AOGS
ACTA Obstetricia et Gynecologica Scandinavica

AOGS MAIN RESEARCH ARTICLE

Prevalence of intimate partner violence among women seeking termination of pregnancy compared to women seeking contraceptive counseling

MARIELLA ÖBERG[1], KRISTINA STENSON[1], ALKISTIS SKALKIDOU[1] & GUN HEIMER[2]

[1]Department for Women's and Children's Health, Uppsala University, and [2]National Center for Knowledge on Men's Violence Against Women, Uppsala University, Uppsala, Sweden

Key words
Intimate partner violence, interpersonal, violence, termination of pregnancy, repeated termination of pregnancy, contraceptive counseling, family planning

Correspondence
Mariella Öberg, Department of Women's and Children's Health, Uppsala University Hospital, 751 83 Uppsala, Sweden. E-mail: mariella.oberg@kbh.uu.se

Conflict of interest
The authors have stated explicitly that there are no conflicts of interest in connection with this article.

Please cite this article as: Öberg M, Stenson K, Skalkidou A, Heimer G. Prevalence of intimate partner violence among women seeking termination of pregnancy compared to women seeking contraceptive counseling. Acta Obstet Gynecol Scand 2014; 93:45–51.

Received: 15 August 2012
Accepted: 4 October 2013

DOI: 10.1111/aogs.12279

Abstract

Objective. To estimate the prevalence of intimate partner violence (IPV) among women seeking termination of pregnancy (TOP) in comparison to women seeking contraceptive counseling. *Design.* Case–control study. *Setting.* Family planning unit, Uppsala University Hospital. *Population.* Women seeking TOP (n = 635) and women seeking contraceptive counseling (n = 591) answered a self-administered questionnaire regarding experience of IPV. In addition, the women were interviewed by specially trained staff. *Method.* Comparisons were made between the two groups and between those who had previously undergone TOP and those who had never done so with experience of IPV as the main outcome measure. Multivariate logistic regression was used to adjust for age, education and occupation. *Results.* In total, 29% of women seeking TOP and 22% of women seeking contraceptive counseling reported experience of violence. Women seeking TOP were more likely to report physical violence [adjusted odds ratio (aOR) = 1.6, 95% confidence interval (CI) 1.2–2.1] and experience of violence during the past year (aOR = 2.3, 95% Cl 1.1–4.8). Women who had ever undergone TOP were also more likely to report IPV compared with women with no history of TOP (aOR = 1.7, 95% CI 1.3–2.3). Among women with repeated TOP, 51% reported experience of IPV. *Conclusion.* Women seeking TOP reported to a greater extent experience of IPV. However, women seeking contraceptive counseling also had a high prevalence of violent experiences. These results stress the importance of caregivers approaching both groups of women with questions about IPV to identify exposed women and offer them help.

Abbreviations: aOR, adjusted odds ratio; CI, confidence interval; IPV, intimate partner violence; OR, odds ratio; TOP, termination of pregnancy.

Introduction

Men's violence against women is a crime against human rights and a major public health issue. Violence against women in a relationship is often referred to as intimate partner violence (IPV). IPV can consist of physical, sexual or emotional violence and threats to a woman by a partner or a former partner. Sometimes the term domestic violence is used, though this is a broader term that can include violence against children or the elderly in the

Key Message

While women seeking termination of pregnancy reported experience of intimate partner violence to a greater extent, those seeking contraceptive counseling also had high prevalence, making these two groups of women important to target with questions about experience of intimate partner violence.

same household by a family member. Although a woman can expose a man in a relationship to violence, and violence can occur in same-sex relationships, the most common perpetrators of IPV are male intimate partners or former partners (World Health Organization http://www.who.int/reproductivehealth/topics/violence/en/index.html). In the WHO multi-country study on women's health and domestic violence 24 000 women from 10 different countries and 15 different settings, including both capitals and big cities as well as urban and rural areas, were asked about their experience of IPV. The prevalence ranged widely, from 15 to 71% (1). The prevalence of violence in Sweden has been investigated in a national survey with a representative sample of 7000 women aged 18–64 years. In the survey, 46% of women reported experiences of emotional, physical and/or sexual violence from a man. Of those women, 15% were subjected to violence from a boyfriend and 46% from a present or former partner (2). Men's violence against women can have a lifelong negative impact on the physical and mental health of girls and women exposed (3–5). One major consequence of IPV is the negative influence it might have on women's reproductive health. It can underlie the woman's lack of fertility control and can lead to unintended pregnancy or abortion (6,7). Studies conducted throughout the world have shown a high prevalence (15–39.5%) of IPV among women seeking termination of pregnancy (TOP), making this an especially interesting group of women for identification efforts to target (8–11).

