Application of BASNEF Model in Prediction of Intimate Partner Violence (IPV) Against Women*

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Abstract

Although some studies have been carried out about Intimate Partner Violence (IPV) in Iran, little is still known about some predictors such as attitudes, subjective norms and other factors in IPV. Intimate partner violence refers to behaviors that harm physically, socially, and psychologically, including physical aggression, sexual coercion, psychological abuse, and controlling behaviors. In order to understand the factors that contribute to IPV with the ultimate goal of conducting primary prevention interventions, we examined one of the health education and health promotion models: the *BASNEF* (Belief, Attitudes, Subjective Norm, and Enabling Factors) model as a predictor of IPV against women who were referred to health centers. Data were collected through a questionnaire based on the BASNEF model and the Conflict Tactics Scales. Data were analyzed by descriptive and analytical statistics including Pearson Correlation and Structural Equation Modeling (SEM). Amos software was applied to Structural Equation Modeling. Descriptive and other analyses were performed by SPSS. The significance level was set at 0.05. The findings of the present study indicate that this model predicts IPV partly. Women's and men's education levels were related to violence: women with less than seven years education experienced more IPV and women with less educated husbands experienced more violence. Due to the importance of understanding the IPV for health edu-

cation and health promotion designs, more qualitative and quantitative studies are suggested.

Introduction

Intimate Partner Violence (IPV) and sexual violence are serious and widespread problems all around the world. According to a multi-country study, 15-71% of women reported experiencing physical and/or sexual violence by an intimate partner at some point in their lives (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006; World Health Organization [WHO], 2010a). Moreover, in Asian countries, 41-61% of respondents reported intimate, physical, and/or sexual, violence during their lifetime (Raj & Silverman, 2002 and Yoshihama, 1999, as cited in Yoshihama & Dabby, 2009). Regarding the prevalence of IPV in Iran, psychological violence, sexual abuse, and physical violence were reported in 82.6%, 43.7%, and 30.9% of respondents respectively (Vakili, Nadrian, Fathipoor, Boniadi, & Morowatisharifabad, 2010). Another study reported psychological violence in 81.4% and sexual abuse in 42.5% of respondents (Faramarzi, Esmailzadeh, & Mosavi, 2005). On the whole, 79.7% of women reported IPV (Nouri et al., 2012).

To clarify what is meant by violence and IPV in this study, here the definitions provided by the United Nation (UN) and WHO are presented. UN (2010) defines violence against women as a "any act of gender-based violence that results in, or is likely to result in, physical, sexual or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life." WHO (2012) defines IPV as a "behavior by an intimate partner or ex-partner that causes physical, sexual or psychological harm, including physical aggression, sexual coercion, psychological abuse and controlling behaviors" (WHO, 2012).

IPV has serious consequences from which we can trace mental, sexual and reproductive health problems for victims and their children. Also there is a high social cost, and headaches, back pain, abdominal pain,

fibromyalgia, gastrointestinal disorders, limited mobility and poor overall health, as well as both fatal and non-fatal injuries are results of IPV (WHO, 2011). Besides, violence against women is one of the limitations to attaining development goals, and the resulting economic costs are another factor that indicates the importance of violence against women's issues (International Center for Research on Women, 2007; WHO, 2011).

Education, acceptance of violence (attitude towards violence), community-level factors, traditional gender norms and social norms supportive of violence are some of the risk factors associated with intimate partner violence (Abramsky et al., 2011; Andersson, Ho-Foster, Mitchell, Scheepers, & Goldstein, 2007; WHO, 2010a). For example, Bangladesh has the world's second-highest rate of domestic violence against women, but older women believed that men have the right to abuse their wives and they said that "There is no domestic violence act in Bangladesh" (Akhter & Ward, 2004). Mahapatra (2012) indicated that women with more social support reported less abuse by their partners. A study on Koreans and Vietnamese in southern California showed that women had less pro-violent attitudes than men. 23.7% of Koreans and 13.4% of Vietnamese agreed that a husband should have the right to punish his wife, and 3.5% of Koreans and 10.2% Vietnamese agreed that "Some wives seem to ask for beatings from their husbands" (Kim-Goh & Baello, 2008). Another study by Kim-Goh and Baello (2008) indicated a negative relationship between education levels and attitudes toward IPV. In Bangladesh, a study on 1,200 women indicated that 67% of them had experienced domestic violence at sometime in their lives and 35% had experienced it in the past year. Participants believed women with more education are less vulnerable to IPV (Bates, Schuler, Islam, & Islam, 2004). All this evidence illustrates the importance of social factors like education, attitude, social norms, and traditional norms in IPV. Therefore, the importance of primary prevention of violence by intimate partners is often overshadowed by the importance of the large number of programs that, understandably, seek to deal with the immediate and prevalent results of violence (WHO, 2010b). According to WHO guidelines, "To achieve change at the population level, it is important to target societal-level factors in the primary prevention of intimate partner and sexual violence. Approaches include the enactment of legislation

