GENDER EQUALITY DEPARTMENT
MINISTRY OF LABOUR - INVALIDS AND SOCIAL AFFAIRS

WHY DO SOME WOMEN EXPERIENCE MORE VIOLENCE BY HUSBANDS THAN OTHERS?

FULL REPORT

Results of the analysis of risk factors for violence by husbands

November 2014

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Foreword

Violence against women (VAW) is symptomatic for deep-rooted gender inequality that is prevalent in most societies, including Viet Nam. Violence against women jeopardizes the autonomy of women to claim and to enjoy their human rights. It also severely impacts upon women's health, in particular women's reproductive health, and often results in physical and psychological trauma, including unwanted pregnancies and HIV/AIDS. According to the 2010 national study on domestic violence in Viet Nam, 58% of ever-married women experienced at least one form of physical, sexual and emotional violence from their husbands at some point in their lifetime (GSO, 2010). However, 87% of victims did not seek help from public services. The effects of gender-based violence (GBV) in Viet Nam are not limited to individuals and families. GBV is also negatively affecting Viet Nam's economic development. The cost of GBV in the form of domestic violence (DV) against women in Viet Nam, in out-of-pocket expenditures and lost earnings, represents nearly 1.4% of national gross domestic product (UN, 2012).

Viet Nam has a quite advanced legal framework, which includes the Gender Equality Law, the Law on Domestic Violence Prevention and Control and related policies to promote gender equality and address domestic violence. However, the traditional patriarchal system remains powerful and strongly impacts on women's lives. Women are expected to be subordinate and "belong" to their husbands and in-laws after marriage. Women are frequently subjected to physical, psychological and emotional threats, but within marriage, violence is rarely recognized because of culturally-defined gender expectations, gender norms, moral standards related to gender issues, as well as patriarchal ideology; all this makes violence against women in their homes 'invisible'. Therefore, while having an equal de jure protection, women's de-facto status is lower than that of men, reinforced by dominant societal expectations. All of the above factors have contributed to a situation in which domination of men and violence against women seem natural and inevitable to women.

In 2013, the UNFPA, in partnership with GSO and MOLISA, commissioned a secondary analysis of data from the National Study on Domestic Violence, which was conducted by GSO in 2010. This report should be seen as a supplement, or 'Part 2', of the report *"Keeping silent is dying" - Results from the National Study on Domestic Violence against Women in Viet Nam*. The study intends to shed some more light on the reasons why in the same cultural context, some women experience more violence by their husbands than do others. This understanding should help the government design more effective interventions and develop necessary policies to address VAW in a more comprehensive manner.

As VAW is one of the key national indicators to monitor the implementation of the Convention on the Elimination of All Forms of Discrimination against Women, the UNFPA in Viet Nam commits to continue supporting the Government of Viet Nam in its efforts to address VAW, in close partnership with development and civil society partners. We hope this paper will contribute to improved policies, programmes and support systems to help women who are experiencing violence or are at risk of being exposed to violence. Indeed, we need more of this type of evidence to fully understand the root causes of

VAW and devise the ways to stop this severe form of human rights violation and gender-based discrimination. With the evidence in our hands, we must work together to realize a society where no woman has to live in the fear of violence.

Arthur Erken

UNFPA Representative in Viet Nam

Acknowledgements

After the results of *The National Study on Domestic Violence against Women in Viet Nam,* conducted by the General Statistics Office (GSO) of Viet Nam, were launched in 2010, some available data from this study remained to be analyzed.

In response to the recommendations of the 2010 Study report *Keeping silent is dying - Results from the National Study on Domestic Violence against Women in Viet Nam*, the UNFPA Viet Nam Country Office commissioned further secondary analysis to provide a better understanding of factors associated with intimate partner violence, as a follow-up on the first report.

This follow-up study was conducted and this report written up by Dr. Henrica A.F.M. Jansen with Ms. Nguyen Thi Viet Nga and Ms. Hoang Tu Anh. Dr. Jansen was responsible for the quantitative data analysis which she conducted together with Ms. Nguyen Thi Viet Nga. Ms. Hoang Tu Anh was responsible for the qualitative information presented in this report. Other supporting tasks were undertaken by Ms. Nguyen Duc Hanh. Computation of the socio-economic status index was conducted by Ms. Seema Vyas.

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A summary report with the same title as this technical report is also available. The summary report is meant for a wider general audience and reflects the main findings and conclusions without using statistics.

Acronyms and abbreviations

AECID	Agency for International Development Cooperation (Spain)
AOR	Adjusted odds ratio
CCIHP	Centre for Creative Initiatives in Health and Population
CI	Confidence interval
COR	Crude odds ratio
DV	Domestic violence
GBV	Gender-based violence
GSO	General Statistics Office
IPV	Intimate partner violence
JPGE	UN-Government of Viet Nam Joint Programme on Gender Equality
MDG-F	Millennium Development Goals Achievement Fund
MOLISA	Ministry of Labour, Invalids and Social Affairs
NGO	Non-governmental organization
PCA	Principal components analysis
SES	Socio-economic status
UN	United Nations
UNFPA	United Nations Population Fund
VAW	Violence against women
WHO	World Health Organization

Executive summary

Background

The National Study on Domestic Violence against Women in Viet Nam was implemented and managed by the General Statistics Office (GSO) in cooperation with the Ha Noi-based Non-governmental organization (NGO) Center for Creative Initiatives in Health and Population (CCIHP), with technical assistance from the World Health Organization (WHO).

The research in this National Study consisted of a quantitative component (a population-based survey of 4,838 women interviewed by specially-trained interviewers) and a qualitative component (in-depth interviews and focus group discussions) and adhered to ethical and safety recommendations formulated by WHO for research on violence against women.

The 2010 report of this study, entitled *Keeping silent is dying - Results from the National Study on Domestic Violence against Women in Viet Nam*, provided for the first time detailed nationwide and regional information on the prevalence, frequency and types of violence against women, health consequences and coping strategies, as well as attitudes and perceptions among women and men.

As follow-up to the identified need for more analysis to contribute to policy review and development, the UNFPA country office supported GSO and MOLISA to conduct the secondary analysis of risk and protective factors[1] and accompanying further analysis of the qualitative data that is presented here. While some smaller-scale studies in Viet Nam have looked at associated factors, the present report explores, for the first time in Viet Nam, the factors that are associated with partner violence[2] in the 12 months preceding the survey, using national data.

Statistical modelling techniques are used for exploring a large set of factors at the individual, relationship/family and community levels to determine if they are statistically associated with the experience of physical and/or sexual intimate partner violence in the past 12 months (also referred to as "current violence").

The variables used in this analysis were chosen based on the existing literature and theoretical frameworks for domestic violence and partner violence, as well as variables

1. Risk and protective factors in the context of statistical analysis do not imply causality. Statistical analysis is able to show whether factors of interest have statistical associations with a certain outcome such as the experience of violence by husband. The analysis identifies which groups of women are more or less likely to experience partner violence. Here, something is called a risk factor if we find that women with the factor are more likely to experience partner violence than women without the factor. Conversely, it is called a protective factor if it is found that women with the factor are less likely to suffer partner violence compared to women without the factor. Risk factors are also often called "predictors" or "associated factors".
2. Partner violence is the word that is used in the international literature for violence perpetrated by the partner in a couple relationship. In the study in Viet Nam, 99% of partners were husbands and thus when the word 'partner violence' is used, it should be understood as 'violence by a husband or ex-husband against his wife'.

that were hypothesized to be important in the Vietnamese context. The report further uses qualitative data to qualify, explain or reinforce the interpretation. The results have the aim to inform prevention and response interventions.

How was violence against women by husbands in the past 12 months measured?

A woman is considered to have experienced recent physical or sexual violence by a husband if she reported to have experienced one or more of the acts below at least once in the 12 months preceding the interview.

Physical violence by husband

a) Slapped or threw something at her that could hurt her
b) Pushed/shoved her or pulled her hair
c) Hit her with a fist or something else that could hurt her
d) Kicked, dragged or beat her up
e) Choked or burned her on purpose
f) Threatened to use or actually used a gun, knife or other weapon against her

Sexual violence by husband

a) Physically forced her to have sexual intercourse when she did not want to
b) She had sexual intercourse when she did not want to because she was afraid of what her husband might do if she did not
c) He forced her to do something sexual that she found degrading or humiliating

In the whole of Viet Nam, 9% of ever-married women, or almost one in ten women, reported to have experienced physical or sexual violence by their husband in the past 12 months.

How was the analysis in this report conducted?

The statistical analysis to determine risk and protective factors uses survey data from 3,427 women, 433 whose current or most recent partner has been violent in the past 12 months and 2,994 women who have not reported any partner violence in their lifetime.

Univariate and multivariate logistic regression analyses were used to identify factors that remained independently associated with partner violence and that thus could be considered predictors of partner violence.

The 40 factors included in the analyses were women's socio-demographic characteristics (7 variables), women's other experiences with violence (6 variables), women's attitudes towards violence (1 variable), partners' socio-demographic characteristics (3 variables), partners' behaviour (4 variables), partners' childhood experiences with violence (2 variables), couple characteristics (4 variables), women's children (2 variables), household assets index (1 variable), family support/social capital (8 variables) and geographic aspects (2 variables).

Some of these factors describe events in the past (e.g. childhood experience with violence), while other factors describe the current situation (e.g. household assets index, husband's behaviour).

Results of the statistical analysis

The results show that of the 40 potential risk factors considered, the following factors are statistically significant associated with current physical or sexual violence by a woman's husband (expressed as risk or protective factors) after controlling for age, geographic region, urban/rural and other factors that were associated in the intermediate logistic regression models.

Woman's factors

- Women with higher than secondary education are less likely to experience violence by husbands
- Women who experienced sexual violence since age 15 by perpetrators other than their husbands are more likely to suffer violence by husbands
- Women who experienced sexual violence as a child below age 15 are more likely to suffer violence by husbands
- Women whose first sexual experience was coerced/forced have a higher risk of violence by husbands compared to those whose first sexual experience was wanted (i.e. consensual)
- Women whose mother was beaten by mother's husband have a higher risk of violence by husbands

Husband's factors

- Women with husbands age 30 and older are less likely to experience violence
- Women whose husbands drink alcohol are more likely to experience violence
- Women whose husbands fight with other men are more likely to experience violence
- Women whose husbands have extramarital relationships are more likely to experience violence
- Women whose husbands' mothers have been abused have a higher risk of violence
- Women whose husbands were abused as children have a higher risk of violence

Relationship factors:

- Women who contribute more than their husbands financially to household have an increased risk of violence
- Women without children have a lower risk of violence
- Women with a high socio-economic index are relatively protected against violence by their husband compared to those with a low index

Geographical characteristics

- Women in three regions (Red River Delta, Central Highlands and the Southeast) are at a higher risk of partner violence compared to those in other regions.

Other characteristics that were tested in the statistical models, including women's attitudes on violence, other relationship factors and women's social capital were only weakly associated or not associated with the experience of partner violence when accounting for all other factors.

In view of the context of Viet Nam, the hypothesis that partner violence could be affected by son preference was tested. However, this study did not provide evidence that women with only daughters have a higher risk of current partner violence than women with only sons; the study in fact suggests that both groups have the same risk of violence.

Corroborating qualitative data

The qualitative narrative data confirm the above-mentioned findings from the statistical analysis. In addition, qualitative narratives suggest that a woman has a higher risk of violence when she normalizes the violence and believes that it is part of her personal fate or a woman's fate in general. In contrast, women who voice out and seek support from outside of the family seem better able to stop or escape the violent situation. The data also suggest that men who have better anger management skills and who are not influenced by peer comments on their wife and their relationship are better able to avoid or reduce their violence acts. The qualitative findings show that communication skills and capacity to understand one another are important protective factors. Couples who can share concerns in life have less conflicts and incidents of violence.

The attitudes of parents, especially the women's parents-in-law, towards violence are important. Women are at greater risk of violence when her in-laws support patriarchy (gia trưởng) and consider violent behaviour a necessary part of patriarchal performance. Finally, qualitative findings suggest that outsiders' attitudes and willingness to intervene are important factors to stop violence. In particular, positive and appropriate responses of authorities such as police towards incidents of violence help improve the situation in most of the cases.

Conclusions

Overall, the study findings support existing theories on how underlying gender inequalities and power imbalance between women and men are fundamental causes of violence against women. The findings go further to show that no single structural underlying factor at individ-ual, relationship or community level explains most of the violence, because looking at all the factors at the same time shows that a good number remain strongly associated with violence. This suggests that although stopping one factor, such as alcohol abuse, will reduce the amount of violence, it likely will not stop the problem altogether.

A number of factors associated with violence by husbands are related to power imbalances between husband and wife and forms of male behaviour that support male power and

gender inequalities, such as husbands engaging in extra-marital relationships and/or fighting with other men. Alcohol use by the husband also greatly increases a woman's risk of violence. Finally, the findings also strongly suggest that violence 'runs in families', or that it is learned across generations, as the results show that having experienced violence in the childhood home has a long-term effect on relationships later in life, making women more at risk of vio-lence by husbands and men more at risk of becoming wife abusers.

These findings points towards the urgent need for interventions with families (especially those with young children), schools and communities, and further suggest that interventions should include men and boys.

Summary of recommendations

1. Focus on prevention as one of the principles of addressing gender-based violence
2. Promote advocacy for gender equality and for prevention of gender-based violence, such as by raising awareness among men and women, especially young couples, of risk factors for violence against women among
3. Work with communities to remove the stigma and silence around gender-based vio-lence by husbands and to change social norms related to the acceptability of violence and the subordination of women
4. Work with men and boys to promote a model of manhood that is oriented towards eq-uality and respect
5. Address child abuse and promote healthy families and violence-free environments for children
6. Integrate combatting violence against women and gender-based violence into other health and economic programmes using intersectoral approaches
7. Enhance the capacities and accountability of social associations, agencies, organiza-tions and the State to respond to gender-based violence
8. While prevention policies and interventions are needed nationwide, in the event of funding constraints, pilot projects/programmes should be prioritized first in the re-gions where women are at the highest risk of violence (the Central Highlands, the Southeast and the Red River Delta).

Aidan Dockery/UN Viet Nam

1. Introduction

Gender-based violence (GBV) refers to violence that is directed against a person on the basis of their gender roles and relationships in society. It reflects and reinforces inequalities between men and women. GBV and violence against women (VAW) are often used interchangeably as most gender-based violence is inflicted by men against women and girls. VAW takes many forms, such as domestic violence (DV), sexual assault, rape, trafficking and sexual harassment at school or in the workplace. Studies around the world show that VAW is most often perpetrated by male intimate partners: current and or previous husbands; cohabiting partners; or dating partners (Garcia-Moreno, Jansen et al. 2005, Heise, Ellsberg et al. 1999, Jewkes 2002). The violence perpetrated by these intimate partners is often called intimate partner violence (IPV).

In 2010, under the Government-UN Joint Programme on Gender Equality in Viet Nam (funded by MDG-F) the General Statistics Office of Viet Nam conducted the first-ever National Study on Domestic Violence against Women in Viet Nam with technical support from WHO.

The research methodology replicated that developed for the *World Health Organization Multi-country Study on Women's Health and Domestic Violence*, which uses a standardized questionnaire and methodology, ensuring comparability of data with other settings, with full consideration for ethics and safety. The study consisted of a quantitative component (a popu-lation-based survey) and a qualitative component (in-depth interviews and focus group dis-cussions).

The National Study on Domestic Violence against Women in Viet Nam sought, for the first time, to obtain detailed nationwide information about:

(1) the prevalence, frequency and types of the different forms of violence against women and children;

(2) the extent to which domestic violence by husbands is associated with a range of health and other outcomes;

(3) factors that may either protect or put women at risk of domestic violence by husbands; and

(4) strategies and services that women use to cope with domestic violence by husbands, perceptions about this violence and how much women know about their legal rights.

The organization of the study, the questionnaire and operational definitions are given in Annex 1.

For the quantitative component (the survey), 4,838 women were interviewed throughout the country between December 2009 and February 2010, using structured face-to-face interviews conducted in full privacy (Jansen, Watts et al. 2004). The qualitative component took place in April 2010 in the provinces of Ha Noi, Hue and Ben Tre and consisted of 30 in-depth interviews and four focus group discussions.

The individual response rate in the survey was relatively high: 78% of the invited women came to the location of the interview and completed the interview. Of the 4,838 interviews, 23 (0.5%) were not completed. Of these 4,815 women with completed interviews, 4,535 were ever-partnered. Of these, 99% were ever-married and only 1% reported cohabitation or dating without marriage. 95% of the ever-partnered women had lived with one partner only[3].

The results of the National Study show that one in three (34%) of ever-married women experienced an act of physical or sexual violence by their husbands at least once in their lifetime and 9% of ever-married women experienced such violence in the 12 months preceding to the interview. When emotional violence is included, more than half (58%) of women reported to have ever experienced at least one of the three forms of violence (physical, sexual or emotional) by a partner at some time in their life and 27% or women reported at least one of these forms of violence in the 12 months preceding the interview.

Like in many other countries, physical and sexual violence by husbands strongly overlap. More women experienced physical violence (31.4%) than sexual violence (9.9%), and most women who experienced sexual violence also reported physical violence. Nationwide, just 3% of women reported suffering solely sexual violence, while 6.9% reported both physical and sexual violence and 24.5% reported physical violence alone.

As in many other countries, in Viet Nam, violence by husbands was much more common for women than violence by perpetrators other than their partner (hereafter referred to as "non-partners"). About 10% of women reported physical violence by non-partners since they were 15 years old and about 2% reported sexual violence since they were 15 years old, whereas 3% reported sexual abuse before they were 15 years old. Perpetrators of non-partner physical violence were mainly male family members whereas for sexual violence the majority of women reported that perpetrators were "strangers" (both for sexual violence before and since age 15) or boyfriends (for sexual violence since age 15).

The first report also showed overwhelmingly that partner violence was associated with a wide range of negative health outcomes for women and behavioural problems in their children. It further became clear the partner violence is a hidden issue that many women do not talk about it because they think it is "normal" and that women should tolerate and endure what is happening to them for the sake of family harmony (General Statistics Office 2010).

One of the key objectives of the National Study on Domestic Violence against Women in Viet Nam was to identify risk factors associated with the prevalence of intimate partner violence in the country, characteristics of victims, perpetrators and their relationship. This analysis, however, was not included in the first report.

In the recommendations of the first report, a number of areas for further analysis were included. The following areas for analysis that were specifically mentioned therein will be included as part of the risk factor analysis in this report. All these topics warrant exploring if the factor of interest is associated with a higher or lower prevalence of violence.

3. While the 1% of partnered women who were cohabiting or dating have been included in the results of this report, for practical reasons we generally chose to use the terms "ever-married" and "ever-partnered women interchangeably. This also applies to the use of "husbands" and "partners".

- analysis of violence by socio-economic status
- analysis of the relationship between partner characteristics and the experience of partner violence
- analysis of relationship between the age of marriage and violence
- analysis of age at first sex and of the nature of the first sexual experience and, for each of these, their relation to violence later in life

The analysis in this report was made possible under the framework of the UN in Viet Nam One Plan 2012-2016 as a part of UNFPA support to the Ministry of Labour, Invalids and Social Affairs (MOLISA) to provide more evidence on gaps in the policy response to gender-based violence beyond the domestic domain to support advocacy for the development of inclusive social protection policies.

This report will explore a number of factors at the individual, relationship, family and community levels to determine if they are statistically associated with physical and/or sexual violence by husbands. Qualitative data is also considered for triangulation.

2. Theoretical framework

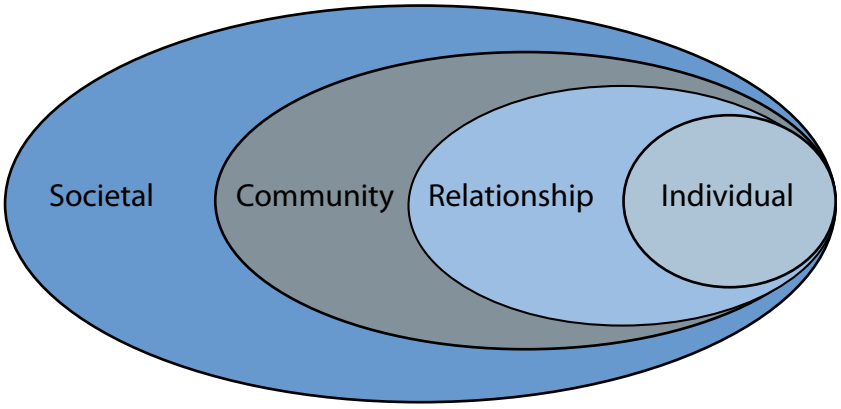
The potential risk factors to be considered were chosen based on existing literature and domestic violence-related theories. The most relevant theoretical frameworks describing factors influencing VAW by husbands or intimate partners include the ecological framework, the social learning theory, the resource theory and the status conflict theory. The ecological framework is the umbrella theory for this study and this framework was underlying the design of the survey questionnaire for the study. Factors mentioned in social learning theory, resource theory and status conflict theory are actually are also addressed by the ecological framework. These three other theories are briefly described below as well as their implications for the analysis used.

Ecological framework

The ecological framework (Heise 1998) has been used as an umbrella framework in the *WHO Multi-country Study on Women's Health and Domestic Violence against Women* (WHO 2002, Garcia-Moreno, Jansen et al. 2005) and in the Viet Nam National Survey on DVAW. This theoretical framework highlights the multifaceted and multi-level aetiology of VAW and domestic violence.

These levels are, from inside to outside, the individual, the relationship and family, the community and societal, as presented in Figure 1.

Figure 1. Ecological model of factors associated with intimate partner violence



According to the framework, the factors that influence violence operate and interact at multiple levels.

- *Individual factors:* e.g. for women (victims), having witnessed violence among parents or caregivers in childhood; for men (perpetrators), having witnessed domestic violence in childhood, having experienced physical or sexual violence in childhood, having an absent or rejecting father or the use of alcohol.
- *Relational factors:* this refers to the immediate context of violence, interaction between the couple and with the family; the family structure and support network,

male dominance in the family that manifests through the role of men in making family decisions or male control of wealth in the family.

