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Domestic Violence and Abuse screening in emergency department: A rapid review of the literature

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Abstract

Aim: The aim of the review was to identify intimate partner violence screening interventions used in emergency departments (ED) and to explore factors affecting intimate partner violence screening in EDs.

Background: Intimate partner violence against women is now clearly recognised as a global health and societal issue. Nurses working in emergency and urgent care settings can play a crucial role in identification, prevention and management of intimate partner violence Research exploring optimal methods of IPV screening and factors affecting intimate partner violence screening in EDs is relatively limited.

Design: Literature review: Rapid Evidence Synthesis

Methods: Literature published between 2000-2015 was reviewed using the principles of rapid evidence assessment. Six electronic databases: CINAHL Medline, EMBASE, Psych Info, the Cochrane Library and Joanna Briggs Library.

Results: Twenty-nine empirical studies meeting the eligibility criteria were independently assessed by two authors using appropriate Critical Appraisal Skills Programme Checklists. IPV screening in EDs is usually performed using electronic, face to face or pen and paper based instruments. Routine or universal screening results in higher identification rates of IPV. Women who screen positive for IPV in EDs are more likely to experience abuse in subsequent months. Factors that facilitate PV screening can be classified as health care professionals related factors, organisational factors and patient related factors.

Conclusion: EDs provide a unique opportunity for health care professionals to screen patients for IPV. Competence in assessing the needs of the patients appears to be a very significant factor that may affect rates of IPV disclosure.

Relevance to Clinical Practice: Knowledge of appropriate domestic violence screening methods and factors affecting IPV screening in emergency can help nurses and other health care professionals provide patient centred and effective care to victims of abuse attending ED.

Keywords:

Intimate partner violence, screening, emergency department, rapid evidence assessment, review, nursing, ED

Intimate Partner Violence screening in emergency department: A rapid review of the literature

Summary statement

What this paper adds:

- The available evidence suggests considerable variations in the types of IPV screening, methodological issues and factors influencing IPV disclosure in ED
- There is some evidence that providing appropriate training and facilities to health care professionals, building trust and rapport with victims, and improving the institutional environment to overcome barriers to IPV screening and management in ED
- Attention needs to be paid to improve staff training and numbers in the ED
- Further research is needed to explore perspectives of patients and staff on IPV screening in the ED.

INTIMATE PARTNER VIOLENCE

Intimate partner violence (IPV) is now clearly recognised as a global health and societal issue (World Health Organisation 2015). It refers to the violence or a pattern of abusive behaviours between intimate partners (Ali *et al.* 2016) resulting in, physical, sexual or psychological harm. IPV encompasses physical aggression, sexual coercion, psychological abuse and controlling behaviours (World Health Organisation 2015). Available evidence suggests that one in three women, worldwide, experience physical or sexual IPV (Devries *et al. 2013)*. While studies demonstrating the prevalence of IPV in men are limited, evidence from the UK suggests that 17% of men (between the ages of 16 and 59) experience IPV (Office for National Statistics 2015). IPV intersects cultures, religions, ethnicities, social class and geographical locations. Over the past few decades, various terms have been used to refer to the phenomenon of IPV and these include domestic abuse, domestic violence, domestic violence and abuse, wife abuse, spousal abuse, wife battering, and wife beating etc. However, IPV is the most current term used to refer to violence between intimate partners who may or may not be married. Use of this term also recognises that IPV can happen in heterosexual as well as homosexual relationship and that women can also be perpetrators of IPV (Desmarias 2012; Fehringer & Hindin 2014). While it is established that women can perpetrate IPV against their male partners, the number of women experiencing IPV and/ or sustaining injuries is much higher (World Health Organisation 2015, Howart *et al.* 2013). Although the focus of this paper is not only women, most of the literature available so far is skewed towards the presentation of issues of women victims of IPV and this is reflected in this paper too.

IPV can have long-term and serious negative health impacts on the victim who, in most cases, is a woman (Olive 2007). Nurses working in any health care setting and especially those working in emergency and urgent care settings can play a crucial role in identification, prevention and management of IPV (NICE 2014). Routine screening of IPV in the Emergency Departments (ED) can be very useful, as ED is a common place that IPV victims/ survivors' access for the treatment of their injuries and symptoms (Houry *et al.* 2008) due to its 24 hour availability. While public health definition of screening

