

Minerva Access is the Institutional Repository of The University of Melbourne

Author/s:

Tarzia, L;Maxwell, S;Valpied, J;Novy, K;Quake, R;Hegarty, K

Title:

Sexual violence associated with poor mental health in women attending Australian general practices

Date:

2017-10-01

Citation:

Tarzia, L., Maxwell, S., Valpied, J., Novy, K., Quake, R. & Hegarty, K. (2017). Sexual violence associated with poor mental health in women attending Australian general practices. Australian and New Zealand Journal of Public Health, 41 (5), pp.518-523. <https://doi.org/10.1111/1753-6405.12685>.

Persistent Link:

<https://hdl.handle.net/11343/297300>

License:

[CC BY-NC-ND](#)

Sexual violence associated with poor mental health in women attending Australian general practices

Laura Tarzia,¹ Sarah Maxwell,¹ Jodie Valpied,¹ Kitty Novy,¹ Rebecca Quake,¹ Kelsey Hegarty¹

Sexual violence (SV) is defined as any sexual act carried out against a person's will and may not necessarily involve direct physical contact.¹ SV is predominantly perpetrated by men against women, and is associated with serious and chronic effects on the physical, mental and reproductive health of victims.²⁻⁴ In Australia, one in five women have experienced some form of SV from the age of 15 years,⁵ most commonly caused by a known male such as an intimate partner. These figures, however, are likely to be vastly under-reported⁵⁻⁷ due to the stigmatised and hidden nature of SV^{8,9} and negative community attitudes around women's responsibility for sexual assault.¹⁰ The Australian Bureau of Statistics (ABS) found that 80% of women who had experienced male-perpetrated SV did not report the incident to the police.⁵

Although SV is known to be one of the most common forms of violence against women,¹ the available data on specific prevalence and associated health effects is inconsistent.¹¹ Population surveys and clinical studies tend to use different definitions of what constitutes 'sexual violence', making it challenging to determine reliable prevalence rates. Many studies focus only on rape and complete sexual assault,¹² with few taking a broader definition.¹³ The ABS Personal Safety Survey now includes many non-contact items (threats and sex obtained through coercion), although excludes unwanted sexual touching and reproductive control.⁵ The US National Intimate Partner and Sexual Violence Survey (NISVS)¹⁴ defines SV even more broadly, encompassing rape, forced penetration, sexual coercion, unwanted

Abstract

Objective: Sexual violence (SV) against adult women is prevalent and associated with a range of mental health issues. General practitioners could potentially have a role in responding, however, there is little information to help guide them. Data around prevalence of all forms of adult SV (not just rape) is inconsistent, particularly in clinical samples, and the links between other forms of SV and mental health issues are not well supported. This study aimed to address these gaps in the knowledge base.

Methods: A descriptive, cross-sectional study was conducted in Australian general practice clinics. Two hundred and thirty adult women completed an anonymous iPad survey while waiting to see the doctor.

Results: More than half the sample had experienced at least one incident of adult SV. Most commonly, women reported public harassment or flashing, unwanted groping and being coerced into sex. Women who had experienced adult SV were more likely to experience anxiety than women who had not, even after controlling for other factors. Women who had experienced adult SV were more likely to feel down, depressed or hopeless than women who had not; however, this association disappeared after controlling for childhood sexual abuse.

Conclusions: The findings support the association between SV and poor mental health, even when 'lesser' incidents have occurred.

Implications for public health: General practitioners should consider an experience of SV as a possible factor in otherwise unexplained anxiety and depressive symptoms in female patients.

Key words: sexual violence, mental health, general practice, women's health

sexual contact and unwanted non-contact sexual experiences. Only a limited number of prevalence studies have been conducted using the broader terms 'unwanted sexual experiences',¹⁵ 'sexual victimisation'¹³ and 'unwanted sexual encounters'.¹⁶ However, these studies focussed only on adolescents or college women, and did not investigate the complete spectrum of SV.

Because of this definitional ambiguity, it is also unclear what the associated health effects might be when all forms of SV are included. In particular, it is important to obtain reliable data on the effects of SV on mental health, often the most pronounced

and long-lasting effects.^{4,17} Studies demonstrate a strong association between experiencing SV and post-traumatic stress disorder (PTSD),^{18,19} depression, anxiety, and other mental health conditions.²⁰⁻²³ However, with the exception of a few studies conducted solely with college women in the context of 'hook up' culture,^{13,24} the vast majority of the existing research into this association refers to rape or complete sexual assault. Consequently, little is known about how other, more subtle forms of SV might affect women's mental health and general wellbeing. Furthermore, college samples are unlikely to include women in

1. Department of General Practice, The University of Melbourne, Victoria

Correspondence to: Dr Laura Tarzia, The University of Melbourne, Department of General Practice, 200 Berkeley Street, Carlton, Victoria 3053;

e-mail: laura.tarzia@unimelb.edu.au

Submitted: November 2016; Revision requested: February 2017; Accepted: March 2017

The authors have stated they have no conflict of interest.

