

Identifying domestic violence and sexual assault presentations at a regional Australian hospital emergency department: Comparative analysis of domestic violence and sexual assault cases

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Abstract

Objective: To map the main characteristics of and differences between domestic violence and sexual assault cases presenting to a hospital emergency department in Australia.

Methods: This retrospective observational cross-sectional study presents a snapshot of domestic violence and sexual assault cases presenting to the emergency department of a regional tertiary Australian hospital between 1 January 2018 and 31 December 2018. Data were extracted from the health district electronic information system for all eligible females. All data were checked for completeness and discrepancies by researchers before analysis.

Results: 42/105 (40%) sexual assault cases and 27/56 (48%) domestic violence cases reported mental health issues. More than half of the sexual assault and domestic violence cases had recurrent presentations to emergency department (51%; 54/105% and 52%; 29/56, respectively); most injuries were classed as severe. 92/105; 88% of sexual assault and 41/56; 73% of domestic violence victims were referred to related services.

Conclusion: Clinical health staff, particularly those working in emergency department, can play crucial roles in identifying cases of domestic violence and sexual assault. Domestic violence training for clinicians and routine domestic violence screening in hospital emergency department is recommended to enhance early intervention.

Keywords

domestic violence, domestic violence screening, emergency department, recurrent presentation, sexual assault

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Introduction

Despite being preventable, domestic violence (DV) and sexual assault (SA) affects approximately one in three women worldwide, violating their human rights.¹ The World Health Organization defines DV as a behaviour perpetrated by a current or former partner which causes physical, sexual, or psychological harm.² Behaviours may present as physical aggression, sexual coercion, psychological abuse, and/or imposing control.² SA is a form of DV, where physical force or coercion results in a sexually natured event conducted against a person's will.³

SA and DV are often seen in combination, as SA can be a tactic of DV, and should not be considered a separate

phenomenon.⁴ DV and SA are typified as gendered crimes, where females are more likely to be victimized due to their socially assigned gender roles.^{3,5} Female victims are also

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more likely than male victims to experience related harms such as homelessness, physical injury and death.⁶

The statistics in Australia are alarming: one woman is killed every nine days by a current or former partner.⁶ A further one in six women has experienced physical or sexual violence from a current or former partner since the age of 15.³ DV episodes tend to recur, or co-occur, with other forms of abuse.^{7,8} Women experiencing sexual abuse are often subject to other DV behaviours such as intimidation and control.⁹ They may also have a history of abuse or neglect in childhood.¹⁰ Concerningly, SA victims are less likely to seek help than those in non-SA DV relationships.³

Healthcare providers are often the first and most trusted point of professional contact for women in DV situations, and can play crucial roles in identifying, managing and preventing DV.¹¹ In particular, emergency department (ED) clinicians may regularly encounter victims of DV and SA presenting with injury or non-injury-related complaints, therefore placing them in a unique position to identify women at risk and initiate early interventions.^{12,13} Identifying women at risk is important, as abuse is often recurrent and typically escalates over time.¹⁴ ED clinicians may not consider their clinical role to include DV case recognition or response, thereby perpetuating risk for affected women.¹⁴ Most women are hesitant to disclose DV, particularly when they are not asked directly.^{15,16}

The use of screening tools to identify women experiencing DV has proven to be valuable in many developed countries such as Canada, United Kingdom and United States.^{17–20} A meta-analysis concluded that DV routine screening (DVRS) increased identification by 133% compared with common care alone.²¹ DV identification improves women's access to support, safety plans and referrals.²² A US study reported routine screening had assisted clinicians to provide information and resources to abused women.²³ A British study showed that the design and implementation of a simple DV screening tool led to increased numbers of DV referrals and attendance at local DV services.²⁴

Although New South Wales (NSW) Health aims 'to strengthen the public health system's role in preventing and responding to domestic and family violence',¹² referral pathways for DV and SA victims in NSW have been traditionally directed at the victim's discretion.⁴ Most states in Australia have introduced antenatal DV screening, while NSW also conducts DV screening in early childhood, mental health and substance abuse programmes.^{25,26} NSW Health is investigating expanding examining to expand the DVRS programme to include EDs. After being piloted in three EDs, DVRS has been shown to be feasible, but further trials are needed to implement the DVRS protocol, making it a regular and routine addition to ED clinical practice.¹²

