

## Physical health consequences of physical and psychological intimate partner violence

By: Ann L. Coker, [Paige H. Smith](#), Lesa Bethea, Melissa R. King, and Robert E. McKeown

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### Abstract:

**Background:** Past studies that have addressed the health effects of intimate partner violence (IPV) have defined IPV as violence based on physical blows that frequently cause injuries. To our knowledge, no epidemiologic research has assessed the physical health consequences of psychological forms of IPV. **Objective:** To estimate IPV prevalence by type and associated physical health consequences among women seeking primary health care.

**Design:** Cross-sectional survey. **Setting and Participants:** A total of 1152 women, aged 18 to 65 years, recruited from family practice clinics from February 1997 through January 1999 and screened for IPV during a brief in-clinic interview; health history and current status were assessed in a follow-up interview. **Results:** Of 1152 women surveyed, 53.6% ever experienced any type of partner violence; 13.6% experienced psychological IPV without physical IPV. Women experiencing psychological IPV were significantly more likely to report poor physical and mental health (adjusted relative risk [RR], 1.69 for physical health and 1.74 for mental health). Psychological IPV was associated with a number of adverse health outcomes, including a disability preventing work (adjusted RR, 1.49), arthritis (adjusted RR, 1.67), chronic pain (adjusted RR, 1.91), migraine (adjusted RR, 1.54) and other frequent headaches (adjusted RR, 1.41), stammering (adjusted RR, 2.31), sexually transmitted infections (adjusted RR, 1.82), chronic pelvic pain (adjusted RR, 1.62), stomach ulcers (adjusted RR, 1.72), spastic colon (adjusted RR, 3.62), and frequent indigestion, diarrhea, or constipation (adjusted RR, 1.30). Psychological IPV was as strongly associated with the majority of adverse health outcomes as was physical IPV. **Conclusions:** Psychological IPV has significant physical health consequences. To reduce the range of health consequences associated with IPV, clinicians should screen for psychological forms of IPV as well as physical and sexual IPV.

**Keywords:** intimate partner violence | IPV | partner abuse | physical health | Women's Experience with Battering Scale | WEB

### Article:

\*\*\*Note: Full text of article below

# Physical Health Consequences of Physical and Psychological Intimate Partner Violence

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to report poor physical and mental health (adjusted relative risk [RR], 1.69 for physical health and 1.74 for mental health). Psychological IPV was associated with a number of adverse health outcomes, including a disability preventing work (adjusted RR, 1.49), arthritis (adjusted RR, 1.67), chronic pain (adjusted RR, 1.91), migraine (adjusted RR, 1.54) and other frequent headaches (adjusted RR, 1.41), stammering (adjusted RR, 2.31), sexually transmitted infections (adjusted RR, 1.82), chronic pelvic pain (adjusted RR, 1.62), stomach ulcers (adjusted RR, 1.72), spastic colon (adjusted RR, 3.62), and frequent indigestion, diarrhea, or constipation (adjusted RR, 1.30). Psychological IPV was as strongly associated with the majority of adverse health outcomes as was physical IPV.

**Conclusions:** Psychological IPV has significant physical health consequences. To reduce the range of health consequences associated with IPV, clinicians should screen for psychological forms of IPV as well as physical and sexual IPV.

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**D**ESPITE THE increasingly well-documented literature on the prevalence<sup>1-7</sup> of intimate partner violence (IPV) and its impact on women's mental health,<sup>8-23</sup> little epidemiologic research has focused on its longer-term, noninjury physical health consequences.<sup>1</sup> Furthermore, with noted exceptions,<sup>24-27</sup> most past studies that address the health effects of IPV measured physical assaults alone without considering the long-term psychological abuse characteristic of violent relationships. We add to existing literature by describing the health effects of IPV by type, including psychological IPV. This is one of the first reports of a clinical study that screened for physical, sexual, and psychological violence, defined as psychological battering or emotional abuse.