In Sweden, approximately 37 000 women and girls undergo a TOP every year (The National Board of Health and Welfare http://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/18330/2011-6-1.pdf). The association between TOP and IPV has never been studied in Sweden, though the number of women exposed could be comparable to those in other international studies. This study had three major aims. The primary aim was to estimate the prevalence of IPV in Swedish-speaking women seeking TOP and compare it with the prevalence of IPV among women seeking contraceptive counseling at the same unit. TOP is a common procedure in Sweden so we presumed that there were women with a history of TOP among the women seeking contraceptive counseling. The secondary aim of the study was therefore to compare all women who had ever undergone a TOP with those who had never had a TOP regarding experience of IPV. Third, we wanted to examine if women with repeated TOP were more exposed to IPV.

Material and methods

The study was carried out at the family planning unit in Uppsala's University hospital, during a 9-month period from October 2005 to October 2006, with a 3-month break during the summer. Uppsala is one of Sweden's major cities with a substantial student population, and the facility handles both women seeking TOP and women in need of contraceptive counseling.

In Sweden girls over 15 years old can seek TOP without parental consent, although we always recommend that young girls talk to their parents. In early pregnancy, up to gestational week 8, it is common that women choose a medical abortion (taking medication at the hospital and completing the abortion at home). Between gestational weeks 9 and 12 women need to undergo a surgical abortion (for which women stay at the hospital for some hours after the procedure). After gestational week 12, and up to week 18 women have a "two-step abortion" including medical treatment and surgical procedure if needed (and they stay in the hospital until the abortion is completed). All women seeking TOP are first examined with ultrasonography to assess pregnancy length and viability.

Women who want contraceptive counseling can consult a midwife in any of various health care centers in the city. For women under 20 years there are special youth health centers or student health centers for contraceptive counseling. All women wanting to terminate a pregnancy need, however, to visit the family planning unit. Therefore, we expected women seeking abortion to be younger than the women seeking contraceptive counseling. For this reason chance selection was used and subsequently adjusted for age, education and occupation.

Eligible to participate were women who were at least 15 years of age and who spoke Swedish. About 15 women consult a doctor for TOP every week. All of those who complied with the inclusion criteria were asked to participate. About 15, sometimes as many as 30, women also consult a midwife for contraceptive counseling every day. Women who were at least 15 years of age and spoke Swedish and who consulted one of the midwives were selected each day to be included. A formal randomization program was not used, but every morning during the study period the registration clerk/secretary put the envelopes with the questionnaires in the consultation list of one of the midwives, who was chosen by chance. Consecutive recruitment of women, chosen also by chance every day from these consultation lists, was made in order to obtain an equal number of participants in the TOP group and the group seeking contraceptive counseling.

On registration the women were provided with an envelope containing a cover letter with information about the study and a self-administered questionnaire. The women were assured of confidentiality and gave their consent to participate through answering the questionnaire and allowing specially trained staff to interview

them. Participants could choose to answer the questionnaire before or after the interview depending on the waiting time for the consultation. They were instructed to put the questionnaire in a locked box regardless of whether they completed it or not. The interview took place in the absence of their partners and the participants were offered counseling if needed, in accordance with current clinical practice. The interviewers had a card with a plan of action for all women who reported exposure to violence. Women who needed it were offered help at once with specialized counselors at the National Centre for Knowledge on Men's Violence Against Women, a knowledge and resource centre that has a clinic for women subjected to violence at the Uppsala University Hospital (http://www.nck.uu.se). The women could choose if and when they wanted help. The interviewers were also encouraged to contact the counselors at the National Centre.