and the development of supporting policies that protect women, addressing discrimination against women and helping to move the culture away from violence - thereby acting as a foundation for further prevention work" (WHO, 2010a, 2010b).

Understanding and identifying situations and settings in each country are important in preventing IPV, this fact is emphasized by WHO (2010a). In addition, Harvey, Garcia-Moreno, and Butchart (2007) stated that prevention of IPV requires understanding the circumstances and factors that influence IPV; changing individual knowledge, attitude, and behavior, enabling social environment, including non-violent social norms; and finally, responsive and protective community institutions. Several studies have been carried out in regard to IPV in Iran. Behnam, Moghadam Hoseini, and Soltanifar (2008) showed that 92.4%, 6.9%, and 7% of women reported very mild, mild, and moderate IPV, respectively. Another study showed that the prevalence of IPV before pregnancy was 51.7% and a woman's not having finished high school, living in an extended family, and her husband's not having finished high school were some risk factors of IPV (Mohammadhosseini, Sahraean, & Bahrami, 2010). Taherkhani, Mirmohammadali, Kazemnejad, and Arbabi (2010) found that the prevalence of domestic violence against women in the previous year was 88.3%. Moreover of the women who reported abuse; 25.4%, reported physical abuse, 87.3% reported emotional abuse and 39.1% reported sexual abuse (Taherkhani, Mirmohamadali, Kazemnejad, Arbabi, & Amelvalizade, 2009). Although there have been some studies in Iran that looked at violence, little is known about the role of attitude, subjective norms, and enabling factors related to IPV. As we can see through all of these factors in the BASNEF model, this model was chosen for studying IPV in Sabzevar, Iran.

BASNEF model

Beliefs, Attitudes, Subjective Norms, and Enabling Factors are the main constructs of the BASNEF model introduced by Hubley for understanding behaviors in health communication. A person's attitudes are the consequences of individual beliefs and the values about the consequences of certain behavior (Hubley, 1993, as cited in Ray, 2006). In fact, attitudes and beliefs are influenced by mass media, values, tradi-

tions, and experiences (Hubley, 2004, as cited in Story & TenBroek, 2005). "The subjective norms consists of the net balance of the perceived attitudes of other people concerning the act" (Hubley, 1998). Indeed, beliefs about influential people that cause certain behaviors make subjective norms (Hubley, 1993, as cited in Ray, 2006), and subjective norms are also influenced by family, community, social network, and culture. Enabling factors include health services, transportation, and employment (Hubley, 2004, as cited in Story & TenBroek, 2005). In the BASNEF model, in order to change behavior, the availability of enabling factors is necessary. Behavioral intention is formed from attitudes and subjective norms (Hubley, 1993, as cited in Ray, 2006). The BASNEF model constructs are summarized in figure 1.
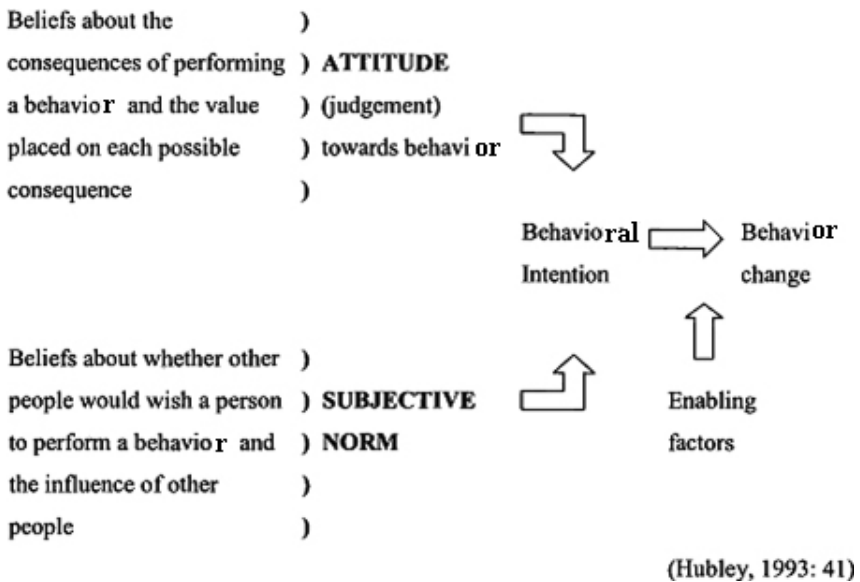
(Hubley, 1993, as cited in Heather, 2005)