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

Aust NZ J Public Health. 2017; 41:518-23; doi: 10.1111/1753-6405.12685

long-term intimate partner relationships or marriages, which is problematic given that behaviours such as coercion, reproductive control and repeat perpetration of violence are more common within the context of these relationships.²⁵

Many of the harms caused by SV are exacerbated when women do not feel able to disclose what has happened to them and, consequently, do not access support.²⁶ Women may feel uncomfortable accessing formal services, as they may not perceive themselves as having experienced sexual assault,^{5,13} particularly if the perpetrator was an intimate partner.⁵ Healthcare providers therefore have a potentially critical role in addressing SV.²⁷ Women may present with unexplained symptoms such as anxiety, depression, PTSD, self-destructive behaviours, sleep disturbances or difficulty undergoing pelvic exams.²⁸ In particular, the World Health Organization has identified primary care, alongside emergency services, gynaecological services, mental health, HIV services and antenatal care, as a key setting for responding to sexual violence.⁹ While some limited prevalence studies exist in several of these settings,^{29,30} there is very little data from primary care settings, either in Australia or elsewhere, as to the prevalence of SV, ways clinicians could identify patients who have experienced SV, and how to promote disclosure.^{31–34} Since the ABS Personal Safety Survey shows that one in twelve women first told their general practitioner (GP) about an experience of SV, and one-third actively sought advice from the GP, even if they had previously disclosed to someone else,⁵ it is critical that up-to-date data for this specific population be obtained. Studies suggest that GPs may not always think to enquire about women's experiences of violence.^{35–37} Furthermore, GPs may not be meeting women's needs and expectations when responding to SV.^{33,38} In order to enact change, it is vital for GPs to understand the prevalence of SV in their specific patient group.

This paper addresses the gaps around prevalence rates of a broader definition of SV; the associated mental health outcomes of SV; and the paucity of Australian clinical population data. The paper focuses on SV experienced as an adult (i.e. when over 15 years of age) rather than childhood sexual abuse, and the specific mental health outcomes of anxiety and depression.

Methods

Our study involved a short, anonymous survey delivered on an iPad to all women aged over 18 years of age in the waiting rooms of participating Australian general practice clinics. If women were unable to complete the survey prior to their consultation, they were given the option to continue it once they had finished with the doctor, or to email it confidentially to complete at home. The survey was also available in a paper format on request. Because many women – particularly those whose experiences involved non-contact behaviours or coercion – do not label their experiences as 'sexual violence' or 'sexual assault', the term 'unwanted sexual contact' was used throughout the survey and materials.

Practice recruitment

Information packs were posted to 54 private general practice clinics in Victoria, Australia who had participated in a previous study.³⁹ Practices were followed up with a phone call from a research assistant to ascertain interest. Upon expression of interest, the lead researcher attended the clinic to talk to the practice manager and clinic GPs about the study. It was not a requirement that all GPs sign up for the clinic to participate.

Participants

Eligible participants were women aged 18 years and over who were waiting to see a participating GP and who had sufficient English reading and writing abilities to complete a survey. A priori calculations using "clustersampsi"⁴⁰ and "power" commands in Stata Version 13⁴¹ were used to estimate the sample size needed to achieve a power level of 80%, with alpha of 0.05, taking into account control variables and clustering effects. These calculations suggested a total sample size of about 216 would be needed to detect an estimated difference of 20% on the binary depression variable. A total sample size of between 154 and 320 would be needed to obtain an effect size of between half a standard deviation and one-third of a standard deviation on anxiety level.

Survey design

The survey was designed using SurveyGizmo and administered via iPad. It took 10 to 15 minutes to complete, which is consistent with typical waiting times in a GP clinic.

