Factors associated with intimate partner violence against women in a mega city of South-Asia: multi-centre cross-sectional study

Niloufer S Ali, Farzana N Ali, Ali K Khuwaja, Kashmira Nanji *

ABSTRACT

Objectives: To assess the proportion of women subjected to intimate partner violence and the associated factors, and to identify the attitudes of women towards the use of violence by their husbands.

Design: Cross-sectional study.

Setting: Family practice clinics at a teaching hospital in Karachi, Pakistan.

Participants: A total of 520 women aged between 16 and 60 years were consecutively approached to participate in the study and interviewed by trained data collectors. Overall, 401 completed questionnaires were available for analysis. Multivariate logistic regression analysis was used to identify the association of various factors of interest.

Results: In all, 35% of the women reported being physically abused by their husbands in the last 12 months. Multivariate analysis showed that experiences of violence were independently associated with women's illiteracy (adjusted odds ratio=5.9; 95% confidence interval, 1.8-19.6), husband's illiteracy (3.9; 1.4-10.7), smoking habit of husbands (3.3; 1.9-5.8), and substance use (3.1; 1.7-5.7).

Conclusion: It is imperative that intimate partner violence be considered a major public health concern. It can be prevented through comprehensive, multifaceted, and integrated approaches. The role of education is greatly emphasised in changing the perspectives of individuals and societies against intimate partner violence.

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[1] **NS Ali,** MB, BS, FCPS
[2] **FN Ali,** MB, BS
[3] **AK Khuwaja,** MB, BS, FCPS
[1] **K Nanji *,** MSc, BScN

[1] *Department of Family Medicine, The Aga Khan University, Karachi 74800, Pakistan*
[2] *Department of Family Medicine and Community Health, University Hospitals Case Medical Center, Ohio 44106, United States*
[3] *Departments of Family Medicine/Community Health Sciences, The Aga Khan University, Karachi 74800, Pakistan*

* Corresponding author: kashmira.nanji@aku.edu

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New knowledge added by this study

- This study shows that women's literacy can play an important role in changing the perspectives of individuals and societies towards violence against women.
- Substance abuse including smoking and alcohol consumption may directly be responsible for intimate partner violence against women in Pakistan.

Implications for clinical practice or policy

- The growing understanding of the impact of violence needs to be translated into primary, secondary, and tertiary level prevention, including both services that respond to the needs of women living with or who have experienced violence, and interventions to prevent violence.
- There is a need for intervention programmes in all societies and cultures for both men and women to highlight this imperative issue.

Introduction

Intimate partner violence (IPV) against women is a global human rights and public health problem. Addressing violence against women (VAW) is central to the achievement of Millennium Development Goal (MDG) 3 on women's empowerment and gender equality, as well as MDGs 4, 5, and 6.[1] Intimate partner violence is defined as "the range of sexually, psychologically and physically coercive acts used against adult and adolescent women by current or former male intimate partners".[2]

The two terms, VAW and IPV, are used interchangeably with gender-based violence. It is reported that violence imposed by husbands is the most common form of VAW.[3] Data from the World Bank suggest that women aged 15 to 44 years are at greater risk from rape and domestic violence than from cancer, motor accidents, war, and malaria.[3] There is enormous body of evidence to suggest that such acts of violence adversely affect the overall wellbeing of women and are associated with psychiatric morbidities like anxiety, depression,

東南亞一個大型城市中針對婦女的親密伴侶暴力的相關因素：多中心橫斷面研究

Niloufer S Ali, Farzana N Ali, Ali K Khuwaja, Kashmira Nanji

目的：評估婦女遭受親密伴侶暴力及相關因素的比例，並探討婦女對被丈夫使用暴力的態度。

設計：橫斷面研究。

安排：巴基斯坦卡拉奇一所教學醫院中的家庭醫學診所。

參與者：共520名16至60歲的婦女參與研究。願意參與的婦女均由受過訓練的人員訪問。共有401份問卷可供分析。使用多元邏輯回歸分析找出各種利益因素的關係。

結果：35%受訪者指出曾在過去12個月內被她們的丈夫身體虐待。多因素分析顯示遭受暴力的經歷與以下因素有獨立的關係：文盲的婦女（調整後的比值比=5.9；95%可信區間，1.8-19.6）、文盲的丈夫（3.9；1.4-10.7）、丈夫的吸煙習慣（3.3；1.9-5.8）和藥物濫用（3.1；1.7-5.7）。

