physical or sexual is an epidemic problem affecting women, their families and the society they are part of. Thus, its effects are felt not only in the short-term but also in the long-term through its negative externalities such as violence towards kids, psychological effects on family members and low trust level in the society as well as denying women education and/or employment, so on and so forth.

Official statistics show a substantial rise in femicides over the last 20 years in Turkey. A platform established to stop such murders has announced that 440 women were killed by men only in 2018 nationwide. (We will stop femicide platform, 2019) Law No. 6284 on the Protection of Family and Prevention of Violence Against Women defines domestic violence as "any physical, sexual, psychological and economic violence between the victim and the perpetrator and between the family members and the people who are considered a family member whether they do or do not live in the same house" (Article 2/b). Although all kinds of violence against women are strictly forbidden by law, a recent study by Kadir Has University (2018) in Istanbul showed that violence against women is the most important problem women face in Turkey (61% of 1,205 women agreed with his).

Violence against women in Turkey is a worrying issue that needs to be understood and solved using policy reforms. Yet relevant academic research, both quantitative and qualitative, is incredibly scarce. The first nationwide quantitative study on the issue has been conducted by the Turkish Presidency's Institute of Family Research and its findings were published in 1995 (Reasons and Results of Domestic Violence, 1995). According to this report, socio-economic status of household head, frequency of alcohol consumption, economic power of women, experience of violence during childhood, net family income and household size all had significant correlations with the incidence of domestic violence in Turkey in 1994. Second major study about the issue has been completed by Altinay and Arat (2008) in which they collected data from a comprehensive fieldwork in 56 provinces, interviewing 1,800 married women. They have found that every one in three women has experienced physical violence. Contrary to the nationwide report in 1995, Altinay and Arat (2008) have found that physical violence against women increases by at least two folds if women earn higher wages than their partners. Another important finding of their study is higher prevalence of violence for adults who were raised in an environment mired in domestic violence. Those two and some other studies (see for example Altinay and Arat 2008; Guler et al. 2005; Akar et al. 2010) also suggest a common finding: the greatest threat for women are mostly inside their houses and the hands they fall prey to mostly belong to their partners. Additionally, there are some recent studies that try to understand the causal effect of an increase in education on domestic violence in Turkey. For example, Erten and Keskin (2018) analyses the effect of 1997 compulsory schooling law amendment on the prevalence of domestic violence. They have found that more years women spent in education in rural areas did not impact prevalence of physical violence however it reduced psychological and economic abuse.

This study aims to understand the factors associated with the probability of experiencing different types of domestic violence and abuse by women in Turkey who got married at least once, using a nationwide household survey. It tests the various theoretical suggestions in the literature, especially about the role of employment of men and women as well as inequality with regards to age, education or income between partners on the incidence of violence. It argues that it is not only the employment of women or men but also their income/age/education gap that matter for the probability of experiencing violence.

The paper proceeds as follows. The next section summarizes the theoretical explanations provided for the violence against women. Section III describes the datasets and empirical strategy. Section IV reports the empirical findings and the last section concludes.

2. Violence Against Women: Theoretical Explanations

Theories in the literature treats violence as an intentional action. Firstly, intra-household bargaining model in Economics suggests that domestic violence against women decreases if relative bargaining power of women improves. This could be achieved, for example, through a better labour market outcome for women than their partners either in terms of employment or income. (Aizer 2010) This theory also suggests that potential relative wages matter instead of actual current wages as it gives men information about the outside options of women and acts as a crucial component of women's bargaining power at home. Anderberg et al. (2015) confirm this theory in the United Kingdom context, using the British Crime Survey and locally disaggregated labour market data. They have found that "increases in male unemployment are associated with declines in domestic abuse while increases in female unemployment have the opposite effect" (Anderberg et al. 2015: 1969).

Secondly, the theory of exposure reduction in Criminology suggests that an increase in employment, regardless of the gender of partner, would help diminish domestic violence by reducing the time partners spend together. (Dugan, Nagin and Rosenfeld, 1999) Kalmuss and Straus (1990), however, have established that economic dependency of women increases their probability of being in a marriage with severe abuses.

Thirdly, the theory of male backlash suggests that as women's financial independence increases, violence against them may increase as a consequence of men feeling threatened upon losing their dominating role in households. (Molm, 1997; Macmillan and Gartner, 1999) This is argued to be the case particularly in countries with a strong patriarchal culture that despises divorce as an exit strategy for women. (Luke and Munshi 2011) Chin (2012) tested the several hypotheses in rural Indian context and found that 'exposure reduction effect' dominates the male backlash effect. Similar to male backlash hypothesis, 'extraction effect hypothesis' suggests that a husband may commit violence to extract a monetary transfer from his wife. (Goetz and Gupta 1996; Bloch and Rao 2002; Chin 2012)

Fourthly, theory of communitarian justice and cultural acceptance in Anthropology focuses on the role of cultural views about violence for the level and frequency of it. Albo (1994), for

example, argues that social recognition and acceptance of intra-household violence among indigenous populations could cause favouritism in respect to violence.