The data collected focused on experience of IPV. A modified, translated version of the Abuse Assessment Screen, a validated tool for detection of IPV, was used for the interviews (12). The self-administered questionnaire consisted of a shortened version of the Norvold Abuse Questionnaire, a tool validated in a Swedish population (13,14). By using two different tools we wanted to increase the probability that the participants would be able to disclose experience of IPV. In addition, we wanted to study how the participants preferred to be asked: through an interview or a self-administered questionnaire. Questions about emotional, physical and sexual violence were included (see Supporting Information S1). Women answering "yes" to any of the questions, during the interview or in the survey, and who reported a present or former partner as perpetrator, were categorized as abused by an intimate partner. Questions about the women's age, educational level and occupation were added to the questionnaire. Two questions were included only for the TOP women; "Has anybody pressured you or forced you to make your decision to get an abortion?" and "Has fear of future violence affected you in your decision to get an abortion?." All data analyzed in this study came from the questionnaire answers and the interviews. No information was taken from the women's medical journals.

Preliminary statistical analysis was done in SPSS version 14.0, while final analyses were done using SPSS version 18.0 (SPSS Inc., Chicago, IL, USA). Comparisons were made first between women seeking TOP and those seeking contraceptive counseling regarding experiences of emotional, physical or sexual abuse by a present or former partner. Thereafter, women having TOP previously, regardless of if they came for TOP or contraceptive counseling during the study period, were compared with those women who never have had TOP. Bivariate associations were examined using cross-tabulations with the chi-squared test. Odds ratios (OR) are shown with a 95% confidence interval (95% CI). Multivariate logistic regression was used to adjust for possible confounding factors, i.e. age, education and occupation. Statistical significance was set at a value of $p < 0.05$. Among the TOP-seeking women we finally compared the women who had had two or more TOPs previously, which we classified as repeated TOP, with those who had had one TOP previously.

The study was approved by the Regional Ethical Review Board in Uppsala University (Dnr 2005:219).

Results

A total of 1517 questionnaires were distributed; 759 to women seeking TOP and 758 to women seeking contraceptive counseling. Of the women seeking TOP, 89% (672) agreed to participate and 81% (614) agreed among women seeking contraceptive counseling. Reasons for noncompliance and exclusions are listed in Table 1. Of the 1286 women who agreed to participate, 60 (37 women seeking TOP and 23 women seeking contraceptive counseling) did not state their age, educational level or occupation and were excluded from the analysis. The age of the participants ranged from 15 to 55 years. Background characteristics are shown in Table 2.

Among the respondents, 186 (29%) of the women seeking TOP and 135 (22%) of the women seeking contraceptive counseling answered "yes" to any of the questions regarding experiences of IPV. The difference between the groups was significant and remained so even after adjustment for age, educational level and current occupation (Table 3). Women seeking TOP were more likely to report physical violence [adjusted OR (aOR) = 1.6, 95% CI 1.2–2.1], emotional or physical violence (aOR = 1.7, 95% CI 1.3–2.3) and experience of IPV in general during the past year (aOR = 2.3, 95% CI 1.1–4.8). Regarding sexual violence, the results were somewhat ambiguous. There was a significant difference when

Table 1. Reasons for non-compliance/exclusion among women seeking TOP and women seeking CC.

	TOP $n = 87$	CC $n = 144$
Declined participation	46	83
Did not understand the questions	11	3
Had a partner or other relative with her	1	1
Blank questionnaire	15	20
Lack of time	3	25
The staff forgot to ask for participation	9	8
Had already participated	2	1
Psychological illness	0	2

TOP, termination of pregnancy; CC, contraceptive counseling.

Table 2. Characteristics of women seeking TOP and women seeking CC.

	TOP $n = 635$		CC $n = 591$		
	n	%	*n*	%	*p*-value
Age (years)					
15–19	112	18	13	2	0.000
20–30	307	48	343	58	
≥31	216	34	235	40	
Education					
Finished/unfinished 9-year compulsory school	147	23	46	8	0.000
Upper secondary school/High school	360	57	331	56	
University/College	128	20	214	36	
Occupation					
Student	224	35	144	24	0.000
Gainfully employed	298	47	373	63	
Works in the home/On parental leave/In search of work/On sick leave	113	18	74	13	
Number of previous abortions	247		155		
One	155	63	114	74	0.000
Two	54	22	28	18	
Three or more	38	15	13	8	

TOP, termination of pregnancy; CC, contraceptive counseling.

the respondents answered an interview question on whether they had ever been sexually abused by an intimate partner. No significant difference could be demonstrated when they replied to the detailed written questions of experiences of sexual violence from an intimate partner.