refers to a test, examination or a procedure that can used in asymptomatic individuals or population to identify any given disease or condition, the definition of IPV screening is somewhat different, as the victims may not be 'asymptomatic' when presenting to health care setting such as ED. In this context, the definition of IPV routine screening varies widely and may range from screening of only suspected victims of IPV to screening every patient attending ED (Waalen *et al.* 2000). IPV screening is very important as it can help identify IPV victims/ survivors, reduce abuse, and improve clinical and social outcomes for the victim/ survivors (Bair-Merritt et al. 2014, Taft et al. 2013). It may also help prevent long term fatal consequences associated with IPV such as homicide or suicide etc. Although health care professionals and researcher are concerned about unintended consequences or harm to the victim/ survivor due to IPV screening in health care setting, evidence supporting such harm is scarce (Houry et al. 2008, MacMillan et al. 2006). Considering this, IPV screening in ED remains an opportunity for health care professionals to identify IPV. Evidence suggests that at least 54% of all women presenting to the ED have experienced IPV at some point in their life (Abbott *et al.* 1995), however, only 5% of such victims/survivors are identified by health care professionals (McGarry & Nairn, 2015) and a majority remains unnoticed (Corbally, 2001; McGarry & Nairn, 2015). There are many barriers to adequate screening, detection and support of IPV victims/ survivors in the ED (Hugl-Wajek *et al*. 2012, p. 860). Overcrowding, lack of time, lack of confidence and lack of preparedness of the health care professionals (Hugl-Wajek *et al*. 2012, Gutmanis *et al.* 2007, Gerbert *et al*. 2002) are some examples of such barriers.

Much emphasis has been placed on the need for universal screening of IPV victims in healthcare settings, including ED, although, research exploring optimal IPV screening methods and barriers to effective IPV screening in EDs is relatively limited. In addition, there is a need to review and consolidate available evidence related to IPV screening and barriers to screening in ED to identify strengths and limitations of the existing studies as well as gaps in the literature. Findings from such a review will help in the development of better IPV screening methods, strategies to overcome barriers to IPV screening and identification of future research needs. Considering this, the current paper aims to present a rapid

review of evidence conducted to explore IPV screening methods used in EDs and what impacts on IPV screening in EDs. The specific objectives of the review were:

- To identify effective IPV screening methods used in EDs to identify IPV
- To explore factors affecting IPV screening in EDs.

METHODS

A rapid review of the literature following the principles of rapid evidence assessment (REA) was undertaken during March – July 2015. REA provides a timely, valid and balanced assessment of available empirical evidence related to a particular policy or practice issue (Department for International Development, UK 2015). REA is a rigorous and explicit method that avails evidence required for policy recommendations in a short timescale. However, the process requires some concessions to the breadth and depth of the review of available evidence using a systematic review process (Ganann *et al.* 2010, *Watt et al.* 2008). The process is characterised by developing a focused research question, a less developed search strategy, literature searching, a simpler data extraction and quality appraisal of the identified literature (Watt *et al.* 2008).

A literature search using the search engines MEDLINE, Cumulative Index to Nursing and Allied Health Literature (CINAHL), PsychInfo, Excerpta Medica Database (EMBASE), the Cochrane Library and the Joanna Briggs Library was performed. Keywords used in the search included domestic violence, intimate partner violence, spousal violence and wife abuse. These terms were used in addition to screening, ED, Accident and Emergency, A & D, screening AND Emergency, and barriers. A search was also conducted using Google and Google Scholar to identify studies not published in indexed journals. In addition, the reference list of each article was scrutinized to identify unpublished studies and grey literature.

Inclusion and Exclusion

In this review, any empirical study that explored screening interventions used to identify IPV victims/survivors in ED was considered for inclusion. Studies that explored barriers to IPV screening in the ED were also included. Included studies had to be, based on empirical data, written in English, and published in a peer reviewed journal between 2000- 2015. Studies that explored IPV screening interventions or barriers to IPV screening in various settings with ED as one settings were also included. Studies that explored IPV screening interventions or barriers to IPV screening in settings other than ED were excluded. In addition, papers such as reports, case series, scholarly or theoretical papers, editorials, commentaries were excluded. Table one summarises the inclusion criteria used to include studies in the present review.

Study Selection

Two independent reviewers (IA and PA) assessed each potential article considering inclusion criteria. In the case of disagreement, both reviewers read the paper and discussed until consensus was reached. Figure 1 provides a flow chart for the literature search. The initial search identified 820 potentially relevant articles. A scan of titles helped in narrowing down this to 250 articles. A further review of the titles and abstracts of identified papers resulted in the selection of 57 potential papers. The full text was retrieved for all 57 articles and after a careful review of each article, 24 articles were included in the review.

Quality Review and Data Extraction

To review the quality of studies, the critical appraisal tools of the Critical Appraisal Skills Programme (CASP) Oxford were used (Critical Appraisal Skills Programme, 2013). The tool was not used to eliminate selected studies from the review, but to ensure that studies were examined using uniform criteria. A data extraction template was constructed and used to record relevant information such as purpose, research design, sampling method, sample characteristics, data collection method, method

of data analysis, the results of the study, limitations and comments. The findings of the review are presented under appropriate headings in the following section.