Some researchers have reported barriers related to disclosure in EDs, for example: time limitations, privacy

issues, discomfort about asking screening questions and inappropriate assumptions.^{19,27,28} A particular challenge for DVRS in EDs is lack of training and education for ED staff. This barrier may lead to staff feeling ill-prepared, helpless and uncomfortable when attending to a patient disclosing personal DV stories.^{17–19,29} Staff who have been trained in identifying and responding to DV cases in a clinical setting show improved readiness to enact questioning, according to an Australian meta-synthesis.³⁰ Despite the general positive view of DV screening among ED clinicians, low screening rates are consistently seen in EDs throughout Australia, particularly in regional locations.^{19,31,32}

For victims, there are coexisting long-term mental and physical health consequences of DV.^{6,33} Women experiencing DV are more likely to visit health professionals and report higher rates of health issues than women not experiencing DV.^{34–36} One third of adult assaults requiring hospitalization in Australia are due to DV and weekly, three women are hospitalized with a brain injury resulting from family violence.⁶ Our research analyses a year's worth of DV and SA presentations at a tertiary Australian hospital, highlighting the importance of awareness and routine screening in EDs.

Methods

This research was conducted according to the guidelines of the National Health and Medical Research Council of Australia, receiving full ethics approval as low risk research from the Hunter New England Human Research Ethics Committee (HNEHREC): 2018/ETH00694. HNEHREC waived the need for informed consent, as this study was concerned with the retrospective assessment of de-identified patient casenotes.

The main objective of this observational cross-sectional study was to identify the main characteristics and differences between DV and SA presentations to the ED of a large metropolitan tertiary referral hospital in NSW, Australia during the 2018 calendar year. Due to significant differences in prevalence, severity and impact when considering violence against women versus men, the researchers limited the study to capture female cases only. We were particularly interested to explore the number of recurrent presentations through ED and whether appropriate referrals had been made by ED staff on behalf of victims.

Participants and setting

The hospital was a major trauma and teaching hospital in regional NSW, Australia, providing services to about 15% of NSW's population. Australian First Nations people comprised 5.4% of the region's population.³⁷ Selection criteria included casenotes of all females presenting to the hospital ED with 'alleged assault', as diagnosed by the ED staff and coded by the hospital's electronic information system, from

1 January 2018 to 31 December 2018. Casenotes of general alleged assaults (GASs), that is, stranger-inflicted assaults in a public setting, were identified and excluded from the study.

Data collection

Data were extracted and formulated into a spreadsheet by an ED nurse educator using the site ED patient information management (ipm) system for all casenotes fulfilling the eligible criteria, that is, female casenotes presenting in the calendar year 2018 with ‘alleged assault’ recorded as the presentation code. Other data collection included demographics such as age, country of birth, Australian First Nations identity, having children, pregnancy, mental health, drug and alcohol abuse, triage (diagnosis), recurrent presentations and referral pathways. Following extraction of the report, the data were de-identified by deleting indicators such as names, date of birth, address and Medical Record Number. The researchers examined each case through the electronic medical record system, reviewing details of scanned files for each case which fit the inclusion criteria. This was necessary to obtain further demographic information such as having children, pregnancy, abortion and termination which were not collected in the ipm report. In particular, recurrent presentations could only be identified by reviewing each patient’s file to explore previous presentations. After identifying all demographic information needed, data were re-organized in a second spreadsheet. The de-identified data were statistically analysed by the Medical Research Institute’s Clinical Research Design & Statistical Services (CREDITSS), by two statisticians and a researcher.