結論：親密伴侶暴力是一個重要的公共衛生問題，可以通過完備、多方面和綜合方法來預防。教育可顯著改變個人和社會對親密伴侶暴力的觀點。

addictive behaviour, etc, and physical injuries, sexually transmitted infections, poor reproductive health outcomes, and even death.[4-7] The impact may also span to affect the mental and physical health of children, who may get "caught in the cross fire" and are directly injured or may get less directly affected as a consequence of abusive relationship between parents.[8,9]

Violence against intimate partners occurs in all countries, all cultures, and at every level of society without exception, although some populations (for example, low-income groups) are at greater risk of violence by intimate partners than others.[10] In 48 population-based surveys from around the world, 10% to 69% of women reported being physically assaulted by an intimate male partner at some point in their lives.[3] The World Health Organization (WHO) multi-country study on women's health and domestic violence documented lifetime prevalence of physical and/or sexual partner violence among ever-partnered women in the 15 sites surveyed ranging from as low as 15% in an Ethiopian province to as high as 71% in Japan.[11]

The burden of IPV is particularly alarming in developing countries as women are vulnerable to many forms of violence and IPV represents the most common form.

The widespread nature of the issue is further evidenced by the findings of more recent studies from countries with varied economic and developmental strata. About 15% of women visiting the family practitioners in Toronto, Canada, admitted being victims of IPV.[12] Another study from a developing country reported the prevalence of male partner–perpetrated violence to be around 7%.[13] Although a true comparison is difficult to make due to methodological differences between studies, in general, a higher burden of the problem is observed in developing countries, including those from South Asia. Around one third to one half of the female participants in different studies from India accept IPV victimisation.[13,14] According to the recent Bangladesh Demographic Health Survey, almost half of married Bangladeshi mothers (42.4%) with children aged 5 years and younger experienced IPV from their husbands.[14] Similarly, in Pakistan, nearly one third to one half of the women stated that they are victims of IPV.[15,16]

Although the prevalence of IPV varies across countries, the factors associated with an increased risk of IPV are similar. These may include substance/alcohol use, young age, and attitudes supportive of wife beating. However, higher education status, high socio-economic status, and formal marriage offer protection against IPV.[11,17,18]

Limited data are available from Pakistan on VAW. The topic remains largely inadequately studied despite its far-reaching adverse consequences. Moreover, most of the published studies have been conducted in the same communities or in communities with similar socio-economic backgrounds, skewing the approximate magnitude of the problem to extremes and hampering the analysis of important demographic factors that may be associated with IPV against women. The aim of this study was therefore to estimate the proportion of women subjected to IPV in Pakistan and to examine whether demographic factors such as education status of both wife and husband and husband's involvement in substance abuse were associated with IPV. We conducted this study among women from diverse socio-economic backgrounds to assess the proportion of women subjected to IPV and the associated factors. We also aimed to determine the attitudes of participants towards the use of violence by husbands.

Methods

This cross-sectional study was conducted in four family practice clinics situated in various localities of Karachi, the largest city and economic hub of Pakistan. Karachi is one of the largest metropolitan cities of the world where over 16 million people reside; it is also called mini-Pakistan as its residents represent all the ethnicities, provinces/states, and socio-economic classes. All these clinics are affiliated with a private tertiary care teaching hospital. A total of eight family practice clinics are associated with the teaching hospital and these clinics were included as

they provide health services to people from different socio-economic strata (lower, middle, and upper). All participants were assured of complete confidentiality of the information collected. After obtaining consent to participate in the study, currently married women (aged 16-60 years) were interviewed consecutively by four female medical students (each in a clinic) who had received prior training for this task. The data were collected simultaneously in all the clinics from July 2012 to November 2012. Sample size was calculated with the help of WHO software for sample size determination. As the prevalence of VAW ranges between 30% and 50%,[14-16] we used a prevalence of 50% for maximum variance with an error bound of 5%; this gave a sample size of 385. The sample size was then inflated by 7% for non-respondents to give a final sample size of approximately 412.