FINDINGS

Study Characteristics

Table 2 and 3 present characteristics of the studies included in the review. The selected studies were published in the last 15 years (between 2000-2015). Studies originated from USA, Australia, United Kingdom (UK), New Zealand, Netherlands, Canada and Iceland. Of 24 selected articles, 12 studies were related to IPV screening interventions and remaining 12 studies explored barriers to IPV screening. In most studies, either there was no comparison group, or the intervention was compared with routine practice (Hugl-Wajek *et al.* 2012, Koziol-McLain *et al.* 2010, Svavarsdottir, 2010, MacMillan *et al.* 2009, Houry *et al.* 2008, Trautman *et al.* 2007, Rhodes *et al.* 2006, Houry *et al.* 2004, Fanslow *et al.* 1999, 1998, Roberts *et al.* 1997, Olson *et al.* 1996). Some studies compared more than one intervention. For instance, Hollander *et al.* (2004) compared the effect of written versus verbal consent on the IPV disclosure. Similarly, Bari-Merritt *et al.* (2006) compared effectiveness of audiotape versus written questionnaire on the rate of IPV disclosure and MacMillan *et al.* (2006) compared computer based self-completed questionnaire, verbal and written self-completed questionnaire.

Study Design:

The research designs used in studies exploring IPV screening interventions included time series (Morrison *et al.* 2000) cohort design (Houry *et al.* 2004), controlled clinical trials (Hollander *et al.* 2001), randomised control trials (RCT) (Koziol-McLain *et al.* 2010, MacMillan *et al.* 2009, Bair-Merritt *et al.* 2006, Rhodes *et al.* 2006), cluster RCTs (MacMillan *et al.* 2006) quasi-experiments (Trautman *et al.* 2007), observational (Houry *et al.* 2008) and cross-sectional survey design (DeBoer *et al,* 2013, Hugl-Wajek *et al.* 2012, Svavarsdottir, 2010). Among studies that explored barriers to IPV screening in the ED, three were qualitative studies (Zijlstra et al 2015, Ritchie *et al.* 2009, Dowd *et al.* 2002, Yam, 2000). Other study

design used included cross sectional (Hurley *et al.* 2005, Kramer *et al.* 2004, Sethi *et al.* 2004, Ramsden & Bonner, 2002, Yonaka et al., 2007) or postal survey design (Elliott *et al.* 2002).

Study Population and Sampling:

All studies included in the review except two (Houry *et al.* 2008, Hollander *et al.* 2001) involved adult or adolescent women. Women who were too ill to participate, or presented with communication or language difficulties, mental instability, or those with partners (therefore, may not be able to answer IPV related questions) were excluded from the studies. Only studies included men as participants (Houry *et al.* 2008, Hollander *et al.* 2001). Other studies focused on perspective of health care professionals such as doctors, nurses, social workers (Zijlstra et al 2015, DeBoer, *et al.,* 2013, Ritchie *et al.* 2009, Gutmanis *et al.* 2007, Dowd *et al.* 2002, Elliott *et al.* 2002).

Depending on the study design, the studies used random sampling, convenience sampling followed by random allocation to various intervention groups and convenience sampling method. The justification for sample size was provided for only a few studies (MacMillan *et al.* 2009, Trautman *et al.* 2007, MacMillan *et al.* 2006, Hollander *et al.* 2001, Morrison *et al.* 2000), though, sample size appeared to be appropriate in all included studies. The majority of the studies described characteristics of the participants in relation to age, gender, ethnicity, and socioeconomic status in ample detail to help the reader understand the study.

Data Collection

Data were collected through various methods depending on the research design and purpose of the study. The data were often collected by trained research assistants (RAs) or researchers (MacMillan *et al.* 2009, Houry *et al.* 2008, Ritchie *et al.* 2009, MacMillan *et al.* 2006, Bair-Merritt *et al.* 2006, Rhodes *et al.* 2006, Houry *et al.* 2004, Hollander *et al.* 2001, Morrison *et al.* 2000) health care professionals such as doctors, nurses, midwives (Zijlstra *et al.* 2015, Ramsden & Bonner 2002), a social worker, or an on-site DV advocate (Hugl-Wajek *et al.* 2012). With regards to IPV screening interventions, information was