- *Community*: this refers to formal and informal social structures that influence the functioning of people in their direct social context. These factors are, for example, socio-economic status of the community, a context of unemployment or crime, norms and tolerance for violence and support services.
- *Larger society/macro-social level:* this refers to the societal and cultural values and beliefs, which influence the other three components in the ecological framework. They include gender inequality, levels of overall violence and laws and other systems for addressing violence against women.

A recent revised version of the conceptual framework includes more detail on the interaction and conflict arena between a woman and her partner, summarizing the evidence base as it exists today (Heise 2011).

Social learning theory

According to social learning theory, behaviours are learned by observing those of others and are performed based on the underlying recognition or reward that the behaviours bring (Bandura 1986). Though there may be biological factors, committing violence is socially learned. Literature gives ample evidence that boys who witness violence between their parents or who experience maltreatment as a child have higher risk of becoming perpetrators to their intimate partners (Sellers, Cochran et al. 2005, Higgins, VanderEnde, et al. 2013). Witnessing violence and/or experiencing violence themselves can make men perceive that violence is acceptable (Pham, Zureick-Brown et al. 2013).

Resource theory

According to resource theory, fewer resources will lead to less power. Thus people who have less resources may use force or violence to achieve their social position and their power. Literature shows that men who have low education, are unemployed or have low income more often use violence against their wife (Goode 1971, Felson, Messner 2000).

Status conflict theory

According to status conflict theory, men's low resources alone do not cause violence but the non-traditional differences in resources between husband and wife are more important risks of violence (Macmillan, Gartner 1999). In countries that are very much influenced by traditional gender norms, like Viet Nam, the non-traditional differences in resource distributions can consist of women who possess higher education attainment, earn more money or are the same age or older than their husband (Higgins, VanderEnde et al. 2013)

While the ecological framework stresses the interplay between all levels, many studies address in particular the inner circles of the framework. Studies around the world have identified factors that predict a higher risk of partner violence, but sometimes factors have been found that are risk factors in some contexts and protective factors in others while they do not change the risk in other settings. Moreover it is generally difficult to

compare results of such studies directly from one study to the other because there is no standardized way to conduct risk factor analysis, even in studies that use the same survey instrument (see examples in Annex 2).

Despite differences in methods, the following individual factors of the woman and her partner have been shown to be consistently related with partner violence.

- *Experience of violence in childhood:* recent research shows that experiencing violence in childhood not only increases the risk of being a perpetrator in adulthood for men but also the risk of being a victim of violence in adulthood for women (Gomez 2011, Riggs, Caulfield et al. 2000, Schumacher, Slep et al. 2001, Coid 2000, Ehrensaft 2003).
- *Experience of sexual abuse in childhood:* Women have a higher risk of becoming a victim of violence in adulthood when they were sexually abused in childhood (Siegel, Williams 2001, van Wijk, de Bruijn 2012). The risk of violence, especially sexual violence, in adulthood for women who were victims of sexual abuse in childhood can be six times higher than women who did not experience it (Coid 2000, van Wijk, de Bruijn 2012).
- *Young age:* Older married women have less risk of suffering from domestic violence than young married women. For example, one study finds that women who are more than 45 years old have a significantly lower rate of violence (Richardson, Coid et al. 2002). The WHO Multi-country Study also finds that young women, especially women of 15-19 years old are at higher risk of current (i.e. having occurred in the past 12 months) physical and sexual violence (Garcia-Moreno, Jansen et al. 2005). This can be due to the fact that younger women are in relationships with younger men who are more aggressive and less in control of their behaviours (Bunge, Locke 2000). Another possible explanation is that younger women have been married for a lower number of years. Newly married couples often have more conflicts than couples who have been together for some time, as couples may need time to adjust to each other. Thus, together with the age variable, the duration of marriage is also an important variable.
- *Having children:* Women with children have a higher risk of being victims of partner violence (WHO 2002, Richardson, Coid et al. 2002, Allen 2004). Economic dependence can be one reason because women with children, especially women who are pregnant and are responsible for taking care of the children, may not be employed. In addition, women with children are less likely to leave the relationship due to cultural norms about family and divorce (Vu, Schuler et al. forthcoming). The number of children can also be an important risk factor. Women in households with many children can have a higher risk of violence (van Wijk, de Bruijn 2012).
- *Separation, divorce and single mothers:* Research shows that violence is likely to increase during the process of or shortly after separation (Melton 2000, Tjaden, Thoennes 2000, Douglas, Dutton 2001, Walby, Myhill 2001, John, Leone et al. 2008). Research especially highlights that separation also increases the risk of domestic violence homicide. Divorced women and single mothers have a higher risk of violence (van Wijk, de Bruijn 2012).

- *Poverty:* Family economic status in general is an important predictor for domestic violence against women (Hindin, Adair 2002, Vung, Ostergren et al. 2008). Low economic conditions can bring pressure to the man as he does not fulfil his traditional gender role as 'household pillar'. Low economic conditions can also increase family conflicts as the couple have to negotiate the use of resources.
- *Extra-marital relationship:* Research shows that a husband having an extra-marital relationship is a risk factor for women to suffer more partner violence (Vung, Ostergren et al. 2008).

The WHO multi-country study questionnaire (used in this Viet Nam study) was specifically designed to enable risk factor analysis of a number of factors in the ecological framework. Several studies that have used this same questionnaire have published findings for such risk factor analysis from around the world, summarized in Annex 2. They consistently show that factors related to the partner's history of abuse in childhood (including his father abusing his mother) are among the strongest predictors, as are the partner's alcohol use, controlling behaviours, fighting with other men and extramarital relationships. Some studies found that education, age and earnings varied in their predictive strength depending on context. In societies where women do not commonly choose their own husbands and where bride price is important, these factors are also related to partner violence.

The design of effective intimate partner violence (IPV) prevention programmes should make use of identification of risk factors – both those that are direct causes of IPV and those that point to underlying characteristics of victims and/or perpetrators associated with IPV – thus allowing appropriate tailoring and targeting of services.

3. Methods

Details of the study methods, sampling, ethical guidelines and response rates have been reported in the first report (General Statistics Office 2010). A summary of the organization of the study, the questionnaire and the operational definitions of the various types of violence used in this report are given in Annex 1.

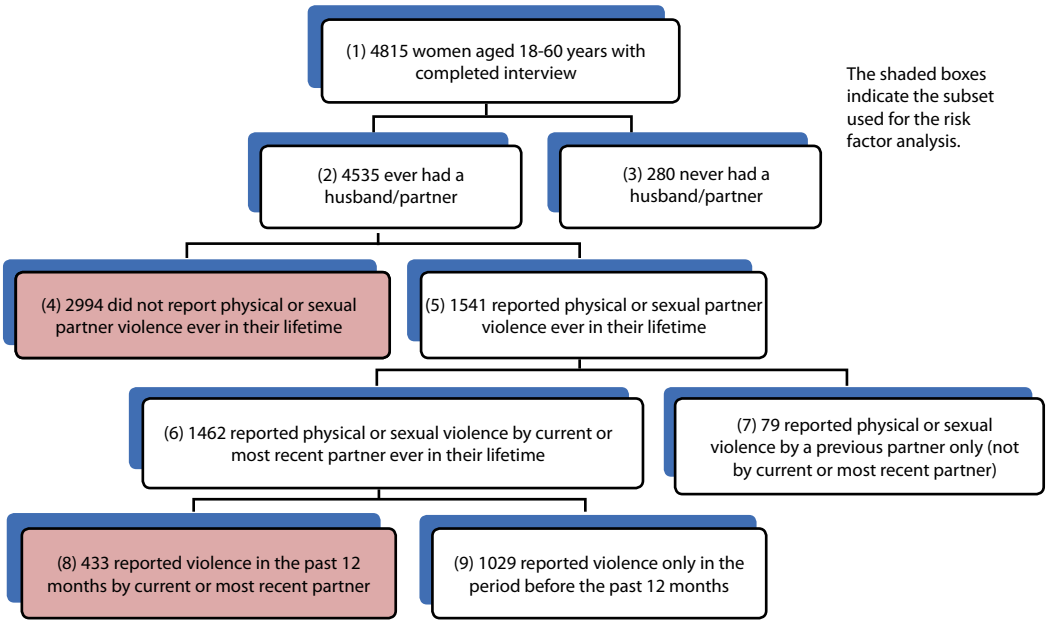
Sub-sample for the statistical analysis

The sample used in the analysis in this report is a subsample of the sample of the national cross-sectional, population based survey on domestic violence against women that was conducted in Viet Nam in 2009.

Of the ever-partnered women, 1,541 reported experiencing physical or sexual violence by a husband at least once in their life, while 2,994 reported never having experienced such violence (see Figure 2).

For the statistical modelling, the following subsample was used: the 433 women whose current or most recent partner was physically and/or sexually violent in the past 12 months were included in the group that was exposed to violence (Group 8 in Figure 2). This group was compared with the 2,994 ever-partnered women who did not report any partner violence (Group 4 in figure 2).

Figure 2. Numbers of women in the survey according to their partnership status and their experience of physical and or sexual partner violence



Only those women whose current or most recent partner was violent were chosen (and not those who reported violence by a previous partner only), because data on partner characteristics were collected for the current or most recent partner only. Thus, the 79 women who reported physical or sexual violence by a previous partner only were excluded in the analysis. The 1,029 women who reported violence by the current or most recent partner, but not in the 12 months preceding the survey, were also excluded so that any associations were not diluted by violence in the past.

Variables in the statistical analysis

Outcome variable: physical and/or sexual partner violence in the past 12 month

The outcome variable (also referred to as "dependent variable") in this analysis is physical and/or sexual violence by a partner. Any acts of physical or sexual violence are included (see Annex 1 for the nature of the acts that are considered). Physical and/or sexual violence is the outcome variable of choice. The questions to measure this physical and/or sexual violence have been validated in many countries and are considered a robust measure of partner violence. Moreover, as has been seen in the Viet Nam study, physical and sexual violence by husbands overlap to a large extent. Reliability testing for lifetime physical and/or sexual violence by partners showed a Cronbach alpha coefficient of 0.78, indicating an acceptable/good reliability.

In other studies using risk factor analysis for sexual and/or physical partner violence, the exact operationalization of the outcome variable, as well as the composition of the subsample used for the analysis, differ from study to study. Studies have examined the following:

- Lifetime violence compared to never violence (in Figure 2 corresponding with Groups 5 vs. 4 or with Groups 6 vs. 4);
- Current violence vs. no current violence (in Figure 2 corresponding with Groups 8 vs. 9+4); and
- Current violence vs. never violence (in Figure 2 corresponding with Groups 8 vs. 4).

See examples of studies using each of these in Annex 2.

In this analysis for Viet Nam, the third option was used and only women who reported violence *by current or most recent partner in the past 12 months vs. women with no physical or sexual partner violence ever in their life were considered*.

Current violence and no lifetime violence were chosen because one of the disadvantages of lifetime violence is that some women with this outcome may have experienced violence that occurred a long time ago and in some cases before the (current) risk factors became relevant. Another disadvantage of using lifetime violence is the possibility of recall bias. Further, association with violence may be diluted as many women with lifetime violence may no longer live in situations of violence (including women with "old violence" would weaken the association). Among the advantages of looking at associations with current violence rather than lifetime violence is that one can be more certain about temporal

relationships. Further, it has more relevance for interventions as they deal with women's current situations.

The reference ("not exposed") group of ever-partnered women who have never experienced any physical or sexual partner violence was chosen, rather than women who are not currently experiencing violence, to avoid diluting the associations by including women in this group with past violence but without violence in the past 12 months[4].

Potential risk factors for physical or sexual violence

The analysis focussed on selected potential risk factors ("independent variables" or "exposure variables") that were chosen based on the conceptual model (ecological framework) and published findings on risk factors, as well as some context-specific risk factors that were hypothesized to be related to IPV in Viet Nam's context. Besides these potential risk factors, it is also necessary to control for some factors that may be confounding the results, in particular the age of the respondent and the region where she lives. These factors are treated the same in the analysis, except that they will always stay in the model, whether they are statistically associated with the outcome or not.

Forty factors regarding the women, their husbands, their relationship and their community were looked at. Factors include socio-demographic characteristics of women and their husbands (such as age and education), other experiences with violence, attitudes, husband's behaviours, couple characteristics and support from family and close networks. The 40 variables/factors and their categories are listed in Table 1. For each factor, the distribution of the categories (subgroups), as well as the prevalence of current physical or sexual violence for each of the subgroups in the total sample of ever-partnered women, was reviewed prior to conducting the risk factor analysis on the sub-sample.

Table 1. Independent variables used for risk factor analysis for current partner violence (the first category is used as baseline)

Variables	Categories
Woman's characteristics	
Demographic	
Age group	18-29, 30-39, 40-49, 50-60
Education	Primary, Secondary, Higher, None
Current partnership status	Partnered, Separated/divorced, Widowed
Age of first marriage	≤19, 20-29, 30+, no marriage ceremony
Ethnic group	Kinh, Other (non-Kinh)

4. In fact, risk factor analysis for all three types of breakdown of outcome variable was conducted to explore how this affects the outcome. Results not shown in this report.

Variables	Categories
Religion	No religion, any religion
Earning cash	No, Yes
Woman's past experience with violence	
Physical violence by others >15 years	No, Yes
Sexual violence by others > 15 years	No, Yes
Childhood sexual abuse + card (< 15 years)	No, Yes
Age at first sex	≤17, 18-21, 22+
Nature of first sexual experience	Wanted to have sex, Coerced/forced
Woman's mother had been beaten by her partner	No, Yes, Don't know
Woman's attitudes	
Attitudes on wife beating[5]	Never justified, Sometimes justified
Partner's characteristics	
Demographic	
Age group	≤29, 30-39, 40-49, 50+
Education	Primary, Secondary, Higher, None
Employment status	Working, Other
Partner's behaviour	
Alcohol consumption	Never/Don't know, Daily, Weekly, Monthly, Less than monthly
Drug use	Never, Ever
Fighting with other men	No/Don't know, Yes
Having extramarital relationships	No/Don't know, Yes/Maybe
Partner's experience with violence	
Partner's mother abused	No, Yes, Don't know
Partner abused as child	No, Yes, Don't know

5. Justification for beating was a rather robust variable (Cronbach alpha coefficient = 0.85). Note that the gender attitudes scale as measured in the survey was rejected as useless because it showed an unacceptably low score when tested for reliability (Cronbach alpha coefficient = 0.36).

Characteristics of couple/relationship	
Relational characteristics	
Age difference	Partner 0-2 years older, Woman older, Partner 3-8 years older, Partner 9+ years older
Educational level difference	Same level, His education higher, Her education higher
Relative contribution to household	Woman contributing less, The same, More, Woman not earning
Woman's role in partner choice	Woman/both chose, Other party chose, No registered marriage
Children of respondent	
Number of children born alive	One, 2, 3-4, 5+, 0 children
Sex of children	Only son(s), Only daughter(s), Both son(s) and daughter(s), No children
Socio-economic status	
Household assets index[6]	Low, Middle, High
Social capital	
Proximity to woman's family	No, Yes/Close together
Frequency of contact with woman's family	At least once a week, Less than once a week
Can count on support from family members	Yes, No/Don't know/No answer
Living with woman's family	No, Yes
Living with partner's family	No, Yes
Respondent grew up in same community	No, Yes
Respondent is member of any group	Yes, No
Neighbours helping when illness in family	Yes, No
Geographical characteristics	
Regions	Northern Midlands and Mountains, Red River Delta, North and South Central Coast, Central Highlands, Southeast, Mekong River Delta
Urban/rural	Urban, Rural

6. A proxy for socio-economic status was computed using the questions on the assets in the household. It was preferred to use the term "Assets index" because the index does not correspond exactly with the household socio-economic level as estimated in other surveys. The method for computing the SES/assets index is described in Annex 3.

Analysis strategy for the risk factor analysis

Using the subsample as described above, univariate logistic regression was used to estimate the crude associations between each potential risk factor and partner violence in the past 12 months and multi-variate logistic regression was used to measure associations accounting for the effects of a number of factors simultaneously.

Results are expressed as odds ratios, a ratio of the odds of violence in a group with the presence of a certain characteristic compared to the odds of violence in a group with the absence of said characteristic (baseline group). Crude odds ratio are the results of univariate analysis, considering only the factor of interest, while adjusted odds ratios are the results of multivariate analysis and they reflect the odds that remains, when the effect of all other factors is also simultaneously accounted for.

For the univariate logistic regression, a probability value (P-value) of 0.10 or less was considered significant. The variables which show to be associated with partner violence in the univariate regression were subsequently included in an intermediate multivariate logistic regression model as an intermediate step to find out final variables to be used in the final logistic model. Age, region and urban/rural factors were also included in the model regardless of the P-value (age as a default effect modifier and region as a fixed factor, because the report showed different levels of violence for each region).

For the intermediate multivariable logistic regression model, a probability value of 0.10 or less was considered significant to be included in the final model (together with age and region). For this final model, a probability value of 0.05 or less was considered significant to determine which factors were independently associated with IPV.

All analysis was performed with STATA statistical software (version 11). For logistic regression, a factor that accounted for the stratified and clustered nature of the sampling strategy (which also included sample weights) was included.

Triangulation with qualitative data

The statistical analysis is complemented with qualitative results on women's perception of risk factors and causes for violence. The qualitative analysis in this paper is mainly based on in-depth interviews with 20 women who had suffered from violence in Ha Noi, Hue and Ben Tre. 15 women were identified through support centres and programmes in these provinces. Five women were identified through qualitative interviews with women in the communes. Interview transcripts were thematically coded using ATLAS.ti 7.0.

In this report, all qualitative results are reflected in blue font.

Figure 3.1. Prevalence of physical or sexual violence by husband in past 12 months, by women's age and level of education

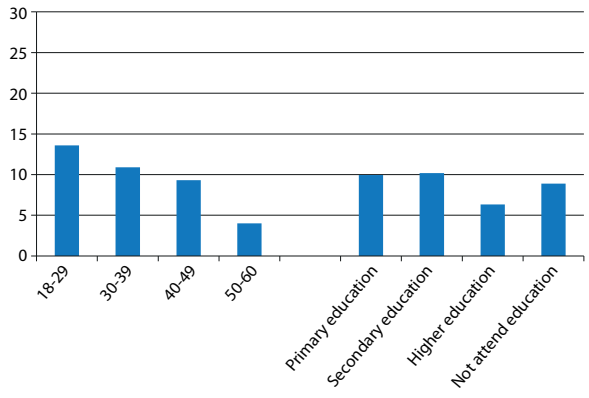


Figure 3.2. Prevalence of physical or sexual violence by husband in past 12 months, by women's age of marriage and current marital status

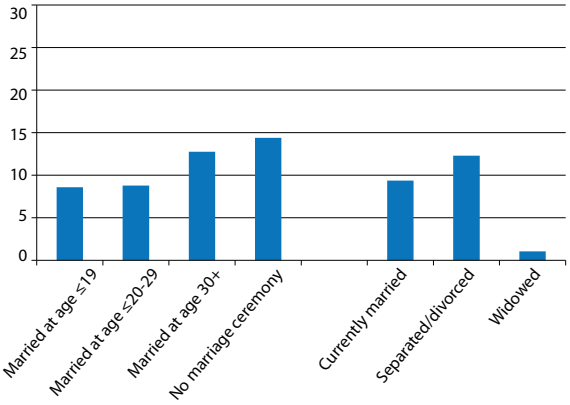


Figure 3.3. Prevalence of physical or sexual violence by husband in past 12 months, by women's ethnic group, religion, earning cash and household assets index

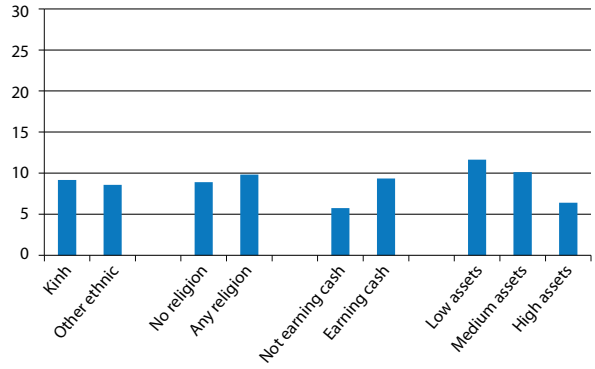


Figure 3.4. Prevalence of physical or sexual violence by husband in past 12 months, by women's attitudes to wife beating, and experience of non-partner physical and sexual violence

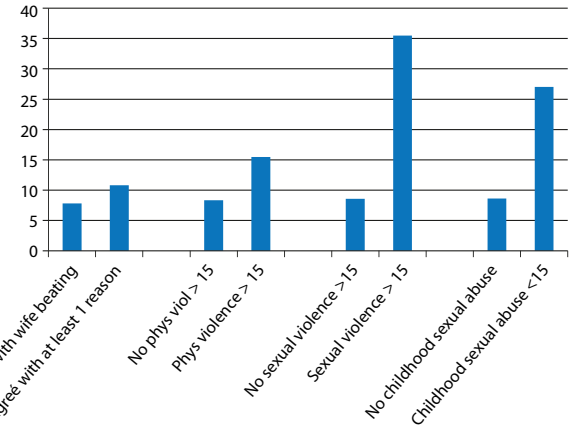


Figure 3.5. Prevalence of physical or sexual violence by husband in the past 12 months, by women's age of first sex, nature of first sex and by her mother's experience with violence by husbands

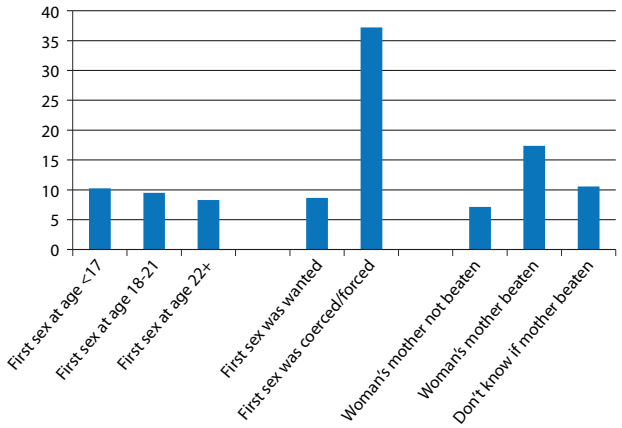


Figure 3.6. Prevalence of physical or sexual violence by husband in past 12 months, by husband's age, education level and employment status