And lastly, the cycle of violence theory in Sociology suggests that child maltreatment increases the likelihood of experiencing or engaging in violence in adulthood. (Fagan 2005) In addition to these theoretical explanations, the empirical literature also suggests that male-to-female domestic violence could also be unintentional due to factors like alcohol (Angelucci, 2008), emotional shocks (Card and Dahl, 2011) and/or mental disorder (Elbogen and Johnson, 2009).

3. Data and Methodology

Two waves (2008 and 2014) of National Survey on Domestic Violence against Women (DVW; hereafter) are used in the empirical analysis of this study. The surveys have been conducted by the Institute of Population Studies at Hacettepe University with the support of Turkish Statistical Institute (TURKSTAT). Target sample, which is a weighted, stratified and multi-layered cluster sample, is selected from all provinces in Turkey with a rural-urban division. It is collected through face-to-face interviews with women aged 15 to 59. The survey does not have a panel structure therefore combination of two waves gives us a pooled cross-sectional data. During the data collection, attention is paid to the ethical and safety guidelines suggested by the WHO in every phase of the DVW such as education of the interviewers, introducing the survey to household and rules to conduct the survey with women which resulted in an over 80% of response rate by households in 2014. Moreover, unbiased random selection of one women in each household is done by the Kish method (Kish, 1949) and the refusal rate to complete questionnaire with women is 4.4% in 2014.

Using this rich data set, this study analyses women's probability of experiencing abuse/violence through a probit model. Factors related to cultural and social norms such as marriage being arranged or not, asking/paying bride price before marriage or even factors about family environment in childhood are included in the regression model. In addition, province-level fixed effects are included in order to control for time independent factors in each province that might change the domestic violence in some way and, time-fixed effect is included to see if there is any time-variant common change in each province. One must still note that the coefficients for the variables related with women such as their labour market status suffer from the endogeneity problem. In other words, we would never be sure if women who experience violence do not work actively or those who do not work experience the violence at a higher level. Moreover, although we include various factors into our regression models we might still have the omitted variables bias problem. Therefore, coefficients presented in the next section must be interpreted as only correlations or associations rather than causations. Definitions of both dependent and independent variables are as follows and their descriptive statistics are provided in Table 1.

3.1. Dependent Variables

In the surveys, women are asked to report if they had experienced various types of abuse and violence by their partners at any point in time after the age of 15. Given their answers, five dependent variables are constructed to measure different types of abuse/violence experience.

- Emotional Abuse: Nine different forms of emotional abuse are covered in the DVW including if partner (i) tries to keep her away from her friends, (ii) prevent contact with her family, (iii) insists on knowing where she is, (iv) ignores her and treats her with little attention, (v) gets angry if she speaks with another man, (vi) suspicious that she is unfaithful, (vii) requires her to seek his approval before seeking medical attention, (viii) towers over her clothing decisions, and (ix) violates her privacy on social networking platforms like Facebook. A binary variable of experiencing emotional abuse is created if the respondent answered "yes" to any of the emotional abuse types listed above.
- 2) Economic Abuse: This is a binary variable which is equal to 1 if respondents argued to have experienced at least one of the economic abuse types in the DVW which are (i) prevention to work, (ii) refusal to give money by partner, and (iii) taking all the income of women without permission. It is 0 if women report no experience of any of these economic abuse types.
- 3) Psychological Abuse: This is also a dummy variable which equals 0 if women have not experienced any type of psychological abuse and, it is 1 if their partner either (i) insults, (ii) belittles/humiliates, (iii) scares/intimidates on purpose and, (iv) threatens to hurt.
- 4) Physical Violence: A set of six variables are used to construct this binary variable which is 0 if there is no experience of physical violence and, 1 if women depending on whether the partner (i) slaps, (ii) pushes/shoves/pulls her hair, (iii) punches, (iv) kicks/drags/beats, (v) chokes/burns or (vi) threatens with weapon/knife.
- 5) Sexual Violence: This variable is also constructed as a binary variable out of answers given to questions about sexual violence. Thus, it is equal to 0 if women reported no record of sexual violence by their intimate partners and 1 if women have had (i) forced sexual intercourse or (ii) due to fear or (iii) been forced to do humiliating things while having sex.

3.2. Independent Variables

- 1) Demographic Factors:
 - Age: This is a continuous variable denoting the age of the respondent.
 - Age of marriage: This is a continuous variable of respondent's age at marriage.
 - Number of kids aged 6-14: Total number of kids in the household who are between age 6 and 14.
- 2) Economic Factors:
 - Education Level of Women: This is a categorical variable where the category 1 refers to no diploma, 2 refers to below high school diploma, 3 refers to high school diploma and 4 stands for above high school diploma.
 - Labour Market Activity Status: This is also a categorical variable where the category 1 stands for formal employment, 2 for informal employment and 3 for women who is not actively employed.
 - Homeownership: A categorical variable which equals 1 if the woman does not own a house, 2 if women owns a house by herself and, 3 if she shares the ownership with someone else.
- 3) Cultural Factors:
 - Marriage is not arranged: This is a dummy variable which is equal to 1 if the marriage is not arranged and 0 otherwise.

