Intimate Partner Violence in the Eastern Part of Iran: A Path Analysis of Risk Factors

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Intimate partner violence against women is a widespread phenomenon that is the cause of many deleterious health and social consequences. This study examines the impact of some risk factors on partner violence in the eastern region of Iran, using path analysis. The study used a population-based cross sectional study design. In this study, 251 married women who were referred to the health centers were selected through a proportionally stratified and randomized sampling method. Domestic violence was measured using Conflict Tactics Scale and the socio-demographic variable was assessed by a self-report questionnaire. Bayesian Structural Equation Modeling was used for evaluating the overall path analysis and the direct and indirect $p$-value was estimated by Bootstrap method. AMOS and SPSS software were used to analyze data.

The prevalence of overall violence was 78.1%, with 37.8% and 0.8% of women reporting minor and severe violence, respectively, and 39.8% reporting both severe and minor forms of violence. Psychological violence was the most common type of violence reported (66.5%). The model showed that husbands’ drug abuse and women’s higher level of education compared to their husbands were the first and second most important factors that significantly and directly influenced the violence. The women’s attitude, however, had the least effect on the violence. The findings indicated that higher educated women and women with addicted husbands were more likely to experience violence. Treating the drug abuse disorders, especially mental disorders, using behavioral couple’s therapy, as well as modifying certain traditional and cultural biases against women’s empowerment are suggested.

We express our deepest gratitude to the women who participated in this study and the health care centers that warmly cooperated with us during the study.

Ethical approval for this study was granted by the Research Ethics Board of the Medical Sciences University of Sabzevar.

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Intimate partner violence (IPV) against women is psychological, physical, or sexual violence perpetrated by an intimate partner, where the intimate relationship is sexual in nature (Estimating the costs, 2009). In 80 population-based surveys conducted in more than 50 countries by the World Health Organization (WHO), 10–60% of married or partnered women reported at least one instance of physical violence during their relationship (Ellsberg & Heise, 2005).

Not only does violence threaten women’s health and their social and economic well-being, it also has been considered as a principal hindrance in attaining developmental targets. Gender equality is recognized as a main factor in achieving all Millennium Development Goal (MDG). Violence against women impacts all the MDGs and provides a number of entry points for approaches to wiping out violence against women (WHO, 2005).

There are documents and evidence that reveal that governments spend a lot economically in respect to violence against women. For instance, in Uganda, the cost of domestic violence was estimated at 2.5 million US dollars in 2007 (Estimating the costs, 2009).

Studies in various countries have identified a range of factors that influence IPV (Leah & Stephen, 2010; Tanya et al., 2011; Tazeen, Nargis, Ingrid, & Gunilla, 2011). Socio-demographic variables have been frequently examined, but there is controversy concerning the direction of the association between risk factors and IPV. Some findings have indicated that poor socio-economic conditions, such as, a low level of education, unemployment, a tolerant attitude toward violence, and low
income, raise the possibility of IPV. The results of other studies are totally or partially in contrast with such findings and have illustrated that, for instance, high levels of education and employment status are associated with increased risk of IPV (Bas-suk, Dawson, & Unrington, 2006; Burazeri et al., 2005; Faramarinzi, Esmailzadeh, & Mosavi, 2005; Krishnan, 2005; Leah & Stephen, 2010).

These variables may be important components of a more comprehensive structural model of IPV. Identifying risk factors is one step in building models that test the complex interrelationships of variables that impact IPV. To model the complex interplay between variables that mediate and alter each other’s impact on IPV in real life, variables cannot be examined in isolation. Instead, multivariate approaches that allow simultaneous entry of variables and disconfirmation of sets of directional relationships are a better approximation to reality.

Domestic violence is a serious problem in Iran, just like in many other countries, and affects many Iranian households. According to a national survey on domestic violence (NSDV) against women conducted in 28 provinces of Iran (NSDV, 2001), there is a prevalence of 66.3% (Ghazi Tabatabai, Mosshen Tabrizi, & Marjai, 2004). Also, 30% of married women reported at least one act of serious physical violence during their marital life (Ghazi Tabatabai, Mosshen Tabrizi, & Marjai, 2004).

