

BRIEF REPORT

Survey of intimate partner violence before and during pregnancy among Japanese women

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Abstract

Aim: Intimate partner violence (IPV) causes serious health problems, which could be life-threatening to pregnant women and their babies. Despite several IPV studies in Japan, the screening timeframe for IPV during pregnancy remains unclear. This study aimed to estimate the prevalence of IPV among Japanese women before and during pregnancy.

Methods: A survey was conducted at a hospital's outpatient clinic in Nagano, Japan, during October through December 2011 and March through July 2012. The Violence Against Women Screen (VAWS) questionnaire was distributed to 93 eligible women and 84 (89.5%) agreed to be assessed for the occurrence of IPV before and during pregnancy.

Results: The mean VAWS total score before pregnancy was 1.43 (standard deviation [SD] = 1.64; range, 0–7), and during pregnancy it was 0.83 (SD = 1.03; range, 0–6), and was significantly different ($t = 4.98$, $P < 0.001$). In addition, more women experienced IPV prior to pregnancy (34.9%) than during pregnancy (20.7%). All women who screened positive during pregnancy were also positive before pregnancy. Prevalence of intimate partner physical violence was 4.9% prior to pregnancy and declined to 3.7% during pregnancy.

Conclusion: Even though the prevalence of IPV during pregnancy had decreased compared with before pregnancy, all women experiencing IPV before pregnancy continued to be victimized during pregnancy. Therefore, IPV screening questions should include IPV that had occurred a year prior.

Key words: intimate partner violence, pregnancy, prevalence, screening.

INTRODUCTION

Violence against women is a major global public health issue. Intimate partner violence (IPV) is defined as behavior by an intimate partner that causes physical, sexual or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse, and controlling behaviors (World Health Organization, 2013). The WHO (2005) study in 10 different countries found that anywhere from 13% to 61% of women have been abused by their intimate male partners.

Intimate partner violence is also a serious social problem in Japan. The Gender Equality Bureau Cabinet Office (2012) in Japan conducted a national survey and found that 26% of women experienced physical violence and 18% of women were assaulted psychologically by male partners with 14% of women reporting coercive sexual intercourse. In addition, 10% of women experienced any type of violence repeatedly by their partner. The prevalence of IPV victimization has not changed for 10 years since the government surveys started in 1999.

A systematic review indicated that prevalence of IPV during pregnancy ranges 0.9–20.1% (Gazmararian *et al.*, 1996). These ranges varied based on the population studied, data collection method, and timing of data collection. A later secondary analysis of data from two

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Received 26 January 2015; accepted 10 June 2015.

large studies (1998–2007) also found IPV rates varying for similar reasons. Prevalence appeared to be higher in African and Latin American countries relative to the European and Asian countries surveyed. For example Denmark's prevalence was 1.8% and Uganda's was 13.5% (Devries *et al.*, 2010). Research on Japanese pregnant women using the Index of Spouse Abuse (ISA) (Kataoka, Yaju, Eto, & Horiuchi, 2005) found that 5% of women experienced IPV during pregnancy, yet a more recent survey employing the Violence Against Women Screen (VAWS) showed that 30.1% of pregnant women had possibly suffered IPV (Inami, Kataoka, Eto, & Horiuchi, 2010). Devries *et al.* (2010) noted that IPV was more prevalent than other conditions for which women were routinely screened such as gestational diabetes and pre-eclampsia. Moreover, IPV towards pregnant women is a serious concern that can be harmful to both women and infants. Violence during pregnancy can result in pregnancy complications such as hypertension, vaginal and cervical bleeding, placental problems, severe nausea, and kidney infection (Sharps, Laughon, & Giangrande, 2007). In addition, it affects the baby including low birthweight, preterm delivery, and neonatal death (Boy & Salihu, 2004; Sarkar, 2008). It may cause life-threatening results or the death of the mother and child (Boy & Salihu, 2004; Shadigian & Bauer, 2005). Women experiencing IPV during pregnancy may be at greater risk of being murdered (McFarlane *et al.*, 2014). Consequently, it is important to screen pregnant women who experienced IPV as early as possible; however, screening times varied among healthcare settings such as initial visit to hospital, pregnancy check-ups, or after childbirth.

