

The Role of Emotional Abuse in Intimate Partner Violence and Health Among Women in Yokohama, Japan

Mieko Yoshihama, PhD, MSW, Julie Horrocks, PhD, and Saori Kamano, PhD

Intimate partner violence (IPV; also referred to as domestic violence) is a serious health concern worldwide.^{1,2} IPV can take many forms, such as physical, emotional, and sexual violence, and is committed by one partner against the other in marriage and other intimate or dating relationships. A recent study of IPV in Japan found that, by the age of 49 years, 19% of women who had ever had a partner had experienced physical or sexual violence (or both) from a partner and 4% had suffered injuries related to such violence.³ Approximately one third of women who are murdered in Japan are killed by their current or former male partners,⁴ which is similar to the proportion of female murder victims in the United States who are killed by male intimate partners.⁵

In Japan, after decades of public denial, there has been a gradual but substantial increase in societal awareness of IPV since the early 1990s.^{6–8} One concrete example of societal response is the enactment of the first legislation on IPV, the Law Relating to the Prevention of Spousal Violence and the Protection of Victims, in April 2001, which was subsequently amended in 2004 and 2007.⁹

Numerous studies have documented the wide-ranging negative health effects of IPV, which are not limited to acute injuries. Women who have experienced IPV report lower self-rated health status, higher levels of distress symptoms, and greater use of health care than do women who have not experienced IPV.^{10–18} Most previous studies have focused on the relationship between partners' physical and sexual violence and women's health.^{12,14,19} Consequently, the effect of emotional abuse is less well understood. Few studies of IPV have accounted for exposure to childhood abuse or to abuse perpetrated by someone other than an intimate partner, or for relevant sociodemographic characteristics.²⁰ Accounting for these variables, we investigated the relationship in Japan between women's health and the experience of intimate partners' emotional abuse as

Objectives. As part of the World Health Organization's cross-national research effort, we investigated the relationship between various health indicators and the experience of intimate partner violence (IPV), which included emotional, physical, and sexual abuse, among women in Yokohama, Japan.

Methods. We used multivariate logistic and negative binomial regression to examine the relationship between health status and IPV in a stratified cluster sample of 1371 women aged 18 to 49 years.

Results. In 9 of 11 health indicators examined, the odds of experiencing health-related problems were significantly higher ($P < .05$) among those that reported emotional abuse plus physical or sexual violence than among those that reported no IPV, after we controlled for sociodemographic factors, childhood sexual abuse, and adulthood sexual violence perpetrated by someone other than an intimate partner. For most health indicators, there were no significant differences between those that reported emotional abuse only and those that reported emotional abuse plus physical or sexual violence.

Conclusions. The similarity of outcomes among those that reported emotional abuse only and those that reported emotional abuse plus physical or sexual violence suggests the need for increased training of health care providers about the effects of emotional abuse. (*Am J Public Health.* 2008;99:647–653. doi: 10.2105/AJPH.2007.118976)

well as physical and sexual violence. It is part of a cross-national research effort, the Multi-Country Study of Women's Health and Domestic Violence, coordinated by the World Health Organization (WHO Violence Against Women Study).

METHODS

Development of Research Instruments

We used the Core Questionnaire version 9.9 developed by the WHO Violence Against Women Study Core Research Team,²¹ which we translated into Japanese by the back-translation method. On the basis of 2 pilot tests, previous research, and professional consultation, questions pertinent to the Japanese sociocultural and economic context were added to the questionnaire.

Sampling and Data Collection Procedures

The stratified cluster sample included 2400 women in Yokohama aged 18 to 49 years,

randomly sampled from the official resident roster. An introductory letter was sent to the selected women inviting them to participate. The letter described the study as a study of women's health and life experiences, rather than a study of violence. This was done to ensure that a woman's partner did not suspect that she had disclosed his violence to others, thus potentially putting the woman in danger of further violence.

As part of the process of obtaining informed consent, a trained female interviewer visited prospective respondents at their residence and explained the purpose and procedures of the study. Face-to-face interviews were conducted at a location of the respondents' choice (usually the respondents' place of residence) between October 2000 and January 2001. Because housing quarters in Yokohama are usually small, it was difficult to conduct an interview in private; consequently, interviews were augmented by paper-and-pencil questionnaires to avoid vocalization of sensitive questions or respondents' answers.