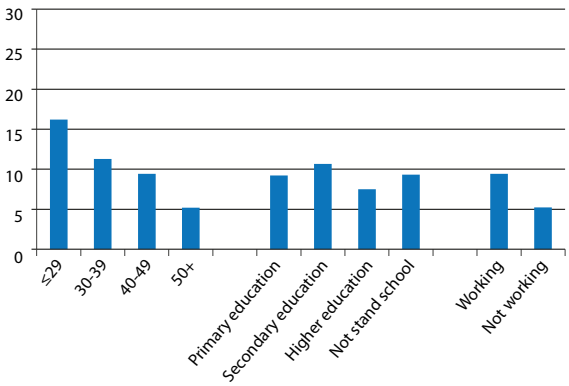


Figure 3.7. Prevalence of physical or sexual violence by husband in the past 12 months, by husband's frequency of drinking, drug use and whether he ever has fights with other men

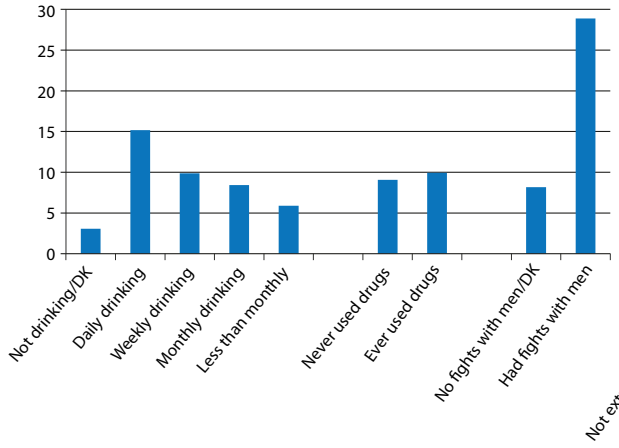


Figure 3.8. Prevalence of physical or sexual violence by husband in the past 12 months, by husband's extramarital relationships and according to whether husband's mother has been abused or husband has been abused as a child

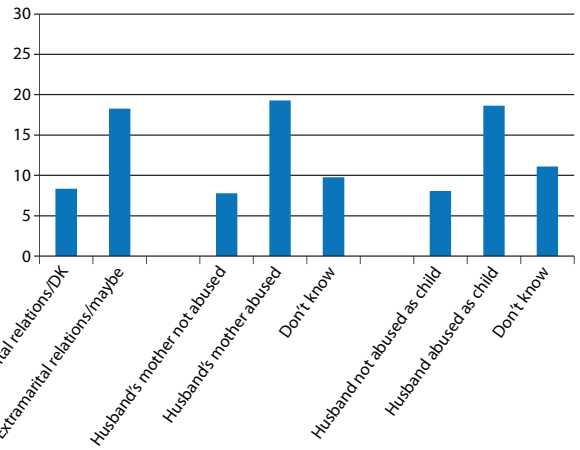


Figure 3.9. Prevalence of physical or sexual violence by husband in the past 12 months, by the couple's differences in age, education, financial contribution to the household, and according to who participated in the partner choice

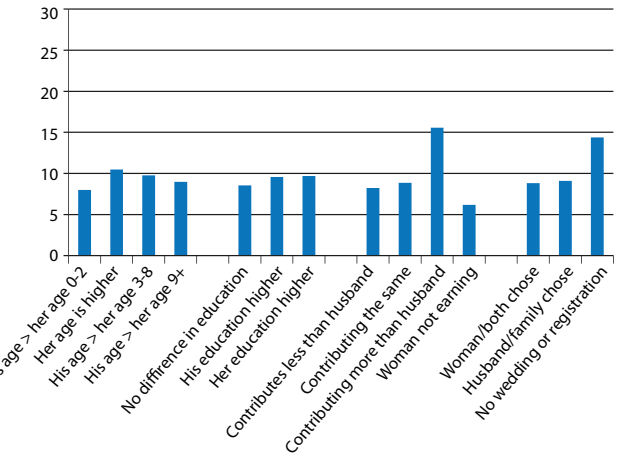


Figure 3.10. Prevalence of physical or sexual violence by husband in the past 12 months, by women's number of children and the sex of her children

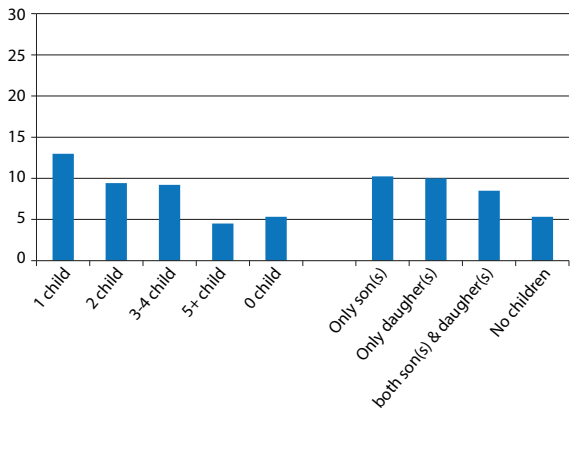


Figure 3.11. Prevalence of physical or sexual violence by husband in the past 12 months, by proximity and supportiveness of family of birth, husband's family, community/neighbour and group membership

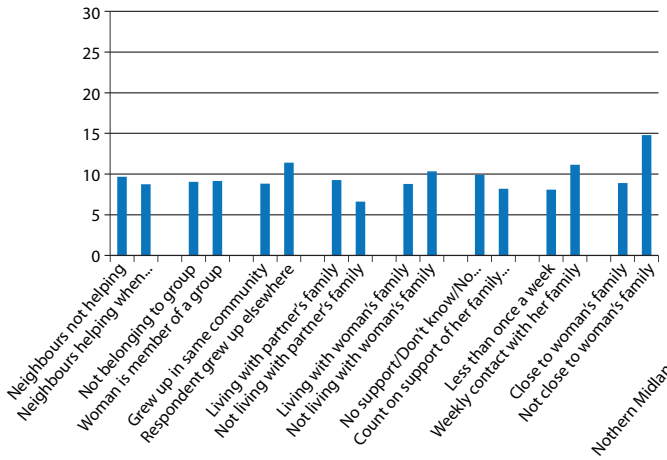
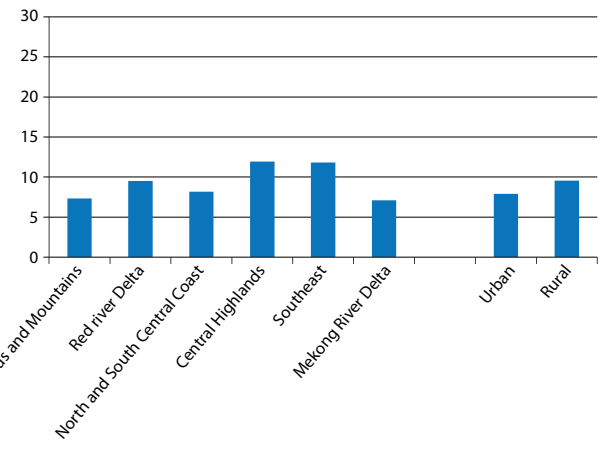


Figure 3.12. Prevalence of physical or sexual violence by husband in the past 12 months, by geographical region and urban/rural location



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4. Results and discussion

For the distribution of the categories of each factor in the total sample of ever-partnered women, see Annex 4. The proportions of women who reported violence by husbands in the past 12 months for each of the categories for these variables are also summarized in Annex 4 and in Figures 3.1–3.12. The patterns of prevalence rates of partner violence for the different risk factors each, on their own, give an indication of which factors could be underlying violence, though it should be seen as solely explorative because only in multivariate analysis can we see if apparent associations remain or not when accounting for other factors at the same time.

The results of the risk-factor analysis using the sub-sample as described in the methods section are reflected in Table 2. The table shows univariate and multivariate logistic regression analysis (intermediate and final models) between before-mentioned factors and current physical or sexual violence by husbands. Below, the factors are discussed individually.

4.1. Women's socio-demographic characteristics

Age

Respondents of the survey in 2010 were women aged 18-60. In the analysis, the following age groups were used: 18-29, 30-39, 40-49, and 50-60, with the youngest age group as the baseline. The univariate analysis shows women's risk of current violence decreases with age, and that the oldest group (50-60) has a statistically significant lower risk compared to the youngest group, suggesting that violence by a husband starts early in a couple relationship and gradually reduces with time. In the intermediate model, controlling for all variables that were significantly related with violence in univariate logistics regression, age-group appeared to no longer be significantly related to the current experience of violence.

Age group was kept in the final model "by default" because age is generally an effect modifier, being related with many other experiences in life, and because it is good practice to control for age by default. Age group was not a significant predictor in the final model for current violence. The result of univariate analysis is in accordance with other studies in Viet Nam and elsewhere (Richardson, Coid et al. 2002, Garcia-Moreno, Heise et al. 2005, Vung, Ostergren et al. 2008). However, the lack of evidence for a significant relationship between women's age and IPV in the final model has also been observed in other studies (Martin, Tsui et al. 1999, Jewkes 2002). While some studies show evidence of an association between the younger age of the women and the risk of IPV, the majority of studies on IPV do not find this association (Jewkes 2002).

Education

Univariate analysis shows that current violence is significantly lower in woman with higher education compared to those with no greater than primary education. The findings show

that this effect of higher education remains significant in the final regression model. Education attainment at a level above secondary (including higher education, college, university, master or PhD) is a protective factor for women. The analysis in this study not only confirms that having education beyond a secondary level has a protective effect on partner violence (compared to women with only primary education); in fact, the data suggest a kind of inverted "U-shaped" relationship because, compared to those with only primary education, those with no education also have lower risk of violence (though not statistically significant).

Since in Viet Nam, the literacy rate among women is more than 90% and more than 80% of the women of reproductive age have attended secondary school (General Statistics Office 2012), it is plausible that the protective effect of education starts after a relatively high threshold beyond secondary education. Higher education as a protective factor is recognized in other research in Viet Nam and around the world (Jewkes 2002, Luke, Schuler et al. 2007, Vung, Ostergren et al. 2008). It is understandable that women with higher education generally have a better social status. They have more access to other social and economic resources, explaining their relatively better protection against domestic violence by their husbands.

Other studies from Viet Nam and other countries also show that women who are not in the lowest and highest level of education ranges, but those at the middle levels, have the highest risk of violence, especially psychological violence (Jewkes 2002, Vung, Ostergren et al. 2008). Such an inverted "U-shaped" relationship was also found in studies in the USA and South Africa, for example, showing that women with the lowest and highest educational levels were protected against partner violence (Straus, Gelles et al. 1980, Department of Health 2002). The increased risk of women in the middle education levels can be explained because women with some education have a higher tendency to challenge the husband's patriarchal ideology. Another explanation is that women in the middle education level group are more aware of violence in comparison with women with a lower (primary) level of education, thus they report violence more.

Table 2. Associations of characteristics of respondents, their partners, their relationships and their community with current (past 12 months) experience of physical or sexual intimate partner violence among ever partnered women in Viet Nam; univariate and multivariate logistic regression analysis

	Total number of women (unweighted)	Univariate logistic regression			Multivariate logistic regression					
					Intermediate model			Final model		
		Crude Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|
Total	3427									
Woman's characteristics										
Demographic										
Age group										
18–29	663	1.00			1.00			1.00		
30-39	1,142	0.89	0.57 - 1.41	0.625	1.51	0.78 - 2.90	0.220	1.36	0.70 - 2.63	0.359
40-49	953	0.78	0.49 - 1.23	0.283	1.56	0.66 - 3.66	0.309	1.37	0.59 - 3.17	0.461
50-60	669	0.33	0.18 - 0.59	**0.000**	0.61	0.22 - 1.72	0.352	0.56	0.20 - 1.55	0.267
Education										
Primary education	779	1.00			1.00			1.00		
Secondary education	1,265	1.00	0.66 - 1.52	0.983	0.84	0.56 - 1.27	0.410	0.89	0.59 - 1.34	0.574
Higher education	981	0.51	0.33 - 0.79	**0.003**	0.52	0.30 - 0.90	**0.020**	0.51	0.30 - 0.87	**0.014**
Not attend school	402	0.87	0.53 - 1.41	0.567	0.72	0.43 - 1.22	0.222	0.68	0.40 - 1.15	0.148

	Total number of women (unweighted)	Univariate logistic regression				Multivariate logistic regression						
						Intermediate model				Final model		
		Crude Odds ratio	95% Confidence Interval		P > |t|	Adjusted Odds ratio	95% Confidence Interval		P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|
Current partnership status												
Currently partnered	3,185	1.00				1.00						
Separated/divorced	91	2.11	1.07	4.16	**0.031**	2.35	0.63	8.73	0.201			
Widowed	150	0.11	0.02	0.71	**0.021**	0.26	0.03	2.16	0.211			
Age of first marriage												
≤19	1,079	1.00										
20-29	2,057	0.99	0.69	1.43	0.962							
30+	147	1.35	0.69	2.64	0.379							
No marriage ceremony	142	1.95	0.99	3.85	**0.055**							
Ethnic group												
Kinh	2,583	1.00										
Other	844	0.82	0.59	1.15	0.249							
Religion												
No religion	2,834	1.00										
Other	592	1.19	0.85	1.65	0.306							

	Total number of women (unweighted)	Univariate logistic regression			Multivariate logistic regression					
					Intermediate model			Final model		
		Crude Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|
Earning Cash										
No	199	1.00			1.00					
Yes	3,226	1.73	0.92 - 3.24	**0.088**	0.77	0.25 - 2.40	0.652			
Woman's past experience with violence										
Physical violence by others >15 years										
No	3,210	1.00			1.00					
Yes	217	2.03	0.96 - 4.32	**0.065**	1.28	0.69 - 2.38	0.438			
Sexual violence by others > 15 years										
No	3,368	1.00			1.00			1.00		
Yes	59	7.68	3.86 - 15.28	**0.000**	6.02	2.45 - 14.80	**0.000**	5.46	2.17 - 13.73	**0.000**
Childhood sexual abuse + card (< 15 years)										
No	3,349	1.00			1.00			1.00		
Yes	78	5.41	2.84 - 10.30	**0.000**	2.71	1.01 - 7.25	**0.047**	2.77	1.07 - 7.15	**0.036**

	Total number of women (unweighted)	Univariate logistic regression			Multivariate logistic regression					
					Intermediate model			Final model		
		Crude Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|
Age at first sex										
≤17	341	1.00								
18-21	1,642	0.95	0.59 - 1.52	0.826						
22+	1,441	0.76	0.47 - 1.22	0.253						
Nature of first sexual experience										
Wanted to have sex	3,377	1.00			1.00			1.00		
First sex coerced/ forced	46	9.69	4.64 - 20.21	**0.000**	3.71	1.35 - 10.15	**0.011**	4.17	1.47 - 11.82	**0.007**
Woman's mother had been beaten by her partner										
No	2,792	1.00			1.00			1.00		
Yes	562	3.64	2.71 - 4.90	**0.000**	2.22	1.55 - 3.18	**0.000**	2.27	1.61 - 3.22	**0.000**
Don't know	73	1.73	0.90 - 3.32	**0.101**	1.60	0.79 - 3.25	0.195	1.76	0.85 - 3.63	0.127
Woman's attitudes										
Attitudes on wife beating										
Does not agree with any justifications (0)	2,048	1.00			1.00					
Agrees with at least 1 justification	1,379	1.60	1.17 - 2.19	**0.004**	1.24	0.90 - 1.72	0.187			

	Total number of women (unweighted)	Univariate logistic regression			Multivariate logistic regression							
					Intermediate model				Final model			
		Crude Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|		Adjusted Odds ratio	95% Confidence Interval	P > |t|	
Partner characteristics												
Demographic												
Age group												
≤29	356	1.00			1.00				1.00			
30-39	1,118	0.69	0.43 - 1.12	0.134	0.46	0.22 - 0.97	**0.042**		0.47	0.22 - 0.98	**0.044**	
40-49	1,058	0.62	0.39 - 0.99	**0.047**	0.35	0.14 - 0.86	**0.022**		0.37	0.15 - 0.90	**0.028**	
50+	895	0.34	0.21 - 0.55	**0.000**	0.43	0.16 - 1.16	**0.094**		0.41	0.15 - 1.11	0.079	
Education												
Primary education	696	1.00			1.00							
Secondary education	1,157	1.13	0.76 - 1.69	0.538	1.37	0.90 - 2.07	0.142					
Higher education	1,291	0.68	0.44 - 1.04	**0.075**	1.19	0.71 - 1.98	0.514					
Not attend school	267	0.95	0.56 - 1.60	0.846	0.77	0.42 - 1.42	0.408					
Employment status												
Working	3,208	1.00			1.00							
Other	219	0.54	0.30 - 0.98	**0.042**	0.79	0.40 - 1.57	0.502					

	Total number of women (unweighted)	Univariate logistic regression			Multivariate logistic regression					
					Intermediate model			Final model		
		Crude Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|
Partner's behaviour										
Alcohol consumption										
Never/ DK	405	1.00			1.00			1.00		
Daily	558	8.21	4.07 - 16.55	**0.000**	6.33	3.04 - 13.16	**0.000**	7.06	3.39 - 14.69	**0.000**
Weekly	779	3.98	1.97 - 8.02	**0.000**	2.96	1.43 - 6.11	**0.004**	3.32	1.59 - 6.94	**0.001**
Monthly	1,084	3.22	1.67 - 6.20	**0.000**	2.74	1.38 - 5.42	**0.004**	2.97	1.48 - 5.98	**0.002**
Less than monthly	601	2.10	1.02 - 4.30	**0.043**	1.68	0.76 - 3.73	0.201	1.77	0.79 - 3.98	0.167
Drug use										
Never	3,419	1.00								
Ever	8	2.34	0.46 - 11.86	0.305						
Fighting with other men										
No/Don't know	3,314	1.00			1.00			1.00		
Yes	113	11.29	6.98 - 18.24	**0.000**	5.69	3.10 - 10.43	**0.000**	5.27	2.95 - 9.39	**0.000**

	Total number of women (unweighted)	Univariate logistic regression			Multivariate logistic regression					
					Intermediate model			Final model		
		Crude Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|
Having extramarital relationships										
No/Don't know	3,256	1.00			1.00			1.00		
Yes/Maybe	171	4.24	2.78 - 6.46	**0.000**	3.11	1.84 - 5.26	**0.000**	3.37	1.95 - 5.82	**0.000**
Partner's experience with violence										
Partner's mother abused										
No	2,731	1.00			1.00			1.00		
Yes	251	3.98	2.76 - 5.74	**0.000**	2.62	1.62 - 4.23	**0.000**	2.75	1.71 - 4.42	**0.000**
Don't know	445	1.38	0.87 - 2.18	0.168	0.90	0.56 - 1.44	0.647	0.90	0.56 - 1.45	0.652
Partner abuse as child										
No	2,997	1.00			1.00			1.00		
Yes	247	3.67	2.46 - 5.49	**0.000**	1.74	1.04 - 2.92	**0.036**	1.71	1.02 - 2.86	**0.043**
Don't know	183	1.64	0.99 - 2.71	**0.054**	1.42	0.76 - 2.68	0.273	1.40	0.77 - 2.53	0.269
Characteristics of couple/relationship										
Relational characteristics										

	Total number of women (unweighted)	Univariate logistic regression			Multivariate logistic regression								
					Intermediate model				Final model				
		Crude Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval		P > |t|	Adjusted Odds ratio	95% Confidence Interval		P > |t|
Age difference													
His age > her age 0-2	1,386	1.00											
Her age is higher	409	1.38	0.86 - 2.21	0.179									
His age > her age 3-8	1,391	1.22	0.87 - 1.72	0.250									
His age > her age 9+	241	0.99	0.59 - 1.65	0.973									
Educational level difference													
No difference	1,708	1.00											
His education higher	1,160	1.18	0.86 - 1.62	0.294									
Her education higher	559	1.24	0.86 - 1.78	0.246									
Relative contribution to household													
Less than partner	1,493	1.00			1.00				1.00				
Contributing the same as partner	1,037	1.13	0.78 - 1.63	0.507	1.23	0.83 -	1.84	0.304	1.27	0.85 -	1.89	0.251	
Contributing more than partner	461	2.30	1.63 - 3.22	**0.000**	2.39	1.57 -	3.66	**0.000**	2.40	1.58 -	3.65	**0.000**	
Woman not earning	436	0.84	0.51 - 1.38	0.493	0.57	0.19 -	1.74	0.324	0.69	0.39 -	1.23	0.212	

	Total number of women (unweighted)	Univariate logistic regression			Multivariate logistic regression							
					Intermediate model			Final model				
		Crude Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|
Woman's role in partner choice										
Respondent/both chose	2,870	1.00			1.00					
Other party chose	415	1.11	0.76 - 1.64	0.581	1.05	0.66 - 1.67	0.832			
No wedding or registered marriage	142	1.96	1.04 - 3.70	**0.038**	0.94	0.38 - 2.34	0.899			
Children of respondent										
Number of children born alive										
1 child	591	1.00			1.00			1.00		
2 children	1,394	0.76	0.51 - 1.12	0.169	0.70	0.45 - 1.08	0.110	0.70	0.46 - 1.08	0.110
3 - 4 children	977	0.79	0.51 - 1.22	0.280	1.00	0.57 - 1.74	0.999	0.98	0.58 - 1.65	0.925
5+ children	344	0.41	0.23 - 0.74	**0.003**	0.70	0.34 - 1.43	0.331	0.64	0.33 - 1.26	0.198
0 children	121	0.34	0.15 - 0.76	**0.009**	0.35	0.14 - 0.84	**0.020**	0.39	0.17 - 0.89	**0.026**