Some of the surveys compared prevalence of IPV prior to pregnancy, during pregnancy, and post-partum. A multicenter cross-sectional study in Belgium (Van, Deschepper, Michielsen, Temmerman & Verstraelen, 2014) found that in the 12 months prior to pregnancy, 14.3% of women reported IPV, which dropped to 10.6% during pregnancy. However, there were no studies comparing prevalence before and during pregnancy in Japan. Therefore, this study aimed to estimate the prevalence of IPV among Japanese women before and during pregnancy.

METHODS

Participants and procedures

This was a cross-sectional survey study. Participants were pregnant women recruited from the outpatient clinic for obstetrics and gynecology at one general hos-

pital in Nagano, Japan, serving predominately low-risk pregnant women. Eligible participants were pregnant women planning on giving birth at the cooperating hospital who were: (i) Japanese speaking; (ii) had no severe illness; and (iii) able to participate in the informed consent process. In October through December 2011 and March through July 2012, the authors consecutively recruited pregnant women at their prenatal checkup for 35 weeks or more. Researchers confirmed women's eligibility and invited them to take part in the study. Excluded was one woman who was unable to read Japanese. Consequently, 93 women were invited to join this study. Agreement was received from 84 women (89.5%). After signing the informed consent, researchers or a trained midwife distributed the written self-administered VAWS, which was completed at a location guaranteeing privacy. After the questionnaire was completed, the researchers or the hospital's midwife collected the questionnaire.

Measures

The instrument used was the 7 item VAWS developed by Kataoka (2005). The VAWS is scored using a 3 point Likert scale (0 = none, 1 = sometimes and 2 = often; for physical violence, 0 = none, 2 = sometimes and 3 = often). There are three factors: physical violence, psychological violence, and sexual violence. Physical violence includes two items indicative of moderate and severe violence. Psychological violence includes four items and sexual violence has one item. The total scores ranged 0–16; a score higher than 2 indicates positive for IPV. Structural concept validity was established using factor analysis; concurrent criterion-related validity was confirmed using the General Health Questionnaire and the Rosenberg Self-Esteem Scale. Cronbach's alpha was 0.70 for reliability (Kataoka, 2005). Its sensitivity was 86.7% and specificity 80.2% when the Japanese version of the Index of Spouse Abuse (Japanese ISA) was applied as the optimized standard. In this study, women were asked about IPV occurring before pregnancy and/or during pregnancy. In addition to the VAWS, the participant's age, marital status, family structure, educational background, employment status, annual income, parity, and characteristics of the woman's partner were collected.

The analysis was conducted using IBM SPSS statistics version 19.0 (IBM, Armonk, NY, USA). To test differences, the χ^2 -test was used for categorical data and Student's *t*-test for continuous data. Proportions with $P < 0.05$ were considered statistically significant.

Follow up of participants

Before starting this study, the researchers ascertained the support protocol for IPV victims at the study hospital and enlisted the support of the local spousal violence counseling and support centers. After completing the questionnaire, all participants were provided information orally and in written form about social resources available in the region surrounding the hospital. Also, for women who screened positive and needed support, a trained midwife provided consultation, safety planning, and referral to the IPV support center in the community. Protocol of screening and intervention was provided to healthcare providers in accordance with the *Perinatal Domestic Violence Support Guidelines* (Women-centered Care Research Group, St. Luke's College of Nursing, 2004).

Ethical considerations

The ethics committee of St Luke's College of Nursing, Tokyo, Japan, approved this study (approval no. 11–039).