Of the 2400 women selected, 1371 completed the interview, resulting in a response rate of 57.1%. Excluding 438 women who were ineligible or could not be reached, 69.9% of those selected completed the interview. This response rate compares favorably with those of other face-to-face interview studies in Japan. For example, in a survey on Japanese national character conducted by the Institute of Statistical Mathematics in 1998, the response rate for the 6 largest cities (including Yokohama) was 49%.²² We present analyses of data for 1287 women who had had at least 1 intimate heterosexual relationship (hereafter called “ever-partnered women”); 84 respondents who had not had such a relationship at the time of the interview were excluded.

On average, the interviews lasted 39.3 minutes (SD=10.9). At the conclusion of the interview, respondents received a gift certificate for books and magazines (equivalent to US\$9.00) and a list of assistance programs. The list was provided to all respondents regardless of whether they reported IPV during the interview. For safety reasons, the list did not explicitly mention IPV and was small to allow it to be hidden easily, if necessary, from an abusive partner. In addition, prior arrangements were made with local programs to provide assistance for respondents and interviewers on an as-needed basis.

Measures

To assess IPV, we asked respondents if they had ever experienced each of 6 forms of physical violence and 3 forms of sexual violence at the hands of their current or former intimate partners (for specific items, see Table 1). Only 6.4% of the respondents reported sexual abuse, and only 31 individuals reported sexual abuse without physical abuse. Although there is evidence that sexual violence is more predictive of poor health outcomes than is physical violence,²³ with such small numbers, it was not possible to study the effects of sexual abuse alone on health. We therefore created a variable that indicated whether the respondent had ever experienced physical violence, sexual violence, or both.

To assess emotional abuse by an intimate partner, we used 2 sets of questions from the WHO Core Questionnaire: (1) 6 items pertaining to current or most recent male partner’s

TABLE 1—Women’s Reported Experience of Physical and Sexual Violence and of Emotional Abuse by Male Intimate Partners: Yokohama, Japan, 2000–2001

| Violence Experienced by Respondent | Respondents, % (95% CI) |
|--|-------------------------|
| Any physical or sexual violence | 15.1 (13.1, 17.0) |
| Any physical violence | 12.6 (10.9, 14.3) |
| Slapped or had object thrown at her that could hurt | 9.0 (7.4, 10.6) |
| Pushed or shoved | 8.4 (6.8, 10.2) |
| Hit with a fist or with something else that could hurt | 2.2 (1.4, 3.0) |
| Kicked, dragged, or beaten up | 2.6 (1.7, 3.4) |
| Choked or burned on purpose | 0.1 (0.0, 0.3) |
| Threatened or assaulted with a gun, knife, or other weapon | 0.6 (0.1, 0.9) |
| Any sexual violence | 6.4 (4.8, 8.0) |
| Physically forced to have sexual intercourse when she did not want to | 5.1 (3.6, 6.5) |
| Had sexual intercourse because she was afraid of what her partner might do | 3.3 (2.3, 4.3) |
| Forced to engage in a degrading or humiliating sexual act | 1.4 (0.6, 2.1) |
| Any emotional abuse ^a | 43.9 (40.7, 47.2) |
| Partner tried to keep her from seeing friends | 3.9 (2.9, 5.0) |
| Partner tried to restrict her contact with her family | 3.3 (2.2, 4.5) |
| Partner insisted on knowing her whereabouts at all times | 13.4 (11.2, 15.7) |
| Partner ignored her and treated her with indifference | 5.4 (4.0, 6.9) |
| Partner got angry if she spoke with another man | 7.3 (5.8, 8.8) |
| Partner often suspected that she was unfaithful | 3.7 (2.5, 5.0) |
| Partner insulted her or said things that made her feel bad about herself | 27.8 (25.0, 30.5) |
| Partner belittled or humiliated her in front of other people | 7.8 (6.2, 9.4) |
| Partner scared or intimidated her | 16.8 (14.6, 19.0) |
| Partner threatened to hurt her | 1.9 (1.1, 2.8) |

Note. CI = confidence interval.

^aThe first 6 items refer to current or most recent male partner; the last 4 items refer to any male partner.

controlling behavior and (2) 4 questions about any male partner’s emotionally or psychologically abusive behavior (for specific items, see Table 1). We created a dichotomous variable that indicated whether the respondent had ever experienced 1 or more types of emotional abuse, coded as 0 (no experience of emotional abuse) or 1 (experience of one or more types of emotional abuse).

To assess self-rated health status, we asked respondents to rate their current health status on a 5-point scale, ranging from 1 (excellent) to 5 (very poor). For multivariate analysis, we constructed a dichotomous variable (where 0=excellent or good, and 1=fair, poor, or very poor), because few respondents rated their health as poor or very poor.

