The effect of intimate partner violence and other forms of violence against women on health

Carmen Vives-Cases1,2, Maria Teresa Ruiz-Cantero1,2,3, Vicenta Escribà-Agüir2,4, Juan José Miralles5

1Department of Preventive Medicine and Public Health, University of Alicante, San Vicente del Raspeig Campus, Ap. 99 C.P. 03080, San Vicente del Raspeig, Alicante, Spain
2CIBER of Epidemiology and Public Health (CIBERESP), Barcelona, Spain
3Public Policies and Health Observatory, Alicante, Spain
4Centre for Public Health Research, Valencia, Spain
5Department of Preventive Medicine and Public Health, Miguel Hernandez University, Alicante, Spain

Address correspondence to Carmen Vives Cases, E-mail: carmen.vives@ua.es

ABSTRACT

Background There are many studies concerning the health consequences of intimate partner violence (IPV). However, little research has been done on the health consequences of other forms of violence against women (VAW) such as the violence perpetrated by male relatives, friends or strangers. The aims of this paper were: (i) to analyze the prevalence of different forms of VAW perpetrated by males at home, workplace and other social environments in Spain and (ii) to analyze whether IPV and other forms of VAW have a different or similar negative impact on women's health.

Methods A sample of 13,094 women interviewed in the Spanish National Health Survey 2006 was included. Outcomes were physical and mental health indicators. Predictor variables were IPV and other VAW forms. Logistic regression models were fitted.

Results The likelihood of coronary heart disease [OR: 5.28 (1.45–19.25)], chronic neck [OR: 2.01 (1.35–2.97)] and back pain [OR: 2.34 (1.53–3.57)] was higher among women who reported IPV than among those who did not. Similar associations were found in the case of women affected by other forms of VAW. Mental health problems, with the exception of psychotropic drug use, were more frequent and more strongly associated with IPV than with other forms of VAW.

Conclusion There are health inequities between battered and non-battered women, which may be related to exposure to not only IPV but also other forms of VAW.

Keywords battered women, mental health, women health

Introduction

Violence against women (VAW) causes many injuries and is the leading factor in many physical and psychological health problems.1 VAW includes different forms of interpersonal VAW perpetrated by partners and other known/unknown men in the home, workplace or other social environments.2 Despite the abundant literature on the health consequences of IPV, there are aspects concerning the health impact of other forms of VAW that remain unclear.

The health consequences of intimate partner violence (IPV) have been the subject of numerous studies, systematic reviews and meta-analyses.3–6 The first studies in Spain showed that the likelihood of chronic disease, psychological distress and poor self-perceived health may be higher in battered women. These women were also more likely to use analgesics, tranquillizers, antidepressants and/or illegal drugs, and spend more days in bed.7,8 Despite the existing research in Spain and other countries, there are few studies on the health consequences of other forms of VAW.9–14

Since the Spanish National Health Survey 2006 (NHS-06)15 included three new questions: one about the different forms of VAW during the previous 12 months, one
about the settings in which these abuse experiences occurred and the other about the types of perpetrators, it was possible to explore the main health consequences of different forms of VAW in a representative sample of the general population. Therefore, the aims of this study were: (i) to analyze the prevalence of different forms of VAW (physical, sexual and psychological) perpetrated by males in the home, workplace and other social environments in Spain and (ii) to analyze whether IPV and other forms of VAW have a different or similar negative impact on women’s health.

Methods

Study design, sample and data collection

This study was based on data from the Spanish National Health Survey 2006 (NHS-06), which was collected during face-to-face interviews in the home. This survey used multiple stage stratified sampling. The first-stage units were census tracts and the second-stage units were family households. Within each household an adult (16 years old or over) was selected to complete the questionnaire. The selected sample included approximately 31,300 homes spread over 2236 census tracts. The total number of people over 16 years old interviewed was 29,478, of whom 14,459 were men and 15,019 women. This study focused on 13,094 women who said they were prepared to answer questions on aggression (87.2% of the women interviewed). No significative statistically differences were found between the socio-demographic profile of the women who answered yes and that of the women who answered no to this question.

Variables

Outcome variables

Eight dependent variables were considered, five related to physical health status, two related to mental health and one to self-perceived health.

Physical health

Five physical health indicators [hypertension, coronary heart disease (CHD), chronic back pain, chronic neck pain and chronic headache] were included, which women reported had been diagnosed by a doctor.

