Breaking Intergenerational Violence: The Role of Government Policy

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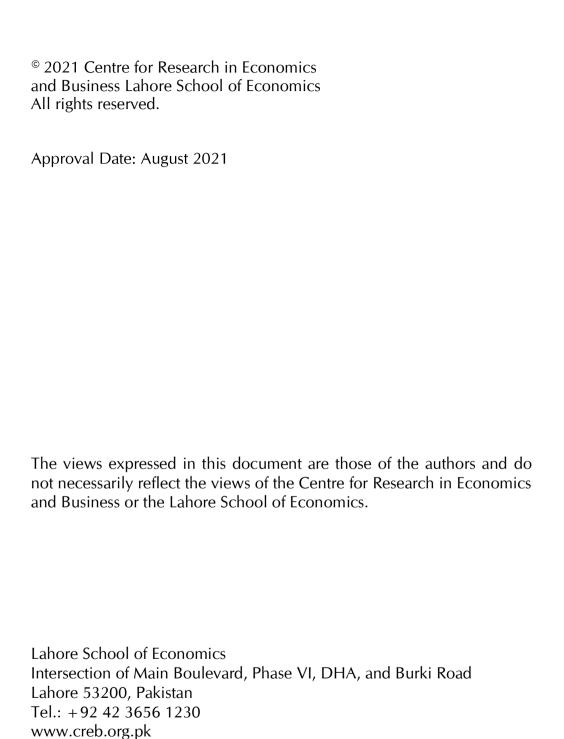Centre for Mathematics
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Preface

The Centre for Research in Economics and Business (CREB) was established in 2007 to conduct policy-oriented research with a rigorous academic perspective on key development issues facing Pakistan. In addition, CREB (i) facilitates and coordinates research by faculty at the Lahore School of Economics, (ii) hosts visiting international scholars undertaking research on Pakistan, and (iii) administers the Lahore School's postgraduate program leading to the MPhil and PhD degrees.

An important goal of CREB is to promote public debate on policy issues through conferences, seminars, and publications. In this connection, CREB organizes the Lahore School's Annual Conference on the Management of the Pakistan Economy, the proceedings of which are published in a special issue of the Lahore Journal of Economics.

The CREB Working Paper Series was initiated in 2008 to bring to a wider audience the research being carried out at the Centre. It is hoped that these papers will promote discussion on the subject and contribute to a better understanding of economic and business processes and development issues in Pakistan. Comments and feedback on these papers are welcome.

Since the second half of 2018 we have had issues with our regular editing services, as a result of which there has been a growing backlog of working papers that had been approved by the editorial committee. To avoid further delays in dissemination of the ongoing research, we decided to publish approved but unedited working papers online. Working paper No 03-18, December 2018 was the first such paper.

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Hijab Waheed and Hamna Ahmed

Abstract

Pakistan fares poorly on indicators of women empowerment and gender equality. In this paper, we study: (a) the impact of childhood exposure to violence, of the woman or her spouse, on her well-being during adulthood and b) the effectiveness of province-wise legislative changes aimed at greater protection of women against violence on their well-being as measured by exposure to domestic violence. Using a difference in differences (DiD) estimation technique, we estimate the causal impact of childhood exposure to violence on well-being of women married before and after the roll-out of a government introduced policy package in Punjab. For this purpose, we use the Women's Social and Economic Wellbeing in Pakistan (ESW) Survey data (2017 – 18). We find that childhood exposure to shocks have long run and persistent effects on future well-being. We show that the government's protection initiatives were partially successful in safeguarding women, especially in metropolitan cities of Punjab; on average, psychological violence victimization is less prevalent among women who got married after the introduction of government initiatives relative to those married before. We find suggestive evidence that the effectiveness of the protection initiatives on exposure to IPV may be due to greater inclusion of women in household decisions.

1 Introduction

Pakistan fares poorly on indicators of women empowerment and gender equality. It ranks 164 out of 167 countries on The Georgetown Institute's Women, Peace and Security index (2019) [1]and it is classified as the third worst country in the world on the gender gap index[2] (The World Economic Forum, 2020). In Pakistan, 34% of ever-married women have experienced spousal abuse at some point in their life, where the most prevalent form of violence is psychological violence (26%) followed by physical violence (23%) (PDHS 2017-18, 2019). In Punjab, one third of ever-married women report being a victim of spousal violence (PDHS 2017-18, 2019).

Shocks experienced during early childhood have long term consequences on adult health and economic outcomes. Children exposed to rainfall shocks completed less years of schooling and earned lower income during adulthood (Shah and Steinberg, 2017). Banerjee and Duflo (2010) found that destruction of French vineyards inversely affected height of people who were children at the time of the shock. Children of mothers who experienced natural disasters have lower education attainment; such children also found to have more child labor (Caruso, 2017). Such shocks may also include exposure to domestic violence, experiencing parental divorce, neglect, or abuse. Child's exposure to intimate partner violence (IPV) has effects on child's neurological development and emotional development (Mueller and Tronick, 2019). Letourneau (2019) in his paper talks about intergenerational transmission of Adverse Childhood Experiences

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[1] The index is structured around three basic dimensions of women's well-being: inclusion (economic, social, political); justice (formal laws and informal discrimination); and security (at the individual, community, and societal levels).

[2] The Global Gender Gap Index examines the gap between men and women across four fundamental categories (subindexes): Economic Participation and Opportunity, Educational Attainment, Health and Survival and Political Empowerment.

(ACEs) via maternal depression and anxiety. Wu, Cao, et al. (2021) found that people who were psychologically maltreated in their childhood were not satisfied from life.

The theory of intergenerational transmission of violence is built upon studies which look at socially learned behavior among children (Bandura, 1986). It focuses on the relationship between domestic violence among parents and the likelihood of similar violence in children's subsequent personal intimate relationships (Kalmuss, 1984; Black, Sussaman, and Unger, 2010; Wagers, Piquerom et al., 2021; Goodman et al., 2020). The social learning theory rests on the idea that children socially learn to use violence as a response to conflict because of being aware of and witnessing violence between parents during childhood (Gilbert et al., 2009; Wathen & MacMillan, 2013). Children also learn that violence is an acceptable response to resolve issues, disagreements, and conflicts (Osofsky, 1995, 2003). The theory of intergenerational transmission of IPV is supported by empirical evidence (For instance, Ballif-Spanvill et al., 2007; Haselschwerdt, Carlson, and Hlavaty, 2021; Abrahams and Jewkes, 2011; Milletich et al 2010; Godbout et al. 2017; Villafañe-Santiago et al., 2019).