To assess functional limitations, we used 4 questions to examine respondents’ experiences during the previous month in the following

domains: (1) difficulty walking; (2) difficulty performing usual work, study, or household activities; (3) physical pain or discomfort; and (4) difficulty with memory or concentration. Respondents rated the degree to which they experienced functional limitation in each domain during the previous month on a 5-point Likert-type scale, ranging from 1 (no problem) to 5 (extreme problem). For multivariate analysis, we created a dichotomous variable (coded as 0=no problem and 1=some problem) for each of the 4 domains.

To assess use of medication, we asked respondents how frequently they used painkillers during the previous month, using a 4-point scale (never, once or twice, a few times, or many times). We created a dichotomous variable by grouping together those who had ever taken painkillers in the previous month. Similarly, we created a dichotomous variable to

indicate whether or not the respondent had ever taken sleeping pills or tranquilizers.

To assess use of health services, we asked respondents whether they had seen any health care professionals—broadly defined to include physicians, nurses, and traditional (Eastern) medicine practitioners, such as practitioners of acupuncture and acupressure—during the previous month and whether they were hospitalized (for reasons other than those related to childbirth) during the previous year.

To assess suicidal ideation, we asked respondents whether they had ever thought of committing suicide.

To assess symptoms of physical and emotional distress, we used the Self-Report Questionnaire.²⁴ This questionnaire, developed by WHO as a screening instrument for psychiatric disturbances, has been found to have good reliability and validity with diverse populations.²⁴ Respondents were asked whether they had experienced each of the 20 listed symptoms during the past month (for specific items, see Table 2).

To assess childhood sexual abuse, we asked respondents whether they had been touched

sexually or made to do something sexual against their will before age 15 years.

To assess adulthood sexual abuse perpetrated by someone other than an intimate partner, we asked respondents whether, since age 15 years, they had been forced to engage in sexual intercourse or sexual acts against their will by someone who was not an intimate partner.

To assess sociodemographic characteristics, we ascertained the respondent's age, relationship status, number of children, and educational level at the time of the interview. As an indicator of socioeconomic status, we used the respondent's perceived economic well-being, which was assessed by asking the degree to which the respondent experienced difficulties in making ends meet; a 5-point scale, ranging from 1 (extremely) to 5 (not at all), was used. For multivariate analysis, we created a variable ranging from 1 (extremely or some) to 3 (little or not at all).

Statistical Analysis

To correct for potential bias introduced by differential nonresponse among various sub-

groups, we constructed and used poststratification weights based on age in years, employment status, and marital status. In our analyses, which were conducted with Stata version 9 (StataCorp LP, College Station, TX), we applied these poststratification weights, as well as survey methods that adjust variance estimates to account for clustering in the sampling design.

We compared respondents' health status across 3 groups of respondents: those who had not experienced IPV, those who had experienced partners' emotional abuse only, and those who had experienced partners' emotional abuse as well as physical or sexual violence. Only 1.5% of respondents reported experiencing physical or sexual violence but not emotional abuse. Because regression estimates are unstable with such small numbers, this group was excluded from the multivariate analyses (and hence from Table 2) but included in the description of the sample characteristics and in Table 1. We estimated adjusted odds ratios using multivariate logistic regression models that controlled for relevant sociodemographic characteristics, including age, education, rela-

TABLE 2—Women's Health Status, by Type of Intimate Partner Violence (IPV) Experienced: Yokohama, Japan, 2000–2001

| Poor Health Indicator | No IPV, % | Emotional Abuse Only | | Emotional Abuse Plus Physical or Sexual Violence | | F ^a |
|---|-----------|----------------------|----------------------|--|----------------------|----------------|
| | | % | AOR (95% CI) | % | AOR (95% CI) | |
| Suicidal ideation | 8.0 | 17.2 | 2.15*** (1.37, 3.36) | 33.8 | 5.04† (3.24, 7.83) | 10.59*** |
| Self-rated health fair to very poor | 19.3 | 27.1 | 1.49** (1.07, 2.06) | 33.0 | 1.80** (1.15, 2.83) | 0.88 |
| Difficulty walking | 2.7 | 5.9 | 2.02** (1.02, 4.01) | 6.6 | 2.18** (1.01, 4.73) | 0.03 |
| Difficulty performing usual activities | 6.2 | 13.2 | 2.26*** (1.38, 3.69) | 13.9 | 1.94** (1.01, 3.72) | 0.26 |
| Health services in past month | 16.0 | 24.0 | 1.57*** (1.16, 2.12) | 28.3 | 1.96*** (1.23, 3.11) | 1.06 |
| Use of painkillers | 21.8 | 26.5 | 1.20 (0.89, 1.61) | 33.7 | 1.49* (0.99, 2.24) | 1.00 |
| Pain or discomfort | 6.8 | 11.8 | 1.56* (0.94, 2.60) | 12.8 | 1.52 (0.90, 2.59) | 0.01 |
| Difficulty with memory or concentration | 6.0 | 8.2 | 1.35 (0.83, 2.20) | 16.9 | 2.76*** (1.37, 5.56) | 5.22** |
| Use of sleeping pills or tranquilizers | 2.2 | 3.3 | 1.46 (0.59, 3.64) | 7.5 | 3.33** (1.24, 8.99) | 3.44* |
| Hospitalization in past year | 3.0 | 3.2 | 0.99 (0.49, 2.00) | 7.0 | 2.44** (1.05, 5.64) | 3.70* |
| No. of distress symptoms ^b | 1.2 | 2.1 | 1.60† (1.36, 1.89) | 2.7 | 2.13† (1.67, 2.72) | 5.24** |