## RESULTS

Of those demographic variables presented in **Table 1**, only Medicaid insurance status was significantly associated with ever experiencing any type of IPV, after adjusting for education and employment. Both partner substance abuse and parental IPV were significantly associated with the woman's IPV experience. Although race was not associated with experiencing any IPV, white women were more likely than African American women to report nonphysical abuse (odds ratio, 1.5; 95% confidence interval, 1.1-2.1).

**Table 2** presents the prevalence of IPV by type and timing of violence. Almost 54% of women screened had ever experienced IPV; 16.4% were currently or recently in a violent relationship. Among those ever experiencing IPV, 25% expe-

## PARTICIPANTS AND METHODS

### DATA COLLECTION

In this cross-sectional study, trained recruiters approached and interviewed 1152 women who sought medical care in 2 university-associated family practice clinics from February 1997 through January 1999. Eligible subjects were women, aged 18 to 65 years, who were insured either by Medicaid or a managed care provider. Because we wanted to focus on partner violence, including sexual violence in an intimate relationship, we required an intimate (meaning sexual) relationship with a man of at least 3 months for inclusion in the study. Study participation included a 5- to 10-minute in-clinic interview to screen for partner violence and a 30- to 45-minute telephone interview to assess the woman's medical history and current health status. We used computer-assisted interviewing for both in-clinic and telephone interviews to reduce errors and rapidly provide scale scores for IPV measures. In-clinic interviewers were women graduate students who received extensive training in asking these sensitive questions, listening actively, and providing women with community resources. A team of 4 women interviewers employed by the University of South Carolina Survey Research Laboratory conducted the telephone interviews and provided community resources as needed. Women were reimbursed for their time in completing these interviews. Women currently in abusive relationships were counseled by recruiters and referred to local services for victims. For safety reasons, women currently in violent relationships were given the option to complete this longer interview in the clinic. The University of South Carolina Institutional Review Board approved this project; all women signed consent forms.

### MEASURES OF IPV

We characterized IPV by (1) the timing of the violence (in a past or recent intimate relationship), (2) the type of violence (physical, sexual, or psychological), and (3) the frequency of the violence. We began by asking each woman whether she was currently in an intimate relationship with a man. If not, we asked her to think about her most recent relationship. We then asked about partner violence in any past relationship. The instrumentation methods for the study appear elsewhere.<sup>28</sup> In this article, we provide a brief overview.

#### Current IPV

We used a modified version of the Index of Spouse Abuse-Physical,<sup>29</sup> a 25-item scale designed to measure the severity

of physical violence inflicted on women by their current or most recent male partners. The Cronbach  $\alpha$  coefficient for the reduced 12-item scale was good ( $\alpha = .91$ ). We assessed current sexual violence using 3 items of the Index of Spouse Abuse-Physical that specifically target this violence. We used the recommended weighted scale score and cut points.<sup>30</sup>

We used the Women's Experience with Battering (WEB) Scale to assess battering.<sup>31-33</sup> Battering is defined as a process whereby one member of an intimate relationship experiences vulnerability, loss of power and control, and entrapment as a consequence of the other member's exercise of power through the patterned use of physical, sexual, psychological, and/or moral force.<sup>31</sup> The WEB Scale measures battering by operationalizing women's psychological vulnerability, or their perceptions of susceptibility to physical and psychological danger, or loss of power and control in a relationship with a male partner. Respondents are asked to indicate their level of agreement or disagreement, using a 6-point Likert scale, with items such as "He makes me feel unsafe in my own home," "I feel like he keeps me prisoner," "I feel owned and controlled by him," and "He has a look that goes straight through me and terrifies me."

As reported elsewhere,<sup>31-33</sup> the WEB Scale has good construct validity, accurately discriminates battered from non-battered women, and shows strong internal consistency reliability (Cronbach  $\alpha = .95$  in the present sample). Because the WEB Scale asks women to respond in terms of how they feel generally, it simply measures present time; in the case of women in a former relationship, it measures how they felt "generally" in their relationships. For this reason, it is a prevalence measure that is not bound by any particular time frame (eg, within the past year). For these analyses, women were classified as battered if they scored above 20. Women who scored as battered on the WEB Scale but did not concurrently experience physical or sexual IPV were termed *psychologically battered*. This distinction allowed us to separate for some analyses women who experienced the loss of power and control and entrapment that characterize battering from those who did not also experience assault to specifically examine the health impact of psychological IPV.