Existing literature sheds light on the underlying mechanisms that may explain intergenerational transmission of IPV. The cycle of violence persists because girls grow up learning acceptance of abuse in a patriarchal culture as they have seen their mothers accept it (Joseph and Msenda, 2020; Buchelli and Rossi, 2019; Rivas, Bonilla and Vázquez, 2020; Cools and Kotsadam, 2017), especially in the case of Pakistan (Aslam, Zaheer, and Shafique, 2015; Amir-ud-din, Fatima, and Aziz, 2018). VAW may also be considered acceptable due to lower self-sufficiency, self-esteem, and an insecure attachment style, all of which are significantly linked with childhood exposure to violence between parents (Ben-ami and Baker, 2012). Intergenerational transmission of violence also persists because male children, imitating their

fathers, learn violence to be an appropriate response towards the wife (Islam et al., 2017; Teva et al., 2020; Jung et al, 2019; Fernández-Montalvo, 2020; Sitney and Kaufman, 2020; Moruri and Obioha, 2020).

In 2014, the Punjab government established Punjab Commission on the Status of Women (PCSW) as a first organization to solely work towards women's empowerment. PCSW was created so that it can: (i) oversee various laws and policies designed to empower women, (ii) propose programs to promote women empowerment, (iii) strive to create opportunities to enhance the status of women in society, and (iv) protect women from all kinds of discrimination. In the same year, female help desks were set-up in police stations and a toll-free helpline for women to seek help and protection was also introduced. Female help desks were manned by women police officers to make the station environment female-friendly and to facilitate women who may wish to seek police services. In 2016, The Punjab Protection of Women against Violence Act (PPWVA) was passed with the aim of protecting women from all kinds of violence and ensuring justice to women across Punjab. Under this law, 24-hour women-run violence-against-women-centers (VAWCs) were established. The objective of this initiative was to aid victims in registering and filing complaints, reporting the incident to the police, accessing healthcare (in case of injuries), providing post trauma rehabilitation, offering guidance regarding government-related queries, giving legal assistance, and collecting evidence (if any) of the violent incident.

Protection orders such as PPWVA are present around the globe to protect abused women (Tudor and Gover, 2018). Some protection orders have been effective in reducing the incidence of violence among married couples and increased safety of women (Kothari et al, 2012; Benitez, McNiel, & Binder, 2010; Russell, 2012; Postmus, 2007); while others show ambiguous results

(Ragusa, 2012; Tam et al. 2016). For instance, some researchers have found that protection orders prevent re-victimization (Trimboli & Bonney 1997; Young, Byles & Dobson 2000), while others show no significant effect of such orders on the likelihood of re-victimization towards IPV (Carlson, Harris & Holden 1999; Kernsmith & Craun 2008).

In this backdrop, the purpose of our paper is two-fold a) to study the impact of childhood exposure to violence, of the woman and her spouse, on her well-being during adulthood and b) to test the effectiveness of a multi-faceted reform package on women's well-being, which included legislative changes at the provincial level, aimed at providing greater protection against violence. We measure well-being by exposure to domestic violence. Using a difference-in-differences (DiD) estimation technique, we estimate the causal impact of childhood exposure to violence on women's well-being. We do so for women married after the roll-out of a holistic women protection policy package in Punjab, relative to those who were married before the introduction of this package. We hypothesize, that the relationship between childhood exposure to violence and women's well-being as an adult would weaken after the introduction of the reform package. We explore alternative mechanisms that may mediate the relationship between legislation against violence and women's well-being. We hypothesize that the impact of the reform package on women's well-being may be driven by changes in women's 1) labor market outcomes, 2) attitudes towards domestic violence, 3) help seeking behavior, and/or 4) say in household decision-making.

Our paper extends the literature on childhood exposure to shocks on future well-being by studying the long run consequences of childhood exposure to violence on the likelihood of experiencing IPV during adulthood. This is complemented with an analysis of the effectiveness of protection initiatives to safeguard women in the context of Punjab. Our paper is one of the

first few studies to use the Economic Wellbeing in Pakistan (ESW) Survey data; to date, the ESW survey is the most comprehensive dataset on women empowerment for a representative sample of 32,878 women in Punjab.

Our main results are summarized here. First, we find that childhood exposure to shocks have long run and persistent effects on future well-being; childhood exposure to violence on average increases the likelihood of experiencing physical violence by 15.05%, psychological violence by 20.3%, and sexual violence by 6.25% in spousal relationship. Second, we show that the government's protection initiatives were partially successful in safeguarding women, especially in metropolitan cities of Punjab; on average, psychological violence victimization is less prevalent among women who got married after the introduction of government initiatives relative to those married before. We find suggestive evidence that the effectiveness of the protection initiatives on exposure to IPV may be due to greater inclusion of women in household decisions.

The rest of the paper is organized as follows: Section 2 explains the data and lays out the empirical framework used for the analysis. Section 3 provides results and Section 4 concludes the study.

2 Methodology

2.1 Empirical strategy

The purpose of our paper is two-fold a) to study the impact of childhood exposure to violence of the woman and her spouse on her well-being during adulthood and b) to test the effectiveness of a multi-faceted reform package on women's well-being, which included

legislative changes at the provincial level, aimed at providing greater protection women against violence.

We used specification (1) to study the long run impact of the woman and her spouse's childhood exposure to inter-parental violence on her current well-being as measured by (i) whether she is subjected to domestic violence by her spouse.

$$Y_{id} = \beta_0 + \beta_1 CEVf_{id} + \beta_2 CEVm_{id} + X_i + Z_d + \varepsilon_{id} \quad (1)$$

Y represents women's well-being in specification (1). Y_{id} is a dummy variable equal to 1 if woman i in district d experienced domestic violence at least once in her lifetime. $CEVf_{id}$ is childhood exposure to violence as measured a dummy variable equal to 1 if woman i in district d was exposed to parental violence during childhood. $CEVm_{id}$ is childhood exposure to violence as measured a dummy variable equal to 1 if spouse of woman i in district d was exposed to parental violence during childhood. X_i is a vector of women specific controls such as age, education, years since married, income, number of sons, family wealth/socio-economic status, and urban/rural location. Z_d captures district fixed effects.

$$Y_{id} = \beta_0 + \beta_1 CEVf_{id} + \beta_2 CEVm_{id} + \beta_3 CEV_{id} * X_i + X_i + Z_d + \varepsilon_{id} \quad (2)$$

We used specification (2) in this study to find if demographic variables play a role in changing the relationship of childhood exposure to violence and women's well-being in the long run. We looked at four demographic variables interaction with CEV: woman's education, husband's education, woman's work status, and husband's work status.

$$Y_{idc} = \beta_0 + \beta_1 CEV_{id} * MA_{idc} + \beta_2 CEV_{id} + \beta_3 MA_{idc} + PS_d + Z_d + X_i + +YoM_c + \varepsilon_{idc} \quad (3)$$

We used specification (3) in this study to test the effectiveness of the multi-faceted reform package on women's well-being. The specification additionally tested how the relationship of childhood exposure to domestic violence and women's well-being changes after the reform package was introduced. We aim to estimate the causal impact of childhood exposure to violence on women's well-being for those women married after the roll-out of a holistic women protection policy package in Punjab, relative to those who were married before the introduction of this package, by using difference in differences estimation technique. We hypothesize, that the relationship between childhood exposure to violence and women's well-being as an adult may weaken after the initiatives taken by Punjab Government starting from 2014.