	Total number of women (unweighted)	Univariate logistic regression			Multivariate logistic regression					
					Intermediate model			Final model		
		Crude Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|
Sex of children										
Only son(s)	917	1.00								
Only daughter(s)	645	0.97	0.59 - 1.60	0.915						
both son(s) & daughter(s)	1,738	0.93	0.65 - 1.34	0.693						
No children	121	0.42	0.19 - 0.92	**0.031**						
Socio-economic status										
Household assets index										
Low	820	1.00			1.00			1.00		
Middle	1,426	0.90	0.60 - 1.34	0.598	0.88	0.57 - 1.35	0.565	0.92	0.59 - 1.43	0.695
High	1,181	0.49	0.31 - 0.77	**0.002**	0.55	0.30 - 0.99	**0.047**	0.55	0.30 - 0.99	**0.047**
Social capital										
Proximity to woman's family										
No	1,324	1.00								
Yes/close together	2,103	0.92	0.66 - 1.26	0.588						

	Total number of women (unweighted)	Univariate logistic regression				Multivariate logistic regression					
						Intermediate model			Final model		
		Crude Odds ratio	95% Confidence Interval		P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|
Frequency of contact with woman's family											
At least once a week	2,038	1.00									
Less than once a week	1,389	1.04	0.78	- 1.38	0.810						
Can count on support from family members											
Yes	3,090	1.00									
No/Don't know/ No answer	337	1.44	0.93	- 2.22	0.105						
Living with woman's family											
No	3,237	1.00									
Yes	190	0.65	0.37	- 1.14	0.131						
Living with partner's family											
No	2,772	1.00									
Yes	655	1.07	0.76	- 1.51	0.681						

	Total number of women (un-weighted)	Univariate logistic regression			Multivariate logistic regression					
					Intermediate model			Final model		
		Crude Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|	Adjusted Odds ratio	95% Confidence Interval	P > |t|
Respondent grew up in same community										
No	1,955	1.00								
Yes	1,472	0.80	0.60 - 1.09	0.158						
Respondent is member of any group										
Yes	2,361	1.00			1.00					
No	1,066	1.44	1.09 - 1.90	**0.010**	1.33	0.93 - 1.91	0.114			
Neighbours helping when illness in family										
Yes	3,331	1.00								
No	96	1.77	0.70 - 4.47	0.229						
Geographical characteristics										
Regions										
Northern Midlands and Mountains	665	1.00			1.00			1.00		
Red River Delta	600	1.50	0.87 - 2.60	0.146	1.98	1.03 - 3.79	**0.040**	2.03	1.05 - 3.93	**0.035**
North and South Central Coast	751	1.13	0.65 - 1.98	0.664	1.57	0.86 - 2.87	0.141	1.68	0.92 - 3.05	0.089
Central Highlands	383	1.94	1.06 - 3.54	**0.031**	2.07	1.16 - 3.72	**0.014**	2.17	1.23 - 3.83	**0.008**

	Total number of women (un-weighted)	Univariate logistic regression				Multivariate logistic regression							
						Intermediate model				Final model			
		Crude Odds ratio	95% Confidence Interval		P > |t|	Adjusted Odds ratio	95% Confidence Interval		P > |t|	Adjusted Odds ratio	95% Confidence Interval		P > |t|
Southeast	426	2.01	1.20	3.36	**0.008**	1.73	0.94	3.21	**0.080**	2.00	1.10	3.65	**0.023**
Mekong River Delta	602	1.09	0.64	1.84	0.750	1.06	0.57	1.98	0.843	1.21	0.68	2.17	0.518
Urban/rural													
Urban	1,215	1.00				1.00				1.00			
Rural	2,212	1.31	0.95	1.81	**0.098**	1.07	0.74	1.57	0.707	1.04	0.71	1.52	0.856

Current partnership status

Univariate analysis shows that women who are separated or divorced are more likely to have experienced current partner violence in the past 12 months. While in a number of cases the divorce may be due to violence, the data for current violence suggests that violence continues around and after the period of separation (at the time of the survey most of the divorced women were separated more than 12 months ago, while some had separated within the past 12 months).

As can be expected, widowed women's risk of current violence is very low and significantly lower than currently-partnered women, because many of them lost their partners more than 12 months ago. In such cases, even those whose partners were violent will not have experienced that violence in the past 12 months. Being widowed thus shows to be "protective" against current violence.

In the intermediate model (when controlling for all other factors), current partnership status was no longer significantly related with current violence.

Among the 20 survivors of partner violence that were interviewed with qualitative in-depth interviews, there was not a single officially divorced woman, though three women in Ha Noi were voluntarily or forcibly separated from their husband. All three were still suffering from violence following their separation. Aside from physical and emotional violence they suffered, losing child custody and home ownership seemed to be important issues following separation.

Interviews with these survivors show that due to the dominant norms regarding women's childcare responsibilities, women who flee from their home in a situation of violence without taking the children with them are stigmatized and thus at risk of suffering more violence from not only her partner but also from his family members.

> *I do not dare take my children away. He would come to take them back. He threatens to pour fuel and light my mom's house on fire. I am very scared.*
>
> (Woman in Ha Noi)

Two women in the qualitative study, one with a registered marriage and one without a registered marriage, were forced to leave their home and lost ownership even if they had been in the relationship for more than 30 years and been the owner of the house or contributed to the building of the house. In both cases, the husband had a second wife. These two women have been trying for a long time to request help from different people at the commune level and the local support centre but have not received any positive responses. Women also indicated that the lack of clear documented evidence of shared properties upon or after marriage increases the risk that women do not get a fair share in the event of divorce and/or separation. Women in the study who decided to leave their husband, with or without a divorce recognized by the court, often claimed that they left with 'empty hands' (tay trắng). This is important because it is common that women in Viet Nam live in the house of their parents-in-law or in the house that is built (by her and her husband) on the land of the husband's parents after marriage.

Thus, even if women contribute to the renovation of their parents-in-law's house or to the construction of their own house (with money and/or labour) their contribution may not be recognized when they get divorced.

Another explanation for relatively high levels of reported violence among divorced/separated women may be that women who are separated or divorced find it easier to disclose violence by a partner with whom they are no longer together. Other studies also show that separation and divorce are risk factors for IPV toward the women (Melton 2000, Tjaden, Thoennes 2000, Douglas, Dutton 2001, Walby, Myhill 2001, Johnson, Ollus et al. 2008, van Wijk, de Bruijn 2012, CCIHP 2012). The moment that the woman decides to leave the relationship, the period after the woman files for divorce and the period prior to the final decision of the court are often very tense and even life threatening for her (Tjaden, Thoennes 2000, Edwards, Fuller et al. 1992, McFarlane, Campbell et al. 2002).

Age of first marriage

National surveys in Viet Nam shows that more than 80% of women in the country get married at the age of 18 or older (General Statistics Office 2012), though among the ever-partnered women in the sample for this study, 33% had married before 19 years of age (see Annex 4).

Comparisons were made between the proportions of women reporting current partner violence for the following groupings for age of first marriage: 19 or younger, 20-29 and 30 or older. No evidence was found that there is a significant relationship between age of marriage and current violence in the univariate analysis and this factor was not included in further modelling.

Ethnic group

The descriptive analysis (Annex 4) showed that the Kinh people (77% in the sample) have only slightly higher levels of current violence than non-Kinh. The univariate analysis suggests that the lower risk for current violence in the non-Kinh group as a whole is not statistically significant.

The non-Kinh group is a mixed group and combining them may hide differences in dynamics of violence between the different ethnic groups (as seen in the first report). The study was not designed to enable detailed analysis of the various ethnic sub-groups, many of whom have very small populations, though this may be explored at a later stage as it cannot be ignored that these groups have different patterns of violence.

There are a few other studies on the risk of domestic violence and ethnicity. The difference in risk among different ethnic groups may be associated with the difference in attitudes to gender equity. Research in Viet Nam shows that sex ratio at birth (of boys over girls) is higher in the Delta areas in the North and in the South, where the majority of inhabitants belong to the Kinh and Hoa people, and it is lower in the mountainous Northern provinces, where the majority of inhabitants are from different ethnic minority groups (UNFPA 2009). Research also reveals that traditional gender norms are more common in the North than in the South (Barbieri, Bélanger 2009). Several studies in Viet Nam and the region show evidence for links between traditional gender norms and son-preference on the one hand, with domestic violence against women and attitudes that justify this

violence on the other (Luke, Schuler et al. 2007, Schuler, Yount et al. 2012, Vung, Ostergren et al. 2008). As each ethnicity has different attitudes and practices in terms of gender equity, more in-depth research on gender in general, and on domestic violence against women in particular, in different ethnicities should help to clarify this.

Religion

More than 80% of women in the sample stated they do not belong to any religion. Nevertheless, because of the general notion that religion has an impact on human behaviour, religion was included in this analysis. The analysis suggests that there is no association between being religious or not and current partner violence.

In qualitative sample, there was just one woman who turned to the Catholic religion after suffering from violence by her husband. She finds religion is a place for her to get peace of mind. However, it is not clear if she shares her experiences of violence with other people in her religious group and, if so, how these people support her.

> *From that time [since suffering from violence], I only have negative thoughts about men. I really don't like men. Thus, I have been practicing religion for the last two years. Men who are religious are very decent. They have to restrain themselves as they follow Jesus. They do not drink alcohol. They do not have any addictions. They do not have any woman except their wife. It is so pleasant to be living in such chaste environment.*
>
> (Woman in Ha Noi)

Before converting to Catholicism, this woman used to believe in supernatural powers as a cause of her husband's habit of drinking alcohol.

> *I used to be very superstitious. People told me that a ghost invited my husband to drink alco-hol. I worshiped a lot. I went to Hai Duong and Bac Ninh. It cost me a lot of money but it did not help. He still drank a lot.*
>
> (Woman in Ha Noi)

One study in Cua Lo, Nghe An shows that religion can have an impact on how women respond to violence. According to Catholic conventions, couples should follow a pre-marital course (lớp giáo lý tiền hôn nhân) to learn how to behave in married life, including how to handle conflicts. This pre-marital course may contribute to reducing conflict and domestic violence. However, the Bible places merit on the "endurance" of women, which can reinforce a 'give in' attitude (chịu nhịn) in the context of violence. In addition, the difficulty of getting a divorce - traditionally not allowed in Catholicism - means women may have to stay in the abusive relationship for their whole life. Nevertheless, temporary separation is formally allowed in Catholicism and this can be employed smartly to protect the women. Involving religious leaders in domestic violence work can potentially have a positive impact on domestic violence intervention and prevention (CCIHP 2012).

Earning cash

Only 6% of ever-partnered women did not have any source of income (see Annex 4). Those who earn money are at higher risk of current violence at univariate level only, though there was no relationship with earning money and current violence in the intermediate model. Hence, there was no statistical evidence for earning money increasing the risk of violence when accounting for other factors.

Though most women in the study seem to be earning income and potentially could make a living themselves and even for their children without their husband's support, qualitative interviews find that women who live in violent situations often try to compromise and stay in the abusive relationship because they cannot find support for housing. Most women can make enough money for daily expenses, food and other things but not for rent. In addition, for many women in rural areas who have never been outside of their commune, it is beyond their imagination to go to other places and rent a place for themselves and their children.

Vietnamese women participate well in the labour market. About 70-80% of working-age women join the labour market and women account for nearly 50% of the labour market (World Bank 2011). This may further explain why having an income may not be a significant factor for partner violence in the country.

4.2. Women's experience with other violence (by other perpetrators)

Physical violence by others since age 15

Physical violence by perpetrators other than partners is related with current violence at univariate level only. There was no relationship with non-partner violence in the intermediate model for current partner violence and thus there is no evidence that physical violence by others increases a woman's risk of partner violence.

Sexual violence by others since age 15

Unlike physical violence, sexual violence by non-partners was strongly related with the experience of partner violence in the univariate analysis and remains strongly related in the final model. Based on the adjusted odds ratio, women who had experienced sexual violence by someone other than her husband had a 5.5 times higher risk of current partner violence compared to women who had not experienced non-partner sexual violence.

For women in Viet Nam, shame attached to sexual abuse may be a reason for the significant increase in domestic violence risk for those who have suffered from sexual abuse but not for those who have suffered from physical violence. Sexual abuse is still very much taboo in Viet Nam. Women and girls who are victims of sexual abuse are often blamed for its occurrence (Khuat, Le et al. 2009). The shame attached to sexual abuse can lower women's self-esteem, thus making them more vulnerable to violence.

Childhood sexual abuse (CSA)

Sexual abuse that occurred before the age of 15 was strongly associated with current violence in the univariate and in the final model. The risk of partner abuse among those

who suffered childhood sexual abuse is almost three times higher than the risk of those who did not. For this factor there is clearly a temporal relationship as the abuse will have occurred in her childhood.

International studies find that a woman's risk of suffering domestic violence in adulthood is up to six times higher if she is sexually abused in childhood (Coid 2000, van Wijk, de Bruijn 2012).

Age at first sex

Categories looked at included <17, 18-21 and 22+. The analysis does not provide evidence for an association between age at first sex and current partner violence.

One international review finds that in countries where marriage is a social norm, marital status is an important influence factor while other factors such as having pre-marital sex or the age at first sex are not significant to the risk of violence (Jewkes 2002).

Nature of the first sexual experience

Independent of the age of the first sexual experience, women whose first sexual experience was forced or coerced are significantly more likely to experience current partner violence, with an adjusted odds ratio of more than 4. For this factor there is clearly a temporal relationship as the first sexual experience would have been at the beginning of the relationship (if her first sexual experience was with current or most recent partner) or before the current or most recent relationship (if she had more than one sexual partner).

It should be noted that talking about sex is taboo in Viet Nam, especially for a young girl. Because a woman's virginity is considered important in Viet Nam, it is still common that a young woman will marry the man with whom she had her first sexual experience. According to the Survey Assessment of Vietnamese Youth 2, only about 5% of female youth reported having pre-marital sex and when it happened, in most of the cases it was with their current husband (Ministry of Health 2010). Thus, the nature of the first sexual experience of a woman, whether with her (future) husband or someone else, can be a predictor of violence in the relationship of a married couple.

In Viet Nam, it a bigger challenge for women to obtain empowerment in the areas of sexual and reproductive health compared to other social and economic fields (Hoang, Tran et al. 2002, Santillán, Schuler et al. 2004). Having consented to the first sex can be considered an indicator of empowerment. Women who consented to the first sex, compared to those whose first sexual experienced was forced or coerced, may be more empowered and may possess better skills to prevent domestic violence in their relationship.

Woman's mother had been beaten by her partner

Women who report that their mother had been beaten by their mother's partner when she (the respondent) was a child have a significantly increased risk for current partner violence. For this factor, there is clearly a temporal relationship as the respondents' mother's abuse in most cases will have occurred in her childhood.

In qualitative interviews, some of the women had mothers who were beaten by their mother's partner. One woman in this situation said that having witnessed her mother being beaten by her father motivated her to fight back and not accept violence.

My mother was beaten so much that she became dull. I cannot accept it for my life. It forced me to go out [to a counselling centre]. I told her that I could not give in like her as it was too miserable. When I was small I could not stand up to protect her. Now, I have my strength and knowledge but my mother is already old. When I was small, I had to witness my father grabbing my mom's hair at the back while holding a bottle of wine. My mom had to tighten her lips. I could not stop it. I felt so frustrated. That violence is the motivation for me to go out to the street and to come here [counselling centre].

(Woman in Ha Noi)

Studies worldwide have demonstrated the relationship between women's experience of violence and their mother having been beaten by her partner (Gomez 2011, Riggs, Caulfield et al. 2000, Schumacher, Slep et al. 2001, Coid 2000, Ehrensaft 2003). This is also confirmed in other studies in Viet Nam (Vung, Ostergren et al. 2008, Pham, Zureick-Brown et al. 2013, Higgins, VanderEnde et al. 2013).

4.3. Women's attitudes and beliefs on wife beating

Attitudes on wife beating

Many researchers hypothesize that attitudes on gender roles/gender equality and women's acceptability of partner violence (as a proxy of attitudes in their community) also explain or predict (some of the) violence that women experience by the hands of their partners.

Measuring associations with attitudes is theoretically important but in practice there are methodological and interpretation issues with the questions that measure attitudes in surveys. Structured questions are usually not a good way to measure attitudes. The questions can be considered leading and they are hard to interpret because the answers often reflect a woman's own experience of justification/normalization of her situation rather than her norm or the community's norm (Jansen H.A.F.M. 2012). Methodological issues regarding measuring attitudes are also discussed in literature. Further work to revise and refine the survey tools will be necessary (Yount, Halim et al. 2013, Schuler, Yount et al. 2012).

Despite these potential challenges, it was decided to include one summary variable for attitudes around acceptability of physical violence. A six-question scale was used asking about justifications for beating by a partner. The cut-off point for the summary variable was between not agreeing with any justification for wife beating and agreeing with at least one reason for wife beating. The use of this variable is warranted because it was rather robust (Cronbach alpha coefficient[7] = 0.85) and the stakeholders of the study had expressed an interest in looking at it due to the sociological importance[8].

7. The Cronbach alpha coefficient is a statistical measure of reliability of a scale. The higher the value, the better the reliability.
8. The gender attitudes scale as measured in the survey was rejected as useless because it showed an unacceptably low score when tested for reliability (Cronbach alpha coefficient = 0.36).

The relation between the attitudes variable and current partner violence was tested. Attitudes on wife beating and current violence by husbands were significantly associated at univariate level. However, the association did not remain when adjusting for other factors in the intermediate model, thus this factor was not included in the final model.

Qualitative studies may be more appropriate for exploring attitudes than surveys. In the qualitative interviews with women who had experienced partner violence, their attitudes and beliefs around partner violence seem important factors that influence women's responses to the violence. Women who believe that violence is their fate and that it is simply a part of a woman's life tend to normalize and minimize the severity of violence. They are more likely to stay in an abusive relationship without seeking help, especially from non-family members such as local authorities or women's organization.

Qualitative interviews also provided evidence that some women believe that violence is not only part of woman's life but also that it will end or reduce on its own. This can also be a reason for the women to stay in the relationship. Some women in the study are living with the hope that their husband will change and that they will then have a better life. Another important reason for the women to stay in the relationship is the predominant perception that women have to be with their children and that it is better for the children to live with both parents even when where there is violence.

> *We women are under the men and we cannot be higher than men are. We get married, and follow our husband to any place he goes (she quoted words from a traditional song). So I got married and I left my parents to follow my husband. I am a woman so I follow my hus-band. I go to the place he wants to go. I cannot fight back against him.*
>
> (Woman in Hue)

4.4. Partner's socio-demographic characteristics

Partner's age group

Partner's age is significantly related with current partner violence, also when accounting for all other factors. Women with older partners are experiencing significantly less current violence than women with partners under 30.

Partner's education

Women with partners who have attained a level of education higher than secondary (including higher education, college, university, master or PhD) report the lowest levels of partner violence. This is however only statistically significant at the univariate level and may have been confounded by factors like age and economic status. Partner's education was thus not included in the final model.

Other research in Viet Nam also found evidence that men with higher education have better gender equity attitudes and are more sensitive to domestic violence (Vung, Ostergren et al. 2008, Luke, Schuler et al. 2007). Research done by Vung et al. finds that

women married to men who only have a primary school education have a doubled risk of violence compared to women married to men who possess a higher education (Vung, Ostergren et al. 2008).

Partner's employment status

The categories for employment status were "currently working" or "other" (e.g. unemployed, student or retired). The analysis showed an association solely at the univariate level. This association disappeared in the intermediate level and the variable was thus not included in the final model.

4.5. Partner's behaviour

For partners' behavioural factors, alcohol consumption, drug use, fighting with other men and having extramarital relationships were considered, which in other studies have been shown to be associated with partner violence. Partners' controlling behaviour and poor communication between partners are generally also associated with partner violence; however these were not included in the modelling. It could be argued that controlling behaviour is part of the same phenomenon of partner violence and including it in the model would run the risk of over-adjustment. There may be a similar issue regarding the factor of poor communication between partners. The results do not indicate the direction of the association. For example, a current or recent communication breakdown could be a consequence of recent violent acts rather than a trigger of violence.

Partner's alcohol consumption

Among all potential risk factors in this study, alcohol consumption is the one factor that is most strongly associated with partner violence. The association is strongest when alcohol abuse is daily. In the final model the adjusted odds ratio is seven, indicating that women with partners drinking daily are at seven times higher risk of violence compared to women with partners who are not drinking. The level of risk is weaker with less frequent use, though it is still significant even when the partner uses alcohol just once a month.

Qualitative interviews show that alcohol consumption plays a role in almost all cases of violence and that when the husband stops or reduces drinking alcohol, violence decreases. In many cases, the women not only mention alcohol but also the influence of peers (husband's friends). According to the women, these men make negative comments about their relationship or about the woman, which in turn angers the husband and leads to him beating his wife.

The effect of alcohol consumption on the risk of domestic violence has been documented quite consistently in research (Rothman, McNaughton Reyes et al. 2012). International studies show that alcohol not only increases the frequency of violent incidents but also their level of severity in comparison with violence without alcohol consumption (Testa, Quigley et al. 2003). Alcohol influences the risk of violence through biological/physiological effects on the body and mind (Lipsey, Wilson et al. 1997, Pihl, Hoaken 2002, White, Jackson et al. 2009, Fagan, Browne 1994). However, in addition to the biomedical effect, alcohol also links to violence through an indirect effect: the interaction of alcohol and the quality of the relationship. Alcohol also links to violence through the moderator model. This model suggests that alcohol will increase the risk of triggering violence in

individuals who already have an aggressive character and in the context of a society that tolerates violent acts (Rothman, McNaughton Reyes et al. 2012).

Partner's drug use

Only very few women in the study reported that their partner had ever used drugs. While the partner's drug use increases the risk of violence, the number of partners who had ever used drugs was too small to reach significance, even at the univariate level.

Partner fighting with other men

Women who report that their partner has been involved in a physical fight with other men since she has known him are at a much higher risk of current violence (adjusted odds ratio showing and increased risk of more than five times) compared to women who report their partners have not been involved in a fight or who do not know whether their partner has ever been in a fight.