The emotional, physical and sexual violence from a former or present partner ranged in severity from mild to modest to severe violence (Table 4). After adjustment for age, level of education and current occupation, women seeking TOP reported significantly greater exposure to severe emotional violence and mild and moderate physical violence. There was no significant difference between the groups regarding exposure to severe physical violence. Exposure to any type of sexual violence was reported by 10% of the women seeking TOP and 8% of those seeking contraceptive counseling. The difference was not significant. Of the two questions that were only administered to the women seeking TOP, 4% ($n = 24$) reported that somebody had pressured or forced them to make the decision to get an abortion and 4% ($n = 26$) reported that fear of future violence had affected them in their decision to get an abortion.

Of the women who had previously undergone TOP, 35% answered "yes" to any of the IPV questions compared with 21% of those with no previous TOP ($p < 0.000$). After adjustments for confounding factors, women who had ever undergone TOP were also more likely to report IPV compared with women with no history of TOP (aOR = 1.7, 95% CI 1.3–2.3) (Table 5). Experiences of physical violence during the past year did not differ.

Among the women with repeated TOP 51% answered "yes" to any of the IPV questions compared with 28% of those with only one previous TOP. Women with repeated TOP were more likely to report experience of physical, emotional and sexual violence. Experience of physical violence during the past year and emotional or physical violence before 18 years of age did not differ between those two groups (Table 6).

Table 3. Type of intimate partner violence, before and after adjustment for age, educational level and occupation among women seeking TOP and women seeking CC.

	TOP		CC		Unadjusted		Adjusted[a]	
Type of intimate partner violence	*n*/total	%	*n*/total	%	OR	95% CI	aOR	95% CI
Physically or emotionally abused before 18 years of age (AAS)	30/630	5	18/587	3	1.581	0.9–3.0	1.284	0.7–2.4
Emotionally or physically abused ever (AAS)	157/633	25	98/591	17	1.659	1.3–2.2	1.703	1.3–2.3
Experience of physical violence during the past year (AAS)	31/632	5	11/589	2	2.710	1.4–5.4	2.304	1.1–4.8
Ever been sexually abused (AAS)	49/634	8	25/586	4	1.804	1.1–2.9	1.687	1.0–2.8
Experience of emotional violence (NorAQ)	142/364	22	106/588	18	1.312	1.0–1.7	1.209	0.9–1.6
Experience of physical violence (NorAQ)	152/632	24	100/588	17	1.545	1.2–2.0	1.601	1.2–2.1
Experience of sexual violence (NorAQ)	62/635	10	44/587	8	1.335	0.9–2.0	1.216	0.8–1.9
Total experience of intimate partner violence (answered "yes" to any of AAS or NorAQ)	186/635	29	132/591	22	1.440	1.1–1.9	1.474	1.1–1.9

TOP, termination of pregnancy; CC, contraceptive counseling; AAS, Abuse Assessment Screen; NorAQ, Norvold Abuse Questionnaire; OR, odds ratio; CI, confidence interval; aOR, adjusted odds ratio.
[a]Adjusted for age, education and occupation.

Table 4. Severity of the violence, before and after adjustment among women seeking TOP and women seeking CC.

	TOP		CC		Unadjusted		Adjusted[a]	
Type of intimate partner violence	*n*/total	%	*n*/total	%	OR	95% CI	aOR	95% CI
Emotional violence								
Mild	108/523	17	75/589	13	1.415	1.0–1.9	1.305	1.0–1.9
Modest	118/633	19	84/588	14	1.375	1.0–1.9	1.282	1.0–1.8
Severe	68/632	11	37/588	6	1.795	1.2–2.7	1.610	1.0–2.5
Physical violence								
Mild	143/630	23	95/584	16	1.511	1.1–2.0	1.573	1.2–2.3
Modest	76/635	12	45/544	10	1.652	1.1–2.4	1.513	1.0–2.3
Severe	43/589	7	27/559	5	1.511	1.0–2.5	1.366	0.8–2.3
Sexual violence								
Mild, no genital contact	43/590	7	25/560	4	1.570	1.0–2.5	1.463	0.9–2.5
Mild, emotional or sexual humiliation	18/615	3	13/575	2	1.295	0.6–2.7	1.285	0.6–2.7
Moderate	35/597	6	26/562	4	1.267	0.8–2.1	1.068	0.6–1.9
Severe	44/591	7	29/557	5	1.430	0.9–2.3	1.239	0.7–2.1

TOP, termination of pregnancy; CC, contraceptive counseling; OR, odds ratio; CI, confidence interval; aOR, adjusted odds ratio.
[a]Adjusted for age, education and occupation.