Y_{idc} is a dummy variable equal to 1 if woman i in district d from cohort c experienced domestic violence at least once in her lifetime. MA_{idc} is a dummy variable equal to 1 if woman i in district d cohort c got married after 2014 – the year when the PCSW women's protection helpline was launched followed by numerous women protection laws passed by the Punjab assembly between 2014 and 2016. X_i is a vector of women specific controls such as age, education, years since married, income, number of sons, family wealth/socio-economic status and urban/rural location. Z_d captures district fixed effects. YoM_c is year of marriage fixed effects.

Furthermore, we try to establish what drives our difference-in-differences estimation results. We hypothesize that the negative impact of childhood exposure to violence on women's well-being may be driven by 1) opinion of women on domestic violence, 2) help seeking behavior of women, 3) women's work status, 4) consent of women in marriage, 5) consent of women in when and where to marry, and 6) women's say in husband's earnings. In order to

empirically test what factor drives the results, the above equation will be used and Y_{idc} will be replaced by each of the variables mentioned above. The definition and construction of each variable is presented in Appendix 12.

2.2 Data

We acquired Women's Social and Economic Wellbeing in Pakistan (ESW) Survey's data (2017-18) from The Punjab Commission on the Status of Women (PCSW). This is currently the most comprehensive data set on women in Punjab, which has data on women's labor force participation, women's employment, violence against women, financial inclusion of women, women's autonomy as well as women's participation in the community.

Table 1: Prevalence of Domestic Violence in Punjab

	Number of Obs	Once (Percent)	Many times in the last 12 months (Percent)	Few times in the last 12 months (Percent)	Once in the last 12 months (Percent)
Physical Violence	15427	20.25	3.26	5.41	3.36
Psychological Violence	15427	36.40	11.13	17.51	4.87
Sexual Violence	15427	7.68	2.07	2.97	0.88

Note: Women may be subjected to multiple types of violence.

Our working sample consists of 15427 women, of which 20.25% experienced physical violence, 36.4% experienced psychological violence, and 7.68% experienced sexual violence, at least once in their married life (Table 1). Physical violence was experienced multiple times by 3.26%, a few times by 5.41% and only once by 3.36% of women over the past year. Psychological violence was experienced multiple times by 11.13%, a few times by 17.51% and only once by 4.87% of in the last 12 months. Finally, sexual violence was experienced multiple times by 2.07%, a few times by 2.97% and only once by 0.88% of women over the past year

(Table 1). Furthermore, we observe that 13.84% of the women in our sample have observed their fathers being violent towards their mothers in their childhood; while 9.22% of women's husbands in our sample have observed their fathers being violent towards their mothers in their childhood (Table 2). All in all, these statistics reveal that domestic violence is prevalent in our sample of women not only in their own marital life but a significant portion of them have also witnessed it in their parent's marital life.

Table 2: Childhood Exposure to Violence by gender in Punjab

	Observations	Percentage
CEV (women)	15427	13.84
CEV (men)	15427	9.22***

Note: CEV means Childhood Exposure to Violence. The difference is statistically significant at 1% significance level.

3   Results

3.1   Long run effects of childhood exposure to violence

We estimate OLS and probit regressions to test if exposure to parental violence during childhood has a long run effect on the likelihood of a woman's exposure to intimate partner violence (IPV). We show these results in Table 3, where we use a dichotomous dependent variable equal to 1 if the woman has been exposed to physical violence (columns 1 and 2), psychological violence (columns 3 and 4), and sexual violence (columns 5 and 6) and 0 otherwise.[3]

Table 3: Long run Effects of Childhood Exposure to Violence on Women's Wellbeing

	Physical Violence		Psychological Violence		Sexual Violence	
		Probit		Probit		Probit
	OLS	Margins	OLS	margins	OLS	Margins

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[3] We have also employed the similar regressions for physical, psychological, and sexual violence experienced by women in the last 12 months (Appendix 2), and we get similar results for it too

	(1)	(2)	(3)	(4)	(5)	(6)
CEVf	0.208***	0.158***	0.222***	0.206***	0.078***	0.058***
	(0.012)	(0.008)	(0.012)	(0.011)	(0.009)	(0.006)
CEVm	0.191***	0.143***	0.213***	0.200***	0.111***	0.067***
Observations	15,427	15,427	15,427	15,427	15,427	15,427
Controls	Yes	Yes	Yes	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively.

Dependent Variables: Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1 and 2); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime (Column 3 and 4); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 5 and 6).

Controls: Age, Education, Years Since Married, Ratio of Sons, Wealth Index Score, Work Status, Urban, Husband's Work Status, Husband's Education

The results show that if a woman has been exposed to parental violence in childhood then the probability that she becomes a victim of violence in her married life is positive and significant, as compared to a woman who has not been exposed to parental violence in childhood. Childhood exposure to parental violence for woman's husband is highly significant and positive as well, which indicates that husbands who have observed parental violence in childhood have a significantly positive probability of being violent towards their wives, as compared to those who have not been exposed to parental violence in childhood. In other words, when a child observes violence among parents in early age then there is a positive and significant probability of women becoming victim of physical, psychological, and sexual violence. If a woman has observed parental violence in childhood then the probability of her experiencing physical violence increases by 16% points (column 2), experiencing psychological violence increases by 21% points (column 4), and experiencing sexual violence increases by 6% points (column 6) relative to a woman who has not been exposed to childhood parental violence. Similarly, if a woman's husband has observed parental violence in childhood then the probability that he would be physically, psychologically or sexually violent towards her increases by 14%, 20% and 7% points respectively. Our findings provide evidence of intergenerational transmission

of violence and reinforces earlier literature which shows that women have an accepting attitude towards domestic violence (Aslam, Zaheer, & Shafique, 2015; Gage, 2005; Jesmin, 2015b), and that children witnessing domestic abuse at home grow up to be more violent adults in comparison to those not exposed to abuse (Ballif-Spanvill et al., 2007; Ehrensaft et al. ,2003). Our findings are also aligned with the existing literature on the long run and persistent effects of shocks experienced during childhood (Shah and Steinberg, 2017; Caruso, 2017).