After extensive literature search and consensus by study investigators, a structured questionnaire was developed and pre-tested. The questionnaire was initially prepared in English, translated into Urdu and then back-translated into English. The final questionnaire was comprised of sections including socio-demographic characteristics and questions regarding the experience of physical/verbal abuse inflicted ever (lifetime) by husband. In this study, physical abuse was defined by any of the following acts used against women: slapping or throwing something at her that could hurt her; pushing or shoving; hitting with fist or something else that could hurt; kicking, dragging, or beating; choking or burning on purpose; and threatening to use or actually use a gun, knife, or weapon against her. The questionnaire also included a section on the women's attitude towards use of violence by husbands against wives. Questions were also included about other variables of interest which included education status of the woman and her husband, working status of the woman and her husband, years since marriage and total number of children, family system in which the woman lives, and information about smoking status and other addictive substances used by the husband. The time required to complete the questionnaire was about 25 to 30 minutes. Due to the sensitivity of the issue, the interviews were conducted with each participant in separate rooms ensuring full privacy. The study was approved by the Research Committee of the Department of Family Medicine, Aga Khan University, Karachi, Pakistan, and prior permission was sought by administration of study clinics.

Data were analysed using the Statistical Package for the Social Sciences (Windows version 19; SPSS Inc, Chicago [IL], US). The proportion of violence experienced by women and other variables of interest were calculated. Cross-tabulation and Chi squared test were used to assess the association between the women's perception and their level of education. The independent association of factors studied with violence experienced by women was examined by multivariate stepwise logistic regression analysis to obtain odds ratios (ORs) and 95% confidence intervals (CIs). Covariates such as education status of participants, education status of husband, and smoking and substance abuse by husband were included in the multivariate model.

Results

A total of 550 women were approached, of which 520 fulfilled the eligibility criteria. As there were 119 women who refused to participate or provided incomplete information in the questionnaire, the response rate was 77%. Finally, information from 401 participants was included in the final analysis; for missing data, we averaged estimates of the variables to give a single mean estimate. The socio-demographic characteristics of the participants are summarised in Table 1. Overall, 190 (47.4%) of the participants were aged 40 years and above, 165 (41.1%) had received no education at all, and husbands of 111 (27.7%) participants had received no schooling. A majority (n=363; 90.5%) of respondents were housewives while one third of the participants' husbands were not working (jobless or retired from work). Overall, 170 (42.4%) participants had been married for more than 20 years, 265 (66.1%) had three or more children, and 252 (62.8%) were living in nuclear (single) families. Husbands of 132 (32.9%) participants were current tobacco smokers and over one fifth of them consumed addictive substances other than tobacco smoking.

Overall, 140 (35%) participants reported being ever physically/verbally violated by their husbands in the last 12 months. The factors associated with IPV against women on univariate analysis are summarised in Table 1. These included illiteracy of women, living in a nuclear family, and being married for more than 20 years; factors related to the husband were illiteracy, unemployment, smoking, and use of other substances besides tobacco.

In the multivariate analysis (Table 2), four factors were independently associated with IPV against women. These were women's illiteracy, husband's illiteracy, smoking habit of husband, and use of substances other than tobacco by husband. Women who were illiterate were 6 times more likely to have been violated by their husbands versus those who were literate (adjusted OR [AOR]=5.9; 95% CI, 1.8-19.6), while women whose husbands were illiterate were 4 times more likely to have been abused than those whose husbands were literate (AOR=3.9; 95% CI, 1.4-10.7). Study participants whose husbands smoked tobacco reported being victims of violence by their husbands 3 times more often than their counterparts (AOR=3.3; 95% CI, 1.9-5.8). Almost similar odds for IPV were observed

TABLE 1. Distribution of socio-demographic characteristics in participants and the association of these characteristics with reported violence by their husbands (n=401)