Table 5. Type of intimate partner violence among women who had one or more TOP previously compared with women who never had any TOP.

	One or more previous TOP		Never had TOP		Unadjusted		Adjusted[a]	
Type of intimate partner violence	*n*/total	%	*n*/total	%	OR	95% CI	aOR	95% CI
Physically or emotionally abused before 18 years of age (AAS)	24/387	6	24/816	3	2.182	1.2–3.9	1.741	0.9–3.2
Emotionally or physically abused ever (AAS)	118/388	30	134/822	16	2.244	1.7–3.0	1.847	1.4–2.5
Experience of physical violence during the past year (AAS)	17/388	4	24/819	3	1.518	0.8–2.9	1.441	0.7–2.8
Ever been sexually abused (AAS)	35/368	9	39/819	5	1.989	1.3–3.2	1.860	1.1–3.1
Experience of emotional violence (NorAQ)	110/387	28	135/821	16	2.018	1.5–2.7	1.758	1.3–2.4
Experience of physical violence (NorAQ)	108/388	28	140/818	17	1.868	1.4–2.5	1.557	1.2–2.1
Experience of sexual violence (NorAQ)	50/386	13	55/822	7	2.075	1.4–3.1	2.021	1.3–3.1
Total experience of intimate partner violence (answered "yes" to any of AAS or NorAQ)	137/388	35	176/823	21	1.999	1.5–2.6	1.714	1.3–2.3

TOP, termination of pregnancy; AAS, Abuse Assessment Screen; NorAQ, Norvold Abuse Questionnaire; OR, odds ratio; 95% CI, 95% confidence interval; aOR, adjusted odds ratio.
[a]Adjusted for age, education and occupation.

The women seeking TOP preferred to answer a questionnaire and discuss the answer with their care-giver (53%) rather than have an interview only (38%). Among women seeking contraceptive counseling, 48% preferred to answer a questionnaire and 41% preferred to be interviewed only (data not shown).

Discussion

The primary aim of this study was to investigate if women seeking TOP were more exposed to violence than a group of sexually active women. TOP is common in Sweden and carried out in all hospitals. This study was conducted in a Swedish population but we think that the results can also be representative for other countries were the abortion laws are similar. Our results show that 29% of women seeking TOP reported experience of IPV compared with 22% of women seeking contraceptive counseling. Both groups included women who had had one or more abortions before the study. Of those who had ever undergone TOP, 35% reported IPV compared with 21% of those with no previous TOP, even after controlling for possible confounders. This strengthens the association between IPV and TOP. The results are comparable to those presented by other studies conducted throughout the world. Wu et al. reported the presence of IPV among 22.6% of women seeking TOP (15), Leung et al. reported IPV among 27.3% of women seeking TOP (16) and Glander

Table 6. Type of intimate partner violence among women with repeated TOP and women with one TOP previously.

Type of intimate partner violence	Repeated TOP[a]		One TOP previously		
	n/total	%	*n*/total	%	*p*-value
Physically or emotionally abused before 18 years of age (AAS)	9/119	8	15/268	6	0.459
Emotionally or physically abused ever (AAS)	52/119	44	66/263	25	0.000
Experience of physical violence during the past year (AAS)	7/119	6	10/259	4	0.337
Ever been sexually abused (AAS)	32/119	27	39/269	15	0.002
Experience of emotional violence (NorAQ)	50/119	42	60/268	22	0.000
Experience of physical violence (NorAQ)	51/120	43	57/268	21	0.000
Experience of sexual violence (NorAQ)	24/119	20	26/267	10	0.005
Total experience of intimate partner violence (answered "yes" to any of AAS or NorAQ)	61/120	51	76/268	28	0.000

TOP, termination of pregnancy; AAS, Abuse Assessment Screen. NorAQ, Norvold Abuse Questionnaire.
[a]Two or more induced abortions previously to the study visit.

et al. found that 39.5% reported a lifetime history of IPV (11). Additional studies have shown that IPV is a strong predictor for TOP and that women who reported IPV were more likely to have had induced abortions (17–21).