3.1.1 Heterogeneous effects of childhood exposure to violence

As a next step we explore whether the probability of being exposed to violence varies by characteristics of the married couple. For this purpose, we interacted the childhood exposure to violence (CEV) with woman's education, husband's education, woman's work status, and husband's work status on exposure to physical violence (Table 4), psychological violence (Table 5) and sexual violence (Table 6).

Table 4: Heterogeneous effects of childhood exposure to violence

	(1)	(2)	(3)	(4)
CEVf	0.162***	0.160***	0.168***	0.170***
	(0.009)	(0.009)	(0.009)	(0.009)
CEVm	0.133***	0.141***	0.133***	0.137***
	(0.011)	(0.011)	(0.013)	(0.033)
Woman's education*CEVf	-0.035			
	(0.025)			
Woman's education*CEVm	0.068**			
	(0.028)			
Husband 's education*CEVf		-0.007		
		(0.019)		
Husband's education*CEVm		0.011		
		(0.023)		
Woman's workstatus*CEVf			-0.022	
			(0.017)	
Woman's workstatus*CEVm			0.022	
			(0.020)	
Husband's workstatus*CEVf				-0.014
				(0.027)

Husband's workstatus*CEVm	0.007
	(0.035)

Observations	15,427	15,427	15,427	15,427
Controls	Yes	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively.
Dependent Variable: Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and 0 otherwise.
Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, husband's education

Table 5: Heterogeneous effects of childhood exposure to violence

	(1)	(2)	(3)	(4)
CEVf	0.214***	0.213***	0.212***	0.271***
	(0.011)	(0.012)	(0.014)	(0.035)
CEVm	0.192***	0.188***	0.202***	0.189***
	(0.014)	(0.015)	(0.017)	(0.047)
Woman's education*CEVf	-0.063**			
	(0.031)			
Woman's education*CEVm	0.0536			
	(0.037)			
Husband's education*CEVf		-0.03		
		(0.025)		
Husband's education*CEVm		0.049		
		(0.031)		
Woman's workstatus*CEVf			-0.015	
			(0.022)	
Woman's workstatus*CEVm			-0.004	
			(0.027)	
Husband's workstatus*CEVf				-0.072*
				(0.037)
Husband's workstatus*CEVm				0.013
				(0.049)
Observations	15,427	15,427	15,427	15,427
Controls	Yes	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively.
Dependent Variable: Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime, and 0 otherwise.
Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, husband's education**.**

Table 6: Heterogeneous effects of childhood exposure to violence

	(1)	(2)	(3)	(4)
CEVf	0.060***	0.061***	0.070***	0.0760***
	(0.006)	(0.006)	(0.008)	(0.017)
CEVm	0.063***	0.064***	0.068***	0.083***
	(0.007)	(0.007)	(0.008)	(0.020)
Woman's education*CEVf	-0.017			
	(0.016)			
Woman's education*CEVm	0.029*			
	(0.017)			
Husband's education*CEVf		-0.015		
		(0.013)		
Husband's education*CEVm		0.014		
		(0.014)		
Woman's workstatus*CEVf			-0.026**	
			(0.011)	
Woman's workstatus*CEVm			-0.001	
			(0.012)	
Husband's workstatus*CEVf				-0.020
				(0.018)
Husbanb's workstatus*CEVm				-0.017
				(0.021)
Observations	15,427	15,427	15,427	15,427
Controls	Yes	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively.
Dependent Variable: Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and 0 otherwise.
Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, husband's education.

If a woman has attained middle or higher-level education and her husband has been exposed to parental violence in childhood then the probability of her becoming a victim of physical violence increases by 7% points (column 1, Table 4). If a woman has attained middle or higher-level education and also has been exposed to parental violence in childhood then the probability of her becoming a victim of psychological violence decreases by 6% points (column 1, Table 5). If a woman is working and has also been exposed to parental violence in childhood then it decreases the probability of being a victim of sexual violence by 3% points (column 3,

Table 6). If a woman's husband is working and has also been exposed to parental violence in childhood then it decreases the probability of being a victim of psychological violence by 7% points (column 4, Table 5). These findings which reflect the decrease in prevalence of violence when woman or her husband is working are aligned with Bhalotra et. (2021), and Bhalotra et. (2019) findings, where they find that job losses and unemployment is associated with increase in intimate partner violence.

3.2 Punjab Government Initiatives effectiveness on Women's wellbeing

The results in the last section established that intergenerational transmission of violence exists in the sample. As a next step, we order to test the effectiveness of the multi-faceted reform package introduced by the Punjab government on women's well-being. To do so, we estimate specification 3 using a DiD strategy. These results are shown in Table 7.

Table 7: Punjab Government Initiatives effectiveness on Domestic Violence

	Physical Violence	Psychological Violence	Sexual Violence
	(1)	(2)	(3)
CEVf	0.162***	0.218***	0.060***
	(0.009)	(0.011)	(0.006)
CEVm	0.143***	0.200***	0.0662***
	(0.010)	(0.014)	(0.007)
Married After 2014	-0.036	-0.046	0.001
	(0.042)	(0.047)	(0.028)
CEVf*Married After 2014	-0.044	-0.113***	-0.017
	(0.033)	(0.041)	(0.020)
CEVm*Married After 2014	-0.012	0.011	0.026
	(0.036)	(0.046)	(0.020)
Observations	14,911	14,910	14,897
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The regression is performed on unrestricted pooled sample. The coefficients shown are probit margins.

Dependent Variables: Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime (Column 2); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 3).
Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

The results show that on average psychological violence victimization is less prevalent amongst women who got married after the introduction of government initiatives. This means the policy intervention by Punjab government was effective to reduce psychological violence significantly. A woman exposed to childhood parental violence, married after 2014 is 11% points less likely to experience psychological violence relative to a woman married before 2014 (column 2, Table 7).

Further we estimated this regression for a sub-sample of women residing in metropolitan cities of Punjab (Faisalabad, Gujranwala, Lahore, Rawalpindi, Sialkot, and Multan). These results are shown in Table 8. Big cities tend to have more economic activity (United Nations, 2018), so information and awareness regarding policies tend to spread faster in urban areas as compared to rural area.