Note. AOR=adjusted odds ratio; CI=confidence interval. AORs and adjusted incidence rate ratios (for distress symptoms) were adjusted for age, relationship status, number of children, education, socioeconomic well-being at interview, childhood sexual abuse, and adulthood sexual abuse by someone other than an intimate partner.

^aF statistic (adjusted Wald F test) for comparison of "emotional abuse only" and "emotional abuse plus physical or sexual violence."

^bFor distress symptoms, average numbers and adjusted incidence rate ratios (with corresponding 95% confidence intervals) are shown. Distress symptoms included the following: has headaches; appetite is poor; sleeps badly; is easily frightened; hands shake; feels nervous, tense, or worried; digestion is poor; has trouble thinking clearly; feels unhappy; cries more than usual; finds it difficult to enjoy daily activities; finds it difficult to make decisions; daily work is suffering; is unable to play a useful part in life; has lost interest in things; feels that she is a worthless person; the thoughts of ending her life is on her mind; feels tired all the time; has uncomfortable feelings in the stomach; is easily tired.

*P<.10; **P<.05; ***P<.01; †P<.001.

relationship status, number of children, and socioeconomic status, as well as experiences of childhood sexual abuse and of adulthood sexual violence perpetrated by someone other than an intimate partner, which are known to be associated with health status.^{25–29} For the number of distress symptoms, the negative binomial regression model was used.³⁰ We used Stata software test statements to assess whether health status among those reporting emotional abuse only and those reporting emotional abuse plus physical or sexual violence differed significantly.

RESULTS

Respondents' Characteristics

The mean age of the respondents was 35.2 years (95% confidence interval [CI]=34.6, 35.8). On average, the respondents had 13.7 years (95% CI=13.5, 13.8) of schooling, with 63.1% (95% CI=59.4, 66.8) having had some postsecondary education. At interview, most were married (70.7%; 95% CI=67.0, 74.1) and had 1 or more children (64.4%; 95% CI=61.3, 67.6). One in 3 (30.3%) indicated that they were experiencing extreme or some difficulties in making ends meet, whereas 46.8% reported little or no difficulties. On the basis of census and other population-based statistics, the distributions of respondents' characteristics were comparable to those of female residents aged 18 to 49 years in Yokohama regarding age, educational level, and marital status.^{22,31, 32}

Experiences of Partners' Physical or Sexual Violence and Emotional Abuse

Of the ever-partnered women, a total of 15.1% reported having experienced an intimate partner's physical or sexual violence sometime prior to the interview; 12.6% reported physical violence, and 6.4% reported sexual violence. The most common types of physical or sexual violence reported were being slapped or having objects thrown at her, being pushed or shoved, and being forced to have sexual intercourse (Table 1).

The most commonly reported types of emotional abuse were a partner's insulting the woman or making her feel bad about herself (27.8%), and scaring or intimidating her (16.8%). Overall, 43.9% of the respondents

reported experiencing some type of emotional abuse. A substantial proportion (30.3%) of ever-partnered women had experienced emotional abuse without experiencing physical or sexual violence. Of the ever-partnered women, 13.6% reported experiencing both physical or sexual violence, and emotional abuse. Most women (89.3%) who had experienced physical or sexual violence had also experienced emotional abuse. Only 1.5% of respondents reported physical or sexual violence without emotional abuse, indicating that partners' physical or sexual violence and emotional abuse often occur together.