- Bride Price: This is a dummy variable that is equal to 1 if a price was paid to women's parents before the marriage and 0 otherwise.
- Sharing the house with others: This is also a dummy variable which is equal to 1 if couples share their house with others such as parents and, 0 if they live alone.
- Blood relation with partner: This is a binary variable that is equal to 1 if partners have blood relation with each other and, 0 if otherwise.
- 4) Partner Characteristics:
 - Education Level of Husband: This is a categorical variable where the first category stands for no diploma, category 2 refers to below high school diploma, 3 for high school diploma and the last category for those with a diploma above high school.
 - Labour Market Activity Status: This is a categorical variable where the category 1 refers to formal employment, 2 refers to informal employment and the category 3 includes those who are not actively employed.
 - Frequency of Alcohol Use: This is a categorical variable denoting the level of alcohol usage by partner. It takes values from 1 to 5 where 1 refers to the case of "no alcohol use" and 5 stands for "almost every day."
- 5) Childhood Factors:
 - Women's mother experienced physical violence from her partner: This is a binary variable that is equal to 1 if women's mother experienced physical violence in her relationship and 0 otherwise.
 - Husband's mother experienced physical violence from her partner: This is a categorical variable where 1 equals "no" and 2 refers to "yes" whereas the category 3 is for an answer of "don't know".
 - Women experienced sexual misconduct during childhood: This is a dummy variable which is equal to 1 if the respondent had experienced a sexual misconduct during her childhood (before age 15) and 0 if otherwise.
 - Husband faced violence from his parents: This is a categorical variable where 1 equals to "no" and 2 refers to "yes" whereas the category 3 is for an answer of "don't know".

6) Spatial Factors:

- Urban: Dummy variable which is equal to 1 if the respondent lives in urban area and 0 otherwise.
- Province-level fixed effects: There are dummy variables for each province in Turkey.
- 7) Age, Educational and Income Gap between Partners:
 - Age gap: This is a continuous variable of age difference between men and women.
 - Educational gap: A categorical variable which is equal to 1 if husband has higher education than his partner, 2 if no difference in education, and 3 if women outpaces her partner with respect to education. Educational levels are calculated given the last diploma women and men have.
 - Income gap: This an ordinal categorical variable from 1 to 5 where the category 1 stands for the case of only woman earning the income in the household, 2 is defining the category of women earning more than her partner, 3 is for the case of both woman and partner earning the same income, 4 is used for the case where woman earning less than the partner and lastly the category 5 stands for the cases where only partner earning the income in the household.

Table 1. Descriptive Statistics

r · · · · · · · · · · · · · · · · · · ·	Mean	Std. Dev.	Min	Max
Type of Violence/Abuse				
Emotional Abuse	.836	.370	0	1
Economic Abuse	.286	.452	0	1
Psychological Abuse	.447	.497	0	1
Physical Violence	.392	.488	0	1
Sexual Violence	.147	.354	0	1
Demographic Factors:				
Age	37.96	10.181	16	59
Age of marriage	19.93	3.982	7	48
Kids (aged 6-14)	.9025	1.261	0	22
Economic Factors:	.7025	1.201	U	22
Education Level of Women				
(Reference category= No diploma)				
	502	401	0	1
-Below high school	.592 .135	.491 .342	0	1
-High school			0	1
-Above high school	.058	.234	0	1
Labour Market Activity Status				
(Reference category= Formal employment)	1.50		0	
- Informal employment	.172	.377	0	1
- Not actively employed	.725	.447	0	1
Homeownership				
(Reference category= No ownership)				
- By herself	.102	.304	0	1
- Shared by others	.089	.285	0	1
Cultural Factors:				
Marriage is not arranged	.412	.492	0	1
Bride Price	.593	.491	0	1
Sharing the house with others	.451	.498	0	1
Marriage with relatives	.221	.415	0	1
Partner Characteristics:				
Education Level of Men				
(Reference category= No diploma)				
-Below high school	.618	.486	0	1
-High school	.220	.414	0	1
-Above high school	.119	.324	0	1
Labour Market Activity Status				
(Reference category= Formal employment)				
- Informal employment	.171	.377	0	1
- Not actively employed	.161	.368	0	1
Frequency of Alcohol Use	1.433	.989	1	5
Childhood Experiences:	1.455	.707	1	5
<i>Women's mother experienced physical violence from her partner</i>	.284	.451	0	1
Husband's mother experienced physical violence from her partner Husband's mother experienced physical violence from her partner	.272	.431	0	1
Women experienced sexual misconduct during childhood	.059	.443	0	1
Husband faced violence from his parents	.226	.418	0	1
Spatial and Time Factors:	701	442	Δ	1
Urban	.731	.443	0	1
Dummy for the year 2014 Source: Author's own calculations from DVW 2008 and DVW 2014.	.357	.479	0	1

Source: Author's own calculations from DVW 2008 and DVW 2014.