It is undeniable that in planning effective preventative strategies, identifying and knowing the risk factors of IPV—both those that are direct causes of IPV and those that point to common characteristics of victims and perpetrators—are essential. Unfortunately, in Iran, there are not enough studies about the etiologies and risk factors of IPV, especially in the form of a structural model. The present study principally examines the impact of some risk factors on IPV in the eastern region of Iran using path analysis.

METHODS

Study Design, Setting, and Participants

This population-based cross-sectional survey was conducted in Sabzevar, Iran, in 2010. Sabzevar is one of the intermediate cities of Khorasan Razavi province located in the eastern part of Iran. A proportional, randomized, stratified sampling method was applied to all 13 public health centers in Sabzevar. First, the city was divided into three economic classes; then health centers in each class were considered as a cluster from which some health centers were randomly selected. In each health center, individuals who met the inclusion criteria were randomly selected using a list of potential participants. The number of women in every cluster was calculated considering the total covered population ratio in each cluster.

Overall, 251 women met the inclusion criteria and were referred to these health centers and thereby participated in this study. Inclusion criteria included: aged between 18 to 60 years, residing in Sabzevar city, being the only wife of her husband, having at least a primary education, and having no previous marriage.

Measures

Intimate Partner Violence

This criterion was examined using the Revised Conflict Tactics Scale (CTS2). This questionnaire was designed for measuring both the extent to which partners in a dating, cohabiting, or marital relationship engage in psychological and physical attacks on each other, their use of reasoning or negotiation to deal with conflicts, and sexual coercion and physical injury from assaults by a partner. In the present study all of the scales except for the negotiation scale were used, that is, physical assault, psychological aggression, and sexual coercion and injury. These scales estimate frequency and intensity of domestic violence in the past year. Moreover, there is an item concerning violence that happened before the past year.

Altogether, 32 items were established, from which 19 items were related to severe abuse and 13 items were related to minor forms of abuse. The validity of the Persian version of this test was certified for content validity by a number of psychologists and psychiatrists and its reliability according to Cronbach’s coefficient alpha for all the scales together was 0.84.

Socio-Demographic Status

Socio-demographic variables included the wife and her husband’s age, education, and job status, the wife’s attitude toward intimate partner violence, and the husband’s drug abuse. In this study, drug abuse was assessed by the women and was considered as the husband using any type of illegal drug, such as opium, amphetamine, methadone, and so on.

These variables were collected by a self–reported questionnaire comprised of two parts with seven questions about demographics and nine questions about women’s attitudes toward domestic violence.

Women’s Attitudes toward Intimate Partner Violence

This researcher-made questionnaire included nine items for examining women’s attitudes towards physical, psychological, and sexual violence that were each measured on a 5-point Likert scale, ranging from 1 (completely disagree) to 5 (completely agree). These items included: “There is no problem if a husband beats his wife,” “The husband has a right to use force to make his wife have sex,” “The husband has the right to swear at or insult his wife whenever he is angry,” and “Only the husband has the right to legislate in family.” The content validity of this instrument was certified and the internal consistency (Cronbach’s alpha) was 0.90.

Data Analyses

Data was analyzed using descriptive and analytical statistics including Kruskal Wallis Test and Structural Equation Modeling (SEM). AMOS software was used for Structural Equation
Modeling (SEM) and SPSS was applied for descriptive and other analyses. Also, the significance level of 0.05 was considered.

Path Analysis or Structural Equation Modeling

The maximum likelihood, which is based on the assumption of multivariate normality, is the most popular method for estimating parameters and their standard deviation. Thus, the multivariate normality was calculated by the Mardia index and critical ratio. According to this, Mardia’s coefficient of multivariate kurtosis was 6.780 and the critical ratio obtained by dividing the sample coefficient by its standard error was 4.246. Both of these indexes were larger than 2.51. As a result, the assumption of multivariate normality was rejected.