Partners' Emotional Abuse and Physical or Sexual Violence and Women's Health

Table 2 presents relationships between health indicators and IPV for ever-partnered women. Of the 11 health indicators measured, only 2—the use of painkillers and the experience of physical pain or discomfort—had no association with IPV. As shown in Table 2, compared with women reporting no IPV, both women reporting emotional abuse, and physical or sexual violence (adjusted incidence rate ratio [AIRR]=2.13) and women reporting emotional abuse only (AIRR=1.60) were more likely to report a large number of distress symptoms, after we adjusted for age, relationship status, number of children, education, socioeconomic well-being at interview, childhood sexual abuse, and adulthood sexual abuse by someone other than an intimate partner. The adjusted odds of reporting suicidal ideation were significantly higher for those reporting emotional abuse plus physical or sexual violence (adjusted odds ratio [AOR]=5.04) and those reporting emotional abuse only (AOR=2.15) than for those who reported no IPV.

Relative to those reporting no IPV, the odds of having fair, poor, or very poor health were 1.80 times higher for those who had experienced emotional abuse plus physical or sexual violence and 1.49 times higher for those who had experienced emotional abuse only, after we controlled for other variables in the model. Compared with those reporting no IPV, those reporting emotional abuse plus physical or sexual violence and those with emotional abuse only were more likely to report difficulty walking (AOR=2.18 and 2.02, respectively),

difficulty performing usual activities (AOR=1.94 and 2.26, respectively), and use of health services in the past month (AOR=1.96 and 1.57, respectively). In addition, women reporting emotional abuse plus physical or sexual violence were significantly more likely than were women reporting no IPV to report difficulty with memory or concentration (AOR=2.76), use of sleeping pills or tranquilizers (AOR=3.33), or having been hospitalized in the previous year (AOR=2.44).

For most health indicators, there were no statistically significant differences between those reporting emotional abuse only and those reporting emotional abuse plus physical or sexual violence. Health indicators for which those reporting emotional abuse plus physical or sexual violence fared significantly worse than those reporting emotional abuse only ($P<.05$) were suicidal ideation, physical and emotional distress symptoms, and difficulty with memory or concentration.

DISCUSSION

Importance of Emotional Abuse

The estimated prevalence of emotional abuse (43.9%) is similar to that found in other studies conducted in Japan. Because of enormous variations in the methodologies employed (e.g., data collection methods, number of emotional abuse items assessed, and sample characteristics), direct comparisons are not possible; however, a study by the Tokyo Metropolitan Government that used 4 items to measure abuse reported the prevalence of emotional abuse to be 55.9%.³³ Other studies did not report the proportion of those who experienced at least 1 form of emotional abuse, instead reporting the proportion of women who indicated having experienced individual items, which ranged from 11.9% to 32.8% in one study³⁴ and from 4.0% to 39.5% in another.³⁵

The comparison of health indicators across 3 groups of women—those who had not experienced intimate partner violence, those who had experienced emotional abuse only, and those who had experienced both emotional abuse and physical or sexual violence from partners—clearly demonstrates the wide-ranging negative

impact of IPV on women's physical and mental health. Our study highlights the negative health impact of emotional abuse irrespective of whether it is accompanied by physical or sexual violence.

This finding has important implications for the work of health care providers, such as assessment and treatment planning. Although routine screening of IPV is not widely practiced in Japan, Article 6 of the Law Relating to the Prevention of Spousal Violence and the Protection of Victims stipulates⁹ that health care providers who detect that a patient has suffered injuries or medical conditions as a result of IPV shall endeavor to provide her with information about *haigusha boryoku sodan shien senta* (spousal violence counseling and support centers). It is critical that health care providers also consider medical conditions that may be associated with emotional abuse. The same law (Article 23) also mandates

state and local governments to undertake training and educational activities to deepen understanding of the human rights of the victims, the distinctive characteristics of spousal violence, etc. among official personnel working in this field.

In developing training and educational materials, the definition of IPV must include emotional abuse.

Health Problems Associated With Intimate Partner Violence

An important contribution of this study is its comparison of the health status of those with emotional abuse plus physical or sexual violence and those with emotional abuse only. The health problems studied here can be divided into 3 categories. The first category includes those health problems that exhibit a dose-response group relationship with the amount of abuse, in that the odds of the problem increases significantly from women who experienced no IPV to those who experienced emotional abuse only, and increases again from those with emotional abuse only to those who experienced emotional abuse plus physical or sexual violence. This first category includes physical and emotional distress symptoms and suicidal ideation.