4. Empirical Findings

4.1. Determinants of domestic violence in Turkey

Factors associated with the five different violence categories are presented in this subsection. Findings for each defined category (demographic, economic, cultural, partner characteristics, childhood experiences and spatial) is subsequently explained for violence categories to have a clear, seperate focus in each case.

Table 2 presents the results for the model where the dependent variable indicates the prevalence of emotional abuse. We see that older women have lower probability of facing it when we adjust for other factors that might affect the presence of emotional abuse. Apart from age of women, education levels are found to play an important role in reducing the likelihood of experiencing emotional abuse. It is also found that the higher the educational level of women is, the lower the probability of its occurrence becomes. This effect is especially strong for those who have above high school diploma. For example, women with above high school diploma are discovered to have 16.5% less chance of experiencing emotional abuse from their husbands compared to women with no diploma, when taking into account other covariates.

In regards to the cultural factors, we see women have lower probability of facing emotional abuse if they are not placed in an arranged marriage. Importance of education is also observed for the case of partners because it is found that the low level of education of partners increases the probability of experiencing emotional abuse in ceteris paribus. We also see that labour market activity status of men has a higher level of association with the probability of emotional abuse against women. That is; women whose husbands are either not working or employed in the informal sector are found to have higher probability of experiencing emotional abuse when we also adjust for other factors. As it was also discussed in the literature, higher frequency of alcohol use is also found to have positive association with the incidence of emotional abuse.

Another important finding is about the role of childhood experiences on the different types of violence and abuse. We find that incidence of physical violence of both mother and mother-inlaw of respondents are associated with their own experiences of emotional violence although the latter has a higher level of association with the emotional abuse against women. Moreover, if the partner faced physical violence from his parents during his childhood, then women who are married to such a man is found to have around 4% higher probability of experiencing emotional abuse in ceteris paribus. Strikingly, among all the childhood experiences, women are found to have higher likelihood of experiencing emotional abuse during her marriage if they had experienced sexual misconduct during their childhood. In terms of spatial characteristics, we found no association between rural and urban regions in terms of experiencing emotional abuse although there is an overall decrease in the probability of it from 2008 to 2014.

TADIE 2. EMILIUNAL AUUSE AVAILISE VUITEN UNALVIAL MALVUULUUUS VELLUULUULUVULUVUU	otional Abuse Against Women (marginal fixed effects of Probit reg	ression) §
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	Full Model
Demographic Factors:	
Age	004***
Age of marriage	001
Kids (aged 6-14)	.001
Economic Factors:	
Education Level of Women (Reference category= No diploma)	
-Below high school	037***
-High school	069***
-Above high school	165***
Labour Market Activity Status (Reference category= Formal employment)	
- Informal employment	.018
- Not actively employed	.010
Homeownership (Reference category= No)	
- By herself	015
- Shared ownership	000
Cultural Factors:	
Marriage is not arranged	027***
Paid bride money	003
Sharing the house with others	010
Blood relationship with partner	007
Partner Characteristics:	
Education Level of Husband (Reference category= No diploma)	
-Below high school	.033*
-High school	.014
-Above high school	.011
Labour Market Activity Status (Reference category= Formal employment)	
- Informal employment	.021**
- Not actively employed	.038***
Frequency of Alcohol Use	.015***
Childhood Experiences:	
Women's mother experienced physical violence from her partner	.015**
Husband's mother experienced physical violence from her partner	.036***
Women experienced sexual misconduct during childhood	.053***
Husband faced violence from his parents	.039***
Spatial and Time Factors:	
Urban	001
Province-level fixed effects	YES
Year fixed effects	035***
# of Obs	13,002
Pr (emotional abuse)	.85
Pseudo R2	0.055

[§]p-value*<0.10, p-value**<.05, p-value***<.01.

In Table 3, we present the association between different categories and the probability of economic abuse. It is found that both older women and those who are married at later years of their life are found to have higher probability of experiencing economic abuse compared to the younger ones when we adjust the model for other covariates. In terms of the effect of education on the incidence of economic abuse, we see that education level really matters because only women who have an above high school degree have lower probability of facing an economic abuse compared to those without a diploma however women who have a diploma below university degree have higher likelihood of experiencing economic abuse, when we control for all other factors in the regression model. When we check the distribution of income gap between

partners and women's educational level, we find that the majority of women who have diploma below university degree are either not income earners or earning less than their partners. This could be one of the reasons behind this finding. Confirming this, Table 3 shows that women who work in the informal sector or do not work at all have higher probability of economic abuse occurrence. Besides, as it was the case for the emotional abuse, women in arranged marriages are found to have lower probability of economic abuse in ceteris paribus.