often collected using computer based self-reported (Houry *et al.* 2008, Trautman *et al.* 2007, Rhodes *et al.* 2006), pen and paper or verbally administered questionnaires (Hollander *et al.* 2001). Some studies (Hugl-Wajek *et al.* 2012, Gutmanis *et al.* 2007, Bair-Merritt *et al.* 2006, Rhodes *et al.* 2006, Elliott *et al.* 2002) reported developing and using study specific questionnaires. Common instruments used were Partner Violence Screen (PVS) (Koziol-McLain *et al.* 2010, MacMillan *et al.* 2006, Houry *et al.* 2004), Women Abuse Screening Tool (WAST) (Svavarsdottir, 2010, MacMillan *et al.* 2009, 2006) and Composite Abuse Scale (MacMillan *et al.* 2009, 2006). One study reported use of a questionnaire developed or adapted from Washington University Universal Violence Prevention, Screening protocol (Houry *et al.* 2008, Hollander *et al.* 2001) and Abuse Assessment Screen (AAS) (Koziol-McLain *et al.* 2010, Kramer *et al.* 2004). Studies utilising qualitative approaches, collected data through in-depth interviews using interview guides (Ritchie *et al.* 2009, Dowd *et al.* 2002, Yam 2000).

RESULTS OF IPV SCREENING INTERVENTIONS STUDIES

Findings suggest that routine or universal screening of IPV results in higher identification rates of IPV (Morrison *et al.* 2000). Women who screen positive for IPV are more likely to experience IPV in the next few months; therefore, IPV screening in the ED can contribute effectively in establishment of preventive interventions to reduce IPV experiences of the those screened (Houry *et al.* 2004). However, the findings also highlighted discrepancies in practice, with some practitioners screening all patients and other screening selectively (Yonaka, *et al.* 2007). Nurses and other health care professionals routinely screen patients with obvious signs of injury but may be selective in screening others with no obvious sign of abuse (Yonaka et al. 2007).

The effectiveness of various screening methods was explored in some studies. Examples of such methods include computer-based screening, pen and paper screening, audiotape questionnaires, and verbal screening by a health care professional (Svavarsdottir 2010, Hugl-Wajek 2009, Houry *et al.* 2008, Bair- Trautman *et al.* 2007, Merritt *et al.* 2006, Rhodes *et al.* 2006, McMillan *et al.* 2006). There were mixed results. Women tend to prefer self-completed questionnaires to face to face questioning (MacMillan

et al. 2006). Computer based screening method was identified as a low cost but effective when compared to verbal inquiries by health care professionals (Trautman *et al.* 2007, Rhodes *et al.* 2006). Women were more likely to disclose IPV when screened using computer based questionnaires (Trautman *et al.* 2007, Rhodes *et al.* 2006) as the disclosure rate for computer based screening was reported to be higher (14 %) compared with verbal screening (8%) (Rhodes *et al.* 2006). No significant difference in women's acceptability of audiotape and written questionnaire was reported, though the use of audiotape questionnaire resulted in higher disclosure rates (Bair-Merritt *et al.* 2006). Another study identified that verbal screening was least preferred by participant and written IPV screening yielded a lower prevalence of IPV (MacMillan *et al.* 2006). On the other hand, one study identified the use of a dedicated and trained DV advisor as an effective method in increasing IPV detection rates (Hugl-Wajek *et al.* 2012).

FACTORS FACILITATING IPV SCREENING OR IPV DISCLORURE IN ED

Several studies have explored various factors that have an impact on IPV screening in the ED (Zijlstra et al 2015, De Boer, *et al.,* 2013, Ritchie *et al.* 2009, Gutmanis *et al.* 2007, Yonaka *et al.* 2007, Hurley *et al.* 2005, Kramer *et al.* 2004, Sethi *et al.* 2004, Dowd *et al.* 2002, Elliott *et al.* 2002, Ramsden & Bonner 2002, Yam, 2000). Universal screening led to higher rates of IPV identification. IPV screening rates vary by the severity of the patient's condition, type of presenting complaint, and presentation time. Patients presenting with less severe problems, or a combination of trauma and medical problems were more likely to be screened for IPV than psychiatric patients. There were various factors that affected health care professional's abilities to screen for IPV in the ED. These factors can be classified into health care professional related factors, organisational factors and patient related factors as presented below.

Health Care Professional Related Factors

These refer to the factors affecting ability of the health care professionals screen their patients for IPV. Example of these include health care professionals' knowledge, awareness and attitudes towards IPV (Yonaka, et al., 2007, Gutmanis *et al.* 2007, Ramsden & Bonner 2002), lack of attentiveness and lack of empathy (Kramer *et al.* 2004, Dowd *et al.* 2002, Yam 2000). These factors may also impact on

the respondent's ability to disclose IPV, as the health care professional may not be able to provide appropriate opportunities for the patient. Other factors include lack of training (Yonaka, et al., 2007, Ritchie *et al.* 2009), health care professional's personal comfort and confidence in asking IPV related questions (Yonaka, et al., 2007, Ritchie *et al.* 2009), personal history of abuse (Yonaka, et al. 2007) perception of role (Ritchie *et al.* 2009) and forgetting (Ritchie *et al.* 2009). Additional barriers for senior health care professionals working in the ED may include additional work roles and responsibilities affecting their ability to develop rapport and trust with the patient resulting in their inability to ask IPV related questions.