Health problems in the second category were associated with experiencing emotional

abuse with or without physical or sexual violence. There was a significant increase in the odds of experiencing these health problems for women reporting emotional abuse only or emotional abuse plus physical or sexual violence compared with those reporting no IPV, but no significant differences between those reporting emotional abuse only and those reporting emotional abuse plus physical or sexual violence. This category includes self-rated health status, difficulty walking, difficulty performing usual activities, and use of health services in the past month.

The third category includes those problems associated with experiencing emotional abuse plus physical or sexual violence, but not with experiencing emotional abuse alone. This category includes difficulty with memory or concentration, use of sleeping pills or tranquilizers, and hospitalization. The link between physical or sexual violence and difficulty with memory or concentration and use of sleeping pills or tranquilizers could be direct; alternately, it could be indirect if, to manage the symptoms of greater distress and more-intense suicidal ideation, women who have experienced physical or sexual violence turn to sleeping pills or tranquilizers, which may cause or exacerbate difficulty with memory or concentration.

The increased reporting of functional limitations (e.g., difficulty walking, difficulty performing usual activities) and distress symptoms among abused women, especially those who have experienced emotional abuse only, deserves mention. Typically, these types of distress are difficult to pair with a medical diagnosis and are categorized as "nonspecific symptoms." As a result, health care providers may dismiss distress as unimportant or label women as hypochondriac, thus failing to offer necessary medical treatment or to address the underlying issues, one of which can be IPV. A recent study of physicians in Tokyo found that only a small proportion (6 of 20) of victims of sexual and physical assault who sought health care indicated assault as a presenting problem and that, in most cases, the presenting problems were physical symptoms.³⁶ Our findings indicate that when female patients present nonspecific symptoms, it is important to acknowledge and address their distress and to explore whether their symptoms are associated with IPV.

Those who had experienced emotional abuse plus physical or sexual violence had a much higher risk of suicidal ideation than were those who had experienced emotional abuse only. Although we did not assess symptoms of major depression or posttraumatic stress disorder specifically, selected items from the Self-Report Questionnaire are indicators of such disorders. Analysis of individual items found a significant difference between those reporting emotional abuse only and those reporting emotional abuse plus physical or sexual violence in the proportion of women reporting sleep disturbance and feelings of nervousness and unhappiness ($P < .05$), and in the proportion of those who have difficulty enjoying daily activities, feel that they are unable to play a useful part in life, and are easily tired ($P < .10$). These symptoms may underlie the much higher risk of suicidal ideation found among those reporting emotional abuse plus physical or sexual violence. Attention to these symptoms in the health care setting is crucial for early detection of suicidal ideation and attempts.

Conclusions

The sample is limited to an urban region of Japan, and it is unknown whether results are generalizable to rural regions; differences in such sociodemographic characteristics as average age at marriage, number of children, employment status, and household sizes could affect the prevalence of IPV or the relationship between health and IPV. Another limitation of our study is the low response rate. Although poststratification weights were used, it is still possible that respondents had a higher or lower rate of IPV and health problems than did nonrespondents. The use of self-report can also challenge the validity; however, people tend to underreport negative or otherwise sensitive experiences,³⁷ which would mean that the no-IPV group in the study included some women who have experienced IPV. Thus, the observed differences in health status between those who experienced IPV and those who did not were conservative estimates.

Given the wide range of health consequences of IPV, abused women are likely to seek health care from almost all hospital departments

and units. A study of physicians in Tokyo found that most women who had been sexually or physically assaulted sought treatment in multiple departments or units, including obstetrics–gynecology, surgery, internal medicine, plastic surgery, and neurology.³⁶ Thus, other units besides emergency departments and surgery clinics must develop the ability to identify abused women. Health care facilities should develop a protocol for detecting and responding to IPV with careful attention to interdepartmental coordination.

It is critical that health care providers be trained in working effectively and sensitively with patients who have experienced IPV. Training should be incorporated in all phases of professional education, from formal education (e.g., medical school or nursing school curriculum) to in-service training and continuing education. Given the significant relationship between IPV and compromised health in women, initiatives aimed at promoting population health must include IPV prevention. ■

About the Authors

Mieko Yoshihama is with the School of Social Work, University of Michigan, Ann Arbor. Julie Horrocks is with the Department of Mathematics and Statistics, University of Guelph, Guelph, Ontario. Saori Kamano is with the National Institute of Population and Social Security Research, Tokyo, Japan.

Requests for reprints should be sent to Mieko Yoshihama, PhD, University of Michigan School of Social Work, 1080 South University, Ann Arbor, MI 48109-1106 (e-mail: miekoj@umich.edu).