#### Past IPV

We assessed physical partner violence in a past relationship using a modification of the widely used Abuse Assessment Screen.<sup>34</sup> Our modification was to ask specifically about physical violence ("Did your male partner hit, kick, or otherwise physically hurt you?"), forced sexual activity ("Did a male partner ever force you to have sexual activities against your will?"), and perceived emotional abuse ("Did you ever

experienced psychological violence only; this proportion would have been missed had we relied solely on physical violence measures of IPV. Among those ever experiencing physical IPV, 58% also experienced sexual violence and 88% experienced psychological violence.

The mean ( $\pm$ SD) age when IPV was first experienced was 22.1 years ( $\pm 5.8$  years); 87.5% of women who had been in a violent relationship were only in one such relationship. Eighty-five percent of women

in a violent relationship left their partners at least once.

**Table 3** presents the adjusted RR estimates for ever experiencing physical and psychological IPV and current health status, hospitalizations, and physician visits. Compared with women who never experienced IPV, women who experienced psychological IPV were significantly more likely to report their physical health (adjusted RR, 1.69) and their mental health (adjusted RR,

feel emotionally or psychologically abused?") by an intimate male partner.

#### Ever IPV

We combined past and current IPV experience to hierarchically categorize ever experiencing IPV by type: (1) physical and/or sexual violence with or without psychological IPV; (2) psychological violence, defined to include either psychological battering or emotional abuse without physical or sexual violence; and (3) never experiencing IPV as the referent group. Most women (88%) who experienced physical or sexual violence also report psychological violence.

Although we combined, as psychological IPV, women who experienced psychological battering in their current or most recent relationship with those who experienced perceived emotional abuse in a past relationship, we need to be clear that battering, as measured by the WEB Scale, and perceived emotional abuse, as measured by the Abuse Assessment Screen, do tap different phenomena. The WEB Scale specifically operationalizes psychological vulnerability, a construct drawn initially from the victimology literature and refined through qualitative research with battered women.<sup>31-33</sup> The Abuse Assessment Screen for emotional abuse is, in contrast, a less specific measure of women's generalized feeling of "being emotionally abused." Despite these differences, we believed it is appropriate to combine women who scored as being psychologically battered in their current or most recent relationship with those who experienced emotional abuse in a past relationship for purposes of assessing the health impact of ever experiencing psychological IPV.

#### DEMOGRAPHICS

We collected the following demographic characteristics: for the women, current marital status, age, race/ethnicity, education, number of people living in the respondent's household, usual occupation, number of guns in the household, alcohol or other drug use problem, and whether the respondent's father was either emotionally or physically abusive toward her mother; for their current male partners, age, race/ethnicity, occupation, and whether the woman perceives him to have an alcohol or other drug use problem. Given the sensitive nature of the screening questions and limited interview time, we did not assess childhood physical or sexual abuse.

#### HEALTH STATUS ASSESSMENT

We modified the National Health Interview Survey<sup>35</sup> to assess the prevalence of a range of health outcomes ("Have you ever been diagnosed or had . . ."), the age at first occurrence, and whether the woman currently experienced

symptoms. First IPV experience was the reference date from which we correctly sequenced adverse health outcomes as occurring only after first IPV experience. We asked about the following health outcomes: specific impairment or health problems preventing or limiting work; paralysis; arthritis; chronic neck or back pain; deafness; hearing loss; tinnitus; blindness; trouble seeing with glasses; glaucoma; detached retina; stammering or stuttering; cancer; myocardial infarction; stroke; hypertension; angina; other heart or circulatory problems; diabetes; stomach ulcers; gastric reflux; spastic colon; frequent indigestion, diarrhea, or constipation; epilepsy; frequent seizures; migraines and other frequent headaches; lupus; frequent kidney or bladder infections; other frequent urinary tract infections; hysterectomy; pelvic inflammatory disease or sexually transmitted infections; frequent pelvic pain; and infertility.