To determine a woman's experience of SV, 21 questions relating to 'Sexual Violence Victimization' and 'Control of Reproductive and Sexual Health' were taken from the NISVS survey.¹⁴ Items asked whether a woman had experienced certain behaviours, and whether they had occurred in the previous twelve months. Women were deemed to have experienced SV if they responded 'yes' to one or more of these items. Current depressive symptoms were measured by a single self-reported question taken from the Patient Health Questionnaire,⁴² which is a validated tool for screening and diagnosing depression in clinical research and practice. The question asked 'Over the past two weeks, how often have you felt down, depressed or hopeless?' Respondents indicated on a 4-point scale whether they had experienced this feeling: 0 = not at all, 1 = several days, 2 = more than half the days, and 3 = nearly every day. During analysis, depression was recoded into a dichotomous yes/no variable. Anxiety was measured using the seven-item anxiety scale from the Patient Health Questionnaire (PHQ), a validated, self-report version of the PRIME-MD interview.⁴³ Respondents were asked to indicate how often they had experienced each item in the last four weeks, where 0 = not at all, 1 = several days, and 2 = more than half the days. If the participant gave a response of 0 to the first item ('feeling nervous, anxious, on edge, or worrying a lot about different things'), they were asked to skip the remaining anxiety items. If they gave a response of 1 or 2 to the first item, they were asked to proceed to the subsequent six anxiety items. Scores on the seven anxiety items were summed to indicate severity of anxiety. A participant scored positively for an anxiety disorder if they responded 'several days' or 'more than half the days' to the first question on the anxiety scale; and to at least three of the remaining six questions on the anxiety scale; or had, cumulatively, a total score ≥ 4 inclusive of the first item.

Data collection

All surveys were collected between August and September 2015. When a female patient arrived at a participating GP, the practice manager or receptionist notified her that a research project was in progress. Women were asked if they would mind being approached by one of the researchers. If a woman declined, administrative staff noted this along with her date of birth and postcode (with permission and for

comparison purposes only) and notified the research team so that they did not approach her. The researchers were also advised not to approach any patients who might be unable to consent (as determined by the practice) due to serious mental illness or lack of comprehension skills. If a woman agreed to be approached, a trained research assistant presented her with an information sheet outlining the study and a consent form. If she was still happy to proceed after reading the information, she was given the iPad or paper survey to complete. A private room was available for any women who did not wish to complete the survey in the waiting room (none took up this offer).

Involvement from GPs was minimised to reduce disruption to their schedule and promote the anonymity of the survey responses. GPs were not informed if their patient had participated, nor were they able to access their patients' responses. The survey responses automatically saved and were securely stored as soon as the participant completed the survey on the iPad. Data collected using paper surveys were manually entered by a member of the research team. Ten per cent of the paper survey data entered were cross-checked for human error by another researcher. The survey data was then cleaned and imported by the researchers into the statistical software program Stata⁴¹ for scoring and analysis.

Despite the sensitivity of the topic, the study was designed to ensure that any potential risks to participants were managed so that they were outweighed by the benefit of participation. This included presenting all women with resource cards with contact details of relevant services, providing GPs with information on responding to disclosures of sexual violence, and training all research assistants to respond sensitively to any distress from participants. Literature suggests that when researching sensitive issues, participants may benefit from having their voices heard⁴⁴ as it provides an avenue for anonymous disclosure and promotes validation of self-worth and altruism. This has been found to heighten self-awareness and empower the participant.⁴⁴ In fact, many women were positive about the topic of this research. Ethical approval was received for the study from the Human Research Ethics Committee at The University of Melbourne (#1543699.1).

Data analysis

Analyses were conducted using Stata Version 13.⁴¹ Descriptive data, including means and standard deviations for continuous variables, and counts and percentages for binary variables, were generated for participant demographics and for each of the variables of interest. Experience of SV as an adult was coded as a binary variable, to enable comparisons between those who had experienced at least one incident of SV as an adult (coded as 1 on the SV variable), and those who had not (coded as 0 on the SV variable). Linear regression with robust standard errors was used to compare these two groups on level of anxiety over the past two weeks. Logistic regression with robust standard errors was used to compare the two groups on whether they had felt down, depressed or hopeless over the past two weeks. Analyses adjusting for age and a history of childhood abuse were also conducted, given that both these variables could potentially influence both adult SV victimisation^{45,46} and mental health.⁴⁷⁻⁴⁹ All analyses adjusted for correlations between responses of women from the same clinic (cluster effects), using the survey data ("svy")