Mental health

To assess their mental health, two indicators were used:

- Use of psychotropic drugs (yes/no): this was measured using a question about whether the women had used antidepressants of this type during the previous 2 weeks.

In addition, the impact on self-perceived health was examined by asking the respondents to describe their general health in answer to a single question: ‘Would you say your overall health is: very good, good, fair, poor or very poor?’ A dichotomous outcome variable was created (1 = fair, poor or very poor; 0 = very good, good).

Predictor variables

(1) Current IPV: this was measured using two questions. First, women were asked if they had suffered any kind of violence during the previous 12 months. If they answered ‘yes’ they were asked who the aggressor was. The options were: (1) An unknown man, (2) an unknown woman, (3) their male intimate partner, (4) a known woman or (5) a known man. Women who answered affirmatively to the first question and said that their male intimate partner was the aggressor were considered victims of IPV.

(2) Other forms of VAW were assessed using the same questions as described above. In this case, if a woman said that the aggressor was an unknown man (option 1) or known man (option 5), these results were noted. The other options relating to female aggressors were excluded from this analysis.

In addition, women who reported IPV and other forms of VAW were asked about the main setting where these types of abuse took place (home, street, neighborhood, workplace and/or other).

We considered non-battered women to be women who declared not having been involved in any kind of violence perpetrated by a male or a female.

Adjusting variables

Some previous studies have shown a relationship between both health status and IPV and several factors: (i) socio-demographic characteristics: educational level (university, secondary education, primary studies or no studies), employment status (paid work yes/no), marital status (married, separated/divorced, others), children at home (0, 1, 2 or more), country of origin (Spain, other country) and age (16–30, 31–50, >50 years) and (ii) social support factors. Therefore, we included these variables as adjusting factors. Social support was measured using the Duke Profile. This scale consisted of 11 statements, which were scored according to a 5-category Likert scale, ranging from ‘much less than desired’ (which scored 1) to ‘as much as
desired’ (which scored 5). An overall score was obtained by adding up all the responses but was defined as ‘missing’ if five or more items were not answered. The higher the score, the greater the social support. It was dichotomised into high and low, taking the 15th percentile as the cut-off point.

In addition, smoking and body mass index (BMI) were considered as control variables. BMI was categorized as: <18.5 (low weight), 18.5 to <25 (normal weight), 25 to <30 (excess weight), ≥30 (obesity) as proposed by the World Health Organization. Both variables were used to adjust the models where hypertension and CHD were the dependent variables. The BMI was also used to adjust the model where chronic back pain was the outcome variable.

Data analysis
After descriptive analyses, multivariate logistic regression models were fitted to determine the associations (adjusted odds ratio, OR) between poor health outcomes (eight outcome variables) and reported IPV and other forms of VAW, taking into consideration the control variables previously described. The statistical package SPSS 14.0 was used.

Results
IPV was the most prevalent type of VAW (0.98%, n = 128 women), followed by violence perpetrated by other known men (0.58%, n = 75), unknown men (0.56%, n = 73) or both (0.02%, n = 3). IPV appeared to be mainly perpetrated in the home, whereas other forms of VAW were more frequent in other settings. Violence perpetrated by known men other than the intimate partner appeared to be more frequent in the workplace, while violence perpetrated by unknown men appeared to occur more frequently in the street (Table 1).

Table 2 shows the distribution of socio-demographic characteristics, social support and health indicators among non-battered and battered women by type of VAW. Women who reported IPV were mostly between 31 and 50 years old (40.9%), had a secondary level of education (40.9%), did not have paid work (60.2%), were married (53.1%), did not have children at home (52%), were born in Spain (71.7%), reported a high level of social support (84.2%), did not smoke (69.7%) and had a normal BMI (42.5%). There were no significant differences in these key baseline variables between women who reported IPV and those who reported other forms of VAW.

Table 3 shows the adjusted associations between the six indicators of physical health and forms of VAW. Both types of VAW (IPV and others) increased the likelihood of worse physical health (CHD, chronic back pain, chronic neck pain and chronic headache) and the magnitude of the OR was similar. However, hypertension was not statistically associated with types of VAW.

Both types of VAW (IPV and others) increased the probability of poor self-perceived health status and worse mental health, but the magnitude of these associations were greater for IPV and poor self-perceived health status and psychological distress (Table 4).