#### RESPONSE RATES

One hundred seventy-four (11%) of 1580 women approached for participation refused. Refusers were significantly more likely to be insured by Medicaid (32%) than were responders (25%); we have no additional demographic data with which to characterize refusers relative to responders. Forty-two (3%) of the 1406 women recruited had never had an intimate relationship and were thus ineligible, and of 1364 women, 192 did not complete the health assessment interview and 20 had missing data on several response variables. Therefore, 1152 women were included in these analyses (73% response rate). Women who did not complete the health assessment interview ( $n=192$ ) were younger and significantly more likely to currently be in a violent relationship (relative risk [RR], 2.6) than were women completing the health assessment.

#### STATISTICAL ANALYSES

We used unconditional multivariate logistic regression<sup>36</sup> to model the association between each health outcome and IPV by type, adjusting for age, race, insurance status, and cigarette smoking. Witnessing partner violence (father physically or emotionally abused mother) was additionally included in models as a proxy for childhood abuse, which we were not able to measure in this study. Because logistic regression provides odds ratios that are biased estimates of the RR if an outcome is not rare ( $>10\%$ ), and many of the outcomes we addressed were not rare, we used the method proposed by Zhang and Yu<sup>37</sup> to provide appropriate estimates of the adjusted RRs and 95% confidence intervals, correcting for the prevalence of the outcomes among women who never experienced IPV. Because of study power limitations, we analyzed associations with IPV only for those health outcomes occurring in at least 5% of the population screened.

1.74) to be poor. Women who experienced physical IPV were more likely to report poor physical (adjusted RR, 1.36) and mental (adjusted RR, 2.28) health and to have more than 5 physician visits in the last year (adjusted RR, 1.18).

**Table 4** provides RR estimates for ever experiencing physical and psychological IPV and ever being diagnosed as having the specific health condition listed. Ever experiencing psychological IPV was associated with a sig-

nificant increase in risk of developing the following conditions: disabilities preventing work, chronic neck or back pain, arthritis, migraines or other frequent headaches, beginning to stammer or stutter ( $P=.08$ ), problems seeing with glasses ( $P=.06$ ), any sexually transmitted infection, chronic pelvic pain, stomach ulcers, spastic colon, and frequent indigestion, constipation, or diarrhea. Physical IPV was also significantly associated with the following: hearing loss, angina, other heart or circulatory con-

**Table 1. Characteristics of 1152 Women Screened for Intimate Partner Violence (IPV)**

Characteristic	No. (%) of Women	Women Who Ever Experienced IPV, %
Age, y		
18-29	324 (28.1)	49.0
30-39	320 (27.8)	54.7
40-49	312 (27.1)	59.1
≥50	196 (17.0)	52.7
Race		
African American	711 (61.7)	53.7
White (referent)	441 (38.3)	54.1
Insurance		
Medicaid	258 (22.4)	65.3*
Managed care (referent)	894 (77.6)	50.6
Education		
<High school	141 (12.2)	61.5†
High school graduate	245 (21.3)	48.4
Some college	393 (34.1)	58.4
Undergraduate degree	251 (21.8)	52.6
Some graduate school (referent)	122 (10.6)	43.6
Current employment status		
Unemployed	130 (11.3)	61.7†
Student	38 (3.3)	51.3
Employed (referent)	984 (85.4)	52.9
Current marital status		
Divorced or separated	244 (21.2)	77.4†
Single living with partner	96 (8.3)	69.1
Single not living with partner	305 (26.5)	53.6
Widowed	54 (4.7)	44.6
Married (referent)	453 (39.3)	39.8
No. living in woman's household		
≥4	348 (30.2)	52.8
3	259 (22.5)	51.9
2	361 (31.3)	51.0
1	184 (16.0)	63.1†
Father abusive toward mother		
Yes	347 (30.1)	70.2*
No (referent)	805 (69.9)	46.3
Current partner has a substance abuse problem‡		
Drinking problem	220 (19.1)	74.1*
Drug problem	106 (9.1)	80.4*
No alcohol or other drug problem (referent)	901 (78.2)	48.2

\* $P < .01$  (denoted correlate of increased IPV risk).