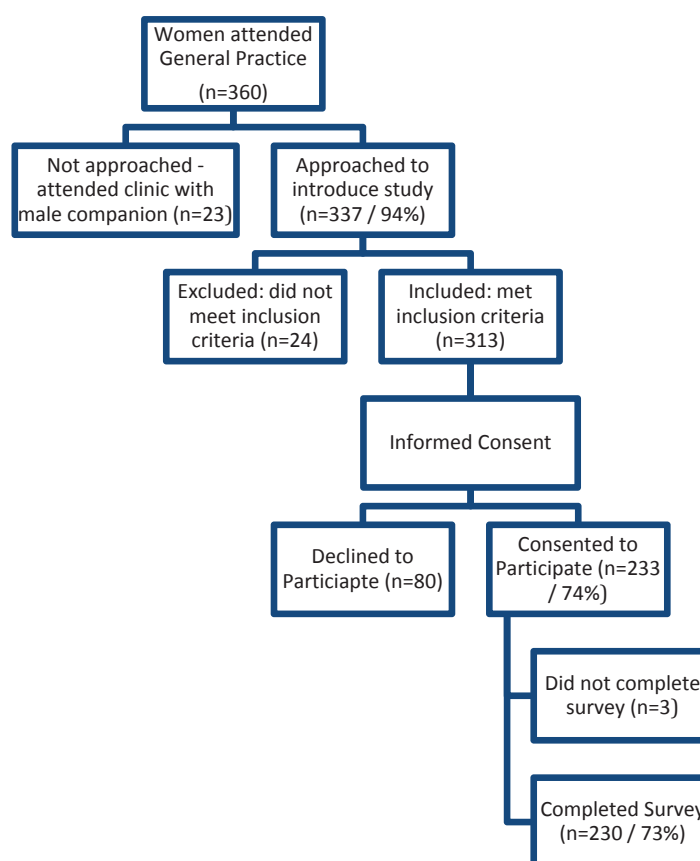
options available in Stata Version 13. A priori and post hoc power and sample size analyses were conducted using the "power" and "clustersamps" commands in Stata.

Results

Four Victorian clinics consented to participate; two in metropolitan Melbourne and two in coastal towns on the rural-urban fringe. Seventeen GPs were available across these clinics, of whom nine agreed to take part in the project. A total of 337/360 women (94%) were approached and asked to participate. Figure 1 illustrates the sample recruitment. Overall, 230/313 eligible women (73%) participated, with between 22 and 100 women from each clinic (mean number of eligible participants per clinic = 57.5, SD = 34.4; intraclass correlation for anxiety <0.001; intraclass correlation for depression = 0.027). Reasons for non-participation of otherwise eligible women included: the woman being too unwell; woman needing to attend to children; or, most commonly, discomfort with the topic.

Table 1 shows participant demographics.

Figure 1: Flow diagram illustrating recruitment of sample.



Experiences of sexual violence

Of the 230 participants, 104 (45.2%) had experienced some form of SV as an adult. Of those, 33 (14.3%) described only one incident, 26 (11.3%) two incidents, 37 (16.1%) between three and ten incidents and nine (3.9%) more than ten incidents of SV, with the highest number of incidents reported being 18.

The most common behaviours reported were flashing or public masturbating (59, 26.8%), harassment in a public place (46, 22.0%) and being fondled or grabbed (44, 20.0%); and 14.7% (32) had agreed to unwanted sex due to pressure and coercion by a partner (see Table 2).

Sixty-two participants (26.9%) reported having experienced some form of childhood sexual abuse (defined as any adult engaging in inappropriate touching, attempting or threatening sex or sexually attacking the participant as a child).

Relationship between sexual violence and mental health

Women who had experienced SV as an adult experienced a higher level of anxiety over the past two weeks than women who had not

Table 1: Demographic characteristics of the sample.

Characteristic	Overall (n=230)	SV (n=104)	No SV (n=102)
	Mean (SD)	Mean (SD)	Mean (SD)
Age in years	51.1 (16.4)	48.5 (14.8)	51.5 (16.7)
	n (%)	n (%)	n (%)
Born in Australia	170 (73.9)	86 (82.7)	70 (70.7)
Married/De facto	142 (60.8)	64 (61.5)	69 (67.6)
Heterosexual	206 (89.5)	98 (94.2)	95 (93.1)
Lives alone	36 (15.7)	16 (15.4)	14 (13.7)
Tertiary educated	122 (53.0)	66 (63.4)	52 (50.9)
Currently studying	22 (9.5)	12 (11.5)	9 (8.8)
Currently in paid employment (inc. self-employed)	109 (47.3)	52 (50.0)	52 (50.9)

Note. SV = participant has experienced some form of sexual violence. No SV = participant has not experienced any form of sexual violence.

Denominators may vary due to missing data.

(SV group mean=4.8, SD=4.1; non-SV group mean=3.4, SD=3.7; mean difference=1.5, 95%CI 0.6–2.4, $p=0.014$). This association remained after adjusting for age (adjusted mean difference=1.5, 95%CI 1.0–2.1, $p=0.003$) and childhood sexual abuse (adjusted mean difference=1.5, 95%CI 0.5–2.4, $p=0.016$).