This article was accepted December 26, 2007.

Contributors

M. Yoshihama and S. Kamano were responsible for the study's development and implementation. J. Horrocks assisted with analyses. All authors contributed to the conceptualization of the paper's focus, data analyses, interpretation of findings, and article writing.

Acknowledgments

This study was funded in part by grants from the World Health Organization (grant W6/181/21), Toyota Foundation (grant 9882-064), Japan Ministry of Health and Welfare (grant H10-kodomo-015), University of Michigan Center for Japanese Studies, University of Michigan Institute for Research on Women and Gender, University of Michigan School of Social Work, Japan National Institute of Population and Social Security Research, and the National Sciences and Engineering Research Council of Canada (NSERC Discovery grant 261497-03).

We thank the study participants, who willingly shared their experiences of intimate partner violence and health

conditions. Special thanks also go to the Japan project team members (Hiroko Akiyama, Tamie Kaino, Fumi Hayashi, and Tomoko Yunomae).

Human Participant Protection

Approval for this study was obtained by the institutional review boards of the University of Michigan and the World Health Organization.

References

- García-Moreno C, Jansen HAFM, Watts C, Ellsberg MC, Heise L. *WHO Multi-Country Study on Women's Health and Domestic Violence Against Women: Initial Results on Prevalence, Health Outcomes and Women's Responses*. Geneva, Switzerland: World Health Organization; 2005.
- Heise L, Ellsberg M, Gottemoeller M. Ending violence against women. *Popul Rep*. 1999;27:1–43.
- Yoshihama M, Horrocks J, Kamano S. Lifetime experiences of intimate partner violence and related injuries among women in Yokohama, Japan. *Am J Public Health*. 2007;97:232–234.
- Hanzai Tokeisho: Heisei 13 Nen No Hanzai [Criminal Statistics in 2001]*. Tokyo, Japan: Keisatsucho [National Police Agency]; 2002.
- US Federal Bureau of Investigation. *Crimes in the United States 2005: Uniform Crime Reports*. Washington, DC: US Dept of Justice; 2006.
- Yoshihama M. Policies and services addressing domestic violence in Japan: from non-interference to incremental changes. *Womens Stud Int Forum*. 2002;25:541–553.
- Yoshihama M. The definitional process of domestic violence in Japan: generating official response through action-oriented research and international advocacy. *Violence Against Women*. 2002;7:339–366.
- Yoshihama M. Domestic violence in Japan: research, program development and emerging movements. In: Roberts A, ed. *Battered Women and Their Families: Intervention Strategies and Treatment Programs*. 2nd ed. New York, NY: Springer; 1998:405–447.
- Haugusha kara no boryoku no boshi oyobi higaiha no hogo ni kansuru horitsu [Law Relating to the Prevention of Spousal Violence and the Protection of Victims], Law No. 31 (2001), Law No. 64 (amendments of 2004), and Law No. 113 (amendments of 2007).
- Campbell JC, Soeken KL. Forced sex and intimate partner violence: effects on women's risk and women's health. *Violence Against Women*. 1999;5:1017–1035.
- Coker AL, Smith PH, Bethea L, King MR, McKeown RE. Physical health consequences of physical and psychological intimate partner violence. *Arch Fam Med*. 2000;9:451–457.
- Collins KS, Schoen C, Joseph S, Duchon L, Simantov E, Yellowitz M. *Health Concerns Across a Woman's Lifespan: The Commonwealth Fund 1998 Survey of Women's Health*. New York, NY: Commonwealth Fund; 1999.
- Leserman J, Li Z, Drossman DA, Hu YJB. Selected symptoms associated with sexual and physical abuse history among female patients with gastrointestinal dis-
- orders: the impact on subsequent health care visits. *Psychol Med*. 1998;28:417–425.
- McCauley J, Kern DE, Kolodner K, et al. The “battering syndrome”: prevalence and clinical characteristics of domestic violence in primary care internal medicine practices. *Ann Intern Med*. 1995;123:737–746.
- McCauley J, Kern DE, Kolodner K, et al. Clinical characteristics of women with a history of childhood abuse: unhealed wounds. *JAMA*. 1997;277:1362–1368.
- Yoshihama M, Horrocks J. Posttraumatic stress symptoms and victimization among Japanese American women. *J Consult Clin Psychol*. 2002;70:205–215.
- Yoshihama M, Horrocks J. The relationship between intimate partner violence and PTSD: an application of Cox regression with time-varying covariates. *J Trauma Stress*. 2003;16:371–380.
- Yoshihama M, Horrocks J. Relationship between emotional numbing and arousal symptoms in American women of Japanese descent who experienced interpersonal victimization. *J Anxiety Disord*. 2005;19:443–459.
- Schei B, Bakketeig LS. Gynecological impact of sexual and physical abuse by spouse: a study of a random sample of Norwegian women. *Br J Obstet Gynecol*. 1989;96:1379–1383.
- Bonomi A, Thompson RS, Anderson M, et al. Intimate partner violence and women's physical, mental, and social functioning. *Am J Prev Med*. 2006;30:458–466.
- WHO Multi-Country Study on Women's Health and Domestic Violence: Core Questionnaire and WHO Instrument—Version 9*. Geneva, Switzerland: World Health Organization; 2000.
- Kokuminsei No Kenkyu Dai 10 Ji Zenkoku Chosa—1998 Nen Zenkoku Chosa, Kenkyu Ripouto 83 [A Study of the Japanese National Character: The Tenth Nationwide Survey Research, Report General Series No. 83]*. Tokyo, Japan: Tokei Suri Kenkyujo [Institute of Statistical Mathematics]; 1999.
- Leserman J, Li Z, Drossman DA, Toomey TC, Nachman G, Glogau L. Impact of sexual and physical abuse dimensions on health status: development of an abuse severity measure. *Psychosom Med*. 1997;59:152–160.
- A User's Guide to the Self Reporting Questionnaire*. Geneva, Switzerland: World Health Organization Division of Mental Health; 1994.
- Avis NE, Assmann SF, Kravitz HM, Ganz PA, Ory M. Quality of life in diverse groups of midlife women: assessing the influence of menopause, health status and psychosocial and demographic factors. *Qual Life Res*. 2004;13:933–946.
- Banyard VL, Williams LM, Siegel J. The long-term mental health consequences of child sexual abuse: an exploratory study of the impact of multiple traumas in a sample of women. *J Trauma Stress*. 2001;14:697–715.
- Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the adverse childhood experiences (ACE) study. *Am J Prev Med*. 1998;14:245–258.