† $P = .01$  to  $.05$  (denoted correlate of increased IPV risk).

‡Percentages sum to more than 100 because categories of alcohol and other drug abuse are not mutually exclusive.

ditions, frequent bladder or kidney infections, having a hysterectomy, and gastric reflux (Table 4).

### COMMENT

Our IPV prevalence is consistent with other reports in similar clinical populations.<sup>2,3,5,25,38,39</sup> We found that 53.6% of women receiving primary care had experienced IPV in their lifetimes, and 13.6% experienced this violence in a current or most recent relationship; 40% ever experienced physical IPV. This is the first large clinical study, to our knowledge, to provide estimates of psychological violence. Fourteen percent of women experienced psychological violence in their lifetimes; 25% of all IPV iden-

**Table 2. Intimate Partner Violence (IPV) Prevalence in a Primary Care Setting (N = 1152)**

IPV Type (Physical or Psychological) and Timing	No. (%)
Any IPV in a current or most recent relationship*	192 (16.4)
Physical IPV (includes physical and/or sexual violence)	104 (8.9)
Psychological IPV (includes psychological battering)	88 (7.5)
Any IPV in a past relationship†	536 (46.5)
Physical IPV (includes physical and/or sexual violence)	422 (36.6)
Psychological IPV (includes perceived emotional abuse)	114 (9.9)
Lifetime, ever experienced any type of IPV‡	620 (53.6)
Physical IPV (includes physical and/or sexual violence)	464 (40.0)
Psychological IPV (includes current psychological battering and past emotional abuse)	156 (13.6)
Never experienced IPV	532 (46.2)

\*Intimate partner violence is a current relationship measured using the Index of Spouse Abuse to measure physical and sexual violence and the Women's Experience with Battering Scale to measure psychological IPV without concurrent physical IPV.

†Intimate partner violence in any past relationship measured using the modified Abuse Assessment Screen for physical, sexual, and perceived emotional abuse.

‡Lifetime IPV measured using the instruments noted herein for IPV in a current or past relationship.

tified in this study would have been missed had we not included this component of partner violence. Furthermore, psychological IPV was as strongly related to the range of health outcomes as was physical IPV. Our data clearly show that psychological violence has a health impact. This finding deserves further study.

Consistent with other studies, our results indicate that women who experience IPV are more likely to report their physical and mental health as fair to poor<sup>8,24,27,40,41</sup> and to have more physician visits,<sup>42</sup> irritable bowel syndrome and frequent dyspepsia,<sup>43-45</sup> chronic pain,<sup>9,46</sup> and migraine and other frequent headaches.<sup>47</sup> Our analyses concur with others in finding IPV to be associated with sexually transmitted infections, pelvic inflammatory disease, chronic pelvic pain, and bladder, kidney, or other urinary tract infections.<sup>19,45-51</sup>

The mechanism by which IPV affects women's health may be direct through repeated physical assaults and resulting injuries. Examples of health consequences through this direct pathway include chronic pain, broken bones, arthritis, hearing or sight deficits, seizures, or frequent headaches. Also, IPV may affect other chronic health conditions indirectly through the long-term psychological stress.<sup>52-55</sup> Hypothesized health outcomes, which may be indirectly linked to partner violence through stress, include stomach ulcers; spastic colon; frequent indigestion, diarrhea, or constipation; angina; and hypertension. Long-term sexual violence and associated trauma may increase a woman's risk of urogenital infections and chronic pelvic pain. Our findings are consistent with both a direct and indirect impact of IPV and health.