Data analysis

Statistical analyses were programmed using SAS v9.4 (SAS Institute, Cary, North Carolina, USA). All data were checked for completeness and discrepancies before analysis. Descriptive statistics were reported for all relevant variables, including frequencies and percentages for categorical variables, means, standard deviations, medians, ranges, and interquartile ranges for continuous variables. Logistic regression analyses were conducted to assess the associations with DV versus SA. The variables for ‘mental health’, ‘having children’ and ‘referral’ were re-categorized as yes/no indicator variables. The variable ‘pregnancy’ was also re-defined as ‘yes’ for females who were pregnant at the time of incident and ‘no’ for non-pregnant females and ‘termination/miscarriage’ as recorded. The variable ‘age’ was categorized as <18 (child), 18–65 (adult) and 65+ (elderly). Characteristics identified at an alpha level of 5% on the Wald Chi-square test in the logistic regression were considered statistically significant, associated with females who experienced DV versus SA.

The Hosmer–Lemeshow goodness-of-fit test was used to determine the adequacy of fit between the final model and the data; with a p -value > 0.05 on this test being considered an indication of an adequate fit. The area under the roc curve (AUC) was used to assess the discrimination ability of the final model, with a value of 0.7 or more considered acceptable. The influence of possible outliers was also assessed.

Results

There were 258 female cases identified as presenting with alleged assault at ED: 97 for GAS, 105 (65%) for SA, and 56 (35%) due to DV. Only SA and DV casenotes were included in the analyses. Table 1 shows the demographic characteristics of the DV and SA victims.

SA

In the study, 99/105 (94%) cases of SA were Australian born. Country of birth for the non-Australian born cohort was mostly women born in New Zealand and the United Kingdom. 16/105 (15%) cases were identified as Australian First Nations. The average case age was 28 years (SD 14.4). 69/105 (66%) cases were between the ages of 18–65 years, while 34/105 (32%) cases were under the age of 18. The mean age of SA cases was much lower than that of DV cases. The majority of cases were neither pregnant nor had children, while 5/105 (4.8%) cases had at least one previous miscarriage or termination. 82/105 (78%) SA cases had no alcohol/drug involvement. 54/105 (51%) cases had recurrent presentations, defined as any presentation at the ED including those related to DV or SA. 42/105 (40%) cases had an associated mental health diagnosis. 92/105 (88%) SA cases were referred to related support services, mostly to the local health district SA team and/or the Child Wellbeing Unit. Related support services included any services such as social workers, the Child Wellbeing Unit (when children were involved) or external organizations such as women’s refuges, Department of Communities and Justice, and police.

DV

Similar to SA cases, 49/56 (87%) DV cases were Australian born and the next most common were those born in the United Kingdom followed by New Zealand. 12/56 (21%) DV cases were identified as Australian First Nations. 27/56 (48%) DV cases experienced mental health issues. 34/56 (61%) DV cases had no alcohol/drug involvement. 29/56 (52%) of DV cases had recurrent admissions to ED. Similar to SA cases, most DV cases were not pregnant or had no children. However, rates of miscarriage or termination were higher in SA cases than DV cases: 5/105 (8.9%) versus 4/56 (4.8%). 29/56 (52%) DV cases had recurrent

Table 1. Demographic variables of DV and SA cases at regional Australian hospital ED, 2018.

Variable		Type of assault		Total (N = 161)
		Sexual assault (n = 105)	Domestic violence (n = 56)	
Mental health issue	No	63 (60%)	29 (52%)	92 (57%)
	Yes	42 (40%)	27 (48%)	69 (43%)
Australian first nations	No	89 (85%)	44 (79%)	133 (83%)
	Yes	16 (15%)	12 (21%)	28 (17%)
Alcohol & drug involvement	No	82 (78%)	34 (61%)	116 (72%)
	Yes	23 (22%)	22 (39%)	45 (28%)
Pregnancy	No	96 (91%)	42 (75%)	138 (86%)
	Pregnant	4 (3.8%)	9 (16%)	13 (8.1%)
	Miscarriage/Termination	5 (4.8%)	5 (8.9%)	10 (6.2%)
Having children	No	97 (92%)	38 (68%)	135 (84%)
	Yes	8 (7.6%)	18 (32%)	26 (16%)
Recurrent admission	No	51 (49%)	27 (48%)	78 (48%)
	Yes	54 (51%)	29 (52%)	83 (52%)
Referral ^a	No	13 (12%)	15 (27%)	28 (17%)
	Yes	92 (88%)	41 (73%)	133 (83%)
Country of Birth	Australia	99 (94%)	49 (87%)	148 (57%)
	Other (including United Kingdom and New Zealand)	6 (6%)	7 (13%)	13 (43%)
	United Kingdom	2 (33%)	3 (43%)	5 (38%)
	New Zealand	2 (33%)	2 (28%)	4 (31%)
Age category	<18 years	34 (32%)	1 (1.8%)	35 (22%)
	18–65 years	69 (66%)	55 (98%)	124 (77%)
	65+ years	2 (1.9%)	2 (1.2%)	2 (1.2%)
AGE	n	105	56	161
	mean (SD)	24.362 (14.986)	34.875 (10.241)	28.019 (14.396)
	median (min, max)	21 (0, 85)	34 (16, 57)	27 (0, 85)
	median (Q1, Q3)	21 (15, 33)	34 (27, 41.5)	27 (18, 37)