There are some factors that enable health care professionals to screen IPV more effectively and these include the ability to ask direct questions (Kramer *et al.* 2004), spending enough time with the patient and not appearing rushed (Kramer *et al.* 2004). In addition, ensuring confidentiality, privacy, respecting the patient's autonomy and their decisions also facilitate IPV disclosure by the victim to the health care professional (Kramer *et al.* 2004). Health care professionals may need training and support to develop such skills (Ritchie *et al.* 2009). The gender of a professional may also influence IPV disclosure, as IPV victim felt comfortable in disclosing their IPV experience to female health care professionals (Kramer *et al.* 2004; Ziljlstra et al. 2015).

Organisational/ Institutional Factors

These refer to factors related to organisational structure and provision that may impact on IPV screening. Lack of privacy (Ritchie *et al.* 2009, Ramsden & Bonner 2002, Ellis 1999), lack of after-hours social services (Ramsden & Bonner 2002) and lack of time (Zijlstra et al. 2015, Yonaka et al. 2007, DeBoer et al. 2013) and work pressure were identified as organisational factors affecting IPV screening and IPV disclosure. Availability of resources and the provision of an appropriate environment to facilitate IPV screening may help in improving IPV detection rates (DeBoer *et al.* 2013, Ritchie *et al.* 2009). Providing healthcare professionals with more prompts or reminders by means of cue cards can help in improving screening rates (Ritchie *et al.* 2009). In addition, ensuring the involvement of health care

professionals in the development and/or review of policies and protocols about identification and management of IPV (Zijlstra *et al. 2015)* may be useful. Such initiative will not only improve health care professionals' willingness, knowledge and abilities to screen IPV in EDs, but will also inculcate of a sense of ownership of policies and procedures. Clear referral pathways and close working relationship between health care professional not only in the ED but also within the wider health care system is essential in facilitating appropriate IPV screening in the ED.

Patient related Factors

These refer to factors that impact victims' ability to disclose IPV to their nurse or other health care professional when visiting the ED. Lack of readiness to share or address the problem, lack of confidence, feeling of embarrassment, fear of harm by the abuser or fear of losing children were identified as some of the barriers that may affect a victims' willingness to disclose abuse and thus affect IPV screening in the ED (Kramer *et al.* 2004). Language barriers, where communication between health care professionals and patients is not concordant, also impacts the victim's ability to disclose their IPV experiences (Yonaka, et al. 2007). In addition, the presence of other family members with the patient was identified as another barrier affecting IPV disclosure by the victim (Zijlstra *et al. 2015).* Provision of appropriate environment of the patients, inculcating a sense of trust and respect, respecting privacy, autonomy and patients' decisions may help in improving disclosure by Victims.

Discussion

ED setting presents a unique opportunity to the health care professionals to screen IPV. There is ample literature that has explored various IPV screening interventions not only in EDs (Hugl-Wajek *et al.* 2012, Koziol-McLain *et al.* 2010, MacMillan *et al.* 2009, Houry *et al.* 2008, Trautman *et al.* 2007, Bair-Merritt *et al.* 2006, MacMillan *et al.* 2006, Rhodes *et al.*2006, Houry *et al.* 2004, Hollander *et al.* 2001, Morrison *et al.* 2000) but in other health care settings (Olive, 2007, MacMillan *et al.* 2006, Wathen & MacMillan 2003). The findings of the review clearly highlight that the issues of IPV screening intervention

in the ED have attracted researcher attention in the past decades. The findings of the review suggest that issues concerning IPV screening in ED and challenges associated with this issue are global; however, most research exploring the issue is conducted in western and developed countries. It is important to explore the variation in the practices related to IPV screening across institutions, systems and countries in an attempt to develop practical and useful guidelines and principles applicable to wider health care settings in different contexts. The findings of the present review also highlight that most of the studies conducted on this topic are quantitative. However, some qualitative studies are conducted to explore factors affecting IPV screening in the ED ((Zijlstra *et al. 2015,* Ritchie *et al.* 2009, Dowd *et al.* 2002, Yam, 2000). The review also highlighted the strengths of the available studies. For instance, sample size and methodology used in various studies appeared generally appropriate and robust. Findings suggest that patients who are IPV victims preferred responding to self-reported questionnaire (Trautman *et al.* 2007, Rhodes *et al.* 2006), however, we know that self-report questionnaire can be a source of recall bias. While quantitative exploration is important, it fails to provide contextual information about the situation and experiences, therefore, mixed method studies can be a good option and may help develop appropriate instruments for IPV screening.