RESULTS

Demographic characteristics of participants

The response rate of the VAWS was 97.6% (82 women). Table 1 shows demographic characteristics of participants. The average age of participants was 31.0 ± 4.5 and 32 (38.1%) were primiparas. Almost all (95.2%) resided with their husband. Almost all women (92.7%) had graduated from high school. Only five women (6.1%) had an annual income of less than ¥2 million (\$US 20,000), however, no one was receiving welfare payments. In the participants' husbands/partners, three men were suspended from duty and three men were unemployed.

VAWS item frequency before and during pregnancy

Table 2 displays the frequencies of each VAWS question before and during pregnancy. For the question "Is it difficult to settle by talking through arguments between you and your partner?", before pregnancy, 29 women (35.4%) responded "difficult to some extent" and four women responded "difficult". During pregnancy, fewer women (29.3%) responded "difficult to some extent" and two women responded "difficult". Almost all women (except one) who responded "difficult to some extent" or "difficult" during pregnancy also answered "difficult to some extent" or "difficult" before preg-

Table 1 Demographic characteristics ($n = 82$)

	N (%)
Participants	
Age	
<20	1 (1.2)
20–29	30 (36.6)
≥30	51 (62.2)
Marital status	
Married	82 (100)
Divorce history	4 (4.9)
Living with partner	
Cohabitate	79 (96.3)
Separate	3 (3.7)
Family structure	
Nuclear families	60 (73.2)
Extended families	22 (26.8)
Educational background	
Junior high school graduate	6 (7.3)
High school graduate	18 (22.0)
Junior college graduate	37 (45.1)
College/Graduate school	20 (24.4)
Unkown	1 (1.2)
Employment status	
House duty	31 (37.8)
Full-time	32 (39.0)
Part-time	17 (20.7)
Others	2 (2.4)
Annual income	
≤2 million yen	5 (6.1)
>2 to 4 million	38 (46.4)
≥4 to < 6 million	22 (26.8)
≥6 million	16 (19.5)
Unknown	1 (1.2)
Parity	
Primiparas	30 (36.6)
Multipara	52 (63.4)
Partners of participants	
Age	
<20	22 (26.8)
20–29	51 (62.2)
30<	9 (11.0)
Divorce history	1 (2.3)
Employment status	
Full-time	72 (87.8)
Suspension from work	3 (3.7)
Others	6 (7.3)
Unknown	1 (1.2)

Note: ¥2 million is equivalent to \$US 20,000.

nancy. The proportion of women reporting "sometimes" for the question of "Do you feel frightened by what he does or said?" before and during pregnancy were 28.0% and 15.9%, respectively. For the question

Table 2 Violence Against Women Screen item responses (“often” or “sometimes”) before and during pregnancy

		Before pregnancy	During pregnancy	<i>P</i>
Item		N (%)	N (%)	
Psychological violence	Difficulty to settle problem by talking	33 (40.2)	26 (31.7)	0.039
	Feel frightened by what he does or said	23 (28.0)	13 (15.9)	0.002
	Screamed or yelled at you	24 (29.3)	12 (14.6)	0.002
	Hit the wall or thrown objects	19 (23.2)	8 (9.8)	0.001
Sexual violence	Forced you to have sex	8 (9.8)	4 (4.9)	0.219
Physical violence	Pull your arm, pushed, slapped you	4 (4.9)	3 (3.7)	1.000
	Hit or kicked you	1 (1.2)	0 (0)	1.000

Table 3 Changes of responses for each items before and during pregnancy

	Before pregnancy “often” or “sometimes” →	During pregnancy “often” or “sometimes”	Before pregnancy “often” or “sometimes” →	During pregnancy “none”	Before pregnancy “none” →	During pregnancy “often” or “sometimes”	Before pregnancy “none” →	During pregnancy “none”
Difficulty to settle by talking	25 (30.5%)		8 (9.8%)		1 (1.2%)		48 (51.2%)	
Feel frightened by what he does or said	13 (15.6%)		10 (12.2%)		0 (0%)		59 (72.0%)	
Screamed or yelled at you	11 (13.4%)		13 (15.9%)		1 (1.2%)		57 (69.5%)	
Hit the wall or thrown objects	8 (9.8%)		11 (13.4%)		0 (0%)		63 (76.8%)	
Forced you to have sex	3 (3.7%)		5 (6.1%)		1 (1.2%)		73 (89.0%)	
Pull your arm, pushed, slapped you	3 (3.7%)		1 (1.2%)		0 (0%)		78 (95.1%)	
Hit or kicked you	0 (0%)		1 (1.2%)		0 (0%)		81 (98.8%)	