Table 8: Impact of Punjab Government Initiatives on Domestic Violence in Big Cities of Punjab

Variables	Physical Violence (1)	Psychological Violence (2)	Sexual Violence (3)
CEVf	0.145***	0.143***	0.057***
	-0.021	(0.028)	(0.015)
CEVm	0.130***	0.223***	0.069***
	(0.025)	(0.034)	(0.017)
Married After 2014	0.006	-0.141	0.050
	(0.093)	(0.096)	(0.066)
CEVf*Married After 2014	-0.249***	-0.358***	-0.103*
	(0.092)	(0.103)	(0.061)
CEVm*Married After 2014	0.045	0.022	0.056
	(0.080)	(0.098)	(0.052)

Observations	2,867	2,870	2,853
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The regression is performed on unrestricted pooled sample. The coefficients shown are probit margins.Dependent Variables: Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime (Column 2); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 3).
Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

The results show that on average physical, psychological and sexual violence is less prevalent amongst women who got married after the introduction of government initiatives, in these six big cities of Punjab (columns 1 to 3, Table 8).

3.3   Robustness Checks

We employed a robustness check by restricting the sample size around the cut off year 2014, this controlled for the duration of marriage. We found out that psychological violence still significantly reduces when the sample is restricted to couples who have gotten married three years before the policy (from 2011 till 2013) and couples who have gotten married three years after the policy (from 2014 till 2017). We concluded that the negative effect of Punjab government's initiatives to reduce psychological violence is robust and consistent, even when the sample is restricted to 1 and 2 year(s) before and after the policy (Appendix 3 and Appendix 4).

Table 9: Punjab Government Initiatives effectiveness on Women's wellbeing - Robustness Check (Sample restricted to 3 years before and after the policy)

Variables	Physical Violence (1)	Psychological Violence (2)	Sexual Violence (3)
CEVf	0.139***	0.210***	0.0684***
	(0.020)	(0.029)	(0.016)
CEVm	0.131***	0.189***	0.0683***
	(0.025)	(0.035)	(0.018)
Married After 2014	0.251	0.434**	0.038

	(0.175)	(0.212)	(0.128)
CEVf*Married After 2014	-0.012	-0.118**	-0.001
	(0.039)	(0.054)	(0.028)
CEVm*Married After 2014	-0.016	0.008	-0.010
	(0.045)	(0.061)	(0.031)
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes
Observations	14,911	14,910	14,897

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The regression is performed on unrestricted pooled sample. The coefficients shown are probit margins.

Dependent Variables: Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime (Column 2); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 3).
Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

We ran placebo tests by randomly choosing the cut-off year and number of years before and after the cut-off year, so we can assure that significance is only coming when 2014 is used as a cut-off year. We used sample of women who got married five years before 2008 and five years after 2008, and used 2008 as the cut-off year and found no significance on the main variables (Appendix 5). We also used sample of women who got married three years before 2010 and three years after 2010, and used 2010 as the cut-off year and found no significance on the main variables (Appendix 6). Lastly, we used sample of women who got married two years before 2011 and two years after 2011, and used 2011 as the cut-off year and found no significance on the main variables (Appendix 7).

3.3.1 Parallel Trends

The key identifying assumption is that in the absence of Punjab government's policies regarding women's protection against violence, trends for domestic violence would have been the same for women married before 2014 and for women married after 2014. To test this assumption, unobserved and observed factors which may vary across marriage cohorts had to be

controlled for. In order to control for unobservable factors, interaction terms of Marriage After 2014 variable and district dummies were added in Specification (3) (see table in Appendix 13). The results are almost the same as Table 7, which means that unobservable factors do not change across marriage cohorts. In order to control for the observable factors, we ran Specification (3) with interaction term of Marriage After 2014 variable and Education variable (see table in Appendix 14), Marriage After 2014 variable and Work Status variable (see table in Appendix 15), and Marriage After 2014 variable and Age cohort dummies (see table in Appendix 16). In all three cases, the results are not much different from our main results, this means that our findings are robust.

3.4 Potential mechanisms

In the above results we have established that Punjab governments initiatives improved women's wellbeing by reducing the likelihood of exposure to domestic violence. We estimated specification 3 on a series of dichotomous dependent variables to explore potential mechanisms through which Punjab government's initiatives empower women. These variables include woman's opinion on domestic violence, woman's help seeking behavior, woman's working status, woman's consent in marriage, woman's consent in decisions regarding her wedding, and woman's say in her husband's earnings (Table 10).

Table 10: Potential Mechanisms

Variables	Opinion on Domestic Violence	Seek Help	Paid Work	Consent in Marriage	When and Where to Marry	Say in Husband's Earnings
	(1)	(2)	(3)	(4)	(5)	(6)
CEVf	-0.030***	0.009*	0.0003	-0.062***	0.002	-0.048***
	(0.007)	(0.005)	(0.010)	(0.012)	(0.008)	(0.012)
CEVm	-0.005	0.001	-0.001	-0.044***	0.007	-0.0511***
	(0.009)	(0.006)	(0.012)	(0.015)	(0.010)	(0.015)

Married After 2014	0.064**	-0.001	-0.061	0.076	0.004	0.018
	(0.032)	(0.026)	(0.043)	(0.049)	(0.032)	(0.050)
CEVf*Married After 2014	-0.014	0.006	0.057	0.123***	0.052**	0.114***
	(0.025)	(0.019)	(0.035)	(0.044)	(0.025)	(0.041)
CEVm*Married After 2014	0.019	-0.012	0.030	-0.042	-0.013	0.070
	(0.029)	(0.022)	(0.041)	(0.047)	(0.029)	(0.047)
Observations	14,900	5,014	14,798	14,309	14,802	14,904
Controls	Yes	Yes	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The regression is performed on unrestricted pooled sample. The coefficients shown are probit margins.