Considering the rejection of assumption of normality, the multivariate path model, Bayesian Structural Equation Modeling was used for evaluating the overall presented path analysis and estimations were conducted based on the Markov Chain Monte Carlo (MCMC) algorithm. In this mode, the model evaluation criterion was posterior predictive p-value ranging from 0–1 with the acceptable quantity of 0.5 or close to it. The bootstrap method was used to estimate the direct and indirect p-value.

RESULTS

Socio-Demographic Status

In this study, the mean age of women and men was 26.9 (SD = 5.50) and 31.2 (SD = 6.20), respectively. A high percentage of women had a high school education and the vast majority of them (90.4%) were a housewife. Nearly half of the men (45.4%) had a primary level of education and a majority of them (67.3%) were self-employed. In addition, 15.9% of women stated that their husbands used illicit drugs.

Regarding women’s attitude toward violence, 35.5% of the participants chose the agree item in most of the questions. While a low percentage of women (8.8%) chose the disagree item only in half of the questions. In total, respondents showed a high level of acceptance of violence (Table 1).

Mean and Intensity of Intimate Partner Violence

Overall, 78.1% of women reported that they have experienced violence at least once or more from their husbands during the past year. Among these, 37.8% and 0.8% only reported minor and severe forms of violence, respectively, and 39.4% experienced both severe and minor forms of violence. Details about the intensity of violence are further described in Table 2.

To facilitate the comparison of different types of violence, the obtained averages of each question was calculated to be between 0 and 100. According to this, the most and the least intensity of violence are further described in Table 2.

The second and third most common violence were physical and injury violence with means of 6.3(SD = 12.8) and 3.8(SD = 8.7). Moreover, about two-thirds of respondents (66.5%) had experienced only psychological violence at least once in the past year, almost half of the respondents (47.4%) reported both sexual and psychological violence, and a minority of women (19.1%) reported physical violence and injury simultaneously.

Findings of Kruskal Wallis Test indicated that there is a significant negative relationship between husbands’ level of education and physical (p = .000), injury (p = .049), psychological (p = .015), and sexual violence (p = .001). On the contrary,

| Type of Violence | Minor Violence Only n (%) | Severe Violence Only n (%) | Both Types of Violence n (%)
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</thead>
<tbody>
<tr>
<td>Psychological</td>
<td>164 (65.3)</td>
<td>75 (29.9)</td>
<td>167 (66.5)</td>
</tr>
<tr>
<td>Sexual</td>
<td>137 (54.6)</td>
<td>33 (13.1)</td>
<td>143 (57)</td>
</tr>
<tr>
<td>Physical</td>
<td>77 (30.7)</td>
<td>62 (24.7)</td>
<td>88 (35.1)</td>
</tr>
<tr>
<td>Injury</td>
<td>49 (19.5)</td>
<td>28 (11.2)</td>
<td>60 (23.9)</td>
</tr>
<tr>
<td>Total</td>
<td>194 (77.3)</td>
<td>102 (40.6)</td>
<td>196 (78.1)</td>
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</table>
there is a significant negative relationship between wife’s level of education and only physical violence ($p = .002$).

We examined the relationship between the couple’s education inequality and violence. As Figure 1 illustrates, when both men and women have college degrees the lowest rate of violence is observed (Figure 1, dark blue). Even though men having a higher level of education proportional to women raises violence slightly, the greatest rate of violence is seen when women are more educated than their husbands (Figure 1, dark green).

Even though no significant relationship between a wife’s job status and different types of violence was found ($p = .042$), a significant negative relationship between the husband’s job status and physical and psychological violence was obtained ($p = .048$). Men who had official jobs had committed the lowest level of violence toward their wives, while men who were self-employed showed the highest level of violence.

Of note, there was a significant difference observed in the mean scores of all types of violence among addicted men and those who did not use any such drugs.