Several limitations of these data deserve mention. Although we have attempted to create temporally correct disease outcome measures, we still have cross-

**Table 3. Ever Experiencing Intimate Partner Violence (IPV) and Hospitalization and Physician Visits in the Past Year**

Health Index	Prevalence of Health Index by IPV Experience, %		Adjusted RR (95% CI) of IPV by Type*	
	Ever IPV (n = 620)	Never IPV (n = 532)	Physical (n = 464)	Psychological (n = 156)
Self-perceived physical health: poor vs fair to excellent	28.1	16.8	1.36 (1.03-1.77)	1.69 (1.20-2.29)
Self-perceived mental health: poor vs fair to excellent	22.7	8.5	2.28 (1.63-3.12)	1.74 (1.07-2.73)
Hospitalizations in the past year: >1 vs 0-1†	19.5	15.0	1.06 (0.77-1.44)	1.20 (0.79-1.76)
Physician visits in the past year: >5 vs 0-5†	48.0	37.6	1.18 (1.01-1.37)	1.17 (0.93-1.42)

\*Relative risk (RR) estimates (95% confidence intervals [CIs]) were adjusted for age, race, insurance status, cigarette smoking, and witnessing parental IPV. Physical violence in any intimate relationship includes physical and/or sexual violence with or without psychological IPV. Psychological violence includes current psychological battering or past emotional abuse with no sexual or physical violence.

†The RRs were additionally adjusted for current or recent pregnancy status.

**Table 4. Intimate Partner Violence (IPV) and Risk of Ever Being Diagnosed as Having These Specific Physical Health Conditions**

Ever Diagnosed With Specific Health Condition	Prevalence of Health Status by IPV Experience, %		Adjusted RR (95% CI) of Ever IPV by Type*	
	Ever IPV (n = 620)	Never IPV (n = 532)	Physical (n = 464)	Psychological (n = 156)
Disability preventing work†	27.7	15.5	1.56 (1.15-2.07)	1.49 (1.06-2.14)
Musculoskeletal or neurologic conditions				
Chronic neck or back pain†	38.0	22.2	1.49 (1.20-1.81)	1.91 (1.49-2.36)
Arthritis†	31.4	20.3	1.54 (1.16-1.89)	1.67 (1.20-2.22)
Frequent seizures, convulsions†	4.3	2.6	1.11 (0.52-2.41)	0.68 (0.18-2.41)
Migraines†	37.1	23.8	1.40 (1.14-1.69)	1.54 (1.18-1.93)
Other frequent headaches†	29.2	22.2	1.16 (0.91-1.46)	1.41 (1.05-1.82)
Began stammering or stuttering	6.6	2.2	2.81 (1.38-5.53)	2.31 (0.89-5.72)
Problem seeing even with glasses	14.4	8.5	1.58 (1.06-2.29)	1.61 (0.96-2.61)
Hearing loss	9.2	4.8	2.04 (1.24-3.28)	1.25 (0.58-2.60)
Cardiovascular conditions				
Hypertension†	32.0	28.1	1.03 (0.81-1.28)	1.15 (0.84-1.52)
Angina†	9.2	4.6	2.04 (1.15-3.50)	0.76 (0.24-2.14)
Other heart or circulatory problems†	13.3	8.5	1.47 (1.01-2.18)	1.22 (0.69-2.09)
Diabetes†	11.4	11.8	0.86 (0.56-1.26)	1.02 (0.58-1.71)
Urogenital conditions				
Bladder/kidney infection†	17.6	9.4	1.73 (1.21-2.40)	1.21 (0.71-1.98)
Other urinary tract infection†	11.6	8.0	1.37 (0.92-2.02)	1.00 (0.53-1.78)
Sexually transmitted infection†	30.3	10.4	3.13 (2.42-3.94)	1.82 (1.19-2.68)
Hysterectomy†	25.1	18.3	1.63 (1.22-2.11)	1.10 (0.69-1.66)
Infertility†	11.6	11.7	0.85 (0.56-1.26)	1.11 (0.66-1.80)
Chronic pelvic pain†	17.3	9.4	1.51 (1.05-2.10)	1.62 (1.03-2.48)
Digestive tract conditions				
Stomach ulcer†	15.5	7.6	2.03 (1.37-2.93)	1.72 (1.01-2.84)
Gastric reflux†	33.4	23.3	1.37 (1.10-1.68)	1.22 (0.88-1.61)
Spastic colon†	7.1	2.6	3.74 (1.88-7.07)	3.62 (1.63-7.50)
Frequent indigestion, constipation, or diarrhea†	45.0	28.5	1.60 (1.36-1.85)	1.30 (1.03-1.63)

\*Relative risk (RR) estimates (95% confidence intervals [CIs]) were adjusted for age, race, insurance status, and witnessing parental IPV. Physical violence in any intimate relationship includes physical and/or sexual violence with or without psychological IPV. Psychological violence includes current psychological battering or past emotional abuse with no sexual or physical violence.