In terms of the role of partners' education level, it is found that only an education level above a certain threshold that matters to decrease the probability of economic abuse incidence. That is; women who are married to a man with a diploma above high school degree had 7.2% lower likelihood of experiencing economic abuse. Besides, unemployed men and those who use alcohol more frequently engage in economic abuse of their partners, on average, when other factors are also taken into account. As it was for the case of emotional violence, we find that childhood experience of both women and men has a significant association with the incidence of economic abuse. Women who have experienced sexual misconduct during her childhood is found to have, on average, around 13% higher probability of experiencing economic abuse. Similarly, women who are married to men whose parents committed physical violence against him during childhood have on average some 11% higher likelihood of exposure to economic violence. Lastly, economic abuse is found to be more present in urban areas than rural regions and had also increased from 2008 to 2014, on average, when all other factors are held into account.

	Full Model
Demographic Factors:	
Age	002***
Age of marriage	003***
Kids (aged 6-14)	.009***
Economic Factors:	
Education Level of Women (Reference category= No diploma)	
-Below high school	.021*
-High school	.030*
-Above high school	077***
Labour Market Activity Status (Reference category= Formal employment)	
- Informal employment	.073***
- Not actively employed	.059***
Homeownership (Reference category= No)	
- By herself	020
- Shared ownership	.001
Cultural Factors:	
Marriage is not arranged	016*
Paid bride money	.007
Sharing the house with others	004
Blood relationship with partner	006
Partner Characteristics:	
Education Level of Husband (Reference category= No diploma)	
-Below high school	003
-High school	026
-Above high school	072***
Labour Market Activity Status (Reference category= Formal employment)	

Table 3: Economic Abuse Against Women (marginal fixed effects of Probit regression) §

- Informal employment	.010
- Not actively employed	.045***
Frequency of Alcohol Use	.055***
Childhood Experiences:	
Women's mother experienced physical violence from her partner	.072***
Husband's mother experienced physical violence from her partner	.053***
Women experienced sexual misconduct during childhood	.127***
Husband faced violence from his parents	.107***
Spatial and Time Factors:	
Urban	.112***
Province-level fixed effects	YES
Year fixed effects	.023*
# of Obs	13,065
Pseudo R2	0.0726
P(economic abuse)	.27

[§]p-value*<0.10, p-value**<.05, p-value***<.01

When we look at the factors related with the occurrence of psychological abuse against women, we easily observe the role of young kids. As it can be seen in Table 4, the higher the number of kids aged 6 to 14 is at home, the higher the likelihood of experiencing psychological abuse against women becomes when the model is adjusted for the other related factors. Moreover, women who are married at early ages are found to have higher probability of facing psychological abuse. As with the economic abuse, education has a decreasing role only after a threshold. That is; when women have a diploma above high school then the likelihood of them experiencing psychological violence is on average 7.5% lower than women without a diploma, in ceteris paribus. Moreover, in contrast to the emotional and economic abuse, it is found that homeownership matters for the incidence of psychological abuse in Turkey, too. Women who are homeowners or enjoy a shared ownership have lower probability of facing psychological abuse than women without either of them, when other factors are taken into account.

Furthermore, cultural factors are found to play an important role in this type of violence. Interestingly, in the Turkish context, factors such as arranged marriage, paying bride money, sharing house with other relatives and kin marriage all decrease the probability of experiencing psychological abuse in ceteris paribus. Again, for men, not having higher levels of education but a diploma above high school degree only diminishes the probability of adopting psychologically abusive attitude towards their partners. Besides, as it was the case in other violence categories, marriage with a man who is either employed in the informal sector or unemployed and, have higher frequency of alcohol usage are positively associated with the probability of psychological abuse in ceteris paribus.

Childhood experiences are again found to have the strongest association with the psychological abuse against women in Turkey. If women's mother and mother-in-law are reported to have experienced physical violence from their husbands, then it is found that the respondent has higher probability of experiencing psychological abuse from her own husband, when the model takes into account other factors. Moreover, if the women have experienced sexual misconduct during her childhood, then, on average, she has 15% higher likelihood of experiencing psychological abuse, in ceteris paribus. Besides, if the woman is married to a person who had

experienced physical violence from his parents during childhood, then she has on average 18% higher probability to experience psychological abuse from his husband, taking into account other factors. We also found that urban residents have higher probability of experiencing psychological abuse than those living in rural areas, in ceteris paribus. Additionally, this type of violence is found to decrease from 2008 to 2014 in Turkey.