Other research shows that where violence is seen as a norm to solve conflict, men are at higher risk of becoming perpetrators (Jewkes 2002). Men who are involved in physical fights with other men can also be men who believe that violence is a legitimate means to solve conflict, thus they can be at a higher risk of also using violence to solve conflicts with their wives.

Partner having extramarital relationships

Women who report that their partner has been or may have been in a relationship with other women while being with her are at a higher risk of current partner violence (adjusted odds ratio of more than three) compared to women who state that their partner did not have other relationships while being with her or who do not know whether it has happened.

It was not rare in qualitative interviews to hear about husbands having extramarital relationships, including both short-term casual and long-term relationships. In all cases, these relationships have direct connections to the violence that the women suffer. In most of the cases, these women are in registered marriages. In one case, the woman lived with her husband for 30 years without registration, while her husband had recently begun a registered marriage with a second wife, after which he forced his first wife to leave the home. It is striking that in all cases, including the two cases mentioned earlier (where the husbands had a registered or non-registered marriage to a second wife), the local authorities did not take any action or answer requests of the women for help, stating that they 'could not do anything'. Of these two cases, one had been married for 35 years and the other for 30 years.

> *He beat me a lot and called me bad names. He used to love me very much, so I suspected [that he was unfaithful] and I followed him. I hired a motorbike to follow him to his hometown and I discovered that he had married another woman a month before.*
>
> (Woman in Ha Noi)

Another study in Viet Nam also finds a similar increased risk of violence for women whose husbands have another partner (Vung et al. 2008). However, in this study the risk of sexual violence alone is increased, and not of other types of violence.

4.6. Partner's experience with violence in his childhood

Partner's mother abused

Women were asked if, as far as they knew, their partner's mother was hit or beaten by his mother's husband. Women who reported partner violence were significantly more likely to report that their partner's mother was abused. The adjusted odds ratio was almost three.

> *My sister-in-law died because her father treated her cruelly. She thought her life was too miserable and was driven to jump into a river. [My mother-in-law was sick and] relatives of my mother-in-law came to visit and gave her some milk and sugar. Once they left, my father-in-law put everything in the cupboard and locked it. He did not allow his wife to eat anything… My mother-in-law told me "He sold the pigs and he kept money for himself. He sold the buffalo. He also said that the money is his. My clothes were torn. I asked him for money to buy new things but he did not give me any. My hat was torn but he did not allow me to buy a new one." He often tortured her emotionally.*
>
> *She often talked to me and we would cry together. Once, a month after we had spoken she drank rat poison to kill herself. She had told me before she died, but I could not do anything. I could not stop her. She kept two packs of rat poison under her pillow, she had a meal and she took poison. I only learned about [my husband's] family situation after I married. My father-in-law often tortured his wife and children. My mother-in-law died because she was too angry and my sister-in-law died because of him too.*
>
> (Woman in Ha Noi)

The findings on the link between partner violence and violence among the partner's parents during his childhood is in accordance with international research (Gomez 2011, Riggs, Caulfield et al. 2000, Schumacher, Slep et al. 2001, Coid 2000, Ehrensaft 2003).

Partner abused as a child

Women who reported that, as far as they knew, their partner had ever been hit or beaten regularly by someone in his family were more likely to report partner violence. Women who had reported that their partner was abused as a child were statistically significant, almost twice as likely to experience current violence compared to women whose partners were not abused.

Men's experience with violence in childhood is found an important risk factor in other literature, including from Viet Nam, indicating it may be a social learning behaviour (Bandura 1977, Fry, McCoy et al. 2012, Martin, Moracco et al. 2002, Gil-Gonzalez, Vives-Cases et al. 2008, Abramsky, Watts et al. 2011, Pham, Zureick-Brown et al. 2013, Higgins, VanderEnde et al. 2013).

Taking into account that beating is commonly used in Viet Nam as a method to educate boys (Rydstrom 2006), this knowledge should be used to change education and communication programs and policies in Viet Nam.

4.7. Characteristics of the couple/relationship

It is believed that factors relating to the characteristics of the couple, such as differences in education, age or the role of women in choosing their husbands, can have significant effects on the balance of power in their relationships and on the risk of current partner violence. As the results below will show, for Viet Nam there was no evidence for such relations with the exception of women's financial contribution to the household.

Age difference

One of the relative differences between partners that was looked at was the age difference between respondent/wife and husband. As a baseline, "same age or husband one or two years older" was used. This group was compared with a group where the respondent was older than her husband, a group where the husband was 3-8 years older and a group where the husband was nine or more years older. No association between age difference and violence was found in the analysis.

Educational level difference

The baseline group was women whose husband had the same level of education as the woman. This was compared with women whose husband had more education and with women whose husband had less education. No association between difference in educational level and violence was found in the analysis.

Some studies suggest increased risk of partner violence where there is disparity in educational attainment (Abramsky, Watts et al. 2011), but such results were not found in this study for Viet Nam.

Statistical findings say something about groups and do not necessarily apply to individuals. This is demonstrated by the example of one woman who in the qualitative interview stated that the difference in educational level is one main cause of the conflicts between her and her husband.

Relative contribution to household

The baseline group consisted of women who contributed less financially than their partner. The baseline group was the largest. The three comparison groups consisted of women who contributed the same as their partner, women who contributed more than their partner and women who did not earn any money and thus did not contribute to the household income. The group of women who contributed more than their partner was significantly more likely to report partner violence than women who contributed less (the adjusted odds ratio was 2.4).

My husband stopped studying in the 4th grade, while I finished after the 12th grade. Thus, our views about society are not in accordance. This is a deadly issue for me. He had lied to me about it. I only knew after we got married.

(Woman in Ha Noi)

As mentioned above, the majority of Vietnamese women participate in the labour marker, thus the status of 'having a job' or 'having an income' may not in itself be a risk. Rather, it is the level of a women's income, especially in relation to the husband's income, that can affect the risk for domestic violence for women. Other research in Viet Nam and other countries shows that women who earn more than their husband or report to contribute more than their husband to the household economics are at higher risk of domestic violence (Jewkes 2002, Luke, Schuler et al. 2007).

If in life, the wife is the breadwinner for the family, if the wife is the one who earns money for the whole family, while husband cannot do this, he would feel like he has nothing to show off. We are strongly influenced by the cultural perception that men are the heads of households. Men would then feel that their position was lower in their family, so they use violence to reaffirm their power and to show their wives that money cannot control all things in the family. When men cannot earn money they find another way to show their power. They use violence as a way to take their power back.

(Man in Ha Noi)

Women's role in partner choice

In Viet Nam, the majority of women are involved in the choice of their partner. The analysis shows, however, that there is no evidence that women who were not involved in the choice of their partner are at a different risk of partner violence compared with women who were involved.

4.8. Children of respondent

Children of respondents were included as a "relationship factor", as generally they are part of the nuclear family and they can be seen as a characteristic of the relationship or direct family, as well as of the woman herself.

Number of children born alive

Women with one child were taken as the baseline group and compared with women with 2, 3-4, 5+ or no children. The largest group is women with two children. The results at univariate level show that women with zero children and with five or more children are at significantly less risk of current violence by their partner compared to women with one child, while women with two or three to four children do not have a different risk compared to those with one. The final model shows that, compared with women with

one child, having more than one child (including having five or more) does not change the odds for current violence. Only women with zero children are at significantly lower risk of current violence compared to women with one child.

Such results are also found in other international studies. Research shows that women with children are in higher risk of violence as it is more difficult for them to leave the relationship (Allen 2004, Richardson, Coid et al. 2002).

Sex of children

In Viet Nam, many families have preference for sons (UNFPA 2011). It was hypothesized that the sex of a mother's child(ren) would have an effect on the violence that she may experience.

Women with only daughters were used as the baseline. This baseline was compared with women who had only sons and women who had both son(s) and daughter(s). The variable also included a category for women without children. At univariate level no statistical significant difference was found between having only son(s), only daughter(s) or having children of both sexes. There was only a significant difference between having only sons and not having children, with not having children being protective for partner violence as described above.

The above findings were somewhat surprising because qualitative interviews show evidence of the effect of child preference. Cases were documented of women who suffered maltreatment of their husband and parents-in-law when they gave birth to only daughters. One woman in Ha Noi had been married to her husband for 35 years and had two daughters. Her husband secretly married a second wife in another province and had a son. Her husband and his family, including her mother-in-law and sisters-in-law, then locked the door and forced the woman to leave her house.

> *There is no conflict. It is just that I did not bear a son. I have two daughters, so he went out to find a son. He tried to force me to take care of his son but I said that I could not do it. He should leave the boy to his mom... She [my mother-in-law] did not allow me to come back and enter the house.*
>
> (Woman in Ha Noi)

In contradiction to the statistical results described above, which indicate no difference in violence for women who had only daughters compared to those who had only sons, but consistent with the evidence from the in-depth interviews, international studies and other studies in Viet Nam show that an attitude of son-preference in men links with higher risk of violence toward the women (Jewkes, Levin et al. 2002, Vung, Ostergren et al. 2008). Furthermore, women's attitudes toward son-preference have an impact. Women who prefer a son appear to have a lower risk of violence in comparison with women who prefer a girl or who have no preference (Jewkes, Levin et al. 2002). Other studies also show that women who have a non-traditional ideology are at higher risk of violence (Luke, Schuler et al. 2007).

4.9. Socio-economic status

In the study, the household assets index was used as a proxy for socio-economic status (for the calculation of this index, refer to Annex 3). Women who score high for the household assets index are at significantly lower risk of partner violence compared to women who score in the lowest category, even when controlled for all other factors.

Other studies around the world also provide evidence for a relationship between domestic violence against women by their husbands and poverty (Jewkes 2002). The increased risk of violence toward women within poor families is explained by theory about stress and men's identity crisis. Poverty itself is a stressful situation. Men who live in poverty have fewer resources to deal with stress, thus they use violence as a way to escape from stress. Also, men in poor households fail to see themselves as successful men according to the masculinity norms of the society, thus they seek violence as a resource to fulfil the image of a man and to gain their sense of power (Jewkes 2002, Hoang, Quach et al. 2013). In addition, poverty brings higher risks for financial conflict in the couple (Jewkes 2002). Women who are in a bad economic condition find it harder to make the decision to leave an abusive relationship (Allen 2004).

4.10. Social capital

Social capital is about the value of social networks, bringing similar people together and bridging between diversity, with norms of reciprocity (Dekker, Uslaner 2001). It is hypothesized that if a woman has a tighter support network, she may be better protected, sooner able to stop violence or to break out of a violent relationship.

A number of variables were explored, including proximity to the woman's family; frequency of contact with the woman's family; whether the woman can count on support from family members; whether the couple lives with the woman's family; whether the couple lives with the man's family; whether the woman grew up in the community where she now lives; whether the woman is a member of a group; and whether neighbours are willing to help when there is an illness in the family[9].

In the univariate logistic regression, it was found that most of these variables were not associated with violence, with one exception. Not being a member of a group would put women at greater risk of violence. This was statistically significant in univariate analysis only. There is also some evidence for a slightly increased risk of violence when a woman cannot count on support of family members, though this was not statistically significant at univariate level (which is probably due to lack of statistical power due to the small numbers that responded they are not able to count on support from family members – see Table 2).

9. Community cohesion reliability was tested with five questions answered on a scale (people know each other well; people will try to stop a street fight; people contribute to community projects; people trust each other; people will help when there is an accident/illness in the family). The scale had a Cronbach Alpha's Coefficient of 0.35, which is unacceptably low. For this reason the scaled was not used other than for the one question that best reflected whether a community is supportive, whether people will help when there is an accident or illness.

In the total sample of ever partnered women, only 5% reported to be living with their own birth parents or their natal relatives, while 18% reported to be living with their parents-in-law or relatives-in-law (Annex 4). Living in the husband's hometown, whether in the home of the parents-in-law or in the couple's own home, is a disadvantage for the women, which in Viet Nam is related to their status as 'in-law' (làm dâu).

> *I am now in a disadvantaged position (yếu thế). I cannot fight. I cannot talk back. No one would intervene. No one would be by my side. I am an in-law here. Thus, the best is for me to give in (chịu nhịn). Oh my God, he can say what he wants, I just give in.*
>
> (Woman in Ha Noi)

Qualitative in-depth interviews with survivors of violence provide evidence that, even though many of these women live with or near their families of birth, they do not get much support from their own birth parents if they decide to divorce or separate. One of the reasons is that parents do not give inheritance to their own daughters or they only give a little. Further, when daughters want to return to their paternal home, not all of them have a place to accommodate them as parents typically live with their sons and sons' families. The perception that a married daughter should live with her in-laws and belongs to her in-laws influences her parents' attitudes and their willingness to intervene when their own daughters live with violence.

> *To be honest with you, because I was already married and had a house with my husband, coming back to my own family (nhà ngoại) I feel like a visitor (ở nhờ). My younger brother and his children are living there. I left my house to follow my husband (xuất giá tòng phu). It is very shameful to return. The neighbours also look at me. It is very embarrassing.*
>
> (Woman in Ha Noi)

The research site in Ha Noi is quite special in the sense that many men are from different Northern provinces but relocated to Ha Noi, got married and stayed to live with their wives' families. This is an area of army camps. Soldiers from provinces come here to work and some of them get married to local girls. Some women said that men who live with their wife's in-laws would view themselves at a lower position and respect their wife more. Not enough data is available to prove this opinion; however, this shows that support from parents to daughters is very important and helps women when they are deciding to get out of a violent situation.

Qualitative interviews reveal that neighbours are important resources for the women. In many cases, the house of a neighbour can serve as temporary shelter for the woman to escape from the anger of her husband.

In qualitative interviews, also it was also found that many interviewed women, whether a survivor of violence or not, are members of a women's union and attend annual meetings. However, joining the women's union may not help violence survivors very much as domestic violence is not being discussed regularly in the meetings, and if it is mentioned, women are

often advised simply to be gentle and to endure. The reinforcement of gender tradition norms in women's organizations is also discussed by Schuler et al. (2006). Lack of male participation and gender education programmes for men are also mentioned as factors that lead to women's participation in mass organizations being ineffective as a protective factor.

> *I am part of the Women's Union in my commune. I attend several meetings, about two, per year. Sometimes people talk about domestic violence. Men never talk about it, only women talk about it to each other. People just say that women should behave well in life.*
>
> (Woman in Ha Noi)

In qualitative interviews, it was found that attitudes of the community (including women and men) and of local authorities on wife beating can influence the nature of their response to violence and thus can increase women's risk of violence. Community people often express their willingness to intervene in instances of violence. However, if the woman is considered 'not good', 'talkative', or to 'not know how to behave', or if the woman's family is seen as 'not standard' (không mẫu mực), the woman often loses this support. The belief that violence is related to individual characteristics rather than social structures is still quite dominant. Community people and local authorities often believe that some women are abused because they deserve it and that some men beat their wives because they have mental problems. These beliefs often lead to no response, or a negative or delayed response, thus putting women at risk. This in turn makes women remain silent, hesitant to seek help.

> *I did not ask for help because, even if I asked, no one would have come. People there hated me, they harmed me. They just left me for my husband to beat me. They did not pay attention to me.*
>
> (Woman in Ben Tre)

This outlook is in accordance with other research on attitudes toward violence against women by their husband in Viet Nam. In their survey of 1,000 women and men in a district town in Northern Viet Nam, Yount et al. used the same scenarios as in the Viet Nam national survey (i.e. scenarios for possible situations that may or may not justify a man beating his wife), as well as other scenarios used in the Demographic and Health Survey (DHS) and the Multiple Indicator Cluster Survey (MICS). They find that the larger the number of scenarios presented to women, the more they think that violence is justifiable[10]. This same study also finds that men who justify violence against women are more likely to be perpetrators of partner violence (Higgins, VanderEnde et al. 2013).

In contrast, effective support from community people and especially from local authorities and support services will encourage women not only to seek help for themselves but also will motivate them to encourage other women to seek help.

Qualitative interviews provided evidence that violence had changed, been reduced or stopped in a number of cases after the police took positive action such as coming to the house immediately after receiving a report from the woman or others, questioning the husband

Now if I meet women who also suffer from violence, I will advise them not to keep silent but to share. I will give them addresses where they can go to share their experience and ask for support.

(Woman in Ben Tre)

I think women suffering from violence should speak out and ask for help or for counselling. It can vary case by case but we should not keep silent. Keeping silent is dying.

(Woman in Ha Noi)

about his responsibilities or temporarily retaining the husband at the police station. However, women often complain about attitudes justifying violence and delayed responses of local policemen and/or members of reconciliation groups. Further studies to understand attitudes of the police around intimate partner violence and their practices in cases of violence are very important.

The women also complain that financial fines do not help to reduce violence. The women are made to pay for the fine rather than their husband. If their family is poor, the financial fine can make the husband angry and blame the woman for causing financial loss to the family, and can thus increase the women's risk of being further abused.

Results of qualitative interviews also showed that very few women who suffer from violence know about other resources where they can seek help if they cannot get help at the local level. Though legal aid centres are available in every district and supporting women in the event of violence is among their tasks, almost none of the women in the study know about these centres and none of them have ever sought help from them. For the few women who do know about the existence of these centres, they do not know the details that can help them access these centres such as their address or telephone number.

4.11. Geographical characteristics

The regions where women live were included as fixed variables to account for regional effects. In the final model it was found that between regions the adjusted odds ratio differs by a factor two, indicating that some regions are safer for women than others. The results show that women in the Central Highlands, Southeast and Red River Delta regions are at higher risk of partner violence than women in the other three regions.

An effect was found of living in urban or rural areas on partner violence in the univariate model but not in the multivariate models, which can be explained by the fact that the differences between regions is more pronounced than the differences between urban and rural for all regions combined.

Studies that compare women in rural and urban areas in the same country tend to provide

10. This study thus also demonstrates methodological issues with these types of questions to measure attitudes

evidence that women in rural areas are at higher risk of partner violence (Garcia-Moreno, Jansen et al. 2005). However, other research conducted with women in urban areas shows that they have a similar level of risk of violence from their husbands as women in rural areas in the same country (Heise, Ellsberg et al. 2002, Abuya, Onsomu et al. 2012). In some large countries, such as in Turkey, it has also been found that the difference in violence between geographical regions can be more pronounced than the difference between urban and rural areas for the regions combined (KSGM/HUIPS/ICON 2009).

Factors such as education, economic contribution to family economy and social networks can influence the risk of domestic violence of women living in urban and rural areas differently. For example, a study in Kenya shows that having higher (postprimary) education is a protective factor for physical partner violence for both urban women and rural women, whereas the same study finds that completing a primary education increases the risk of sexual violence compared to not having having completed primary education for rural women only (Abuya, Onsomu et al. 2012).

5. Strengths and limitations of this analysis

Regarding the strengths of the study, the data was collected with a state-of-the-art and well-tested methodology and standard instruments, with full consideration for ethics and safety by well-trained and committed interviewers. Quality control measures were thoroughly implemented. The methodology for measuring VAW developed by WHO, used in this study, is considered a best practice around the world to measure this sensitive topic statistically. This is a topic that sometimes people are not willing to discuss and share information about openly and honestly, and this methodology has been shown to have a good track record of getting respondents to disclose such information. We are thus confident that the data from the survey is scientifically sound and robust. Further, the study made use of quantitative as well as qualitative components in a complementary way, which has additional strengths as triangulation of data assisted in its interpretation and deepened understanding.

However, there are some disadvantages in the methodology. The current rate of violence in the last 12 months is often thought to be a more reliable assessment of intimate partner violence because of the assumption that there is less recall bias (Gil-Gonzalez, Vives-Cases et al. 2008). However, recent events of violence might be more difficult to report due to feelings of shame or fear of re¬tali¬ation when disclosing such family problems, especially incidents of sexual violence. Since violence is something women in general - and women in Viet Nam in particular - are not immediately willing to disclose, there is always a risk of underreporting.

In terms of outcome measures, only physical and/or sexual partner violence in the past 12 months is looked at, which means other types of violence, in particular emotional and economic violence, were not examined. This choice is to a large extent based on what other studies do (and thus facilitates comparability) and the fact that the methodology to measure emotional and economic violence is still being developed. The drawback is that some other forms of violence were not paid attention to that may be equally and sometimes even more important in a woman's life.

Using current violence, and not lifetime violence, enables better studying temporal relationships but risks overlooking risk factors that make violence start in the first place, especially in situations where women are more easily able to get out of violent relationships and consequently do not show up in the "current violence" group.

Another limitation is that this is a cross-sectional study and the direction of the associations for some of the variables is not possible to establish. However, judgements about causality can be formulated if the time sequencing is clear. This pertains, for example, to childhood experiences and their associations with adult violence. For other factors, the direction of the association can only be discussed in terms of plausibility.

Another limitation is that in the study only women were interviewed and thus women's reports of their partner characteristics are relied upon.

A further limitation is that only factors for which data was collected in the national study in 2010 were considered. This implies, among other things, that factors that pertain to the outer circles of the ecological framework were not considered. In the statistical risk factor analysis, the main factors looked at are part of the inner circles of the ecological framework: individual factors of the women and of her husband; relationship factors of the couple; and factors that could indicate social capital/family and an immediate support circle of the woman.