Consistent with previous research (Larkin *et al.* 1999, Olson *et al.* 1996), the findings of the review suggest that routine or universal screening of IPV results in higher rates of identification of IPV cases (Morrison *et al.* 2000). Findings highlight that women who screen positive for IPV in ED are more likely to experience IPV in the next few months and therefore, IPV screening in the ED can help in the development of effective preventive strategies to protect the women from further IPV victimization (Houry *et al.* 2004). There are various screening methods that can be used by health care professionals. These may include computer based screening, written or pen and paper screening, audiotape questionnaires, and verbal screening by a health care professional (Svavarsdottir 2010, Hugl-Wajek 2009, Houry *et al.* 2008, Trautman *et al.* 2007, Bair- Merritt *et al.* 2006, Rhodes *et al.* 2006, McMillan *et al.* 2006). Evidence suggests that these methods may prove equally effective in different places and settings and that there

is no single best IPV screening method (Thackeray *et al. 2007;* Hussain et al. 2015*).* While there are 33 IPV screening questionnaires that can be used for IPV screening, only a small number of studies have been conducted to validate these questionnaires and that the sensitivity and specificity of these questionnaires are highly variable (Rabin, *et al.* 2009). It is important to consider that the effectiveness of any particular screening method may depend on the context where it was administered, comfort and confidence of the person using the method and state, willingness, comfort and confidence of the victim.

Consistent with available evidence, the findings of the study identify computer based screening method as effective and efficient (Renker, 2008, Trautman *et al.* 2007, Rhodes *et al.* 2006). This may be because the patient or IPV victim can answer various questions without being interrupted or without the feeling of being judged and embarrassed. Such methods convey a sense of confidentiality that may help the patients respond to question better. On the other hand, verbal screening methods can be effective when the practitioner is able to develop a trusting relationship with the patient. In such cases a rapport and trust between the practitioner and the victim may help the victim disclose information more comfortably. The findings of the review suggest that most of these screening instruments are developed and tested in western countries and may not be as effective in screening IPV in other countries. However, unless further studies are conducted in other parts of the world, especially in non developed, eastern and Asian countries to test the usefulness, relevance and applicability of available tools, this is just an assumption. Definitions and perspective about IPV differ in different cultures and there is a need to develop culturally specific tools for different populations and context.

The findings suggest many factors, including health care professionals, patients and institutional or organisational factors that may help or hinder IPV screening in the ED. Health care professionals' related factors included knowledge, awareness and attitudes towards IPV (Gutmanis *et al.* 2007, Ramsden & Bonner 2002), lack of attentiveness, lack of empathy (Kramer *et al.* 2004, Dowd *et al.* 2002, Yam 2000), and lack of time (Yonaka, et al. 2007, Zilstra, 2015). Therefore, it is important to provide health care professionals with appropriate training and services to help them develop confidence and

competence to ask sensitive questions from their patients (Ritchie *et al.* 2009, Kramer *et al.* 2004). Findings identified gender as a factor affecting IPV screening. It may be that some patients may feel more comfortable in disclosing their IPV experiences to a health care professional of their own gender. This also suggests that appropriate training and preparation of health care professionals may be needed to help such them develop confidence and competence in asking relevant questions and thus may help in improving IPV screening. Further robust and systematic research will be useful to explore the impact of gender and gender congruence on disclosure of IPV or other forms of domestic violence especially by male victims of violence.

The findings of the review also highlighted various institutional and organisational factors such as lack of privacy (Ritchie *et al.* 2009, Ramsden & Bonner 2002) lack of after-hours social services (Ramsden & Bonner, 2002) and lack of time (Yonaka, et al. 2007, Zilstra, 2015) and work pressure as factors affecting IPV screening or disclosure. This suggests that there is a need to deal with such issues to improve IPV detection rates in ED. We already know that ED is very busy setting and factors such as high turnover of staff, stressful environment, and difficulties associated with provision of and sustaining of training opportunities affect IPV screening and subsequent management of such cases (O'Doherty *et al.* 2014). Ensuring appropriate staffing in the ED can help provide appropriate time to facilitate IPV screening. In addition, development of appropriate policies and pathways delineating identification, management, and referral procedure may help health care professionals understand their responsibility better and may help improve IPV screening.