Figure 1: BASNEF model for understanding behavior.

The BASNEF model is very useful in understanding the role of values and beliefs in health behavior (Hubley, 2004, as cited in Story & TenBroek, 2005). In the BASNEF model, an understanding of the influences on behavior can lead to interventions that go beyond family, com-

munity and national levels and consider both educational, social, economic and political changes (Hubley, 1993, as cited in Ray, 2006). Hubley (1998) states that the "BASNEF model can be used to design health education programs based on an understanding of the community."

Similar theories have been tested in IPV fields, but the BASNEF model has not been tested in this field. Kernsmith (2005) applied the "Theory of Planned Behavior" in a cross-sectional study to examine the relationship of attitudes toward behavior, social norms, and behavioral control with violence behavior in an intimate relationship. Moreover, the "Theory of Reasoned Action" applied by Natan (2011) in a correlational quantitative study to understand the factors that influence the decision of Ethiopian women to report domestic violence provides another tool to examine the relationship of societal attitudes to IPV. This study found that the decision to report violence was not influenced by women's attitudes, but rather by family and social welfare workers. Nabi, Southwell, and Hornik (2002) have investigated the beliefs related to domestic violence from a "Theory of Reasoned Action" perspective, but did not find any significant relationship between beliefs and behavior of violence. Tolman, Edleson, and Fendrich (1996) conducted a study that examined men's attitudes toward behavior, men's understanding of others' expectations about violence, and men's beliefs about perceived control of abusive behaviors in trying to predict men's intentions toward violence against women. In addition, they considered violence that women had reported. Their study provided that the "Theory of Planned Behavior" to stop men's violent behaviors had moderate predictive abilities regarding intent toward abusive behaviors. With respect to understanding IPV behaviors and importance of preventive approach in IPV, this study examined the application of the BASNEF model in predicting IPV to answer the main research question: "Can the attitudes, subjective norms, enabling factors, and the intention to go to a health center to seek help and ask for consultation predict IPV?"

Method

Design and sample

   This is an analytical descriptive study that was carried out in Sabzevar, Iran. Sabzevar is one of the cities of the Khorasan Razavi Province in the eastern part of Iran. Proportional randomized stratified sampling method was applied to all 13 public health centers in Sabzevar.

   Married women who were interested, were the only wife of their husbands, had at least primary education and had no previous marriages were included in this study.

   In Structural Equation Modeling (SEM) analysis, optimal and minimum sample sizes were 200 and 100, respectively. It was also noted that the ratio of sample size to the number of estimated parameters was 5:1 (Levine, Berenson, & Stephan, 1998). In this study there were 7 free parameters and the calculated sample size, using the minimum 5:1 ratio, was 70. The sample size of 210 was sufficient for SEM.

Data collection and instrument

   Data were collected through self-administered (reported) questionnaires. The questionnaire consisted of three parts: a demographics section, an IPV section and a questionnaire based on the BASNEF model.

   The demographic portion included eight questions about the age of the couple, their level of education, their jobs, number of children and the duration of their marital life.

   The questionnaire was based on the BASNEF model and was designed in 4 sections. The first section measured attitudes toward IPV using 12 items, such as "There is no problem if a husband beats his wife," with each item measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The second section measured subjective norms with four items, such as "How much do important people in your life think that your husband has the right to insult you?" with each item measured on a five-point Likert scale ranging from 1 (never) to 5 (a lot). The third section measured enabling factors using three items, such as "Health centers give me education and consultation if I have conflict with my husband," with each item scoring

1 (yes) or 0 (no or I don't know). The fourth section asked questions about intentions to go to health centers in the past year, such as "Have you intended to go any health center to seek help because of violence or insults from your husband in the past year?" in two items.