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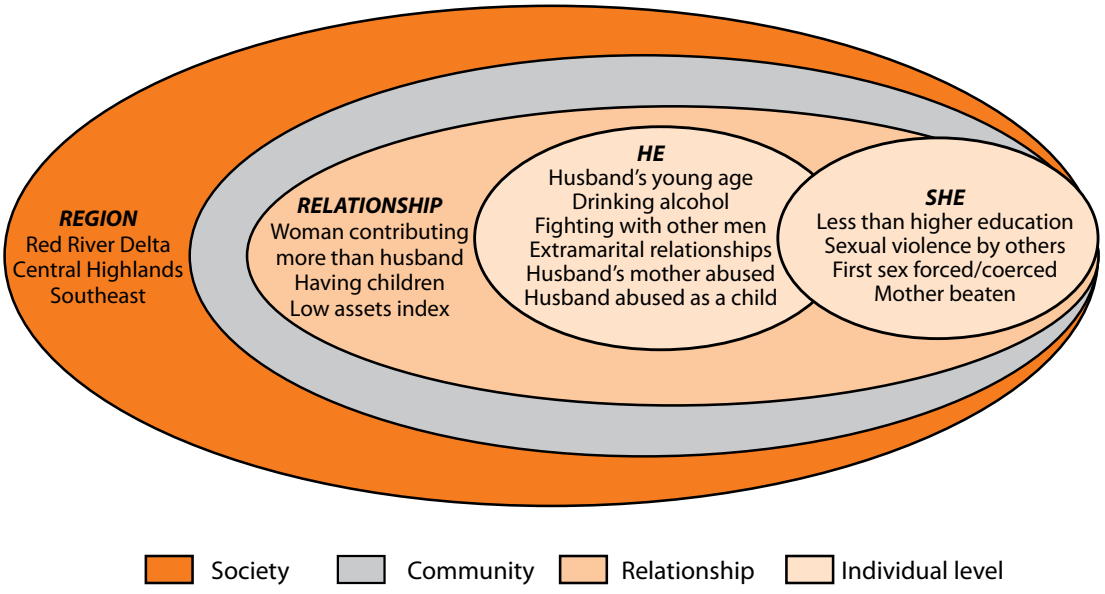
6. Conclusions and recommendations

In this report, 40 factors were looked at regarding the women, their husbands, their relationships and their communities. Factors included: socio-demographic characteristics of women and their husbands (such as age and education); other experiences with violence; attitudes; husband's behaviours; couple characteristics; and support from family and close networks. These factors primarily form part of the inner circles of the ecological framework, a model used to explain partner violence.

The statistical findings confirm that no single risk factor, but rather a complex interplay of different factors at individual, relationship and community level, acts as a predictor of sexual or physical violence by a husband. Many of the statistical findings in this study are similar to what has been found in other studies around the world (See Figure 4 for a summary of the findings for Viet Nam).

Figure 4. Risk factor identified for experiencing physical and/or sexual violence by a husband in past 12 months



The findings highlight that violence by husbands is most strongly associated with male behaviour that could be considered harmful forms of expressing manhood and that are related to power imbalances between husband and wife. This is evidenced by the associations between alcohol use, fighting and extramarital relationships on the one hand and partner violence on the other.

Violence by husbands is also strongly associated with victimization of the woman or her husband before their marriage or with the victimization of their respective mothers. The findings strongly suggest how violence 'runs in families' or rather that it is learned across

generations. Having experienced violence in the childhood home has a long-term effect on later relationships, as it places women at greater risk of violence by husbands while making men more at risk of becoming wife abusers. The findings suggest that young boys and girls learn how to deal with relationships, including conflicts, from their parents and later use similar strategies in their own marriage.

Other factors that increase a woman's risk of violence include her experience of sexual violence with people other than partners, her experience of sexual abuse as a child and whether her first sexual experience was forced or coerced.

A number of factors that were hypothesized to be related to spousal violence were not confirmed by this analysis. These included ethnic group, religion, physical violence by non-partners since age 15, attitudes on wife beating, age differences between partners, educational differences between partners and factors related to social capital/a woman's close support system.

Of relevance for policy and interventions is the overwhelming evidence for the link between the early life experiences of abuse of boys and girls and its long-term effect on later relationships. The findings also suggest alcohol plays an important role in the interplay of risk factors and partner violence. All of this suggests that interventions are necessary with families (especially those with young children), schools and communities, with the inclusion of men and boys, to address the intergenerational cycle of abuse, including childhood abuse, and that responses to children who have witnessed violence against their mothers are necessary.

The following are specific recommendations in line with the findings of this analysis of risk and protective factors related to VAW in Viet Nam:

1. *Focus on prevention as one of the principles of addressing gender-based violence.*

The persistent consequences of sexual abuse or physical violence in childhood stick with girls and boys throughout their lives and increase the chance that they will also become perpetrators and victims. The findings on the nature of the first sexual experience also show that when the experience of first sex is coerced or forced, the risk of partner violence later in life is greatly increased.

To break the cycle of violence and to stop gender-based violence before it starts, it is critical to start early. Prevention programmes should focus on the prevention of child abuse, coercive control, as well as physical and sexual violence, while actively promoting gender equality and challenging harmful male behaviours.

It is important to promote sex education as an independent module or part of a life skills programme for girls in or out of school. Girls should be equipped with knowledge and skills that help them understand their needs, body and feelings to help them make good decisions in life. The education programme should be rights-based, affirming the sexual rights of young people in general, and of women and girls in particular, to avoid reinforcement of traditional gender roles and norms regarding sex and sexual

relationships. This education programme will not only help girls stay healthy through their teen years but also reduce the risk of suffering from violence later in life while increasing their opportunities to have an equitable, safe and fulfilled sexual life.

Higher education of women and men is a protective factor. Thus, it is another long-term task to promote higher education together with integrated gender equality and awareness on violence against women and girls included in the curriculum in schools and training programmes.

2. *Promote advocacy for gender equality and for prevention of gender-based violence, such as by raising awareness of risk factors for violence against women among men and women, especially for young couples.*

The findings show that violence starts early in marriage (with young husbands) and is also related to stressors such as economic situation and number of children. Therefore, prevention programmes should focus on young couples, in particular before marriage.

Pre-marital training should challenge and change prevailing social norms and mindsets about traditional roles of women and their status within the family to prevent violence against women during their marriage. This is a long-term task. The training should go beyond violence against women to address its root cause, which is gender inequality. The training should aim to change traditional gender norms that are significantly related to violence, such as the role of women and men in household economics (relative contribution to household) and children (number and gender). Both women and men should be made aware of the factors that can increase the risk of violence and be equipped with life skills to handle conflicts that are almost unavoidable in marriage. They should learn how to respond effectively to situations in a non-violent manner.

3. *Work with communities to remove the stigma and silence around gender-based violence by husbands and to change social norms related to the acceptability of violence and the subordination of women.*

The study findings show that sexual violence by people other than a partner from age 15 onwards, childhood sexual abuse and a forced or coerced sexual experience are significant risk factors for partner violence. This may be due to the serious stigma attached to these events and the lack of support services for victims. Talking about sex, sexual abuse, rape and violence by husbands is still very much taboo in Viet Nam. Women and girls who are victims of gender-based violence are commonly blamed by society. As a consequence, these women and girls often blame themselves and look down on themselves and consider their own bodies 'dirty'.

Communication programmes should therefore aim to reduce stigma toward women and girls who suffer from sexual or physical abuse. Community-based initiatives and mobilization should focus on cultivating knowledge, skills and practices for community members and local authorities to change social norms related to the acceptability of

violence and the subordination of women. This is also important to improve appropriate responses when assisting victims of violence, including women who suffer from the violence and secondary victims such as their children.

4. Work with men and boys to promote a model of manhood that is oriented toward equality and respect.

The findings in this report show that there is a consistent and strong link between perpetrating partner violence and men engaging in other harmful practices to express manhood. Men who drink alcohol or have extramarital relationships are more likely to be perpetrators of violence against their wives. In addition to the biological effects in the case of alcohol abuse and the psychological effects in the case of extramarital relationships, these two factors link to current violence against their wives through social acceptance of such behaviours, viewed as part of a man's masculinity and sexuality. Fighting with other men is also a significant predictor or risk factor for partner violence. It has a strong link with social acceptance of violence in Viet Nam due to the notion that violence is due to men's inherent biology as they have "hot blood".

In order to reverse these attitudes and practices, a model of "good manhood", one that upholds equality, respect and good norms of masculinity, should be promoted in society. It should celebrate Vietnamese male role models who share, who help their wives and families and who exercise good communication and conflict resolution skills.

Alcohol consumption is a significant risk factor. Thus, not only an image of non-violent men but also of men who do not drink should be promoted. Given the still-dominant social role of alcohol consumption for men in Viet Nam, as Ly (2012) argued, unless this social role changes, other policies using financial and moral mechanisms to limit alcohol consumption may not be effective. Together with communication programmes to change norms on alcohol consumption, men should also be equipped with skills to avoid peer pressure to drink.

Themes of alcohol and violence should be part of a broader gender education programme, which challenges the traditional gender norms for women and men. Such an education programme should promote the tolerance of boys and men to diversity, including gender and sexual diversity. Communication and education programmes should aim to change the perception among some men that using violence is a legitimate means of education or solving conflict. These programmes should also help boys and men develop skills to control themselves and to use non-violent means to deal with conflicts, including social and family conflicts. In addition, education on masculinity should start as soon as possible, so it should be part of school curriculum.

Education about gender-based violence should be obligatory for perpetrators. Current policies focus on financial and moral sanctions, although these are not effective. Such sanctions do not help change men's behaviour and can increase risks for women. There are already successful models of working with perpetrators (CCIHP 2010, CCIHP 2012, Hoang, Quach et al. 2013, DOVIPNET 2014). The government should support expanding such models. One of the challenges for implementing these models is recruiting men. Thus, if

a policy can make participation in such programmes compulsory for male perpetrators, they would be more effective.

At community level, women's unions are the focal organizations to mobilize women. Mass organizations such as farmers unions and youth unions involve significant participation of men and boys. As such, it is recommended to work not only with women's unions, but also with mass organizations such as these to mobilize men and boys to actively participate in gender-based violence prevention and ending violence against women. The capacities of these organizations to effectively work with men and boys in this way should be strengthened.

5. *Address child abuse and promote healthy families and violence-free environments for children.*

The findings in this report confirm that domestic violence is a learned behaviour, copied from parents. This evidences the importance of childhood experience. If a man experienced violence in his family as a child, he is not only at risk of experiencing further problems with his well-being during his childhood as seen in the national report, but he also has a higher risk of becoming a perpetrator of violence against women when he grows up. A history of violence in the woman's family when she was a girl is also an important risk factor for her current partner violence. When a child (girl or boy) grows up in a family with a violent environment, unequal gender relations, or with tolerance for violence, they learn that power in the family relationships is maintained by violence and that violence as part of couple relationships is normal. This is another integral part of the social norms on masculinity learned in childhood, during which a boy learns to be a future perpetrator and a girl learns how to accept such violent behaviour. Violence as a means of discipline, education or problem solving has shown to contribute to gender-based violence later in life. As such, not only families but also schools should be free of violence. In every act of domestic violence there are perpetrators, primary victims and secondary victims (e.g. children or other family members).

By promoting healthy families and violence-free environments for children, domestic violence can be prevented effectively and fully. Both perpetrators and victims should be helped. Love and respect for life and happiness for every individual should be promoted.

6. *Integrate combatting violence against women and gender-based violence into other health and economic programmes using intersectoral approaches.*

The findings show that in addition to early experiences of violence, factors such as relative contribution to household income, socio-economic status and education are also linked to violence against women. Women and men with low socio-economic status are especially at risk of becoming perpetrators or victims. The research findings thus point to the need for holistic action. To address violence against women effectively, a structured multisectoral approach involving all relevant agencies and organizations is needed.

Economic development and poverty reduction are important to reduce violence against women. However, the relationship between women's financial contribution to their household and current partner violence is complex, as the analysis shows. Women who contribute more than their husbands have an increased risk of current violence by their partner. Furthermore, the power and status of women participating in economic activities may challenge traditional views of their role. Thus, combatting gender-based violence should be integrated in economic development programmes for poor families. These programmes should be based on an understanding of how gender inequality and gender-based violence impacts women, men and families. Both men and women in poor economic conditions who are part of these programmes should be provided with specific resources to help them deal with economic and social pressure and engage them in combatting violence against women.

The health sector also has an important role to play and health workers need to be trained to properly recognize and respond to violence. This should be done not only through counselling and therapy, but also by referring other support services, while keeping women safe. Such programmes need to be conducted with respect for the local context in coordination with other sectors and social actors, using holistic strategies and interventions at national and local levels.

7. *Reproduce the 'model on prevention and mitigation of harmful effects of gender–based violence' while enhancing local capacities in communes where the model has been introduced.*

The *'model of prevention and mitigation of harmful effects of gender-based violence'* was piloted in 63 communes in 63 provinces throughout the country under the National Programme on Gender Equality in the period 2011-2015. Since then, this model has been evaluated and replicated in 75 other communes. In each commune the model generally has 4 components: a club for prevention and mitigation of harmful effects of gender-based violence; a gender-based violence prevention group; reliable addresses; and a safe house (shelter) in the community. While it is recommended to reproduce the model, it is also important to strengthen the current activities of the model, for example through standardizing criteria for the safe house and the reliable addresses; training of staff to enhance counselling services, support and protection of survivors of violence; as well as advocacy activities in the general community to create awareness and improve communication so that people are better able to prevent and respond to gender-based violence in the community.

8. *Strengthen the capacities and enhance the accountability of social associations, agencies, organizations and the State to respond to gender-based violence.*

To ensure the effectiveness and sustainability of integrated and holistic strategies and programmes, the capacities and accountability of social associations, agencies, organizations and the State for gender-based violence should be enhanced. Qualitative data reveals the importance of family members, neighbours and especially local officers

in intervention in instances of violence against women. Effective interventions increase women's trust in the justice system and thus may increase the likelihood of them seeking help to stop or escape from a violent situation. As the study shows, effective and timely response of local authorities, including police, is very important.

Advocacy and capacity building programmes are needed for each type of social association, agency and organization related to their work on gender-based violence. The Domestic Violence Law supports the development of systems to work on domestic violence from central to grassroots levels. However, this does not automatically mean that the system functions properly. As the study shows, in many cases women who suffered from violence often get support or advice that is not helpful or that even puts them at more risk of violence. Resources should be made available to build the capacity of people in the support system to improve the way they work on gender-based violence. Besides enhancing specific skills such as counselling, the capacity building programme should focus on changing perceptions on gender roles and women's rights. With a better understanding and perception on gender equality, the Law on DV will be easier to implement and enforce.

9. *While prevention policies and interventions are needed nationwide, in the event of funding constraints, pilot projects/programmes should be prioritized first in the regions where women are at the highest risk of violence (the Central Highlands, the Southeast and the Red River Delta).*

The findings from the analysis highlight the need for inter-sectoral approaches. Such approaches should be outlined in a national strategic plan. While prevention policies and interventions are needed nationwide, in the event of resource constraints, pilot projects/programmes should be prioritized first in the regions where women are at the highest risk of violence, which according to this study are the Central Highlands, the Southeast and the Red River Delta.

Annex

Annex 1. Organization, questionnaire and operational definitions used in the National Study on Domestic Violence

Organization of the study

The National Study on Domestic Violence against Women in Viet Nam was implemented and managed by the General Statistics Office (GSO), with technical assistance and overall coordination by WHO, which recruited two national consultants from the Centre for Creative Initiatives in Health and Population (CCIHP), the Ministry of Health and an international consultant, Dr. Henrica A.F.M. Jansen, as team leader. The field research was an activity under the United Nations – Government of Viet Nam Joint Programme on Gender Equality (MDGF-1694).

The research consists of a quantitative component (a population-based survey) and a qualitative component (in-depth and key informant interviews and focus group discussions). The study adhered to ethical and safety recommendations formulated by WHO for research on violence against women.

The survey replicated the methods that were developed for the WHO multi-country study on women's health and domestic violence. Main deviations from the WHO methods were the use of a larger, national sample and the use of a different age bracket for the women that were eligible to be interviewed: 18-60 years. Women were invited to be interviewed in community centres in their community or neighbourhood by specially trained interviewers. The methods, training of field staff, sampling strategy and ethical considerations have been described in the first report on this study[11].

Survey questionnaire

The survey questionnaire consists of a household questionnaire, asking about household assets and perception of and experience with crime by household members[12], followed by an individual woman's questionnaire containing 12 sections covering the following topics:

Section 1. Respondent and her community: socio-demographics, social capital

Section 2. General health, recent symptoms, health service use, mental health

11. General Statistics Office (2010). Results from the National Study on Domestic Violence against Women in Viet Nam: "Keeping silent is dying". Ha Noi, Viet Nam.

12. In Viet Nam both the household questionnaire and the woman's questionnaire were administered to the selected women because they were interviewed outside her own households and no other household members were involved in answering questions from the household questionnaire.

Section 3. Reproductive health: reproductive history, contraception use

Section 4. Children: pregnancy of last born child, behaviour of school-aged children

Section 5. Current or most recent partner: socio-demographics, alcohol and substance use, fighting with men, extramarital relationships

Section 6. Attitudes around gender equality, partner violence and sexual autonomy

Section 7. Partner violence: emotional, controlling behaviours, physical, sexual, violence in pregnancy

Section 8. Injuries due to partner violence

Section 9. Coping strategies: help-seeking behaviour, leaving

Section 10. Physical and sexual violence by people other than partners

Section 11. Financial autonomy

Section 12. Concealed disclosure of childhood sexual abuse, conclusion of interview.

For the full questionnaire refer to the first report.

Operational definitions for the types of violence used in this report

The experience of physical or sexual violence was measured by asking about specific behavioural acts, without using the word violence, which is an approach that minimizes (subjective) interpretation by the interviewer or respondent and that encourages greater disclosure of violence.

A. Questions asked of all women who ever had a husband/partner

Intimate partner violence (violence by husband/partner) was considered to be present when a woman answered yes to having experienced at least one of six acts of physical violence or one of four acts of sexual violence as described below.

Physical violence by husband or partner (acts c-f are considered severe)

(a) Slapped or threw something at her that could hurt

(b) Pushed, shoved her or pulled her hair

(c) Hit her with a fist or something else that could hurt

(d) Kicked, dragged or beat her up

(e) Choked or burned her on purpose

(f) Threatened to use or actually used a gun, knife or other weapon against her

Sexual violence by husband or partner

(a) Physically forced her to have sexual intercourse when she did not want to

(b) She had sexual intercourse when she did not want to because she was afraid of what her partner might do

(c) He forced her to do something sexual that she found degrading or humiliating

(d) He forced her to have sex with another person[13]

13. This act was not in the original WHO questionnaire but was added in the Viet Nam questionnaire

Physical and/or sexual violence by a husband or partner

One or more of the above acts of physical and/or sexual violence

B. Questions asked of all women about people other than husband or partner

Physical violence after age 15 by people other than husbands or partners

Since the age of 15, someone other than her partner beat or physically mistreated her.

Sexual violence after age 15 by people other than husbands or partners

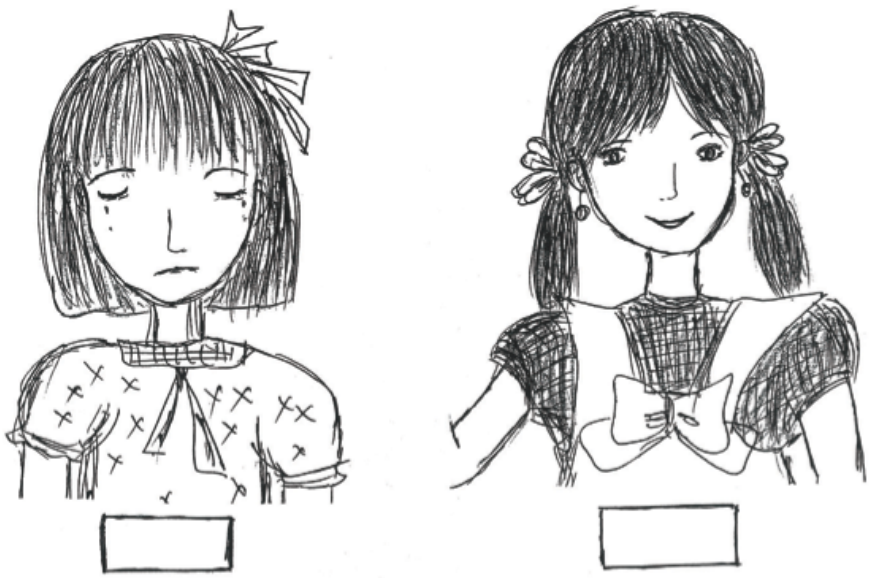
Since the age of 15 years, someone other than her partner forced her to have sex or to perform a sexual act when she did not want to.

Childhood sexual abuse (asked retrospectively about sexual abuse before the age o 15f) by others

Before the age of 15, someone had touched her sexually or made her do something sexual that she did not want to.

At the end of the interview the respondent was given a second – concealed – opportunity to disclose childhood sexual abuse by marking a face card (see Figure A1.1) and seal it in an envelope. The interviewer would not see which face was marked.

Figure A1.1. Card with pictorial representation of response to a question on sexual abuse before age 15: crying face indicates "yes", smiling face indicates "no"



Reference periods

For each act of violence that the respondent reported as having happened to her, she was asked whether it had ever happened during her lifetime, and whether it had happened in the past 12 months. The two reference periods were used to calculate lifetime prevalence and the current prevalence of violence.

The lifetime prevalence of violence (or "ever experienced violence") measures whether a certain type of violence has occurred in her life, even if it was only once. In this sense, it is cumulative and, as per definition, it would increase with age. It reveals how many women have experienced violence at some time in their lives. This is especially important for advocacy and awareness raising. The lifetime prevalence rate of intimate partner violence refers to the proportion of women who have ever had a husband or other intimate partner who reported at least one occurrence of an act of physical or sexual violence by their current or any previous partner at any time in their life. All women who experienced prevalence in the past 12 months preceding the survey are also counted among those who experienced lifetime violence.

Prevalence in the 12 months preceding the survey ("current violence") reflects types of violence only when they occurred in the past 12 months, regardless of when it started. It could have started recently or have been ongoing for many years. Violence in the last 12 months is by definition lower than lifetime prevalence as it covers recent violence that is also included in lifetime violence. The 12-month prevalence rate of intimate partner violence as used in this report thus refers to the proportion of women who have ever had a husband or other intimate partner who reported at least one occurrence of an act of physical or sexual violence by any partner within the period of 12 months preceding the interview. The proportion experiencing violence in the past 12 months is significant in understanding the situation at one point in time: the present situation. This is significant for drafting intervention programmes (e.g. how many women would currently need services). The 12-month period is also significant for monitoring change to determine the impact of these programmes[14].