The review also identified patient related factors that may affect IPV disclosure (Kramer *et al.* 2004). Provision of appropriate environment of the patients, inculcating a sense of trust and respect and respecting privacy, autonomy and decisions of the patient / IPV victim may help in improving IPV screening in the ED or IPV disclosure by patients. It is important to note that the findings related to patient related factors, in this review, are mainly from the perspective of health care professionals. Further research exploring the perspective of victims, or about factors affecting their ability to disclose IPV may

be useful. At the same time, it is important to increase health care professionals' awareness about the perspectives and expectations of victims/ survivors about IPV disclosure and the role of health care professionals. Available evidence suggests that victims/ survivors of IPV expect their nurses and health care professionals to ask them about their experiences (Pratt-Eriksson et al. 2014). An awareness of patient expectations may help nurses and other health care professionals develop the confidence to screen IPV.

Current review provides important insight about appropriate IPV screening methods used in the ED. The review also highlighted factors affecting IPV screening in the ED. While screening can help identify IPV victims, the rate of identification remains lower when compared with IPV prevalence (O'Doherthy *et al.* 2014). Further research is needed to explore if IPV screening increases the rate of referral to other agencies and organisations. More multicentre research trials are needed to explore the effectiveness of universal IPV screening in EDs and other health care settings.

Limitations

In line with REA methodology limitations were introduced in the review, which is appropriate as promptly aggregated evidence summaries inform the development of timely intervention for policy makers and service providers. Keeping REA methodology in mind and the timescale of rapid review print and grey literature was not searched, contacts to authors were not made, and published material was restricted to English language, therefore, there is a possibility of missing relevant published and unpublished studies. These limitations might have introduced bias into this review. However, given a wide range of results from quality studies on IPV screening, it would be unlikely that significant findings are missed and additional information would change hugely the conclusion of the review.

Relevance to Clinical Practice

The review highlights various important factors (e.g. Privacy, confidentiality and trust) that appear to be important for the IPV victims attending ED and receiving IPV screening and referral services. Health care

professionals working in the ED and providing such services need to be mindful of these factors and should ensure that they provide appropriate service to the patients/ IPV victims. Provision of such services requires an appropriate number of health care professionals, social workers of DV advocates to be present in EDs, therefore, the findings have implications for health facility, and ED managers and policy makers to ensure the appropriate number of staff are appointed in ED to ensure provision of appropriate services. In addition, appropriate education and training opportunities to develop nurses and other health care professionals' knowledge, confidence and competence about IPV screening in the ED and other health care settings.

Conclusion

Health care professionals working in the ED have a unique position that can help them identify many patients who are experiencing IPV and/ or are at risk of IPV from their current and former partners. This review has added to the understanding of various IPV screening interventions in the ED and factors affecting IPV screening in the ED. Knowledge of such factors may help in improving available services for the IPV victims attending ED. The systematic review of the literature presented highlights these factors and suggest that there is scope to explore the effectiveness of IPV screening services in the ED in the future. There is a need to explore the factors affecting IPV screening in ED from the perspective of patients and health care providers. Qualitative studies need to be conducted to explore patients and health care professionals' subjective experiences in relation to IPV screening in the ED.

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Table 1: Criteria for inclusion of primary studies in the review

Screening interventions	**Barriers to screening**
Conducted in the ED setting	Conducted in the ED setting
Participants of either gender (male/female) presenting to the ED Health care professionals working in the ED	Participants of either gender (male/female) presenting to the ED Health care professionals working in the ED
Quantitative (experimental and non-experimental studies	Quantitative or Qualitative studies