Socio-demographic characteristic	No. (%) of participants	Reported violence (%)	Odds ratio (95% confidence interval)
Age-groups (in years)			
16-29	101 (25.2)	32.3	1.0
30-39	110 (27.4)	31.3	0.9 (0.5-1.8)
40-49	115 (28.7)	43.1	1.6 (0.9-2.8)
≥50	75 (18.7)	34.3	1.1 (0.6-2.1)
Education status of the participants			
Graduate/postgraduate	73 (18.2)	8.7	1.0
Secondary/higher secondary	111 (27.7)	15.2	1.9 (0.7-5.1)
Primary	52 (13.0)	46.9	9.3 (3.4-25.5)
Illiterate	165 (41.1)	57.7	14.3 (5.9-35.1)
Education status of husband			
Graduate/postgraduate	119 (29.7)	10.7	1.0
Secondary/higher secondary	114 (28.4)	24.1	2.6 (1.3-5.6)
Primary	57 (14.2)	55.6	10.4 (4.7-23.3)
Illiterate	111 (27.7)	63.8	14.5 (7.2-30.2)
Working status of participants			
Housewife	363 (90.5)	35.9	1.0
Working outside home	38 (9.5)	33.3	0.9 (0.4-1.9)
Working status of husband			
Office worker	124 (30.9)	15.4	1.0
Shopkeeper/businessman	95 (23.7)	30.0	2.4 (1.2-4.6)
Manual worker/labour	43 (10.7)	40.0	3.7 (1.6-8.2)
Retired/jobless	139 (34.7)	56.1	7.0 (3.9-12.9)
Years since marriage			
1-10	116 (28.9)	27.3	1.0
11-20	115 (28.7)	29.6	1.1 (0.6-2.0)
≥21	170 (42.4)	45.3	2.2 (1.3-3.7)
Total No. of children			
0	34 (8.5)	25.0	1.0
1-2	102 (25.4)	26.0	1.1 (0.4-2.7)
≥3	265 (66.1)	40.6	2.1 (0.9-4.8)
Family system			
Joint	149 (37.2)	27.7	1.0
Nuclear	252 (62.8)	40.3	1.8 (1.1-2.8)
Smoking status of husband			
Never smoker	232 (57.9)	24.7	1.0
Ex-smoker	37 (9.2)	45.7	3.6 (1.2-5.4)
Current smoker	132 (32.9)	52.0	3.3 (2.2-5.3)
Substance use other than tobacco by husband			
No	310 (77.3)	29.4	1.0
Yes	91 (22.7)	57.0	3.2 (1.9-5.2)

in participants whose husbands were addicted to substances other than tobacco (AOR=3.1; 95% CI; 1.7-5.7).

Overall, 268 (67%) participants accepted that a wife should always follow her husband's instructions irrespective of her will and 74 (18.5%) women agreed that violence against wife was justified if she did not follow her husband's instructions.

The association of women's perspective towards husband's dominance and use of violence against wife with the number of years of school attended by women is shown in the Figure. As the number of years of schooling increased, there was a significant decline in the proportion of women who were in favour of husbands' dominance over wives, and those who accepted violence against wives (Chi squared, P<0.001). The Figure depicts that the majority of the illiterate women (over 75%) agreed that wife should always follow her husband's instructions irrespective of her will, and about 30% believed that violence against a wife was justified if she did not follow her husband's instructions. On the other hand, less than 5% of the women who had more than 12 years of education thought that IPV was justified if the husband's instructions were not followed.

TABLE 2. Multivariate analysis for independent factors associated with intimate partner violence among study participants

Characteristic	P value	Adjusted odds ratio (95% confidence interval)*
Education status of participants		
Graduate/postgraduate		1.0
Secondary/higher secondary	0.25	1.9 (0.6-5.8)
Primary	<0.001	4.9 (1.5-16.3)
Illiterate	<0.001	5.9 (1.8-19.6)
Education status of husband		
Graduate/postgraduate		1.0
Secondary/higher secondary	0.37	1.5 (0.6-3.5)
Primary	0.03	3.2 (1.2-8.7)
Illiterate	0.01	3.9 (1.4-10.7)
Smoking status of husband		
Never smoker		1.0
Ex-smoker	0.01	3.0 (1.3-7.1)
Current smoker	<0.001	3.3 (1.9-5.8)
Substance use other than tobacco by husband		
No		1.0
Yes	<0.001	3.1 (1.7-5.7)

* Adjusted for age, education status of participants and their husbands, and smoking status of husband

Discussion

Violence against women is being increasingly identified as a major contributor to the ill health and mortality among women.[3,10] Despite the imperative nature of the problem, there is lack of adequate information on IPV against women in Pakistan. In the current study, we have explored the proportion of women abused by their intimate partners and have identified factors significantly associated with such acts of abuse.

In this study, approximately one third of the women (35%) reported being ever physically/verbally violated by their husbands. Other studies from Pakistan[15,16] have also reported similar findings, with approximately one third to one half of the participants experiencing some form of violence from intimate partners. However, a study conducted in Karachi, Pakistan, among 400 married women showed that the prevalence of IPV (physical violence) was 80%.[17] A possible explanation for this high magnitude of IPV prevalence could be the fact that the participants were recruited from low socio-demographic background communities that may be associated with increased perpetuation of violence and vulnerability to the victimisation of violence.