“Has your partner screamed and/or yelled at you?”, 23 women responded “sometimes” and one woman responded “often” before pregnancy. Fewer women (14.6%) responded “sometimes” for this question during pregnancy. All women who responded “sometimes” during pregnancy except one answered the same as before pregnancy. The answer of “sometimes” for the questions “Has your partner hit the wall or thrown an object?” were 23.2% before pregnancy and 9.8% during pregnancy. Regarding sexual violence, for the question “Has your partner forced you to have sex?”, eight (9.8%) women responded “sometimes” before pregnancy, and four women during pregnancy. Among them, only one woman who responded “none” before pregnancy chose “sometimes” during pregnancy concerning sexual violence. For the question “Has your partner pulled your arm, pushed, and/or slapped you?”, four (4.9%) women reported “sometimes” before pregnancy and three (3.7%) women reported the same during pregnancy. One woman responded “sometimes” for the question “Has your partner hit or kicked you?”

before pregnancy but no women experienced that during pregnancy. Frequencies of items for psychological violence during pregnancy had significantly decreased compared with before pregnancy. On the contrary, sexual violence and physical violence had not changed from before and during pregnancy.

Table 3 shows each item’s response changes before and during pregnancy. In all items, response was not changed among most of the women. However, frequency of violence was decreased in some women. For the items of psychological violence, 15.9%–9.8% of the women who answered “sometimes” before pregnancy chose “none” during pregnancy. For sexual violence, 6.1% of women who answered “sometimes” before pregnancy chose “none” during pregnancy. Only 1.2% of women who answered “sometimes” before pregnancy chose “none” during pregnancy for the items of physical violence.

On the other hand, only a few women reported that their frequency of violence was increased. Of the women who answered “none” before pregnancy, 1.2% chose

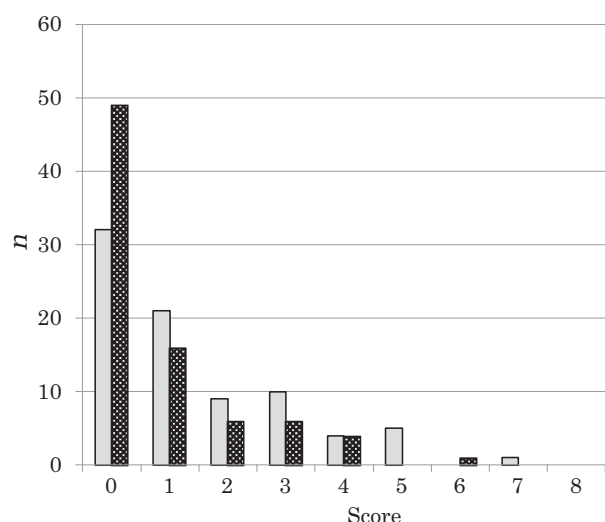


Figure 1 Frequency distribution of the Violence Against Women Screen total score before and during pregnancy ($n = 82$). □, Before pregnancy; ■, during pregnancy.

“sometimes” during pregnancy in the item of “difficult to settle problem by talking”, “screamed or yelled”, and “forced you to have sex”.

Comparison of VAWS total scores before and during pregnancy

Figure 1 shows the frequency distribution of the VAWS total score before and during pregnancy. The mean VAWS total score before pregnancy was 1.43 (standard deviation [SD] = 1.64; range, 0–7) and during pregnancy was 0.83 (SD = 1.03; range, 0–6). Means of total scores, before and during pregnancy, were significantly different ($t = 4.98$, $P < 0.001$).