Table 4: Psychological Abuse Against Women (marginal fixed effects of Probit regression) \S

	Full Model
Demographic Factors:	
Age	.001
Age of marriage	008***
Kids (aged 6-14)	.010***
Economic Factors:	
Education Level of Women (Reference category= No diploma)	
-Below high school	.005
-High school	.001
-Above high school	075***
Labour Market Activity Status (Reference category= Formal employment)	
- Informal employment	008
- Not actively employed	026
Homeownership (Reference category= No)	
- By herself	029*
- Shared ownership	036**
Cultural Factors:	
Marriage is not arranged	056***
Paid bride money	024**
Sharing the house with others	025***
Blood relationship with partner	043***
Partner Characteristics:	
Education Level of Husband (Reference category= No diploma)	
-Below high school	002
-High school	020
-Above high school	051*
Labour Market Activity Status (Reference category= Formal employment)	
- Informal employment	.027**
- Not actively employed	.055***
Frequency of Alcohol Use	.084***
Childhood Experiences:	
Women's mother experienced physical violence from her partner	.147***
Husband's mother experienced physical violence from her partner	.146***
Women experienced sexual misconduct during childhood	.151***
Husband faced violence from his parents	.184***
Spatial and Time Factors:	
Urban	.034***
Province-level fixed effects	YES
Year fixed effects	029**
# of Obs	13,105
Pseudo R2	0.1155
P(psychological abuse)	.44
$r_{psychological abuse}$	

[§]p-value*<0.10, p-value**<.05, p-value***<.01

This paper also tries to understand the factors that are related with the physical violence. Again, we see that demographic factors such as age, age of marriage and number of kids in the house are associated with the prevalence of physical violence. Older women and those with higher number of kids have higher likelihood of experiencing physical violence from their partners. Education level of both women and men plays a significant role. The higher the diploma level of each, the lower is the probability of physical violence occurrence. For example, if women have a diploma above high school level, on average, they are found to have around 16% lower probability of experiencing physical violence from their partners, in ceteris paribus. We also see that women who are not actively employed have higher probability of physical violence compared to women who are employed in the formal sector, in ceteris paribus. However, it must be noted that this is just a correlation and one cannot exactly say whether unemployed women are facing more physical violence or physical violence causes them to stay unemployed. Moreover, we also observe that husbands who are either employed in the informal sector or not actively working do commit physical violence with a higher probability, on average, than men who work in the formal sector, when we take into account other factors. We also see that homeownership of women, or in other words economic power of women decreases the probability of experiencing physical violence. As might be expected, the likelihood of physical violence is smaller if the marriage was not arranged. Interestingly, and unlike the popular belief, sharing the house with others such as parents is found to decrease the probability of committing physical violence.

As we observed for other types of abuses above, frequency of alcohol use is also positively correlated with the prevalence of physical violence. However, still the most important factors in explaining the physical violence are found to be related with the childhood experiences of partners. If mother-in-law had experienced physical violence, then the bride has 17% higher probability of facing physical violence from her husband, too. Furthermore, sexual misconduct experience of women during their childhood increases the likelihood of physical violence in their marriage on average by 18%, in ceteris paribus. Similarly, if husband faced physical violence from his parents during his childhood then his wife had on average 16% higher likelihood of experiencing physical violence from him. Lastly, we can discuss the role of rural-urban divide and the change in the prevalence of physical violence is higher in urban areas but it decreased countrywide from 2008 to 2014 by 5.5%.

The last type of violence that will be discussed in this subsection is the sexual violence. Similar to physical violence, age of women, marriage at younger ages and number of kids within the household are positively correlated with the sexual violence. Higher education levels of both women and men are negatively associated with the prevalence of sexual violence. In terms of labour market activity status, we observe that women married to a man who is not actively employed and have higher frequency of alcohol consumption have higher likelihood of experiencing sexual violence. Once more, childhood experiences of partners are found to be the most significant explanatory factor behind the occurrence of sexual violence. For example, women who had experienced sexual misconduct during their childhood have, on average, 14.2% higher probability of having sexual violence during their marriages when we also

consider other factors. Lastly, women in urban areas are found to have higher prevalence of sexual violence even though there is 4% countrywide decrease from 2008 to 2014.

	Full Model
Demographic Factors:	
Age	.004***
Age of marriage	015***
Kids (aged 6-14)	.018***
Economic Factors:	
Education Level of Women (Reference category= No diploma)	
-Below high school	041***
-High school	091***
-Above high school	156***
Labour Market Activity Status (Reference category= Formal employment)	
- Informal employment	.001
- Not actively employed	037**
<i>Homeownership</i> (Reference category= No)	
- By herself	044***
- Shared ownership	041**
Cultural Factors:	
Marriage is not arranged	027***
Paid bride money	019
Sharing the house with others	041***
Blood relationship with partner	016
Partner Characteristics:	
Education Level of Husband (Reference category= No diploma)	
-Below high school	012
-High school	064***
-Above high school	097***
Labour Market Activity Status (Reference category= Formal employment)	
- Informal employment	.052***
- Not actively employed	.048***
Frequency of Alcohol Use	.074***
Childhood Experiences:	
Women's mother experienced physical violence from her partner	.152***
Husband's mother experienced physical violence from her partner	.169***
Women experienced sexual misconduct during childhood	.178***
Husband faced violence from his parents	.156***
Spatial and Time Factors:	
Urban	.024**
Province-level fixed effects	YES
Year fixed effects	055***
# of Obs	13,108
Pseudo R2	0.1544
P(physical violence)	.38

Table 5: Physical Violence Against Women (marginal fixed effects of Probit regression)