Three academic staff experts in the domestic violence, health education, and health promotion fields validated the questionnaire of the BASNEF model for content validity. Reliabilities of the attitudes, subjective norms, enabling factors, and intention scales were 0.72, 0.73, 0.60, 0.70, respectively.

IPV was measured by the Conflicts Tactics Scale (CTS). The *Conflict Tactics Scales,* or CTS2 (Straus, 1979), measures both the extent to which partners in a dating, cohabiting, or marital relationship engage in psychological and physical attacks on each other and also their use of reasoning or negotiation skills to deal with conflicts and sexual coercion and physical injury from assaults by a partner. It has 78 items that include: psychological (8 items), physical (12 items), negotiation (6 items), sexual (7 items) and physical injury (6 items). In this study, only 39 questions that measured a husband's violence against his wife were considered. The CTS is scored by adding together the midpoints for the response categories chosen by the participant. The midpoints are the same as the response category numbers for categories 0, 1, and 2. For category 3 (3-5 times) the midpoint is 4, for category 4 (6-10 times) it is 8, for category 5 (11-20 times) it is 15, and for category 6 (more than 20 times in the past year), it is 25. The reliability of the questionnaire was determined by Cronbach's alpha and internal consistency for this measure was 0.86. Data were analyzed by descriptive and analytical statistics including Pearson Correlation and Structural Equation Modeling (SEM). Amos software was applied for Structural Equation Modeling. Descriptive and other analyses were performed by SPSS. The significance level was considered 0.05.

Structural Equation Modeling

The most common method for parameter estimates and their standard deviation is maximum likelihood, which is based on the assumptions of multivariate normality; therefore the Mrdya index and critical ratio were used to determine the multivariate normality.

The Critical Ratio obtained by dividing the sample coefficient by its standard error was 7.832 and contains Mardia's coefficient of multi-variate kurtosis as 9.048; these two indices were greater than 2.58, and therefore the multivariate *normality* was rejected. Rejection of the as-sumption of multivariate normality, Bayesian Structural Equation Modeling, was used for *overall* path model evaluation in which pre-sentation of the estimation algorithm was based on Markov Chain Monte Carlo (MCMC). Posterior Predictive p-value is the criterion for evaluating the model varies from zero to one, and the value close to 0.5 is acceptable. The bootstrap was used to estimate the direct and in-direct P-value.

Results

Based on the results taken from the questionnaires, demographics var-iables are presented in table 1. The Chi-square test did not show any significant relationship between IPV and women's job, whether she was a housewife or worked out of the home ($p > 0.05$). According to Kruskal Wallis test, there was a relationship between IPV and the level of women's education ($p = 0.007$), as well as the level of husband's edu-cation and IPV ($p = 0.03$).

For the five types of IPV, 76.7% psychological violence, 97.1% nego-tiation violence, 28.1% injury violence, 63.8% sexual violence and 45.2% physical violence were reported. However, among 207 (98.6%) women who reported violence, 40 respondents (19%), 25 women (13.3%) expe-rienced all types and only one type of violence, respectively. Different intensities of IPV are presented in chart 1. Table 2 shows the correla-tions of the study variables. All of the predictor variables showed sig-nificant correlations with IPV measures, except enabling factors.

Structural Equation Modeling

Standardized total effects of intention and subjective norms were 0.280 and 0.216, respectively ($p = 0.01$). Attitudes and enabling factors total effects were not statistically significant. Posterior predictive p-value in the BASNEF model was 0.49, which is acceptable.