Women who had experienced SV as an adult were more likely to report feeling down, depressed or hopeless over the previous two

weeks than women who had not experienced SV as an adult (52.4% versus 38.8% reported feeling down, depressed or hopeless; odds ratio=1.7, 95%CI 1.2–2.5, $p=0.017$). This association also remained after adjusting for age (adjusted odds ratio=1.8, 95%CI 1.3–2.5, $p=0.009$), but not after adjusting for childhood sexual abuse (adjusted odds ratio=1.7, 95%CI 0.8–3.4, $p=0.106$). This was despite no statistically significant association between experience of childhood sexual abuse and feeling down, depressed or hopeless during the past two weeks (odds ratio=1.4, 95%CI 0.7–3.1, $p=0.254$). A post hoc sample size analysis showed that, on the basis of observed group proportions and odds ratio, a total sample size of about $n=420$ would be required to obtain statistical power at the recommended level of 80%⁵⁰ when analysing the association between SV and feeling down, depressed or hopeless and adjusting for childhood sexual abuse.

Conclusions

The findings highlight the alarming prevalence of SV among Australian women attending general practices. Almost half the women who participated in this study had experienced some form of SV at some stage of their adult lives, and more than 40% had experienced more than one item of SV. Our findings are higher than those reported in recently published Australian research, where the prevalence of SV in a community sample was estimated to be around 19%.⁵ This is unsurprising considering the broader spectrum of behaviours covered by our definition of SV. Furthermore, given the established links between SV and other health issues, a sample recruited from a clinical setting is more likely to have experienced SV than women in the broader population.²²

The findings of this study also highlight the association between past lifetime experiences of SV and current poor mental health. In our study, women who experienced at least one incident of SV as an adult had higher levels of anxiety compared with women who had not reported any unwanted sexual experiences as an adult, even after adjusting for age and experience of childhood sexual abuse. This association is consistent with existing literature,^{22,23} although it has not been explored to a great extent within primary care samples. Similarly, women who had experienced adult SV were more likely to

Table 2: Prevalence of SV by type.

	n (%)
Has anyone ever:	
exposed their sexual body parts to you, flashed you, or masturbated in front of you?	59 (26.8)
harassed you while you were in a public place in a way that made you feel unsafe?	46 (21.0)
fondled or grabbed your sexual body parts?	44 (20.0)
kissed you in a sexual way? Remember, we are only asking about things that you didn't want to happen.	19 (8.6)
made you show your sexual body parts to them? Remember, we are only asking about things that you didn't want to happen.	10 (4.6)
made you look at or participate in sexual photos or movies?	8 (3.6)
When drunk, high, drugged or passed out and unable to consent, has anyone ever:	
had vaginal sex with you?	14 (6.4)
made you perform oral sex?	11 (5.1)
forced you to receive anal sex?	7 (3.2)
made you receive oral sex?	7 (3.2)
Has anyone ever used physical force or threats of physical harm to make you:	
have vaginal sex with them?	15 (6.8)
have vaginal, oral, or anal sex with you, but sex did not happen?	11 (5.0)
perform oral sex?	11 (5.0)
let them put their fingers or an object in your vagina or anus?	10 (4.6)
receive oral sex?	7 (3.2)
receive anal sex?	5 (2.3)
Have you ever had vaginal, oral or anal sex with someone after they pressured you by:	
wearing you down by repeatedly asking for sex or showing they were unhappy?	32 (14.7)
doing things like telling you lies, making promises about the future they knew were untrue, threatening to end your relationship, or threatening to spread rumours about you?	16 (6.4)
using their authority over you, for example, your boss or your teacher?	6 (2.8)
Have any of your romantic or sexual partners ever:	
refused to use a condom when you wanted to use one?	15 (6.9)
tried to get you pregnant when you did not want to become pregnant; or tried to stop you from using birth control?	6 (2.7)

Denominators may vary due to missing data

report feeling down, depressed or hopeless over the past two weeks than those who had not, although this association disappeared after adjusting for childhood sexual abuse. This could suggest that the association between adult SV and depressive symptoms was mediated by childhood sexual abuse; or it could simply be that there was insufficient power to detect an effect once variance associated with an additional variable was added to the analysis. The latter is a possibility given the small sample size, and given no association was found between childhood SV and feeling down, depressed or hopeless over the last two weeks in the current sample. A larger sample size would allow further assessment of childhood sexual abuse as a full or partial mediator or a moderator, helping determine whether a significant association between adult SV and depressive symptoms exists independently of childhood sexual abuse for some women. This would be consistent with prior research showing the presence of depressive symptoms following an experience of adult SV.^{20,22,23,51} Either way, the findings of this current study support that depressive symptoms can continue to be experienced some time after experiencing SV, and this finding has clinical implications regardless of whether the woman's first experience of SV was as a child or an adult.