DV: domestic violence; SA: sexual assault; ED: emergency department; SD: standard deviation.

^aReferral: Any referrals to social workers, the Child Wellbeing Unit (when children were involved) or external organizations such as women's refuges, Department of Communities and Justice (DCJ), and police.

admissions to ED. 55/56 (98%) DV cases were between the ages of 18–65 years and only 1/56 (1.8%) case was under the age of 18. Most (41/56 (73%)) DV cases were referred to related support services. The most common reported injuries were strangulation, burning, poisoning, stabbing, fractures and motor vehicle injuries. Kidnapping, imprisonment for days, food and water deprivation and restricted access to children were also reported.

Multivariable logistic regression analysis including all independent variables was fitted, with Maximum Likelihood Estimates and 95% CIs presented. Table 2 details the adjusted odds ratios, 95% CIs and Wald *p*-values for the characteristics investigated for association with the outcome: cases experiencing DV or SA. A total of 161 cases who had experienced either DV (*n* = 56) or SA (*n* = 105) were included in the final multivariable regression model. As shown in Table 2, age, having children and pregnancy were significantly associated with the outcome at the *p* < 0.05 level, while controlling for other characteristics. Australian First Nations, alcohol and drug involvement,

mental health and recurrent admission were not significantly associated with the outcome.

The odds of experiencing DV were increased by 1.06 times (odds ratio (OR): 1.06, 95% CI: 1.03, 1.10) for each year of increase in age. Compared to females without children, those who had children had more than five times the odds (OR: 5.47, 95% CI: 1.93, 15.53) of experiencing DV. Compared to non-pregnant females, those who were pregnant had more than five times the odds (OR: 5.64, 95% CI: 1.38, 23.01) of experiencing DV. The odds of experiencing DV in females who had had a miscarriage/termination during their pregnancy were not significantly different to those for non-pregnant females (signified by the inclusion of one in the adjusted 95% CI).

Discussion

The severity of physical injuries identified in our study was both noteworthy and disturbing. Health services provide a unique opportunity to identify women experiencing

Table 2. Characteristics associated with domestic violence versus sexual assault collectively.

Characteristic	Category	Adjusted OR (95% CI)	Adjusted <i>p</i> -value
Age	(per year)	1.06 (1.03, 1.10)	0.0001
Australian first nations	Yes	1.38 (0.50, 3.82)	0.5352
Alcohol and drug involvement	Yes	2.01 (0.84, 4.79)	0.1146
Having children	Yes	5.47 (1.93, 15.53)	0.0014
Mental health issue	Yes	1.56 (0.66, 3.69)	0.3151
Pregnancy	Miscarriage/Termination	2.05 (0.47, 8.96)	0.3421
	Pregnant	5.64 (1.38, 23.01)	0.0160
Recurrent admission	No	1.90 (0.73, 4.92)	0.1861

OR: odds ratio; CI: confidence interval.