Though both reference periods have been measured, the analysis in this report uses only current violence.

Partnership definition

According to the Viet Nam DV Law, women can experience domestic violence only from current or former husbands or cohabiting partners without marriage registration. In this survey, women are considered ever-partnered if they have ever been married, ever lived with a man or ever had a dating partner (boyfriend). In practice, in this survey almost 100% of the ever-partnered women were ever-married. This implies that if they experience partner violence this would correspond with the definition of domestic violence in the DV Law.

In the analysis in this report, only current/most recent partners are included, because in the questionnaire only the characteristics of one partner, the current or most recent partner (the latter if not currently partnered), has been collected.

14. Caution is always required with the interpretation of change of prevalence. Sometimes when awareness is increased, more women disclose violence and the prevalence rate will go up, which does not necessarily mean that the violence has increased.

Annex 2. Overview risk factor analysis in other studies using the same or similar questionnaire

Compiled by Henrica A.F.M. Jansen 2013

Authors of study; journal	Study questionnaire used	Sub-sample used	Dependent (outcome) variable(s)	Independent variables	Main findings	Comments
Abramsky et al. BMC Public Health, 2011	WHO study questionnaire	Women (15-49) who ever had a male partner Data used from all 10 countries (15 sites) WHO multi-country study	Physical and/or sexual partner violence within the past 12 months vs never violence	Prior to relationship: History of mother beaten; abused in childhood, education Current situation: Demographics and relative status; attitudes, alcohol, other relationships, non-partner violence; characteristics of the union.	Similar findings across sites: Secondary education, high SES protective, while alcohol abuse, young age, norms around wife beating, infidelity, childhood abuse, fighting increasing the risk. Strength of association was greatest if both have the risk factor	Uses additional variables for when both partners have a risk factor (mother abuse, child abuse, alcohol etc.)
Djikanovic et al. J Epidemiol Community Health, 2010	WHO study questionnaire	1456 women (15-49) who ever had a male partner (married or cohabitated) in Belgrade	Ever physical and/or sexual partner violence by current or most recent partner vs never violence	Woman: Age, education, proximity to and support from family, non-partner abuse, first intercourse, history of mother beaten. Partner: Age, education, employment, alcohol, drugs, fighting , infidelity, mother abuse and childhood abuse	Majority of associated factors related to partner: his childhood experiences with violence in own family	Justification for ever violence because current violence only 4% resulting in low power of the analysis

Authors of study; journal	Study questionnaire used	Sub-sample used	Dependent (outcome) variable(s)	Independent variables	Main findings	Comments
Tabassum Naved R and Persson L.A., Studies in Family Planning, 2005	WHO study questionnaire	2702 ever married women 15-49 in two sites in Bangladesh	Current (12m) physical violence vs. no current physical violence	Woman: age, earning, belonging to group, religion, attitudes Husband: education, mother abuses Dowry, living with in-laws, family support, spousal communication, household income. Proportion of respondents worried about crime (community level)	Strongest factor is the history of abuse of the husband's mother by his father. Other factors: spousal communication, dowry. Education and age worked different urban vs rural. In rural areas women's earning and income increased risk.	Contains section describing evidence from qualitative research
Hayati E.N. et al. BMC Women's Health, 2011	WHO study questionnaire	765 pregnant women in one district in Central Java	Ever physical partner violence vs. never. Ever sexual partner violence vs. never. (No combined variable for both types)	Woman: age, education, income, children, geography. Husband: age, education, work, still money, share income, infidelity, alcohol, mother beaten, fighting with men	Sexual violence with men's age and women's economic independence. Physical with husband's behaviour and childhoods experience with violence.	Attitudes were explored separately from the other risk factors

Authors of study; journal	Study questionnaire used	Sub-sample used	Dependent (outcome) variable(s)	Independent variables	Main findings	Comments
Kiss L, et al. Social Science and Medicine, 2012	WHO study questionnaire	940 ever-partnered women in Sao Paulo City	Ever physical and/or sexual violence in the period that women lived in current neighbourhood vs. women who had partner violence before moving in neighbourhood and women who never experienced partner violence	Woman: age, education, number of children alive, child hood sexual abuse and mother abused, acceptability of violence, alcohol Partner: employment, alcohol, fighting with men, mother abused, controlling behaviour. Modelling: women model, partner model and combined model.	Individual factors for both partners were more important to determine likelihood of violence than contextual or geographic effects (partners' alcohol use, controlling behaviours, fighting; women's mother abused, alcohol) Misclassification bias for partner variables was discussed.	The study focussed on the influence of neighbourhood socioeconomic conditions and includes individual risk factors for women and their partners

Authors of study; journal	Study questionnaire used	Sub-sample used	Dependent (outcome) variable(s)	Independent variables	Main findings	Comments
Ma`a Fafine mo e Famili, 2012	WHO study questionnaire	428 women (15-49) who experience violence by current or most recent partner and those who never experienced partner violence in Tonga	Ever physical and/or sexual partner violence by current or most recent partner vs never violence. Physical and/or sexual partner violence within the past 12 months vs no current violence (i.e. never violence and violence only before past 12m)	Women: demographic, geographic, income, religion, immediate support network, experience with violence by others Partner: demographics (age, education, employment), behaviour (alcohol, fighting, infidelity) partner childhood experiences with violence, Household: SES	Main risk factors for both lifetime violence and current partner violence related to characteristics of the partner rather than of the woman: fighting with other men, having extra-marital affairs, man's experience of violence in his childhood. A man's regular use of alcohol is a risk factor for current violence.	Separate multi-variable models were built for women and for partner characteristics; the final model included those that were associated in the two earlier models

Authors of study; journal	Study questionnaire used	Sub-sample used	Dependent (outcome) variable(s)	Independent variables	Main findings	Comments
Secretariat of the Pacific Community, 2009	WHO study questionnaire	2346 ever-partnered women (15-49) who experience lifetime violence by current or most recent partner and those who never experienced partner violence in Solomon Islands	Ever physical and/or sexual partner violence by current or most recent partner vs never violence. Physical and/or sexual partner violence within the past 12 months vs no current violence (i.e. never violence and violence only before past 12m)	Woman: age, education, marital status, partner choice, birth place, number of children, employment, mother beaten, non-partner violence, childhood abuse, attitudes, alcohol use. Partner: age, education, employment, alcohol use, mother beating, fighting with men, infidelity, controlling behaviours	Almost all variables that were associated with lifetime partner violence in the final model were partner characteristics as well as non-partner sexual abuse and bride price	Descriptive analysis for current and lifetime violence, multivariate modelling only for lifetime violence

Authors of study; journal	Study questionnaire used	Sub-sample used	Dependent (outcome) variable(s)	Independent variables	Main findings	Comments
Secretariat of the Pacific Community, 2010	WHO study questionnaire	1397 ever-partnered women (15-49) who experience lifetime violence by current or most recent partner and those who never experienced partner violence in Kiribati	Ever physical and/or sexual partner violence by current or most recent partner vs never violence. Physical and/or sexual partner violence within the past 12 months vs no current violence (i.e. never violence and violence only before past 12m)	Woman: age, education, marital status, partner choice, birth place, number of children, employment, mother beaten, non-partner violence, childhood abuse, attitudes, alcohol use. Partner: age, education, employment, alcohol use, mother beating, fighting with men, infidelity, controlling behaviours	Risk factors for lifetime violence by a current or most recent partner: attitudes to sex. respondent's alcohol consumption, partner's alcohol consumption, childhood sexual abuse, partner controlling behaviour, partner had affair, partner fights with other men, partner beaten as a child, partner's father beat mother	Descriptive analysis for current and lifetime violence, multivariate modelling only for lifetime violence

Authors of study; journal	Study questionnaire used	Sub-sample used	Dependent (outcome) variable(s)	Independent variables	Main findings	Comments
Vanuatu Women's Centre, 2011	WHO study questionnaire	2015 ever-partnered women (15-49) in Vanuatu	Ever physical and/or sexual partner violence vs. never physical or sexual partner violence	Women: demographic, relationship status, marriage ceremony, bride price, children, childhood experiences, non-partner violence, attitudes, kava Partner: demographics, alcohol, kava, drugs, gambling, childhood experiences, fighting, infidelity, controlling behaviours	Significant associations: 5 partner factors: controlling behaviours, alcohol use, infidelity, fighting, employment status; 7 woman factors: drinking, non-partner physical violence, mother beaten, earning income, CSA, SES an attitudes Partner factors strongest associations	Many details in univariate descriptive analysis

Authors of study; journal	Study questionnaire used	Sub-sample used	Dependent (outcome) variable(s)	Independent variables	Main findings	Comments
Yuksel-Kaptanoglu et al. J Interpers Violence, 2012	Adapted from WHO	All ever-married women (number not mentioned) out of total national sample of 12795 women aged 15-49 in Turkey	Physical and/or sexual partner violence in the past 12 months vs. no current violence (i.e. never violence and violence only before past 12 months)	Women and partners history with abuse, educational and age difference, marriage decision and type, partner having affairs, drinking, preventing contact with family controlling behaviours, number of children, marriage duration, work, support from family, attitudes, non-partner abuse, SES, contribution to family income, Geographical region	Violence associated with early childhood abuse experienced by women and her husbands, marriage decided by others, husband behaviours, woman's contribution to household income, support, non-partner violence. None with education and employment status	Limitation of their out outcome variables not mentioned in discussion
Stockl H. et al, Sociology of Health and Illness, 2011	German questionnaire (not WHO)	3866 women with current partners (16-49) in Germany	Partner violence by current partner vs never partner violence	Woman's childhood violence, woman's vulnerabilities and age, relationship and household characteristics (age gap, relative income, education, employment, nationality, children, marital status, duration of relationship) Social support and community. Geographical region	Factors associated with violence: childhood abuse, woman's drug use, disability, more than 3 children, non-partner violence and social exclusion. Partner unemployed, shorter relationship duration, man or both partners drinking.	Note: different questionnaire; we included this study here to show that there are yet more different ways to define the outcome variable

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Annex 3. Method to develop an index for Socio-economic Status - Vietnam Violence against Women Study

Prepared by Seema Vyas, 2013

1. INTRODUCTION

The Vietnam violence against women (VAW) survey collected information on a number of individual variables reflecting different dimensions of household socioeconomic status (SES). This Annex describes the method used to develop a single measure or index of SES using this information. A key issue in deriving a single measure index of SES using different indicators is how to assign weights to the individual variables. Principal components analysis (PCA) is a commonly used approach of statistically deriving weights for SES indices. PCA is a multivariate statistical technique that reduces the number of variables in a data set into a smaller number of components. Each component is a weighted combination of the original variables. The higher the degree of correlation among the original variables in the data, the fewer components required to capture the common information. An important property of the components derived is that they are uncorrelated, therefore each component captures a dimension in the data. The next section details the steps taken to derive a PCA-based SES index.

2. METHOD

Guided by Vyas and Kumaranayake (2006) this study undertook three steps to derive a PCA-based SES index: first, a descriptive analysis; second, the construction of the PCA-based SES index; and third, the classification of households into SES groups. The analysis was conducted using STATA version 12.00 statistical software.

2.1 Descriptive analysis

The first step was to conduct descriptive analysis which involved establishing the overall sample size, the frequency of each variable, and patterns of missing data for individual variables. This descriptive analysis was essential exploratory work to ensure data quality, and appropriate data coding and recoding for further analysis.

Overall sample size

A household selection form and questionnaire was administered and completed in 4837 households (1763 urban; 3074 rural). The household questionnaire gathered information on different SES indicators and the SES index was constructed using data from all 4837 households where full SES data were collected.

Frequency analysis

The purpose of the frequency analysis was to establish the extent to which the variables were distributed across households and to inform subsequent coding of the variables. An issue with PCA is that it works best when asset variables are correlated, but also when the distribution of variables varies across households. It is the assets that are more unequally distributed between households that are given more weight in PCA. For example, an

asset which all households own or which no households own would exhibit no variation between households and would carry a weight close to zero from a PCA. A second issue with PCA is that data in categorical form are not suitable for inclusion in the analysis. This is because the categories are converted into a quantitative scale which does not have any meaning. To avoid this, qualitative categorical variables are recoded into binary variables.

The Vietnam survey data gathered information on source of drinking water; type of toilet facility; main type material used in the roof; ownership of a range of household durable items; ownership of three different types of vehicles; land ownership; and the number of rooms in the house used for sleeping and the total number of people in the household. A description and frequency distribution of the variables for Vietnam total sample (urban and rural location combined) and for the Vietnam urban sample and the Vietnam rural sample separately is shown in Table A3.1 in this annex.

Table A3.1: Description and frequency of SES variables

Variable long name (short name) / *Variable type*	Variable Label	Vietnam total %/ mean *(std. dev.)* (N=4837)	Vietnam urban %/mean *(std. dev.)* (N=1763)	Vietnam rural %/ mean *(std. dev.)* (N=3074)
Main source of drinking water (q01) / *Categorical*	Tap/piped water in residence	25.0	54.3	8.2
	Outside tap (piped) with HH	1.7	3.5	0.7
	Public tap	0.4	0.7	0.3
	Drilled well	21.7	14.3	26.0
	Protected deep well	23.5	16.0	27.7
	Unprotected deep well	3.4	1.5	4.6
	Protected spring water	5.3	0.2	8.2
	Unprotected spring water	4.4	1.0	6.3
	Rainwater	7.7	3.3	10.2
	Bottled water	0.2	0.3	0.2
	Car small tanker water	0.1	0.1	0.1
	Car/truck big tanker water	0.0	0.0	0.1
	River/stream/pool/lake water	5.4	3.2	6.7
	Other	0.3	0.1	0.5
	Refused/no answer	0.1	0.0	0.2

Variable long name (short name) / *Variable type*	Variable Label	Vietnam total %/ mean *(std. dev.)* (N=4837)	Vietnam urban %/mean *(std. dev.)* (N=1763)	Vietnam rural %/ mean *(std. dev.)* (N=3074)
Kind of toilet facility (q02) / *Categorical*	Semi or septic tank flush toilet	44.6	74.2	27.7
	Sulab flush toilet	6.3	6.8	6.0
	Two compartment latrine	7.9	3.4	10.5
	Fishing pool/river/canal latrine	9.2	4.7	11.8
	No latrine	14.2	4.9	19.6
	Other	17.8	6.0	24.5
Main materials used in roof (q03) / *Categorical*	Different materials	10.3	7.1	12.1
	Natural traditional roof	4.5	1.5	6.2
	Corrugated iron/brick	66.9	61.8	69.9
	Concrete roof	18.1	29.6	11.6
	Other	0.1	0.0	0.2
Whether household has ..... (q04) / *Binary*	Electricity	97.0	99.7	95.5
	Radio	29.9	34.8	27.1
	Television	89.9	95.0	87.0
	Table telephone	51.4	65.2	43.5
	Mobile phone	75.0	86.2	68.7
	Refrigerator	39.4	64.9	24.7
	Computer	18.0	36.0	7.7
Whether household member has..... (q05) / Binary	Bicycle	66.2	67.6	65.4
	Motorcycle	78.9	86.1	74.8
	Car	3.1	5.6	1.6
Land ownership (q06) / *Binary*	Land	89.6	86.0	91.7

Variable long name (short name) / *Variable type*	Variable Label	Vietnam total %/ mean *(std. dev.)* (N=4837)	Vietnam urban %/mean *(std. dev.)* (N=1763)	Vietnam rural %/ mean *(std. dev.)* (N=3074)
Rooms for sleeping (q07) / *Continuous*	1-7	2.04 *(1.63)*	2.06 *(0.85)*	2.04 *(1.94)*
Total in household (tothh) / *Continuous*	1-17	4.31 *(1.60)*	4.13 *(1.62)*	4.41 *(1.57)*

The findings reveal that across the total sample, there was variation in the main sources of drinking water, type of sanitation facility and main material used in the roof. The majority of households use one of three sources of drinking water: tap/piped water in residence; drilled well; or protected deep well. Though smaller in percentage terms, the number of households that cited rainwater; protected spring water; or river/stream/pool or lake as their main source of drinking water was not negligibly small (i.e. n>250). However, there were several categories with very low frequencies—public tap; bottled water; car small tanker; big tanker; other; and refused. While one category dominates type of toilet facility in the household and the main material used in the roof, the remaining households are distributed across the rest of the categories for both housing characteristics. Almost 45.0% of households have a semi or septic tank flush toilet—the single largest proportion across the categories—however, among the remaining households, the type of toilet facility ranged from 6.3% reporting they have a sulab flush toilet to 17.8% reporting they have an "other" type of facility. Two-thirds of the households reported that the main material used in the roof was corrugated iron/brick, and among the remaining households, the main material used was split primarily between different materials and concrete. Though 4.5% reported that their roof was made of traditional materials, this still accounted for 219 households. Almost all households have electricity and the vast majority (almost 90.0%) have a television or own land. Ownership of the remaining household durable assets ranged from 18.0% (computer) to 75.0% (mobile phone). While the majority of households have a bicycle or a motorcycle (66.2% and 78.9% respectively) very few households have a car.

The distribution of the SES indicators across the total sample, to some extent, masked the variation by urban and rural location. For example, in the Vietnam urban over half (54.5%) of the household's main source of drinking water is from a tap/piped water in residence and 74.2% have a semi or septic tank flush toilet. This compares with 8.2% and 27.7% respectively in Vietnam rural. The distribution of main roofing material is less varied between the two settings, however, a greater proportion of households (29.6%) in Vietnam urban have a roof made from concrete. Ownership of all household durable

items is higher in the Vietnam urban than in Vietnam rural—most notably ownership of a refrigerator 36.0% (urban) and 7.7% (rural). The mean number of rooms in the household used for sleeping is similar in both settings, however, the mean number of people in the household is slightly higher in Vietnam rural.

2.2 Analytical approach

Given the differences in distribution of the SES indicators by urban and rural split, three separate PCA analyses were run: Vietnam total sample; Vietnam urban sample; and Vietnam rural sample. The purpose of this was to assess whether an SES index created using the total sample masked the variation in household SES in the urban and the rural samples.

Coding of variables

Table A3.2 describes the coding for each SES indicator. For main source of drinking water, six separate binary variables were created: whether or not the household's main source of water came from a tap (in residence, outside with household or public tap); well (drilled well, protected deep well or unprotected deep well); spring water (protected spring water or unprotected spring water); rainwater; river, stream, pool or lake; and other (bottled water, car small tanker, car/truck big tanker, other or refused to answer). The sixth category "other" grouped together the sources of drinking water with low frequencies but that individually did not appear similar to any of the other five categories.

All six categories of toilet facility were separated into the following six binary variables: whether or not the household has a semi or septic tank flush toilet; sulab flush toilet; two compartment latrine; fishing pool, river or canal latrine; no latrine; or "other" type of facility.

Four binary variables were created for main material used in the roof: made from different materials; traditional materials combined with "other" materials; corrugated iron/brick; and concrete roof.

All household durable assets, type of vehicle and land ownership remained as separate binary variables. A 'crowding' index was created as the ratio between the number of people in the household and the number of rooms in the house for sleeping.

Inclusion of variables in PCA analyses

Based on the frequency distribution for the Vietnam total sample (urban and rural combined) and for the rural only sample, all variables were considered for inclusion in the PCA analysis. When considering Vietnam urban sample, the variable electricity was excluded from the analysis as virtually all households had electricity and therefore the variable would exhibit virtually zero variation.

Table A3.2: Description of SES variables used in PCA analysis

Variable description	Type of variable	Value labels
Tap (in house/outside house/public)	Binary	No = 0 Yes = 1
Well (Drilled/protected & unprotected deep well)	Binary	No = 0 Yes = 1
Spring water (protected and unprotected)	Binary	No = 0 Yes = 1
Rainwater	Binary	No = 0 Yes = 1
River/stream/pool/lake water	Binary	No = 0 Yes = 1
Other/bottled/car/truck/refused	Binary	No = 0 Yes = 1
Semi or septic tank flush toilet	Binary	No = 0 Yes = 1
Sulab flush toilet	Binary	No = 0 Yes = 1
Two compartment latrine	Binary	No = 0 Yes = 1
Fishing pool/river/canal latrine	Binary	No = 0 Yes = 1
No latrine	Binary	No = 0 Yes = 1
Other type of toilet facility	Binary	No = 0 Yes = 1
Different materials	Binary	No = 0 Yes = 1
Natural traditional roof & "other"	Binary	No = 0 Yes = 1
Corrugated iron/brick	Binary	No = 0 Yes = 1
Concrete roof	Binary	No = 0 Yes = 1
Electricity	Binary	No = 0 Yes = 1
Radio	Binary	No = 0 Yes = 1
Television	Binary	No = 0 Yes = 1
Table telephone	Binary	No = 0 Yes = 1
Mobile phone	Binary	No = 0 Yes = 1
Refrigerator	Binary	No = 0 Yes = 1
Computer	Binary	No = 0 Yes = 1
Bicycle	Binary	No = 0 Yes = 1
Motorcycle	Binary	No = 0 Yes = 1
Car	Binary	No = 0 Yes = 1
Land	Binary	No = 0 Yes = 1
Crowding index	Continuous	0.030-13

Missing values

Another data issue is that of missing values and two options exist to deal with this. The first is to exclude households with at least one missing value from the analysis, and the second is to replace missing values with the mean value for that variable. Exclusion of households based on missing socioeconomic data could significantly lower sample sizes and the statistical power of study results. However, attributing mean scores for missing values reduces variation among households. Though in both situations, the limitation is more pronounced with high numbers of missing values.

In the Vietnam survey, four of the household durable assets, ownership of a bicycle or car and land ownership have cases of missing data. However, missing values accounted for less than 0.003% of the sample. Therefore, in cases of urban households missing values were recoded to the mean from the Vietnam urban sample of that variable, and in cases of rural households missing values were recoded to the mean from the Vietnam rural sample of that variable. It is expected inclusion or exclusion of these households would have little impact on the distribution of SES.