What is particularly noteworthy about our findings is that, where the existing literature primarily supports the association between rape or complete sexual assault and poor mental health outcomes,^{18,22,34} this study suggests that even 'lesser' incidences of SV may be associated with women's current mental wellbeing. The most common experiences of SV experienced by women in our sample included being subjected to public harassment, being flashed or having a man's sexual body parts exposed to them, being fondled or grabbed in a sexual way, and being coerced into unwanted sex. A substantial minority of women (7%) had been physically forced or threatened into having unwanted vaginal, oral or anal sex with a man, and 7% had had a partner refuse to use a condom when they were asked to do so. The prevalence of anxiety and depressive symptoms amongst these women suggests GPs ought to consider all forms of SV as an important potential factor when seeing women with these symptoms, and consider exploring this further if no other explanation is apparent.

Limitations of the study

In cases where women experienced SV both during childhood and as an adult, it is unclear whether their experiences as children are connected more to their current mental health issues. Similarly, women who participated may have also experienced non-sexual trauma in their lives that was not captured in the survey. Consequently, rather than highlighting a causative relationship, this study has explored only an *association* between SV and deleterious mental health outcomes in women.

Additionally, the self-reporting style of this cross-sectional study may have led to a recall bias, and consequently, with an under-reporting of SV. This may have hypothetically diminished the effect size of the association between SV and poor mental health. The low response rate from GP clinics (4/54 = 7.4%) may also have affected the findings, as a sample from four clinics may not be representative of a broader population from general practice. This response rate, however, is consistent with other Australian studies conducted in a GP setting.³⁹

Lastly, small effect sizes and large confidence intervals were a limitation of the study. These were partially due to the small sample size. The small sample size also resulted in a potential lack of power to detect the desired differences on the anxiety and depression outcomes. Re-evaluating this association with a larger sample size may improve the strength of the findings.

Implications for public health

As the first port of call for many women who have experienced SV,⁵ as well as for women experiencing depression and anxiety,⁵² GPs need to recognise the likely association between SV and poor mental health in their patients. Although there are guidelines around responding to women who have been recently raped or assaulted⁹ (e.g. sexually transmitted infection screening and referral pathways), there is a broader role for the GP in identifying past experiences. For women to receive support, GPs need to sensitively enquire about and understand these experiences.^{53,54} However, there are numerous barriers to GPs enquiring about SV and, consequently, many women do not disclose to their health practitioner unless directly asked.^{34,36} It is also important for Australian GPs to recognise the potential

they hold clinically in supporting women through recovery from any unwanted sexual experience.⁹

Although the findings presented in this paper are only preliminary, they suggest a clear association between experiences of all types of SV as an adult and increased risk for anxiety in women. They also suggest an association between an experience of past SV and feeling down, depressed or hopeless, although this association disappeared after adjusting for childhood sexual abuse. This has important implications for practice – not only for GPs but for other health professionals referring women to mental health services – and we hope that it will raise awareness around the possibility that female patients presenting with these symptoms may have had an experience of SV. To our knowledge, this is the only study in the past 20 years that has explored the association between adult SV and poor mental health outcomes in an Australian clinical population.