Dependent Variables: Opinion to Domestic Violence takes a value of 1 if a woman disagrees that it is important for a man to show who the boss is, and takes a value of 0 if woman agrees or is neutral towards this statement (Column 1); Seek Help takes a value of 1 if a domestic violence victim woman has seek any help and takes a value of 0 otherwise (Column 2); Paid work takes a value of 1 if a woman has worked against a pay check in the past one year, and takes a value of 0 otherwise (Column 3); Consent in Marriage takes a value of 1 if a woman's consent is taken in choosing life partner, and takes a value of 0 otherwise (Column 4); When and Where to Marry takes a value of 1 if woman herself or jointly with her father decides when and where she will marry, and takes a value of 0 otherwise (Column 5). Say in Husband's Earning takes a value of 1 if a woman has a say in her husband's earnings, and takes a value of 0 otherwise (Column 6).
Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

The results do not show any significant effect on changing women's attitudes towards violence (column 1), their help seeking behavior (column 2) or the likelihood that they will engage in paid work (column 3)[4]. However, we do find that women who got married after 2014 and have experienced childhood parental violence are more likely to have consent in choosing their partner, in wedding decisions, and have a say in how to spend their husband's earnings (columns 4, 5 and 6, Table 10)[5]. These results are consistent with (Chowdhury, Bohara, and

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[4] According to Propensity score matching we matched women on a set of observable characteristics and found that women (or their husbands) who faced childhood exposure to violence are not different in work status from those who (or their husbands) did not face childhood exposure to violence (Appendix 8).
[5] We do not think that the reduction in violence is driven through change in husbands' attitude because a) the effective is coming through the interaction between CEVf*MA, and b) the results show a significant effect on greater inclusion of women in decision-making.

Horn, 2018; Zegenhagen, Ranganathan, and Buller, 2019; Mavisakalyan and Rammohan, 2021) where it has been found that cooperative decision-making environment in a marital relationship reduces violence.

4 Conclusion

This aim of this paper was to look at the impact of childhood exposure to violence on women's well-being measured by exposure to domestic violence and to test the effectiveness of Punjab governments' initiatives to provide safety and justice to women.

We found that CEV has long lasting effects, which aligns with a large and well-established literature on lasting impacts of early childhood shocks. Childhood exposure to violence negatively effects women's well-being in the long run where women's well-being is measured by whether she is subjected to domestic violence by her spouse. We found evidence that women who observed parental violence in childhood and got married after Punjab Government's policy package are less likely to experience domestic violence. The policy has been more effective in reducing prevalence of violence in big cities of Punjab. We did not find evidence to support a change in women's labor market outcomes, women's perception of domestic violence, and women's reporting behavior after government's initiatives. However, we found evidence that women who observed parental violence and got married after government's policy are more likely to be included in household decision making.

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5 Appendix

Appendix 1: Long run Effects of Childhood Exposure to Violence on Women's Wellbeing

	Physical Violence			Psychological Violence			Sexual Violence		
	(1)	(2)	(3) Probit	(4)	(5)	(6) Probit	(7)	(8)	(9) Probit
VARIABLES	OLS	Probit	margins	OLS	Probit	Margins	OLS	Probit	margins
CEVf	0.208***	0.637***	0.158***	0.222***	0.625***	0.206***	0.078***	0.454***	0.058***
	(0.012)	(0.034)	(0.008)	(0.012)	(0.033)	(0.011)	(0.009)	(0.044)	(0.006)
CEVm	0.191***	0.577***	0.143***	0.213***	0.609***	0.200***	0.111***	0.529***	0.067***
	(0.014)	(0.040)	(0.010)	(0.014)	(0.040)	(0.013)	(0.011)	(0.048)	(0.006)
Age	-0.001	-0.007	-0.002	0.000	0.001	0.000	-0.003	-0.024	-0.003
	(0.003)	(0.012)	(0.003)	(0.004)	(0.011)	(0.004)	(0.002)	(0.017)	(0.002)
Education	-0.009***	-0.046***	-0.012***	-0.011***	-0.034***	-0.011***	-0.003	-0.020	-0.003
	(0.003)	(0.013)	(0.003)	(0.004)	(0.011)	(0.004)	(0.002)	(0.017)	(0.002)
Years Since Married	0.001**	0.005**	0.001**	0.001	0.003	0.001	-0.000	-0.000	-0.000
	(0.001)	(0.003)	(0.001)	(0.001)	(0.002)	(0.001)	(0.000)	(0.003)	(0.000)
Ratio of Sons	-0.007	-0.033	-0.008	-0.009	-0.027	-0.009	-0.010	-0.079	-0.010
	(0.010)	(0.040)	(0.010)	(0.012)	(0.035)	(0.012)	(0.007)	(0.051)	(0.006)
Wealth Index Score	-0.033***	-0.136***	-0.034***	-0.021***	-0.067***	-0.022***	-0.009***	-0.072***	-0.009***
	(0.005)	(0.019)	(0.005)	(0.006)	(0.017)	(0.006)	(0.003)	(0.026)	(0.003)
Urban	0.011	0.040	0.010	0.027***	0.078***	0.026***	0.007	0.027	0.003
	(0.008)	(0.032)	(0.008)	(0.009)	(0.028)	(0.009)	(0.005)	(0.041)	(0.005)
Work Status	0.048***	0.181***	0.045***	0.082***	0.239***	0.078***	0.019***	0.146***	0.019***
	(0.007)	(0.026)	(0.006)	(0.008)	(0.024)	(0.008)	(0.005)	(0.034)	(0.004)
Husband's Work Status	-0.017	-0.062	-0.015	0.000	0.002	0.001	-0.007	-0.058	-0.007
	(0.011)	(0.043)	(0.011)	(0.013)	(0.039)	(0.013)	(0.007)	(0.059)	(0.007)
Husband's Education	-0.010***	-0.043***	-0.011***	-0.005	-0.016	-0.005	-0.004**	-0.033**	-0.004**
	(0.003)	(0.011)	(0.003)	(0.003)	(0.010)	(0.003)	(0.002)	(0.015)	(0.002)
Constant	0.170***	-0.991***		0.244***	-0.709***		0.083***	-1.400***	
	(0.023)	(0.089)		(0.027)	(0.081)		(0.016)	(0.117)	
Observations	15,427	15,427	15,427	15,427	15,427	15,427	15,427	15,427	15,427
R-squared	0.125			0.147			0.078		

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively.
Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1, 2, and 3); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime (Column 4, 5, and 6); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 7, 8, and 9).