3. PRINCIPAL COMPONENTS ANALYSIS

The first principal component is considered a measure of SES and is therefore retained. The output from a PCA is a table of factor scores or weights for each variable. Generally, a variable with a positive factor score is associated with higher SES, and conversely a variable with a negative factor score is associated with lower SES. PCA was conducted using all the original SES variables described in Table A.2[15]. The results from the final PCA models (total sample; Vietnam urban and Vietnam rural) are shown in Table A3.3.

When considering the results for Vietnam total sample, a household that obtains water from a tap or, to a much lesser extent, from rainwater, has a semi or septic tank flush toilet, and has a concrete roof would attain a higher SES score. All other household infrastructure variables were associated with lower SES with main water source from a spring or river, no latrine or "other" toilet facility and a roof made from either different materials or traditional/ other materials displaying the greatest negative weights. Households with more durable assets would attain a higher SES score with the variables refrigerator, computer, table phone, mobile phone and TV displaying high weights. Household ownership of any of the three types of transport was associated with higher SES—household ownership of a motorbike yielded the highest weight. Ownership of land was marginally associated with higher SES—reflecting that the majority of households, in both urban and rural Vietnam, own land. Households that had higher levels crowding was associated with lower SES.

When considering the weights derived from the urban and rural sample separately, for Vietnam urban analysis, the sign of the weights were similar to that derived from the

15. In STATA, when specifying PCA, the user is given the choice of deriving eigenvectors (weights) from either the correlation matrix or the co-variance matrix of the data. If the raw data has been standardized, then PCA should use the co-variance matrix. As the data was not standardized, and they are therefore not expressed in the same units, the analysis specified the correlation matrix—the default in STATA—to ensure that all data have equal weight. For example, crowding is a quantitative variable and has greater variance than the other binary variables, and would therefore dominate the first principal component if the co-variance matrix was used.

Vietnam total sample analysis. In addition, the poorer quality infrastructure variables generally displayed stronger negative weights—e.g. river/stream/pool/lake source of drinking water and two compartment latrine or fishing pool/river/canal latrine. The weights associated with the household asset durables, and the type of vehicle were generally of a similar magnitude. In Vietnam rural, there were some differences, compared with the Vietnam total sample, in the sign associated with a few of the infrastructure indicators of SES. For example, the weights associated with having a well for the main source of drinking water, a sulab flush toilet, two compartment latrine, or corrugated iron/brick roof were positive.

Table A3.3: Results from principal components analysis

Variable	Vietnam (total sample N=4837)			Vietnam urban (N=1763)			Vietnam rural (N=3074)		
	Mean	Std dev	PC score	Mean	Std dev	PC score	Mean	Std dev	PC score
Tap (in house/outside house/public)	0.272	0.445	0.260	0.585	0.493	0.275	0.092	0.290	0.077
Well (Drilled/protected & unprotected deep)	0.486	0.500	-0.069	0.318	0.466	-0.216	0.583	0.493	0.172
Spring water (protected and unprotected)	0.102	0.303	-0.194	0.027	0.163	-0.070	0.145	0.353	-0.270
Rainwater	0.077	0.267	0.013	0.033	0.178	0.006	0.102	0.303	0.059
River/stream/pool/lake water	0.054	0.227	-0.110	0.032	0.177	-0.133	0.067	0.250	-0.119
Other/bottled/car/truck/refused	0.008	0.089	-0.007	0.005	0.071	-0.017	0.010	0.098	-0.002
Semi or septic tank flush toilet	0.446	0.497	0.357	0.742	0.437	0.356	0.277	0.447	0.303
Sulab flush toilet	0.063	0.243	-0.004	0.068	0.252	-0.107	0.060	0.238	0.057
Two compartment latrine	0.079	0.270	-0.030	0.034	0.181	-0.076	0.105	0.306	0.059
Fishing pool/river/canal latrine	0.092	0.289	-0.097	0.047	0.211	-0.175	0.118	0.322	-0.048
No latrine	0.142	0.349	-0.246	0.049	0.215	-0.185	0.196	0.397	-0.290
Other toilet facility	0.178	0.382	-0.142	0.060	0.238	-0.160	0.245	0.430	-0.085
Roof made from different materials	0.103	0.304	-0.104	0.071	0.258	-0.057	0.121	0.326	-0.156

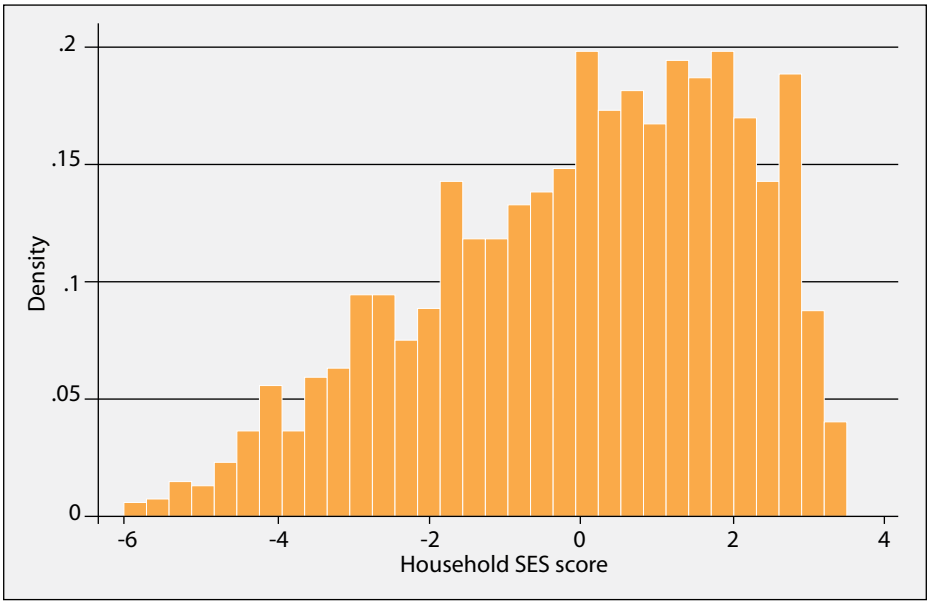
Variable	Vietnam (total sample N=4837)			Vietnam urban (N=1763)			Vietnam rural (N=3074)		
	Mean	Std dev	PC score	Mean	Std dev	PC score	Mean	Std dev	PC score
Natural traditional roof	0.046	0.210	-0.110	0.015	0.123	-0.113	0.064	0.245	-0.112
Corrugated iron/brick roof	0.669	0.470	-0.092	0.618	0.486	-0.222	0.699	0.459	0.043
Concrete roof	0.181	0.385	0.255	0.296	0.456	0.299	0.116	0.320	0.183
Electricity	0.970	0.171	0.175				0.955	0.208	0.233
Radio	0.299	0.458	0.149	0.348	0.477	0.126	0.271	0.445	0.163
Television	0.899	0.301	0.243	0.951	0.217	0.153	0.870	0.336	0.317
Table telephone	0.514	0.500	0.268	0.652	0.477	0.295	0.435	0.496	0.234
Mobile phone	0.750	0.433	0.258	0.862	0.345	0.224	0.687	0.464	0.281
Refrigerator	0.394	0.489	0.346	0.649	0.477	0.344	0.247	0.431	0.296
Computer	0.180	0.384	0.279	0.360	0.480	0.287	0.077	0.266	0.203
Bicycle	0.662	0.473	0.122	0.676	0.468	0.030	0.654	0.476	0.224
Motorcycle	0.789	0.408	0.228	0.861	0.346	0.226	0.748	0.434	0.234
Car	0.031	0.172	0.123	0.056	0.229	0.124	0.016	0.127	0.099
Land	0.898	0.303	0.015	0.861	0.346	0.061	0.919	0.273	0.032
Crowding index	2.393	1.239	-0.183	2.195	0.959	-0.133	2.506	1.361	-0.226

3.2 Classification of households into SES group

Classification of households into SES group – Vietnam total sample (urban and rural combined)

Using the factor scores from the first principal component as weights, a dependent variable can then be constructed for each household which has a mean equal to zero, and a standard deviation equal to one. This dependent variable can be regarded as the household's SES score, and the higher the household SES score, the higher the implied SES of that household. A histogram of the household SES scores using the Vietnam total sample data is shown in Figure A3.1. The figure reveals that the distribution of the household SES score is slightly left skewed towards 'higher' SES.

Figure A2.1: Distribution of household SES score in Vietnam (urban & rural)



To differentiate households into broad SES categories studies have used cut-off points-most commonly an arbitrarily defined disaggregation e.g. quintiles. Another method is to use a data driven approach-cluster analysis-to derive SES categories. Cluster analysis was used in the WHO multi-country study on domestic violence and women's health to derive "low", "middle" and "high" SES categories.

For this study both methods to classify households into SES groups were explored using the Vietnam total sample. First households were ranked according to their SES score and were then split into three equal sized groups "terciles". The second approach used K-means cluster analysis to group households into three clusters. The mean SES score for each SES category, derived using both methods, is shown in Table A3.4. The differences in the mean SES score between the SES groups are similar for both methods. For example, the difference in the mean SES score between the low and middle SES group is 2.228 for the tercile method and 2.395 for the cluster method and between the high and middle SES group is 2.408 for the tercile method and 2.680 for the cluster method.

Using the cluster method, slightly less than one-quarter of households (23.5%) are classified in the low SES group, 43.2% are classified as middle SES and exactly one-third are classified as high SES. When comparing the distribution of households across SES groups for the two methods, 90% were similarly classified. The difference in the distribution of household SES classification resulting from the two approaches arises—in all but one of the 479 households classified differently—from households classified as low SES using the tercile method but as middle SES using the cluster approach.

Table A3.4: Mean socioeconomic scores by SES group (N=4837)

	Terciles			Cluster analysis		
	Low	Middle	High	Low	Middle	High
N	1614	1611	1612	1136	2090	1611
Mean SES score	-2.287	-0.059	2.349	-2.725	-0.330	2.350
Std. Dev	1.086	0.574	0.889	1.009	0.713	0.888
Min	-6.436	-0.999	1.009	-6.436	-1.527	1.011
Max	-0.999	1.007	4.761	-1.529	1.009	4.761

Internal coherence compares the mean value of each asset variable by SES group in order to assess whether ownership differs by group—ownership of higher SES indicators should ideally be highest in the high SES group and lowest in the low SES group. Table A3.5 show the mean ownership levels of the SES indicator variables by both the tercile and cluster derived SES groups. The purpose of this analysis is primarily to assess whether the different SES indicators vary in the level of ownership by SES group. However, because 90% of households are similarly classified using the two approaches, the mean ownership levels are similar—the classification of households into the high SES households is virtually identical using both the tercile and cluster approaches, and therefore, the mean ownership levels of each SES indicators are the same. The findings reveal that the distribution of SES indicators across the SES groups is, as expected, similar using both approaches with the cluster approach very marginally displaying greater differences in ownership of SES indicators across the SES groups.

Table A3.5: Mean ownership of SES variables by SES group (N=4837)

Variable	Terciles					
	Low (N=1614)	Medium (N=1611)	High (N=1612)	Low (N=1136)	Medium (N=2090)	High (N=1611)
Tap	0.041	0.190	0.585	0.028	0.163	0.585
Well	0.509	0.626	0.323	0.446	0.634	0.323
Spring water	0.261	0.037	0.009	0.323	0.055	0.009
Rainwater	0.054	0.104	0.073	0.050	0.095	0.073
River/stream/pool/ lake water	0.123	0.035	0.004	0.141	0.046	0.004
Other/bottled/car/ truck/refused	0.011	0.007	0.006	0.011	0.008	0.006
Semi or septic tank flush toilet	0.020	0.389	0.930	0.011	0.311	0.930
Sulab flush toilet	0.038	0.115	0.037	0.019	0.107	0.037
Two compartment latrine	0.064	0.156	0.017	0.033	0.151	0.017
Fishing pool/river/ canal latrine	0.167	0.105	0.003	0.160	0.123	0.003
No latrine	0.388	0.038	0.001	0.474	0.071	0.001
Other toilet facility	0.323	0.197	0.012	0.302	0.237	0.012
Roof made from different materials	0.183	0.086	0.040	0.204	0.097	0.040
Natural traditional roof	0.115	0.022	0.002	0.133	0.033	0.002
Corrugated iron/ brick roof	0.693	0.806	0.510	0.662	0.796	0.510
Concrete roof	0.009	0.086	0.449	0.001	0.074	0.448
Electricity	0.911	0.999	1.000	0.873	1.000	1.000
Radio	0.142	0.306	0.451	0.111	0.285	0.451
Television	0.730	0.971	0.997	0.635	0.968	0.997
Table telephone	0.213	0.476	0.854	0.172	0.438	0.854
Mobile phone	0.442	0.846	0.963	0.339	0.810	0.963

Variable	Terciles					
	Low (N=1614)	Medium (N=1611)	High (N=1612)	Low (N=1136)	Medium (N=2090)	High (N=1611)
Refrigerator	0.018	0.283	0.881	0.005	0.229	0.881
Computer	0.001	0.043	0.496	0.000	0.033	0.496
Bicycle	0.501	0.749	0.736	0.418	0.738	0.736
Motorcycle	0.546	0.854	0.970	0.459	0.830	0.970
Car	0.000	0.007	0.085	0.000	0.005	0.085
Land	0.885	0.905	0.903	0.882	0.902	0.903
Crowding index	2.964	2.232	1.981	3.185	2.279	1.982

Classification of households into SES group – Vietnam urban and Vietnam rural

When assessing the distribution of household SES, derived from the Vietnam total sample, by urban and rural location, the majority of households in the urban sub-group are classified as high SES (61.0%) and few are classified as low SES (7.4%) (Table A3.6). The distribution of household SES in the rural sub-group is more varied. The distribution of SES group from the separate urban and rural analyses reveal a more even distribution in Vietnam urban—for example, one-quarter is classified as low SES and virtually identical percentage are classified as middle and high SES. In Vietnam rural, the distribution across the SES groups differs in that a much higher proportion is classified as high SES and a much lower proportion as low SES. In urban Vietnam 58.9% of households were similarly classified (comparing total sample analysis and urban sample analysis), this figure was just over two-thirds (68.3%) for Vietnam rural.

Table A3.6: Distribution of household SES by urban and rural location (total sample analysis; urban sample analysis and rural sample analysis)

SES group	Vietnam (total sample)		Vietnam urban	Vietnam rural
	Urban % N=(1763)	Rural % (N=3074)	% (N=1763)	% (N=3074)
Low	7.4	32.7	24.7	18.4
Middle	31.6	49.9	38.2	46.9
High	61.0	17.4	37.2	34.7

4. SUMMARY

This summary Annex describes how a PCA-based SES index was created using the Vietnam VAW survey data. Three PCA-based indices were derived: Vietnam total (urban and rural combined); Vietnam urban; and Vietnam rural. From the PCA analysis using the total sample, households were classified into SES groups using both terciles and cluster analysis approaches. An assessment of the internal coherence concluded that while both methods performed almost identically in disaggregating SES. When considering the distribution of household SES by urban and rural location (from the results using of the total sample analysis), there was little variation in households SES in the urban location. Therefore, separate PCA-based indices were run for the urban and the rural samples separately and it is recommended that this SES indicator is used if separate urban and rural analyses are to be conducted.

The SES index that is used in this report is the PCA-based index for Vietnam (total sample) using the cluster analysis approach.

REFERENCE

Vyas S and Kumaranayake L (2006) How to do (or not to do) . . .Constructing socio-economic status indices: how to use principal components analysis. Health Policy and Planning 21(6): 459-468

Annex 4. Distribution of risk factors and prevalence of current physical or sexual violence by partners, among entire sample of ever partnered women in Viet Nam (N=4456)

	Total number of women (unweighted)	Distribution of characteristics (%)	Experienced partner violence in past 12 months (%, weighted)
Total	4456	100.0	9.1
Woman's characteristics			
Demographic			
Age group			
18–29	776	17.4	13.6
30-39	1458	32.7	10.9
40-49	1267	28.4	9.3
50-60	955	21.4	4.0
Education			
Primary education	1,079	24.2	10.0
Secondary education	1,693	38.0	10.2
Higher education	1,168	26.2	6.3
Not attend school	515	11.6	8.9
Current partnership status			
Currently partnered	4075	91.5	9.4
Separated/divorced	166	3.7	12.3
Widowed	214	4.8	1.1
Age of first marriage			
≤19	1,445	32.5	8.6
20-29	2,635	59.2	8.8
30+	174	3.9	12.8
No marriage ceremony	199	4.5	14.4
Ethnic group			
Kinh	3,449	77.4	9.2
Other	1,007	22.6	8.6

	Total number of women (unweighted)	Distribution of characteristics (%)	Experienced partner violence in past 12 months (%, weighted)
Religion			
No religion	3,657	82.1	8.9
Other	798	17.9	9.8
Earning Cash			
No	258	5.8	5.8
Yes	4,196	94.2	9.3
Woman's past experience with violence			
Physical violence by others >15 years			
No	4,139	92.9	8.4
Yes	317	7.1	15.5
Sexual violence by others > 15 years			
No	4,372	98.1	8.6
Yes	84	1.9	35.5
Childhood sexual abuse + card (< 15 years)			
No	4,338	97.4	8.6
Yes	118	2.6	27.0
Age at first sex			
≤17	442	9.9	10.3
18-21	2,208	49.6	9.5
22+	1,803	40.5	8.3
Nature of first sexual experience			
Wanted to have sex	4,381	98.4	8.7
First sex coerced/forced	71	1.6	37.2
Woman's mother had been beaten by her partner			
No	3,513	78.8	7.2
Yes	841	18.9	17.4
Don't know	102	2.3	10.6

	Total number of women (unweighted)	Distribution of characteristics (%)	Experienced partner violence in past 12 months (%, weighted)
Woman's attitudes			
Attitudes on wife beating			
Does not agree with any justifications (0)	2,575	57.8	7.8
Agrees with at least 1 justification	1,881	42.2	10.8
Partner characteristics			
Demographic			
Age group			
≤29	413	9.3	16.2
30-39	1,388	31.1	11.3
40-49	1,405	31.5	9.4
50+	1,250	28.1	5.2
Education			
Primary education	950	21.4	9.2
Secondary education	1,578	35.6	10.7
Higher education	1,571	35.4	7.5
Not attend school	334	7.5	9.3
Employment status			
Working	4,152	93.2	9.4
Other	304	6.8	5.2
Partner's behaviour			
Alcohol consumption			
Never/ DK	479	10.7	3.1
Daily	852	19.1	15.2
Weekly	1,019	22.9	9.9
Monthly	1,364	30.6	8.4
Less than monthly	742	16.7	5.9
Drug use			
Never	4,439	99.6	9.1
Ever	17	0.4	9.9

	Total number of women (unweighted)	Distribution of characteristics (%)	Experienced partner violence in past 12 months (%, weighted)
Fighting with other men			
No/Don't know	4,256	95.5	8.2
Yes	200	4.5	28.9
Having extramarital relationships			
No/Don't know	4,155	93.2	8.4
Yes/Maybe	301	6.8	18.3
Partner's experience with violence			
Partner's mother abused			
No	3,455	89.9	7.8
Yes	388	10.1	19.3
Don't know	613	16.0	9.8
Partner abused as child			
No	3,827	85.9	8.1
Yes	376	8.4	18.7
Don't know	253	5.7	11.1
Characteristics of couple/relationship			
Relational characteristics			
Age difference			
His age > her age 0-2	1,826	41.0	8.0
Her age is higher	549	12.3	10.5
His age > her age 3-8	1,794	40.3	9.8
His age > her age 9+	287	6.4	9.0
Educational level difference			
No difference	2,209	49.6	8.6
His education higher	1,516	34.0	9.6
Her education higher	730	16.4	9.7

	Total number of women (unweighted)	Distribution of characteristics (%)	Experienced partner violence in past 12 months (%, weighted)
Relative contribution to household			
Less than partner	1,899	42.6	8.2
Contributing the same as partner	1,316	29.5	8.8
Contributing more than partner	614	13.8	15.6
Woman not earning	627	14.1	6.2
Woman's role in partner choice			
Respondent/both chose	3,691	82.8	8.8
Other party chose	566	12.7	9.1
No wedding or registered marriage	199	4.5	14.4
Children of respondent			
Number of children born alive			
1 child	701	15.7	13.0
2 children	1,770	39.7	9.4
3 - 4 children	1,338	30.0	9.2
5+ children	517	11.6	4.5
0 children	130	2.9	5.3
Sex of children			
Only son(s)	1,139	25.6	10.2
Only daughter(s)	805	18.1	10.0
both son(s) & daughter(s)	2,375	53.4	8.5
No children	130	2.9	5.3
Socio economic status			
Household assets index			
Low	1051	23.6	11.6
Middle	1931	43.3	10.1
High	1474	33.1	6.4

	Total number of women (unweighted)	Distribution of characteristics (%)	Experienced partner violence in past 12 months (%, weighted)
Social capital			
Proximity to woman's family			
No	1,707	38.3	9.7
Yes/close together	2,749	61.7	8.7
Frequency of contact with woman's family			
At least once a week	2,630	59.0	9.0
Less than once a week	1,826	41.0	9.1
Can count on support from family members			
Yes	3,987	89.5	8.8
No/Don't know/ No answer	469	10.5	11.4
Living with woman's family			
No	4219	94.7	9.3
Yes	237	5.3	6.6
Living with partner's family			
No	3,676	82.5	8.8
Yes	780	17.5	10.3
Respondent grew up in same community			
No	2,539	57.0	9.9
Yes	1,917	43.0	8.2
Respondent is member of any group			
Yes	3079	69.1	8.1
No	1377	30.9	11.2
Neighbours helping when illness in family			
Yes	4333	97.2	8.9
No	123	2.8	14.8
Geographical characteristics			
Regions			
Northern Midlands and Mountains	803	18.0	7.3
Red River Delta	816	18.3	9.5

	Total number of women (unweighted)	Distribution of characteristics (%)	Experienced partner violence in past 12 months (%, weighted)
North and South Central Coast	931	20.9	8.2
Central Highlands	530	11.9	11.9
Southeast	576	12.9	11.8
Mekong River Delta	800	18.0	7.1
Urban/rural			
Urban	1,566	35.1	7.9
Rural	2,890	64.9	9.6

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