Figure 2 shows the model according to standardized direct effects,

24% and 28% of IPV variation explained by subjective norms and intention, respectively ($p = 0.01$).
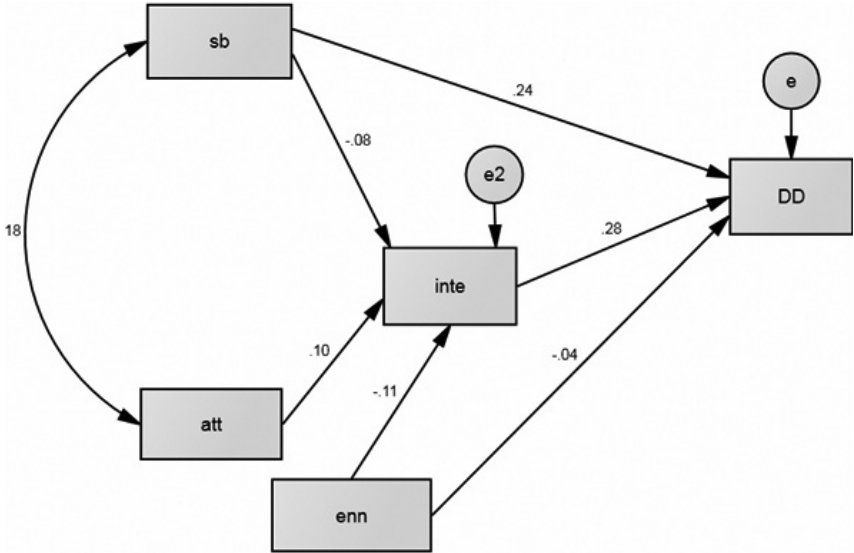
Sb: subjective norms, att: attitudes, enn: enabling factors, inte: intention, DD: IPV

Figure 2: Path analysis of BASNEF model with Standardized Direct Effects

Table 1

Descriptive Statistics for demographics Variables

	Descriptive variables				
	Women age	Husband age	Marital duration	Number of children	
Number Mean(SD)	210 26.86 (5.53)	210 31.22(6.20)	210 7(5.5)	210 1.42(.89)	
	Descriptive variables				
	Women education			Woman's employment	
	Lower than middle *school 53(25.2)	High school diploma ** 108(51.2)	University 23.6(49)	Housewife 188(89.8%)	Employee 22(10.2%)
Frequency (%)					

* Middle school: literacy up to 7 years of official education

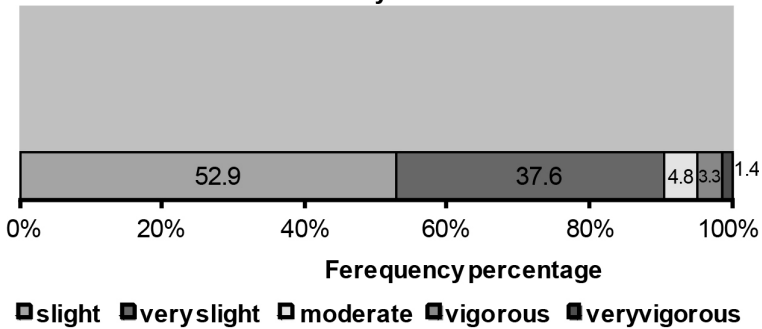** High school diploma: literacy between 7 to 12 years of official education

Table 2

Pearson Correlations among the variables of BASNEF model.

	IPV	Subjective norms	Attitudes	Enabling factors
Subjective norms	0.218**			
Attitudes	0.170*	0.183**		
Enabling factors	-.057	0.037	0.012	
Intention to go health centers	0.269**	-0.061	0.083	-0.107

  * Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed)

Chart1: The frequency percentage of domestic violence intensity

| 52.9 | 37.6 | 4.8 | 3.3 | 1.4 |

0%   20%   40%   60%   80%   100%

Ferequency percentage

☐ slight ■ very slight ☐ moderate ■ vigorous ■ very vigorous

Discussion

This study examined the application of the BASNEF model, including attitudes toward IPV, subjective norms, intention to go to health centers and enabling factors in predication of IPV. The findings of the present study indicate that this model predicts IPV only partially. One study about the theory of planned behavior application showed that this model was not appropriate for women, but appropriate for men (Kernsmith, 2005). Similarly, Natan (2011) found that the theory of reasoned action predicted violence partially, and another study found that beliefs related to IPV correlated with the intention to act out violent behaviors, but rarely with reported actions (Nabi et al., 2002). Tolman et al. (1996) concluded that theory of planned behavior had a modest power to predict the intention of abuse and subsequent abusive behavior. A study

of the Transtheoretical model (TTM) showed that the constructs of this model did not apply in IPV treatment programs very well (Brodeur, Rondeau, Brochu, Lindsay, & Phelps, 2006). The results of all of these studies partly support the findings of the present study.