28. Keyes CLM. The nexus of cardiovascular disease and depression revisited: the complete mental health perspective and the moderating role of age and gender. *Aging Ment Health*. 2004;8: 266–274.
29. Weng HLH, Bastian LA, Taylor DH, Moser BK, Ostbye T. Number of children associated with obesity in middle-aged women and men: results from the Health and Retirement Study. *J Womens Health*. 2004;13: 85–91.
30. Cameron A, Trivedi P. *Regression Analysis of Count Data*. Cambridge, England: Cambridge University Press; 1998.
31. Genshiryoku Anzen System Kenkyujo [Institute of Nuclear Safety System]; A study of view of nature of 1994 [in Japanese]. Tokyo, Japan. 1994.
32. *Heisei 14 Nen Shugyo Kozo Kihon Chosa*. [The Employment Status Survey of 1997]. Tokyo, Japan: Somucho Tokeikyoku [Management and Coordination Agency—Statistics Bureau]; 1998.
33. *“Josei Ni Taisuru Boryoku” Chosa Hokokusho* [Report of “Violence Against Women” Study]. Tokyo, Japan: Tokyo-to Seikatsu Bunkakyoku [Tokyo Metropolitan Government Bureau of Life and Culture]; 1998.
34. *Ibaraki-Ken Danjyo Kyodo Sankaku Shakai Kenminshiki Chosa Hokokusho* [Report of Ibaragi Prefecture Survey on the Attitudes Toward Gender Equal Society]. Mito, Japan: Ibaraki Prefecture; 2001.
35. *Nichijoseikatsu Niokeru Danjono Ishiki to fittai Nikansuru Chosa: Chosakekka Sokuho* [Preliminary Results of a Study on Attitudes and Behaviors of Men and Women]. Nagoya, Japan: Nagoya-shi Josei Nitaisuru Boryoku Kenkyukai [Nagoya City Research Team on Violence Against Women]; 1999.
36. Kano N, Nakamura Y, Sakurayama T, et al. Iryokikan niokeru seiboryoku/boryoku higai josei noukeire nikansuru jittaichosa [A study of institutional medical care of female victims of sexual assault and violence]. *Nippon Koshu Eisei Zasshi* [Jpn J Public Health]. 2000;47:394–403.
37. Rasinski KA, Willis GB, Baldwin AK, Yeh W, Lee L. Methods of data collection, perceptions of risks and losses, and motivation to give truthful answers to sensitive survey questions. *Appl Cogn Psychol*. 1999;13: 465–484.