Discussion
Main findings of this study
The results of this study show that IPV is the most prevalent type of VAW in Spain. Violence perpetrated by other known and unknown men appeared to occur at work or in the street, whereas IPV was the most frequent form of violence in the home. The negative effects on women’s health
are much more worrying. With the exception of hypertension, all forms of VAW showed strong associations with indicators of poor physical and mental health. Given that VAW is avoidable, our findings reveal health inequities that are prejudicial to battered women in Spain.

What is already known on this topic and what this study adds

The prevalence of different forms of chronic pain and their association with IPV and other forms of VAW revealed one of the direct consequences of physical violence and the psychological distress generated by these situations.23 The design of the Spanish NHS-06 did not allow for identification of the types of violence reported by the women respondents.
affected, but the results were consistent with those of other studies which distinguished between different types (physical and/or psychological) of IPV.4–6 It should be noted that pain was considered to be a long-term negative health consequence, which may be present even after the abuse has ended.23

Although the majority of previous studies used self-reported indicators of physical health, this study obtained similar results using physical health indicators, which women reported had been diagnosed by a doctor. In addition, a strong association was found between IPV and CHD after socio-demographics, social support and other health factors (smoking, BMI) were adjusted for. The magnitude of the association between IPV and CHD may be interpreted as a consequence of the psychological distress suffered by these women.24

It should be noted that associations between IPV, poor self-perceived health status and psychological distress were much stronger than those observed in other cases of VAW. No difference was found however in the use of psychotropic drugs. It was difficult to compare these results with those of other studies as prior to this study no one had analyzed the health effects of IPV and other forms of VAW separately.9–14

### Limitations of this study

IPV was more prevalent in other studies that used information from National Health Surveys.25–29 These differences may be explained by the fact that the Spanish NHS-06 collected information using only one question that required women to perceive whether they were battered. In addition, the information was collected at a face-to-face interview, which usually obtains a lower prevalence of IPV than do self-report questionnaires.30 Moreover, an underestimation of the prevalence of VAW is possible due to an information bias when women refuse to answer questions about their current situation as regards violence.31 Nevertheless, in this study, 87.2% of the women said they were prepared to answer questions on this problem.

In spite of the above limitations, we would like to underline some strengths and innovations of this study. On one hand, it is based on a representative national sample of women belonging to the general population, whereas most of the studies that focus on the impact of violence on health are based on clinical samples. On the other hand, considering that not all VAW is the same, the effects of IPV are analyzed separately from those of other forms of VAW experienced by women with different prevalent health problems. In addition, the Spanish NHS-06 gives information about physical health indicators which women reported had been diagnosed by a doctor.

### Conclusions

Since the cross-sectional design of this study allowed us to calculate the prevalence of IPV and other forms of VAW, it may be estimated that approximately 352,905 Spanish women were affected by different forms of abuse perpetrated by their partners, relatives, friends, colleagues or strangers based on the female population over the age of 18 residing in Spain in 2006.

One of the fundamental requirements for the design and formulation of VAW policies is that their measures should refer to the different forms of violence and settings where this problem might occur.32 In this instance, our study found different types of VAW that may be perpetrated by their partner at home or by other males at work or in the street. This is a new finding which should be looked into more closely in future studies. It also evidence health inequities between battered and non-battered women, which may be related to exposure to different types of VAW.

### Table 4

| Impact of IPV and other forms of VAW on self-perceived health, psychological distress and psychotropic drug use among women responding to the Spanish National Health Survey (2006) |
|---|---|---|---|
| Poor self-perceived health | n | % | OR* | 95% CI |
| No VAW | 4948 | 38.9 | 1 | |
| IPV | 101 | 79.5 | 6.79 (4.24–10.87) | |
| Other VAW | 74 | 49.0 | 1.97 (1.35–2.88) | |
| Psychological distress | n | % | OR* | 95% CI |
| No VAW | 3071 | 25.7 | 1 | |
| IPV | 93 | 77.5 | 8.17 (5.23–12.75) | |
| Other VAW | 64 | 47.1 | 3.11 (2.16–4.48) | |
| Psychotropic drug use | n | % | OR* | 95% CI |
| No VAW | 999 | 7.9 | 1 | |
| IPV | 18 | 14.5 | 1.72 (1.00–2.97) | |
| Other VAW | 20 | 13.5 | 2.02 (1.19–3.42) | |

*Adjusted ORs by socio-demographic characteristic (education, employment status, marital status, children at home, country of origin, age) and social support factors.
References


32 Council of Europe. Recommendation of the Committee of Ministers and Explanatory Memorandum to member states on the protection of women against violence, 2002.