Although in our study women's attitudes were correlated with IPV; in final, the SEM model subjective norms and intention to go to health centers, predicted IPV. In another study, attitudes toward behavior did not predict violent behaviors (Tolman et al. 1996). Nabi et al. (2002) found a correlation between beliefs and intention, but not with violent behaviors. In Tolman et al. (1996), a study from TPB variables, perceived control seemed to be the most important factor in understanding violent behavioral intention. Natan (2011) indicated that the intention of women in reporting domestic violence was not supported by women's attitudes and beliefs. In contrast, Abramsky et al. (2011) found that "In almost all sites, women who had attitudes supportive of a husband beating his wife had increased odds of IPV."

In our study, subjective norms and intention predicted IPV. This finding is congruent with Natan (2011), which found that the intention of reporting domestic violence was supported by family and social welfare workers [subjective norms]. Indeed, traditional gender roles and social norms are supportive factors of violence (WHO, 2010a). Caetano, Ramisetty-Mikler, and Harris (2010) did not show a correlation between social control and intimate violence partners. Worden and Carlson (2005) found that most people think that the roots of domestic violence are not in the society, but rather in families and individual factors. Similarly, Yount and Li (2010) showed a weak association between gender stratification and norms with physical violence. It seems that all these differences about beliefs in the role of social norms and subjective norms depend on the social context in the countries in which the studies were done.

Low level of education is, however, the most consistent factor associated with both the perpetrating and experiencing intimate partner violence and sexual violence across studies (WHO, 2010a). In our study, the level of women and men's education was related with domestic violence. Women with less than seven years of education experienced more IPV and women with husbands with lower education experienced more violence. This finding agrees with the results of studies conducted

by Mohammadhosseini et al. (2010), Yount and Li (2010), and WHO (2010a); but in Mahapatra (2012), despite a highly educated sample, a high level of violence was reported. In the current study, negotiation violence, psychological violence, sexual violence, physical violence, and injury violence were reported respectively. Although the rates of IPV were high, that intensity of reported violence was quite slight. Also we noticed that the CTS scale considers even slight conflicts - for example, "insisting on sexual relationship." It can be claimed that these kinds of IPV are conflicts that might be solved with education and consultation at individual and community settings in cultural context as well as by influencing social norms. Our finding is congruent with Mahapatra (2012) , who showed a breakdown of IPV consisting of 94% of psychological abuse, 33% of sexual abuse, 27% of physical abuse, and 11% of injury. The types of abuse that women reported in Iranian studies indicated that physical, psychological, injury and sexual violence, respectively, were the most observed kind of violence that women reported (Mohammadkhani, Rezai Dogahe, Mohammadi, & Azadmehr, 2008). Another study (Salehi & Mehralian, 2006) found that psychological violence, physical violence, and sexual violence were the more reported forms of violence, respectively. In addition, Vakili et al. (2010) reported psychological violence, sexual abuse and physical violence as 82.6%, 43.7%, 30.9%, respectively. These rates of violence are near to those obtained in this study.

Although most of the respondents reported domestic violence, the intensity of domestic violence was not especially high and almost 92% of respondents reported quite slight intensity. Jafarnejad, Moghadam Hoseini, Soltanifar, & Ebrahimzadeh (2009) found 89.2% of violence during pregnancy was modest. This finding supports a study in Egypt claiming that high percentages of women reported domestic physical violence ever (33%) and incidents of minor physical violence were reported more than severe physical violence (Yount & Li, 2010). Also Mahapatra (2012) showed minor forms of abuse in 65% of participants.

Due to the low intensity of IPV in our study, education and consultation about conflict resolution and life skills especially in primary prevention are suggested. In addition, based on the Iranian context, in the current study, the role of subjective norms is quite important. IPV is complex; to understand this phenomenon, more quantitative and qual-

itative studies are necessary to develop local models and preventive approaches to prevent IPV.

Limitations

There are some limitations that need to be acknowledged and addressed regarding the present study. First, this study was conducted only on women, so a comparative study about committing violence against men is suggested. Second, although we would have preferred to do this study through interviews, this was not possible due to organizational limitations. Third, having at least primary education was one of eligible factors in the current study (because participants needed to complete questionnaires); therefore, this study did not cover the data of IPV in illiterate women.

Also there were some limitations with the CST scale. First, according to the CTS, the respondents were asked about frequency of violence during only the last twelve months, so the questionnaire failed to detect ongoing systematic patterns of abuse. Second, the CTS scale focused on specific acts and therefore did not provide information about the context in which items occurred.

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