†The RRs were additionally adjusted for cigarette smoking.

sectional data. We did not confirm diagnoses with existing medical records because many health outcomes of interest would not have been documented in a medical record or may not have the age at first occurrence needed to sequence the outcome relative to IPV experience. Therefore, health outcome data may be misclassified. We cannot exclude the possibility that women who experience IPV may be more likely to seek care and, thus, be diagnosed than are women who do not experience IPV. We have limited statistical power to detect difference in risks for some health outcomes (eg, developing cancer, lupus, epilepsy, stroke).

Because of safety concerns, we did not conduct health interviews for all women screened for IPV. Women who could not be recontacted by telephone or through follow-up clinic interviews were significantly more likely to currently be in violent relationships. Therefore, the true prevalence of current IPV was somewhat higher than reported among those completing both interviews; 20.1% of all women screened (n=1406) experienced IPV as did 36.5% of those who did not complete both interviews and were, therefore, excluded from these data (n=192). Because the 2 groups did not differ in the distribution of demographic correlates, the RR

estimates for IPV and health outcomes should not be biased.

This research adds to existing literature that documents the frequency and health impact of psychological IPV. We defined psychological IPV to include psychological battering, characterized by women's continuous feelings of susceptibility to danger, loss of power and control, and entrapment. If we had not included psychological IPV, we would have missed 25% of women who had ever experienced IPV. Not only did our inclusion of psychological IPV reduce exposure misclassification, but also assessing psychological IPV allowed us to investigate the impact of psychological IPV on women's health even when physical and sexual IPV were not present. We found that psychological violence was associated with many of the same health outcomes as was physical IPV. This suggests that it is important for clinicians to screen for psychological forms of IPV as well as for physical and sexual assault in intimate relationships.

Since many past studies used select samples (eg, battered women shelters, case series of those seen in clinics or alcohol treatment facilities), our more population-based approach of screening women receiving primary care and our screening for IPV independent of health outcomes is a design strength that allows generalization of our results to other primary care populations. In contrast with many past studies of the health effects of IPV, we were able to control for the potential impact of witnessing parental IPV on the association between IPV and health outcomes.

## CONCLUSIONS

The American Medical Association, American College of Obstetrics and Gynecology, and American Academy of Family Practice recognize the impact of IPV on women's health and have called for efforts to address IPV.<sup>56,57</sup> The national health objective for the year 2000 addressing intimate violence specifies that at least 90% of hospital emergency departments should have protocols for routinely identifying, treating, and referring patients who experience sexual assault and spousal violence.<sup>58</sup> Routine screening for IPV in health care settings can be an important measure toward reducing the health consequences of this violence. The screening questionnaire needs to be short, easy to administer, sensitive, and specific. The WEB Scale may be an appropriate screening tool, because both physical and psychological IPV are inclusively identified with this tool. Furthermore, the WEB Scale takes about 2 minutes to complete and can be self-administered.

As with screening for chronic diseases, early detection of partner abuse could lead to an effective intervention to reduce associated morbidity and mortality. In addition, by identifying patients who have experienced IPV and understanding the complexities of the individual patient's physical and mental well-being, physicians have the opportunity to provide more appropriate care, thereby improving the lives of some of their patients.<sup>18</sup> Interventions at any point in the life history of IPV may be effective, since, as these data suggest, the abusive relationship and its effects seem to last long after the relationship

ends. In fact, Flitcraft<sup>59</sup> advocates that not acknowledging abuse may be psychologically damaging in itself. Screening for IPV is not, however, sufficient to reduce the health impact of this violence. Effective clinic- and community-based interventions are needed to address IPV in women's lives. Clinicians need to be supported in screening efforts, community resources must be available for women in need, and, as a society, we must acknowledge the magnitude and impact of this problem and commit to a zero tolerance policy for partner violence.

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