The education status of both the partners has been observed to have significant influence on the prevalence of IPV.[19-21] Provision of education undoubtedly plays a protective role against IPV. Empowering women through social networking along with income earning improves their capacity

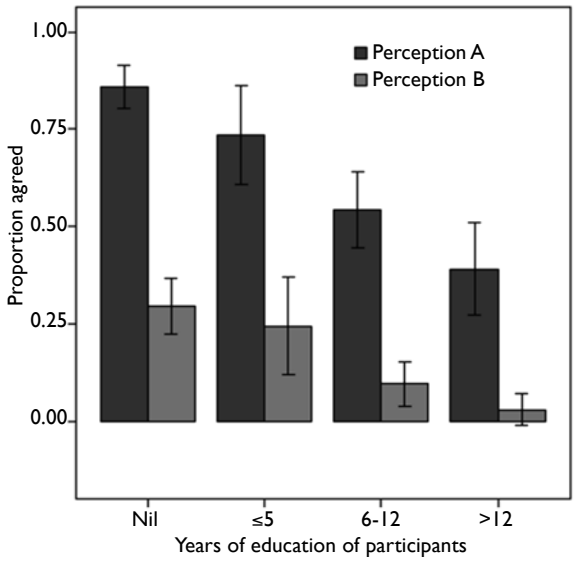

FIG. Association of education status with women's attitude towards intimate partner violence
Perception A: Wife should always follow her husband's instructions irrespective of her will
Perception B: Violence against wife is justified if she does not follow her husband's instructions
Error bars denote standard deviations

to access information and resources available in society, and seek help in case of spousal abuse.[19] The results of the current study also clearly indicate a positive association between the literacy levels of husband and wife and IPV victimisation among women. Education also imparts a protective role through influencing the perspectives of individuals, and societies in general, against the acceptability of mistreatment towards women.[19] A climate of tolerance towards IPV makes it easier for perpetrators to persist with their violent behaviour.[22] Education inculcates a sense of self-respect and self-reliance in women, enhancing their capacity to make appropriate decisions regarding various aspects of their lives confidently and autonomously.[11] On the other hand, lack of education not only deprives women from acknowledging their rights but, instead, stigmatises their thinking on gender roles and makes them more accepting towards use of force to impose these roles.[23,24] This effect was observed in previous studies in which low level of education was associated with women's acceptance of wife battering, whereas higher education level was negatively associated with tolerance of wife beating. Furthermore, educated women were most protected against violence.[23,24] This is also reflected in the findings of this study in that acceptance and tolerance towards husband's mistreatment and control over the wife markedly declined as the education level of the women improved.

The results of the current study also indicate that women whose husbands smoke or consume other substances of abuse experience increased levels of IPV. This is consistent with the findings of previous studies[20,25,26] which showed that smoking, alcohol consumption, and using other substances of abuse were strongly associated with IPV. Substance abuse, including smoking and alcohol consumption, may be directly responsible for IPV by affecting cognition, reducing self-control, perpetuating aggression and may also induce stress and unhappiness in relationships, thereby, further increasing the risk of violence and conflict.[26]

This study has some limitations. It was conducted in selective family practice clinics which may have underestimated the results due to under-reporting. Since these clinics are situated in urban areas of a single city, the participants may not represent the population at large. Moreover, the response rate was low in this study (77%) due to the sensitive nature of the issue. There is also a chance of selection bias. As this was a cross-sectional study, temporality or causality could not be established. Owing to the cultural and social restrictions, we did not enquire about sexual abuse. Moreover, due to sensitivity of the issue, there may have been under-reporting of such information. We had asked about the abuse ever in the lifetime; therefore, there is some possibility of recall bias as well. Hence, the actual burden of the problem may be higher than what we have reported. Finally, the questionnaire used in this study is not a validated tool, so there is a chance of information bias in the study.

Conclusion

In the light of the above findings, it is imperative that VAW be considered a major public health concern. The prevention of VAW can be achieved through comprehensive, multifaceted, and integrated approaches that require joint efforts by the government, policy-makers, social workers, religious scholars, educationalists, and public health practitioners. In this respect, the role of education is greatly emphasised in changing the perspectives of individuals and societies against IPV. Family physicians, being the first-line doctors and health care providers, should be well trained in screening for IPV and providing instantaneous care to the victims by catering to their psychological needs to prevent poor mental health outcomes.

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