Although we expected to have a high prevalence of experiences of IPV among TOP-seeking women, we were surprised that the prevalence of self-reported IPV was also considerable among the group seeking contraceptive counseling. Among women who had never had an induced abortion, 21% reported a lifetime prevalence of IPV. This is in accordance with a study including comparable groups, where there was no difference reported in the prevalence of IPV between the contraceptive counseling and TOP groups (22). A different study showed a presence of IPV among 8.2% of a non-TOP group compared with 27.3% among a TOP-group (17). Among the women with repeated TOP, 51% reported experience of IPV. Other studies have also shown a higher risk of IPV among women with repeated TOP (15,23).

With respect to the type of violence reported, physical and emotional violence dominated, while sexual violence was not as prevalent. Women in the TOP group were more likely to report physical violence during the past year. Previous international studies have shown a high prevalence of IPV during the past year among women seeking TOP (24–26).

Various reasons may underlie the significantly higher rates of exposure to IPV among women seeking TOP. Women exposed to IPV may lack control over their own sexuality. They may not be allowed to decide whether or not they use contraception and therefore chose to terminate an unwanted pregnancy (27). Adolescents are especially vulnerable, as IPV can lead to sexual health problems that can have lifelong consequences, including TOP (28,29). In this study, we found that force and fear can be part of the decision for abortion.

A possible limitation of the study could be that we included an equal number of controls and cases. A larger number of controls could have given the study greater power. Nevertheless, significant associations were detected. A potential weakness could be the arbitrary chance selection of the women seeking contraceptive counseling. Another potential weakness of the current study relates to the women's self-reporting of violence experiences in the questionnaires, and that is why an interview was also included. An additional source of bias could be that different healthcare providers performed the interviews. To reduce that bias, women were asked to fill out anonymous questionnaires. Among the strengths of this study are the large numbers of participants, that all women seeking TOP and a representative selection of women seeking contraceptive counseling were approached and that the response rate was high.

The results of the study have important clinical implications. If we presume that almost a third of all women seeking TOP have a lifetime experience of IPV, approximately 10 000 women seeking induced abortion in Sweden each year would have been exposed to violence from a present or former partner. The prevalence of IPV among non-TOP women was also high, increasing the number of those that might have been subjected to IPV. Healthcare providers can have a central role in identifying women subjected to physical and sexual violence and so it has been suggested that all women in all healthcare settings should be assessed for IPV (30). These results imply that caregivers in family planning units should use visits for both TOP and contraceptive counseling to approach women and inquire about IPV. It is a major opportunity to identify exposed women and offer them help, in an effort to prevent some of the devastating consequences of IPV.

References

1. Garcia-Moreno C, Jansen H, Ellsberg M, Heise L, Watts CH. Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence. Lancet. 2006;368:1260–9.
2. Lundgren E, Heimer G, Westerstrand J, Kalliokoski A. Slagen dam. Mäns våld mot kvinnor i jämställda