[§]p-value*<0.10, p-value**<.05, p-value***<.01

Overall, findings in this section suggest that several theories can be confirmed in the Turkish context. We find that in all of the abuse or violence categories, husbands who are not actively employed have higher probability to commit violence against their wives. However, the theory of exposure reduction is not confirmed for women. Except the case of economic abuse, women who are not actively employed are found to have lower likelihood of experiencing domestic violence. Moreover, we find that the theory of exposure reduction is not enough to explain the

violence in the Turkish context where informal economy is a considerable part of the overall economic activity in the country. Thus, apart from the employment-unemployment division, our findings suggest that work in the informal sector does not have similar effects of working in the formal jobs. This might also reflect the poverty and economic stress levels of people as informal jobs on average are having worse conditions both in terms of pay and work conditions in Turkey. (Kayaoglu, 2019) Strikingly, we find that husbands who are in the informal jobs have higher probability of committing all kinds of violence and abuse we discussed in this paper. Therefore, one might argue that it is not the employment itself but also the quality of employment that affects the domestic violence, at least in a developing country context such as Turkey.

These findings can also be used to argue whether or not the theory of male backlash is confirmed in Turkey. This theory suggests an increase in the domestic violence once women have their financial independence as husbands may feel threatened to lose their power at home. In the Turkish case, we see that this is confirmed in the physical and sexual violence cases. In other words, we find that women who are not actively working have lower likelihood of experiencing both physical and sexual violence from their husbands. However, women who do not work or work in the informal jobs are found to have higher probability of experiencing economic abuse from their husbands.

The findings in this paper confirms the cycle of violence theory, too. As a reminder, this theory suggests that maltreatment during childhood increases the probability of experiencing or engaging violence in adulthood. Our results strongly confirm this theory. We found that childhood experiences of both women and their husbands have a solid association with all types of violence and abuse even when we take into account other factors.

	Full Model
Demographic Factors:	
Age	.001***
Age of marriage	006***
Kids (aged 6-14)	.004**
Economic Factors:	
Education Level of Women (Reference category= No diploma)	
-Below high school	020***
-High school	028***
-Above high school	049***
Labour Market Activity Status (Reference category= Formal employment)	
- Informal employment	.000
- Not actively employed	020*
<i>Homeownership</i> (Reference category= No)	
- By herself	011
- Shared ownership	017*
Cultural Factors:	
Marriage is not arranged	034***
Paid bride money	004
Sharing the house with others	010*
Blood relationship with partner	007
Partner Characteristics:	

Table 6: Sexual Violence Against Women (marginal fixed effects of Probit regression)
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Education Level of Husband (Reference category= No diploma)	
-Below high school	.000
-High school	033**
-Above high school	025*
Labour Market Activity Status (Reference category= Formal employment)	
- Informal employment	.026***
- Not actively employed	.031***
Frequency of Alcohol Use	.035***
Childhood Experiences:	
Women's mother experienced physical violence from her partner	.068***
Husband's mother experienced physical violence from her partner	.066***
Women experienced sexual misconduct during childhood	.142***
Husband faced violence from his parents	.083***
Spatial and Time Factors:	
Urban	.014*
Province-level fixed effects	YES
Year fixed effects	041***
# of Obs	13,046
Pseudo R2	0.1451
P(sexual violence)	.11

[§]p-value*<0.10, p-value**<.05, p-value***<.01

4.2. The Role of Income, Education and Age Gap in Explaining the Intimate Partner Violence Against Women in Turkey

Although the findings in the previous subsection confirms the role of several theories suggested in the literature, we were not able to test the household bargaining model. Therefore, in this subsection, we repeated our regression models by incorporating independent variables that are constructed to measure the relative bargaining power of women in the household, namely income, education and age differences between partners. Results presented in Table 7 show that income gap between partners matters for the prevalence of economic, physical and sexual violence in Turkey. We observe that the higher the wage gap between partners is, the higher the likelihood of economic abuse to occur becomes though its probability is higher if women earn more than their husbands. Apart from income, education level can also be used to proxy for the potential economic outcomes. Table 8 shows that the likelihood of economic abuse is higher if women have higher education level than men. Therefore, household bargaining model which suggests a decline in violence if relative economic power of women increases is not confirmed in terms of economic abuse in Turkey because our model shows that women who are the only income earners and those have comparatively higher education level than their husbands rather face the highest probability of experiencing economic abuse.