References

1. World Health Organization. *Global and Regional Estimates of Violence Against Women: Prevalence and Health Effects of Intimate Partner Violence and Non-partner Sexual Violence*. Geneva (CHE): WHO; 2013.
2. Santaularia J, Johnson M, Hart L, et al. Relationships between sexual violence and chronic disease: a cross-sectional study. *BMC Public Health*. 2014;14:1286.
3. Chamberlain L, Levenson RR. *Addressing Intimate Partner Violence Reproductive and Sexual Coercion: A Guide for Obstetric, Gynecologic, Reproductive Health Care Settings*. San Francisco (CA): Futures Without Violence; 2013.
4. Campbell R, Dworkin E, Cabral G. An ecological model of the impact of sexual assault on women's mental health. *Trauma Violence Abuse*. 2009;10(3):225-46.
5. Cox P. *Violence Against Women in Australia: Additional Analysis of the Australian Bureau of Statistics' Personal Safety Survey 2012*. Sydney (AUST): Australia's National Research Organisation for Women's Safety; 2015.
6. Australian Bureau of Statistics. *Defining the Data Challenge for Family, Domestic and Sexual Violence: Summary 2013*. Canberra (AUST): ABS; 2013.
7. Tarczon C, Quadara A. *The Nature and Extent of Sexual Assault and Abuse in Australia*. Melbourne (AUST): Australian Institute of Family Studies; 2012.
8. Wall L. *Research Report: The Many Facets of Shame in Intimate Partner Sexual Violence*. Melbourne (AUST): Australian Institute of Family Studies; 2012.
9. World Health Organization. *Responding to Intimate Partner Violence and Sexual Violence Against Women: WHO Clinical and Policy Guidelines*. Geneva (CHE): WHO; 2013.
10. VicHealth. *Australians' Attitudes to Violence Against Women. Findings from the 2013 National Community Attitudes towards Violence Against Women Survey (NCAS)*. Melbourne (AUST): Victorian Health Promotion Foundation; 2014.
11. Bagwell-Gray ME, Messing JT, Baldwin-White A. Intimate partner sexual violence: A review of terms, definitions, and prevalence. *Trauma Violence Abuse*. 2015;16(3):316-35.
12. Macdowall W, Gibson L, Tanton C, et al. Lifetime prevalence, associated factors, and circumstances of non-volitional sex in women and men in Britain: Findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *Lancet*. 2013;382(9907):1845-55.