**Structural Equation Modeling of Association between Socio-Demographic Status and Domestic Violence**

Posterior predictive $p$-value in this model was 0.49, which indicates that this model is fit appropriately. According to this model, a wife’s attitude towards violence, drug abuse in the husband, a husband’s job, and educational nonconformity have significant and direct effects on violence. Among these variables, drug abuse in the husband and the wife’s attitude showed the most and the least direct effect, respectively (with Standardized Total Effects of 0.194 and 0.103, respectively). In this study, educational nonconformity was defined as a wife having a higher education level than her husband, which resulted in raising the rate of violence against women. The wife’s age and education level, however, had a significant and indirect effect on the husband’s violence; the wife’s attitude toward violence showed a significant and direct effect on violence (Figure 2).

Likewise, we tested this model based on four types of violence, separately, and Posterior predictive $p$-value was acceptable for all of them.

It is noticeable that in the psychological, physical, and injury violence model, drug abuse in men had the greatest direct effects on spouse violence and in the sexual violence model educational nonconformity had the greatest direct effects on spouse violence (Table 3).

**DISCUSSION**

**Extent of Spouse Violence**

Results of the current study showed that although the majority of women experienced violence at least once in their marital life, a minority of them reported severe forms of violence. The greatest percentage among different types of violence was allocated to psychological violence (66.5%). In spite of the fact that prevalence of violence in this survey is greater than some others, there are some similarities to other research.

For instance, in Mahaputra’s (2012) study of 215 women of South Asian origin in the US, prevalence of some forms of intimate partner violence was 38%. Psychological violence only (52%) and both psychological and sexual violence (16%) were the first and the second most prevalent violence among women, which is in line with the results of this study (Mahapatra, 2012).
TABLE 3

Standardized Direct, Indirect, and Overall Effects of Socio-Demographic Variables in Path Analysis of Types of Domestic Violence

<table>
<thead>
<tr>
<th>Socio-Demographic Variables</th>
<th>Types of Violence</th>
<th>Husband’s Age</th>
<th>Wife’s Age</th>
<th>Wife’s Education</th>
<th>Education Difference</th>
<th>Husband’s Occupation</th>
<th>Drug Abuse</th>
<th>Wife’s Attitude</th>
<th>Posterior Predictive p-value</th>
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<tr>
<td>Overall Violence Direct —</td>
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<td>Indirect –.036 (.051)*</td>
<td>−.033 (.006)</td>
<td>−.056 (.17)</td>
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<td>Total –.036 (.051)</td>
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<td>Sexual Violence Direct —</td>
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<td>Indirect −.039 (.051)</td>
<td>−.023 (.106)</td>
<td>−.044 (.150)</td>
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<td>Total −.039 (.051)</td>
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<td>Psychological Violence Direct —</td>
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<td>Indirect −.039 (.050)</td>
<td>−.025 (.045)</td>
<td>−.048 (.107)</td>
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<td>Total −.039 (.050)</td>
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<td>Physical Violence Direct —</td>
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<td>Indirect −.024 (.178)</td>
<td>−.041 (.004)</td>
<td>−.061 (.008)</td>
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<td>Total −.024 (.178)</td>
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<td>Injury Violence Direct —</td>
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<tr>
<td>Indirect −.027 (.050)</td>
<td>−.018 (.061)</td>
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<td>Total −.027 (.050)</td>
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*p-value (obtained from bootstrapping)

This table presents the results of path analysis of different types of violence and overall violence as final responses in the pathway model (Figure 2).
In another study conducted on 759 married women in urban areas of Karachi, the total prevalence of violence exposure was 87.1%. The greatest percentages of women reported psychological abuse in their lifetime (81.8%) and within the past year (83.6%). In addition, 43.9% of the sample reported all three forms of violence (physical, psychological, sexual) in their lifetime (Tazeen et al., 2011).

In several studies performed in this field in different parts of Iran, a wide rate of spouse violence was reported. In most of these studies, psychological/emotional violence was more prevalent than other types (Faramarzi et al., 2005; Ghahhari, Mazdarani, Khalilian, & Zarghami, 2008; Zand, 2008). In Sarei (Ghahhari, Mazdarani, Khalilian, & Zarghami, 2008), the prevalence rates of emotional, physical, and sexual violence were 92.2%, 73.5%, and 49.6%, respectively. Most of the participants stated that they suffered from a mild form of spouse abuse (Ghahhari et al., 2008).