The number of women positive for IPV screening prior to pregnancy was 29 (34.9%), which decreased to 17 (20.7%) during pregnancy. Furthermore, the mean VAWS total score of the 17 women positive for IPV during pregnancy was 3.06 (SD = 1.09) and 10.76 (SD = 1.44) before pregnancy; all women who screened positive during pregnancy were also positive before pregnancy. No participants screened negative before pregnancy but then scored positive for IPV during pregnancy.

DISCUSSION

This was the first study on the prevalence of IPV, including physical, sexual, and psychological violence, that included the periods before and during pregnancy

in Japan. The characteristics of women in this survey indicated that they were slightly older and had a little more education than others in Japan. The middle income population was smaller; there were more women whose incomes were either less than ¥2 million or more than ¥6 million compared with the general Japanese population (Ministry of Health, Labor and Welfare, 2011; Ministry of Health, Labor and Welfare, 2012; Ministry of Internal Affairs and Communications, 2012).

The results using the VAWS indicated that almost 35% of women reported IPV prior to pregnancy and that decreased to 20.7% during pregnancy, and all women who screened positive during pregnancy were also positive before pregnancy. Previous researchers (Karmaliani *et al.*, 2008; Urquia, O’Campo, Maureen, Janssen & Thiessen, 2011) also documented that IPV prevalence before pregnancy had decreased during pregnancy. Partners may be less likely to assault during pregnancy due to fears of hurting the unborn baby or due to the social unacceptability of hurting pregnant women (Scribano, Stevens & Kaizar, 2013). IPV during pregnancy and also the year prior to pregnancy was found to be a great risk for multiple forms of pregnancy-related morbidity (Silverman, Decker, Reed, & Raj, 2006). Additionally, it was reported that the strongest predictor of psychological IPV at post-partum was having been abused 12 months before pregnancy (Escribà-Agüir *et al.*, 2013). Therefore, it is necessary to ask about IPV occurring in the year prior to the pregnancy.

A longitudinal study of women from the US Nurse Family Partnership program showed that prevalence of physical violence prior to pregnancy was 8.1%; during pregnancy, 4.7%, and 12 months after delivery 12.4% (Scribano, Stevens & Kaizar, 2013). In another US study, physical violence before pregnancy was 5.3%, and during pregnancy it dropped to 3.6% (Chu, Goodwin, & D’Angelo, 2010). Similarly, the present authors’ findings indicated that prevalence of intimate partner physical violence was 4.9% prior to pregnancy and declined to 3.7% during pregnancy but was not significantly different. While all three studies indicated a drop in IPV rates during pregnancy, for this study, the small sample size, study design and IPV instrument, or characteristics of Japanese might have contributed to the smaller percent change. Further study will be needed with a larger and more varied sample size.

One of the limitations of this study was the cross-sectional study design rather than a longitudinal design. At 35 weeks and onwards at their check-up women

were asked only once about IPV that had occurred both before and during pregnancy. These data were retrospective with possible recall bias; therefore, longitudinal data would provide more accurate data (O'Reilly, Beale, & Gillies, 2010). Data from women experiencing IPV prior to 35 weeks whose pregnancy was terminated for whatever cause were unobtainable. Therefore, in future studies this population should be included. In addition, post-partum period IPV data will be needed to understand changes around pregnancy. Also, because the sample size was small, generalizations must be limited. It is necessary to continue this study with more participants from a variety of backgrounds across a wider range of regions. Finally, examinations of the associations of IPV before, during, and after pregnancy with adverse effects to women and infants should be considered critical in order to improve their health outcomes.

ACKNOWLEDGMENT

This study was supported by a Grant-in-Aid for Scientific Research (B) (no. 25293458) from the Japan Society for the Promotion of Science.

DISCLOSURE

No potential conflicts of interest were disclosed.

AUTHOR CONTRIBUTIONS

Study design and data collection was performed by Y. K. and M. I., data analysis by Y. K.; and manuscript writing by Y. K. and E. S.

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