13. Banyard VL, Ward S, Cohn ES, et al. Unwanted sexual contact on campus: A comparison of women's and men's experiences. *Violence Vict.* 2007;22(1):52-70.
14. Black MC, Basile KC, Breiding MJ, et al. *The National Intimate Partner and Sexual Violence Survey: 2010 Summary Report*. Atlanta (GA): National Center for Injury Prevention and Control Centers for Disease Control and Prevention; 2010.
15. Raghavan R, Bogart L, Elliott M, et al. Sexual victimization among a national probability sample of adolescent women. *Perspect Sex Reprod Health.* 2004;36(6):225-32.
16. Mitchell A, Patrick K, Heywood W, et al. *National Survey of Australian Secondary Students and Sexual Health 2013*. Melbourne (AUST): La Trobe University Australian Research Centre in Sex, Health and Society; 2014.
17. Rees S, Silove D, Chey T, et al. Lifetime prevalence of gender-based violence in women and the relationship with mental disorders and psychosocial function. *JAMA.* 2011;306(5):513-21.
18. Tjaden P, Thoennes N. *Extent, Nature, and Consequences of Rape Victimization: Findings from the National Violence Against Women Survey*. Washington (DC): National Institute of Justice and the Centers for Disease Control and Prevention; 2006.
19. Gavranidou M, Rosner R. The weaker sex? Gender and post-traumatic stress disorder. *Depress Anxiety.* 2003;17:130-9.
20. Pico-Alfonso MA, Garcia-Linares MI, Celda-Navarro N, et al. The impact of physical, psychological, and sexual intimate male partner violence on women's mental health: Depressive symptoms, posttraumatic stress disorder, state anxiety, and suicide. *J Womens Health.* 2006;15(5):599-611.
21. Resick P. The psychological impact of rape. *J Interpers Violence.* 1993;8:223-55.
22. Coid J, Petruckevitch A, Chung WS, et al. Abusive experiences and psychiatric morbidity in women primary care attenders. *Br J Psychiatry.* 2003;183:332-9; discussion 40-1.
23. Chen L, Murad M, Paras M, et al. Sexual abuse and lifetime diagnosis of psychiatric disorders: Systematic review and meta-analysis. *Mayo Clin Proc.* 2010;85(7):618-29.
24. Flack W, Daubman K, Caron M, et al. Risk factors and consequences of unwanted sex among university students: Hooking up, alcohol and stress response. *J Interpers Violence.* 2007;22(2):139-57.
25. McOrmond-Plummer L, Easteal P, Levy-Peck J, editors. *Intimate Partner Sexual Violence: A Multidisciplinary Guide to Improving Services and Support for Survivors of Rape and Abuse*. London (UK): Jessica Kingsley Publishers; 2014.
26. Littleton HL. The impact of social support and negative disclosure reactions on sexual assault victims: A cross-sectional and longitudinal investigation. *J Trauma Dissociation.* 2010;11(2):210-27.
27. Basile KC, Smith S. Sexual violence victimization of women: prevalence, characteristics, and the role of public health and prevention. *Am J Lifestyle Med.* 2011;5(5):407-17.
28. Luce H, Schrager S, Gilchrist V. Sexual assault of women. *Am Fam Physician.* 2010;81(4):489-95.
29. Peschers U, Du Mont J, Jundt K, et al. Prevalence of sexual abuse among women seeking gynecologic care in Germany. *Obstet Gynecol.* 2003;101(1):103-8.
30. Beck J, Bekker M, Van Driel M, et al. Prevalence of sexual abuse among patients seeking general urological care. *J Sex Med.* 2011;8:2733-8.
31. Mazza D, Dennerstein L, Ryan V. Physical, sexual and emotional violence against women: A general practice-based prevalence study. *Med J Aust.* 1996;164(1):14-7.
32. Hegarty K, Bush R. Prevalence and associations of partner abuse in women attending general practice: A cross-sectional survey. *Aust N Z J Public Health.* 2002;26(5):437-42.
33. Walker E, Torkelson N, Katon W, et al. The prevalence rate of sexual trauma in a primary care clinic. *J Am Board Fam Pract.* 1993;6(5):465-71.
34. Coid J, Petruckevitch A, Chung WS, et al. Sexual violence against adult women primary care attenders in east London. *Br J Gen Pract.* 2003;53(496):858-62.
35. Hegarty K. The hidden epidemic of domestic violence: When to ask and how to respond. *Med Today.* 2012;13(7):54-7.
36. Hegarty K, Taft A. Overcoming the barriers to disclosure and inquiry of partner abuse for women attending general practice. *Aust N Z J Public Health.* 2001;25(5):433-7.
37. Warshaw C. Educating health professionals: Changing attitudes and overcoming barriers. In: Roberts G, Hegarty K, Feder G, editors. *Intimate Partner Abuse and Health Professionals: New Approaches to Domestic Violence*. London (UK): Elsevier; 2006.
38. Denis C, Seyller M, Chariot P. Expectations and perceptions of care among victims of sexual assault who first seek care from emergency, primary care and gynaecological doctors. *Emerg Med J.* 2015;33:134-8.
39. Hegarty K, O'Doherty L, Taft A, et al. Screening and counselling in the primary care setting for women who have experienced intimate partner violence (WEAVE): A cluster randomised controlled trial. *Lancet.* 2013;382(9888):249-58.
40. Hemming K, Marsh J. A menu-driven facility for sample-size calculations in cluster randomized controlled trials. *Stata J.* 2013;13(1):114-35.
41. STATA: Statistical Software. Release 13. College Station (TX): Stata Corporation; 2013.
42. Kroenke K, Spitzer R, Williams J. The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med.* 2001;16(9):606-13.
43. Spitzer R, Kroenke K, Williams J. Validation and utility of a self-report version of PRIME-MD: The PHQ primary care study. Primary Care Evaluation of Mental Disorders. Patient Health Questionnaire. *JAMA.* 1999;282(18):1737-44.
44. Valpiet J, Cini A, O'Doherty L, et al. 'Sometimes cathartic. Sometimes quite raw': Benefit and harm in an intimate partner violence trial. *Aggress Violent Behav.* 2014;19:673-85.
45. Heise L. Violence against women: The hidden health burden. *World Health Stat Q.* 1993;46(1):78-85.
46. Coid J, Petruckevitch A, Feder G, et al. Relation between childhood sexual and physical abuse and risk of revictimisation in women: A cross-sectional survey. *Lancet.* 2001;358(9280):450-4.
47. Stordal E, Mykletun A, Dahl AA. The association between age and depression in the general population: A multivariate examination. *Acta Psychiatr Scand.* 2003;107(2):132-41.
48. Wise LA, Zierler S, Krieger N, et al. Adult onset of major depressive disorder in relation to early life violent victimisation: A case-control study. *Lancet.* 2001;358(9285):881-7.
49. Maniglio R. The impact of child sexual abuse on health: A systematic review of reviews. *Clin Psychol Rev.* 2009;29:647-57.
50. Cohen J. A power primer. *Psychol Bull.* 1992;112(1):155-9.
51. Abrahams N, Jewkes R, Mathews S. Depressive symptoms after a sexual assault among women: Understanding victim-perpetrator relationships and the role of social perceptions. *Afr J Psychiatry.* 2012;16:288-93.
52. Whiteford H. Depression in primary care: Expanding the evidence base for diagnosis and treatment. *Med J Aust.* 2008;188(12):101-2.
53. Garcia-Moreno C, Hegarty K, d'Oliveira A, et al. The health systems response to violence against women. *Lancet.* 2014;385(9977):1567-79.
54. Garcia-Moreno C. Dilemmas and opportunities for an appropriate health-service response to violence against women. *Lancet.* 2002;359(9316):1509-14.