Sverige – en omfångsundersökning [Captured queen. Men's violence against women in "equal" Sweden – A prevalence study]. Stockholm: Fritzes, 2001.
3. Krug EG, Mercy JA, Dahlberg LL, Zwi AB. The world report on violence and health. Lancet. 2002;360:1083–8.
4. Garcia-Moreno C, Jansen H, Ellsberg M, Heise L, Watts C. WHO multi-country study on women's health and domestic violence against women. Geneva: WHO, 2005.
5. Ellsberg M, Jansen H, Heise L, Watts CH, Garcia-Moreno C. Intimate partner violence and women's physical and mental health in the WHO multi-country study on women's health and domestic violence: an observational study. Lancet. 2008;371:1165–72.
6. Hathaway J, Willis G, Zimmer B, Silverman JG. Impact of partner abuse on women's reproductive lives. J Am Med Womens Assoc. 2005;60:42–5.
7. Williams GB, Brackley MH. Intimate partner violence, pregnancy and the decision for abortion. Issues Ment Health Nurs. 2009;30:272–8.
8. Wiebe ER, Janssen P. Universal screening for domestic violence in abortion. Womens Health Issues. 2001;11:436–41.
9. Evins G, Chescheir N. Prevalence of domestic violence among women seeking abortion services. Womens Health Issues. 1996;6:204–10.
10. Kaye D. Domestic violence among women seeking post-abortion care. Int J Gynecol Obstet. 2001;75:323–5.
11. Glander SS, Moore ML, Michielutte R, Parsons LH. The prevalence of domestic violence among women seeking abortion. Obstet Gynecol. 1998;91:1002–6.
12. Soeken KL. The abuse assessment screen: a clinical instrument to measure frequency, severity and perpetrator of abuse against women. In: Campbell J (ed). Empowering survivors of abuse: health care for battered women and their children. Newbury Park, CA: Sage. 1998. pp. 195–203.
13. Swahnberg K, Wijma B. The Norvold Abuse Questionnaire (NorAQ): validation of new measures of emotional, physical and sexual abuse, and abuse in the health care system among women. Eur J Public Health. 2003;361:2107–13.
14. Wijma B, Schei B, Swahnberg K, Hilden M, Offerdal K, Pikarinen U, et al. Emotional, physical and sexual abuse among patients visiting gynaecology clinics: a Nordic cross-sectional study. Lancet. 2003;361:2107–13.
15. Wu J, Guo S, Qu C. Domestic violence against women seeking induced abortion in China. Contraception. 2005;72:117–21.
16. Leung TW, Leung WC, Chan PL, Ho PC. A comparison of the prevalence of domestic violence between patients seeking termination of pregnancy and other general gynaecology patients. Int J Gynecol Obstet. 2002;77:47–54.
17. Whitehead A, Fanslow J. Prevalence of domestic violence amongst women attending an abortion clinic in New Zealand. Aust N Z J Obstet Gynecol. 2005;45:321–4.
18. Taft AJ, Watson L. Termination of pregnancy: associations with partner violence and other factors in a national cohort of young Australian women. Aust N Z J Public Health. 2007;31:135–42.
19. Alio AP, Salihu HM, Nana PN, Clayton HB, Mbah AK, Marty PJ. Association between intimate partner violence and induced abortion in Cameroon. Int J Gynecol Obstet. 2011;112:83–7.
20. Bourassa D, Bérubé J. The prevalence of intimate partner violence among women and teenagers seeking abortion compared with those continuing pregnancy. J Obstet Gynaecol Can. 2007;29:415–23.
21. Kaye DK, Mirembe FM, Bantebya G, Johansson A, Ekstrom AM. Domestic violence as risk factor for unwanted pregnancy and induced abortion in Mulago Hospital, Kampala, Uganda. Trop Med Int Health. 2006;11:90–101.
22. Kazi S, Reeves MF, Creinin MD. The prevalence of domestic violence in volunteers for abortion and contraceptive research studies. Contraception. 2008;78:79–83.
23. Fischer WA, Singh SS, Shuper PA, Carey M, Otchet F, Mac-Lean-Brine D, et al. Characteristics of women undergoing repeat induced abortion. CMAJ. 2005;172:637–41.
24. Keeling J, Birch L, Green P. Pregnancy councelling clinic: a questionnaire survey of intimate partner abuse. J Fam Plann Reprod Health Care. 2004;30:165–8.
25. Woo J, Fine P, Goetzl L. Abortion disclosure and the association with domestic violence. Obstet Gynecol. 2005;05:1329–34.
26. Saftlas AF, Wallis AB, Shochet T, Harland KK, Dickey P, Peek-Asa C. Prevalence of intimate partner violence among an abortion clinic population. Am J Publ Health. 2010;100:1412–5.
27. Gee RE, Mitra N, Wan F, Chavkin DE, Long JA. Power over parity: intimate partner violence and issues of fertility control. Am J Obstet Gynecol 2009;201:148e1–7.
28. Danielsson I, Blom H, Nilses C, Heimer G, Högberg U. Gendered patterns of high violence exposure among Swedish youth. Acta Obstet Gynecol. 2009;88:528–35.
29. Silverman JG, Raj A, Clements K. Dating violence and associated sexual risk and pregnancy among adolescent girls in the United States. Pediatrics. 2004;114:220–5.
30. Campbell JC. Health consequences of intimate partner violence. Lancet. 2002;359:1331–6.

Supporting information

Additional Supporting Information may be found in the online version of this article:

Data S1. Type of intimate partner violence.