Another study in Tehran (Zand, 2008) revealed that the majority of women (67.8%) were victim of psychological violence, 58.8% were victims of sexual violence, and 39.4% were victims of physical violence (Zand, 2008). In general, the results of different studies indicated that spousal violence is still a major social dilemma in Iran as well as other Islamic states. Although, domestic violence, especially spousal violence, has been entirely banned in Islam and there are some verses in the Koran that speak about protecting a wife’s rights (Koran 30:21), this high rate of violence against women can be the result of socio-cultural issues rather than religious backgrounds, patriarchal ideology rather than religious ideology.

In many parts of Iran, particularly in rural areas and small cities like Sabzevar, family structure is still based on the men’s dominance and authoritarian. Men are responsible for maintaining the family structure by whatever way they think is reasonable, including violence. Furthermore, in this part of Iran, violence against women is almost considered as a private, personal, and family issue and women avoid reporting violence exerted against them. This reaction hinders some appropriate interventions and ultimately leads to the increase of violence.

Drug Abuse and Violence against Women

In the current model, the results of path analysis indicate that drug abuse in men is the largest risk factor for three types of violence (psychological, physical, and injury violence) and overall violence. This finding is consistent with three other conceptual models, the spurious model, indirect effects model, and proximal effects model, which have been used to explain the relationship between alcohol use and drug abuse and violence against women. All of these models illustrate a remarkable link between these two variables, even after controlling for confounding variables (Fals-Stewart, Golden, & Schumacher, 2003; Leonard & Senchak, 1993; McCaulley, Kern, Kolodner, & Dill, 1995).

The best explanation for this is that drug abuse often results in stressful interpersonal relationships and, consequently, increases the probability of violence among couples. This may be due to psychopharmacologic influences on cognitive processing (Chermack & Taylor, 1995).

Other Socio-Demographic Variables

This model revealed that even though the wife’s attitude had a significant and direct effect on violence, predictive power of this variable was lower than other significant variables, including the type of the husband’s job and educational inequality. Women who were more educated than their husbands and whose husband worked in the private sector (self-employed) were more likely to experience violence.

Different results were obtained regarding the impact of socio-demographic factors on violence. Most studies suggest that poor socioeconomic status increases the risk of violence (Bassuk et al., 2006; Faramarzi et al., 2005; Leah & Stephen, 2010). Other studies disagree and indicate that socially empowered women are more likely to receive violence (Burazerie et al., 2005; Corinne, Suji, Tina, Rohini, & Suneta, 2009; Tanya et al., 2011). To be more precise, in some societies, not only does high level education not protect women from violence, but it elevates their vulnerability. In fact, in societies with patriarchal ideologies, men with lower socioeconomic status compared to their wives are more likely to be aggressive. It is argued that whenever men are in a lower social position, their self-esteem is decreased and they experience a sense of weakness and of not being successful as a man (Jewkes, 2002).

In many parts of Iran, for example Sabzevar city, there is a strong male authoritarianism in families but, in recent years, there has been an increased tendency for young women to achieve a high level of education. It is not surprising, therefore, that a great rate of violence against women may be observed.

CONCLUSION

The prevalence of spousal violence is high in Sabzevar, a small city in Iran. Women with a husband who abuses drugs and educated women are the most likely to experience violence. Therefore, attention to this problem is very crucial. First, it is necessary to treat the drug abuse disorder, especially mental disorders, by behavioral couple’s therapy, which can efficiently be effective in lessening the violence. Second, regarding educated women, it is essential that cultural and traditional biases and erroneous beliefs against women and their empowerment change using information, sensitization, and the education of men. Eventually, a multi-agency intervention by refugees, advocacy, outreach, and counseling services can be the best way to remedy IPV and mental health issues.

Declaration of interest: The authors alone are responsible for the content and writing of the paper.

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