Table 7 also shows that prevalence of both physical and sexual violence is at the highest level if only woman has income in the household though this time we do not have a U-shape relationship between violence and wage gap. That is; the likelihood of physical and sexual violence is lower only if only one partner is an income-earner compared to the case where only women own an income in the household. Moreover, we can see from Table 8 that women have higher likelihood of experiencing physical violence if their education level is higher than their husbands. Thus, we can argue that household bargaining model is also not confirmed in regards to the prevalence of physical violence in Turkey. One should also note that higher education level of men compared to women decreases the likelihood of experiencing all kinds of abuse

and violence (except emotional abuse) when we consider other factors in the model. Additionally, we find that age gap only matters for the emotional abuse by decreasing its probability of occurrence.

		n 1 1 1 1	51 1 1	a 1
Emotional	Economic	Psychological	Physical	Sexual
Abuse	Abuse	Abuse	Violence	Violence
003	094***	.032	.015	.019
016	159***	034	084***	054***
016	070***	.018	033	013
024	124***	010	111***	036*
\checkmark		\checkmark	\checkmark	\checkmark
13,003	13,065	13,105	13,108	13,046
0.0591	0.0755	0.1158	0.1564	0.1468
.85	.27	.44	.38	.11
	003 016 016 024 √ 13,003 0.0591	Abuse Abuse 003 094^{***} 016 159^{***} 016 070^{***} 024 124^{***} $$ $$ 13,003 13,065 0.0591 0.0755	Abuse Abuse Abuse 003 094^{***} $.032$ 016 159^{***} 034 016 070^{***} $.018$ 024 124^{***} 010 $\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$	Abuse Abuse Abuse Violence 003 094^{***} $.032$ $.015$ 016 159^{***} 034 084^{***} 016 070^{***} $.018$ 033 024 124^{***} 010 111^{***} $$ $$ $$ $$ 13,003 13,065 13,105 13,108 0.0591 0.0755 0.1158 0.1564

Table 7: Role of Income Gap in Explaining the Violence Against Women (marginal fix	ked
effects of Probit regressions)§	

[§]p-value*<0.10, p-value**<.05, p-value***<.01.

Table 8: Role of Age and Education Gaps in Explaining the Violence Against Women (marginal fixed effects of Probit regressions)[§]

	Emotional Abuse	Economic Abuse	Psychological Abuse	Physical Violence	Sexual Violence
Age gap	003***	000	000	002	000
Educational gap					
(Reference Category: No gap)					
-Woman has higher education than man	.005	.037**	.020	.057***	.017
-Man has higher education than women	013	023**	028***	040***	020***
Other control variables	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
# of Obs.	12,954	13,018	13,057	13,060	12,998
Pseudo R2	0.05912	0.0725	0.1158	0.1552	0.1449
P(abuse/violence)	.85	.27	.44	.37	.11

[§]p-value*<0.10, p-value**<.05, p-value***<.01

5. Conclusion

Given the recent surge in the number of femicides in Turkey and news about domestic violence rearing their heads up in various media outlets, this study aimed to understand the factors associated with various types of abuse and violence against women. In this respect, two waves of National Survey on Domestic Violence against Women in Turkey were analysed for evermarried women and theories about domestic violence were tested in the Turkish case. Thus, it contributes not only to the literature about intimate partner violence through providing a descriptive analysis in a developing country context but also to policy debates in the country.

Our regression models tried to understand the role of various factors (demographic, economic, cultural, partner characteristics, childhood experiences, spatial and time factors) on the prevalence of emotional, psychological, economic, physical and sexual violence. We found that higher education level of partners, better employment prospects of husbands and childhood experiences of both women and men are crucial to explain the likelihood of all of the above-

listed abuse/violence categories in Turkey. In terms of testing the theories suggested in the literature, we were able to conclude that theory of exposure reduction which suggests reduction in the violence in case of employment of either women or husbands was not fully confirmed in the Turkish context. That is, although we found that men who do not actively work are engaging in abusive/violence behaviours at a higher likelihood, men who work in informal sector were also found to have higher abusive/violent behaviours compared to those who are employed in the formal sector, even after controlling for other factors such as education levels of partners. Moreover, we saw that the theory of exposure reduction is not at all valid for the case of women's employment. Our results showed that women who are not actively employed have low probability of experiencing physical and sexual violence whereas in the case of economic abuse, both those who are not employed and those who work in the informal sector face higher likelihood of it.

Moreover, the theory of male backlash and extraction effect hypothesis were confirmed in the Turkish context because our results showed that women who are employed in the formal jobs have higher likelihood of experiencing physical and sexual violence from their husbands compared to those who do not actively work. However, in terms of the economic abuse, as explained above, we established that women who are employed in the informal jobs and those who do not work have higher probability of facing economic abuse.

We also tried to test the household bargaining model which suggests that relative bargaining power of women with respect to their husbands is important to understand the prevalence of domestic violence. We measured the relative bargaining power of partners in terms of the differences between their education and also income levels. We found that there is a U-shape relationship between economic abuse and income gap. In other words, it is not only the employment of women and their husbands that matter for the prevalence of economic abuse but also the earnings gap between partners that matters. The least likelihood of economic abuse is seen when the incomes of partners are the same. Moreover, women who are the only income earners in the household faces higher likelihood of physical and sexual violence compared to those who have same income with their husbands or who do not contribute to household income at all.

A more striking finding of this study was the dominating role of childhood experiences of both women and their husbands in all kinds of abuse and violence analysed in this paper. Thus, we could argue that the cycle of violence theory, which suggests higher likelihood of experiencing or engaging in violence during adulthood would increase if those adults face maltreatment during their childhood, strongly holds in the Turkish case.

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