abuse, to provide appropriate care and to connect them to other support services which may safe-guard against future harm.¹² Our study found that most SA and DV ED presentations were referred to relevant services. Although the referral rate in our study was higher than that found in current literature,²⁷ almost a third of DV cases were still not referred, thereby missing opportunities for early intervention. This is particularly concerning given the severity of the DV presentations. Importantly, early detection and intervention are dependent on healthcare professionals recognizing DV and SA so that the response is prompt and appropriate. This can be achieved with adequate clinical training aimed at identifying and responding to DV and SA cases.^{32,38}

It is essential for clinicians to maintain professional education in order to achieve best outcomes for patients. Regular training and upskilling in DV and SA education is needed for staff to feel confident in approaching patients in ED.¹⁹ There are various reports of inadequate or minimal DV education in clinical settings.^{18,29,30} One Australian study found that almost 30% of ED staff felt under-trained in DV education.³¹ Inadequate DV education may limit a clinician's ability to assess a patient's situational danger, make safety plans or confidently complete necessary reports.³¹

Our study highlighted the prominence of mental health issues among women presenting with DV and SA. These issues included disorders such as depression, anxiety, personality disorder, anorexia and suicidal ideation. This finding is in keeping with other studies which have shown associations between DV and mental health disorders.^{39,40} It has been reported that poor mental health associated with DV can persist long after the violence stops.⁴¹ Depression and anxiety accounts for approximately 70% of the mental health burden for DV affected women aged 18–44, according to an Australian report on DV health impacts.⁴²

An important finding from our study was the strong correlation of both DV and SA with recurrent admissions to the same ED. According to the World Health Organization, indicators for frequent ED presentations include unexplained injury; chronic gastrointestinal, reproductive or genitourinary symptoms; repeated vaginal bleeding; traumatic injury,

particularly if repeated and with vague explanations; and neurological symptoms including headaches, cognitive problems or hearing loss.² If identified early, these frequent admissions can be prevented and any early intervention can have a positive benefit for the long-term health of the DV and SA victims.^{32,38} Identifying re-presenters to ED is important, as abusive injuries tend to become more serious over time, potentially resulting in death.^{42,43} An Australian study found that victims of DV homicide had frequently presented to ED in the past, but many had not been identified as at-risk, nor received any referral for intervention.⁴⁴

Limitations

Our study had a number of limitations including its retrospective nature, small numbers and single site. Case numbers are likely to have been greater, as we know that disclosure is often underreported.¹⁶ Moreover, it is possible that cases had presented to external health services, thereby affecting the recurrence figures. Another important limitation was that no data were collected regarding the actual effectiveness of ED staff responses and referrals. Also, lack of standard questioning resulted in some data around mental health status, having children, marital status, and drug and alcohol misuse being recorded inconsistently. Limitations in funding have prevented this study being continued past 2018, and hence, the results may not reflect current DV and SA ED presentations. However, the findings illustrate the responsibility for health services to remain actively involved in undertaking research and interventions to improve outcomes for victims of DV and SA.

Recommendations for practice

Health services have a significant role in identifying and responding to the preventable problem of DV and SA. Educating clinical staff regarding DV assessment and referral is essential and may be assisted by the implementation of adjunctive screening tools. Clinicians should be particularly aware of the co-existence of other medical and physical complaints, in addition to any past history of

abusive events. By identifying vulnerable groups, training clinicians and expanding interventions through appropriate referral pathways, health services may reduce representation rates and improve physical and mental health outcomes for victims.

Conclusion

DV and SA are intertwined violations of human rights, mostly affecting women. As seen in our study, cases of DV and SA typically present through ED systems, due to the nature of injury and related physical and mental sequelae. Co-existing mental health issues are prominent, as are recurrent presentations of alleged assault which typically become more serious over time. ED clinicians should be alert to potential cases of DV and SA, as they are in a prime position to identify, address and refer affected patients. However, clinicians must first be appropriately equipped to do so. Educational training and the implementation of screening surveys can increase case detection while improving staff confidence and their ability to appropriately refer, thereby improving outcomes for DV and SA patients.

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Author contribution(s)

Nafiseh Ghafournia: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Writing – original draft; Writing – review & editing.
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Availability of data and materials

The data sets generated and analysed during the current study are not publicly available due to direct identifiers which place individuals in the data set at risk of being identified, but are available from the corresponding author on reasonable request.

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