Appendix 2: Long run Effects of Childhood Exposure to Violence on Women's Wellbeing

	Physical Violence		Psychological Violence		Sexual Violence	
	(1)	(2)	(3)	(4)	(5)	(6)
		Probit		Probit		Probit
	OLS	margins	OLS	margins	OLS	margins
CEVf	0.126***	0.086***	0.191***	0.163***	0.049***	0.037***
	(0.010)	(0.006)	(0.012)	(0.010)	(0.007)	(0.005)
CEVm	0.126***	0.078***	0.191***	0.163***	0.087***	0.050***
	(0.012)	(0.007)	(0.014)	(0.012)	(0.010)	(0.005)
Age	-0.008***	-0.007***	-0.005	-0.005	-0.005**	-0.005**
	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)
Education	-0.007***	-0.008***	-0.010***	-0.009***	-0.001	-0.001
	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)
Years Since Married	-0.001**	-0.001**	-0.002***	-0.002***	-0.001*	-0.001**
	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)
Ratio of Sons	-0.008	-0.008	-0.016	-0.016	-0.007	-0.006
	(0.007)	(0.007)	(0.011)	(0.011)	(0.006)	(0.005)
Wealth Index Score	-0.021***	-0.022***	-0.023***	-0.024***	-0.010***	-0.010***
	(0.004)	(0.004)	(0.005)	(0.005)	(0.003)	(0.003)
Urban	0.017***	0.015***	0.028***	0.026***	0.011**	0.007*
	(0.006)	(0.006)	(0.009)	(0.009)	(0.004)	(0.004)
Work Status	0.017***	0.016***	0.079***	0.076***	0.008*	0.009**
	(0.005)	(0.005)	(0.008)	(0.007)	(0.004)	(0.004)
Husband's Work Status	-0.030***	-0.030***	0.000	-0.001	-0.003	-0.001
	(0.009)	(0.008)	(0.012)	(0.012)	(0.006)	(0.007)
Husband's Education	-0.006***	-0.007***	-0.001	-0.001	-0.001	-0.002
	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)
Constant	0.150***		0.221***		0.064***	
	(0.018)		(0.026)		(0.013)	
Observations	15,427	15,427	15,427	15,427	15,427	15,427
R-squared	0.088		0.120		0.065	

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively.

Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence in the last 12 months, and takes a value of 0 otherwise (Column 1 and 2); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence in the last 12 months, and takes a value of 0 otherwise (Column 3 and 4); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence in the last 12 months, and takes a value of 0 otherwise (Column 5 and 6).

Appendix 3: Punjab Government Initiatives effectiveness on Women's wellbeing - Robustness Check (Sample restricted to 2 years before and after the policy)

	Physical Violence	Psychological Violence	Sexual Violence

	(1)	(2)	(3)
CEVf	0.127***	0.230***	0.062***
	(0.025)	(0.034)	(0.020)
CEVm	0.133***	0.178***	0.092***
	(0.030)	(0.043)	(0.021)
Married After 2014	0.003	0.052	0.077
	(0.088)	(0.105)	(0.069)
CEVf*Married After 2014	-0.003	-0.171***	0.03
	(0.044)	(0.061)	(0.032)
CEVm*Married After 2014	-0.046	0.018	-0.052
	(0.051)	(0.070)	(0.036)
Observations	2,108	2,108	1,912
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The regression is performed on unrestricted pooled sample. The coefficients shown are probit margins. Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime, and takes a value of 0 otherwise (Column 2); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 3).
Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

Appendix 4: Punjab Government Initiatives effectiveness on Women's wellbeing - Robustness Check (Sample restricted to 1 year before and after 2014)

	Physical Violence (1)	Psychological Violence (2)	Sexual Violence (3)
CEVf	0.150***	0.235***	0.103***
	(0.038)	(0.051)	(0.032)
CEVm	0.129***	0.142**	0.155***
	(0.044)	(0.062)	(0.032)
Married After 2014	-0.006	0.011	0.064***
	(0.024)	(0.030)	(0.022)
CEVf*Married After 2014	-0.064	-0.234***	-0.063
	(0.061)	(0.085)	(0.051)
CEVm*Married After 2014	0.007	0.109	-0.128**
	(0.067)	(0.096)	(0.053)
Observations	1,081	1,081	839
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The regression is performed on unrestricted pooled sample. The coefficients shown are probit margins. Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime, and takes a value of 0 otherwise (Column 2); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 3).
Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

Appendix 5: Punjab Government Initiatives effectiveness on Women's wellbeing - Robustness Check (Sample restricted to 5 years before and after 2008)

	Physical Violence (1)	Psychological Violence (2)	Sexual Violence (3)
CEVf	0.177***	0.230***	0.056***
	(0.018)	(0.024)	(0.013)
CEVm	0.123***	0.186***	0.060***
	(0.021)	(0.029)	(0.015)
Married After 2008	0.239	0.454*	0.262*
	(0.204)	(0.240)	(0.139)
CEVf*Married After 2008	-0.028	-0.025	-0.006
	(0.026)	(0.034)	(0.018)
CEVm*Married After 2008	0.025	0.006	0.019
	(0.030)	(0.040)	(0.020)
Observations	6,299	6,299	6,299
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The regression is performed on unrestricted pooled sample. The coefficients shown are probit margins. Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime, and takes a value of 0 otherwise (Column 2); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 3).
Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

Appendix 6: Punjab Government Initiatives effectiveness on Women's wellbeing - Robustness Check (Sample restricted to 3 years before and after 2010)

	Physical Violence (1)	Psychological Violence (2)	Sexual Violence (3)
CEVf	0.130***	0.193***	0.043***
	(0.023)	(0.030)	(0.016)
CEVm	0.155***	0.217***	0.0742***
	(0.027)	(0.037)	(0.017)

	Physical Violence	Psychological Violence	Sexual Violence
Married After 2008	0.117	0.228	0.124
	(0.121)	(0.141)	(0.081)
CEVf*Married After 2008	0.026	0.026	0.020
	(0.033)	(0.044)	(0.022)
CEVm*Married After 2008	-0.007	-0.015	-0.006
	(0.039)	(0.053)	(0.024)
Observations	3,979	3,979	3,979
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The regression is performed on unrestricted pooled sample. The coefficients shown are probit margins. Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime, and takes a value of 0 otherwise (Column 2); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 3).
Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

Appendix 7: Punjab Government Initiatives effectiveness on Women's wellbeing - Robustness Check (Sample restricted to 2 years before and after 2011)

Variables	Physical Violence (1)	Psychological Violence (2)	Sexual Violence (3)
CEVf	0.142***	0.188***	0.021
	(0.027)	(0.036)	(0.020)
CEVm	0.154***	0.183***	0.091***
	(0.032)	(0.043)	(0.020)
Married After 2011	0.084	0.139	0.075
	(0.076)	(0.091)	(0.057)
CEVf*Married After 2011	0.005	0.051	0.040
	(0.039)	(0.051)	(0.028)
CEVm*Married After 2011	-0.019	0.001	-0.002
	(0.046)	(0.062)	(0.030)
Observations	2,642	2,642	2,516
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The regression is performed on unrestricted pooled sample. The coefficients shown are probit margins. Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime, and takes a value of 0 otherwise (Column 2); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 3).
Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

Appendix 8: Propensity Score Matching: Childhood Exposure to Violence and Work Status

Variables	Estimate	SE	N	P value
	(1)	(2)	(3)	(4)
CEVf	0.002528	0.009378	15,427	0.787
CEVm	0.003695	0.009912	15,427	0.709

Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

Appendix 9: Definition of Domestic Violence

Physical Violence	This variable takes a value of 1 if respondent has experienced either of the following from her spouse, and 0 otherwise:
	Slapped or been thrown something at that could hurt
	Pushed or pulled by hair
	Hit with fist or with something else that could hurt
	Kicked, dragged or been beaten up
	Choked or burnt on purpose
	Threatened or actually used a gun, knife or any other weapon
	Threatened or actually tried to disfigure you (chop nose/ears, throw acid, etc)
	Threatened or actually forced you to abort a pregnancy
	Threatened or actually forced you to become pregnant against your wishes
Sexual Violence	This variable takes a value of 1 if respondent has experienced either of the following from her spouse, and 0 otherwise:
	Forced sexual intercourse
	Gotten afraid of rejecting having a sexual intercourse
	Forced to do anything sexual which you did not want to
Psychological Violence	This variable takes a value of 1 if respondent has experienced either of the following from her spouse, and 0 otherwise:
	Insulted you or made you feel bad about yourself

Belittled or humiliated you infront of other people

Done things to scare or intimidate on purpose

Verbally tried to hurt you or someone you care

Neglected or acted indifferent deliberately

Appendix 10: Definition of CEV

Childhood Exposure to Violence (Female)	This variable takes value of 1 if respondent's mother was beaten by her father, and 0 otherwise
Childhood Exposure to Violence (Male)	This variable takes value of 1 if respondent's husband's mother was beaten by his father, and 0 otherwise

Appendix 12: definition of other empowerment variables

Seek Help	This variable takes value of 1 if woman has sought any help (Police, health center/hospital, social services, legal advice, shelter/dar ul aman, local leader) and 0 if no help has been taken
Opinion on Domestic Violence	It is important for a man to show his wife who is the boss (Disgaree = 1, Agree = 0, Neutral = missing)
Paid Work	This variable takes value of 1 if woman has paid employment and 0 for unpaid work, inactive, and unemployed.
Consent marriage	1 if woman has consent in choosing life partner 0 if not
When and Where to Marry	1 if woman or father and woman jointly decides when and where she will get married 0 if another male member or father alone decides
Say in Husband's Earnings	1 if wife and husband jointly or wife alone decides how husband's earnings will be used and 0 if it is decided by husband alone or by in-laws

Appendix 13: Control for unobserved factors that varied between marriage cohorts.

Variables	Physical Violence (1)	Psychological Violence (2)	Sexual Violence (3)
CEVf	0.161***	0.217***	0.061***
	(0.009)	(0.011)	(0.006)
CEVm	0.143***	0.199***	0.068***
	(0.010)	(0.014)	(0.007)
Married After 2014	-0.003	-0.016	0.033
	(0.081)	(0.089)	(0.057)
CEVf*Married After 2014	-0.034	-0.123***	-0.020
	(0.034)	(0.043)	(0.021)
CEVm*Married After 2014	0.010	0.045	0.034
	(0.037)	(0.048)	(0.021)
Observations	14,911	14,910	14,610
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes
Interaction: Marriage After 2014 with District dummies	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The coefficients shown are probit margins.

Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime, and takes a value of 0 otherwise (Column 2); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 3).

Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

Appendix 14: Control for observed factors that varied between marriage cohorts: Education.

Variables	Physical Violence (1)	Psychological Violence (2)	Sexual Violence (3)
CEVf	0.161***	0.217***	0.061***
	(0.009)	(0.011)	(0.006)
CEVm	0.143***	0.199***	0.068***
	(0.010)	(0.014)	(0.007)
Married After 2014	-0.003	-0.016	0.033
	(0.081)	(0.089)	(0.057)
CEVf*Married After 2014	-0.034	-0.123***	-0.020
	(0.034)	(0.043)	(0.021)
CEVm*Married After 2014	0.010	0.045	0.034
	(0.037)	(0.048)	(0.021)
Observations	14,911	14,910	14,610

Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes
Interaction of Marriage After 2014 with District dummies	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The coefficients shown are probit margins.

Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime, and takes a value of 0 otherwise (Column 2); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 3).

Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

Appendix 15: Control for observed factors that varied between marriage cohorts: Work Status.

Variables	Physical Violence (1)	Psychological Violence (2)	Sexual Violence (3)
CEVf	0.162***	0.218***	0.060***
	(0.009)	(0.011)	(0.006)
CEVm	0.143***	0.200***	0.066***
	(0.010)	(0.014)	(0.007)
Married After 2014	-0.021	-0.039	-0.006
	(0.043)	(0.048)	(0.029)
CEVf*Married After 2014	-0.041	-0.112***	-0.019
	(0.033)	(0.041)	(-0.020)
CEVm*Married After 2014	-0.007	0.013	0.025
	(0.036)	(0.046)	(0.020)
Observations	14,911	14,910	14,897
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes
Interaction: Marriage After 2014 with Work Status	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The coefficients shown are probit margins.

Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime, and takes a value of 0 otherwise (Column 2); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 3).

Controls included: Age, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

Appendix 16: Control for observed factors that varied between marriage cohorts: Age

Variables	Physical Violence (1)	Psychological Violence (2)	Sexual Violence (3)
CEVf	0.162***	0.218***	0.060***
	(0.009)	(0.011)	(0.006)

CEVm	0.143***	0.199***	0.066***
	(0.010)	(0.014)	(0.007)
Married After 2014	0.005	0.065	0.113
	(0.145)	(0.182)	(0.090)
CEVf*Married After 2014	-0.041	-0.112***	-0.017
	(0.033)	(0.041)	(0.020)
CEVm*Married After 2014	-0.013	0.011	0.027
	(0.036)	(0.046)	(0.020)
Observations	14,911	14,910	14,897
Controls	yes	yes	yes
District Fixed Effects	yes	yes	yes
Year Of Marriage Fixed Effects	Yes	Yes	Yes
Interaction: Marriage After 2014 with Age cohort dummies	Yes	Yes	Yes

Note: Standard errors are robust and appear in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively. The coefficients shown are probit margins.

Physical Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of physical violence once in her lifetime, and takes a value of 0 otherwise (Column 1); Psychological Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of psychological violence once in her lifetime, and takes a value of 0 otherwise (Column 2); Sexual Violence is a dummy variable, which takes a value of 1 if a married woman has been a victim of sexual violence once in her lifetime, and takes a value of 0 otherwise (Column 3).

Controls included: Age dummies, Education, years since married, ratio of sons, wealth index score, urban, work status, husband's work status, and husband's education.

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