Figure 1: Literature Search Flow chart

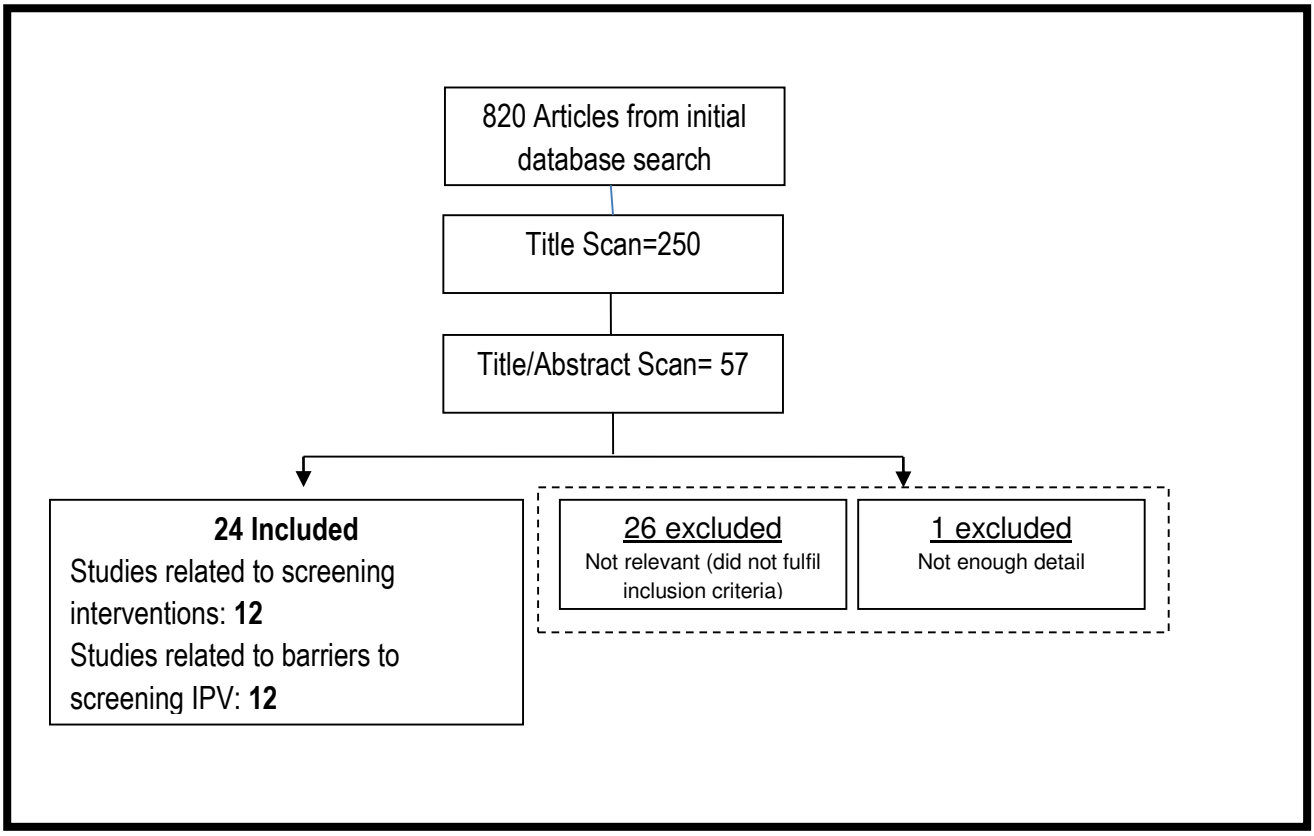

Table 2: **Characteristics included studies related to IPV screening**

Author & year	Country	Setting	Inclusion Criteria	Screening method	Comparison
Morrison *et al.* (2000)	Canada	ED	Women attending ED and (screening group only) those not needing immediate treatment or those having conditions preventing participation	Structured interview, including asking five direct questions about current of past DV	Usual assessment
Hollander *et al.* (2001)	USA	ED	All patients attending ED, medically stable for completing the screening, (excluded if >18 or < 65years of age, or unable to complete the screening process due to language barrier or medical instability)	On even days patients were asked to provide a written informed consent, On the odd day, following verbal consent, patients were asked to respond to a standard questionnaire	Written vs verbal consent
Houry *et al.* (2004)	USA	ED	Women aged ≥ 18 attending ED, excluded if presented to the ED for the sexual assault evidentiary exam, had a language barrier, were critically ill, or had altered mental status	Demographic questions and six questions about DV including partner violence screen (PVS), followed up after 4 months and assessed using the modified 18 item CTS scale, also asked if the patient has experienced any injuries since the initial ED visit and if sought medical care for any illness or injury related to DV	Usual assessment
Bair- Merritt (2006)	USA	Paediatric ED	English or Spanish speaking women attending paediatric ED, not accompanied by another adult, the child was not undergoing acute resuscitation, aged ≥ 18 or were an emancipated minor	Audiotape group: listened to audio question and circled yes and no answer on the sheet: written questionnaire group: completed a written survey, following completion of ten safety question by either method the RA verbally administered ten Likert scale questions	Audiotape questionnaire vs written questionnaire

Author & year	Country	Setting	Inclusion Criteria	Screening method	Comparison
MacMillan *et al.* (2006)	Canada	ED	Women between 18-64 years of age. Able to speak and read English. Not too ill to participate. Able to provide informed consent	Computer Based Screening: completed screening instrument (PVS and WAST, randomly ordered) using a tablet computer. Written self-completed method: complete paper version of screening method (PVS and WAST randomly ordered), face to face method with verbal questioning of health care provider: verbally screened by their health care provider with one of the 2 screening instruments, randomly determined	Computer-based self-completed questionnaire, face to face interview, written self-completed questionnaire
Rhodes, *et al.* (2006)	USA	Urban & Suburban ED	Women age 18-65 years attending ED with non-urgent problem.	Self-administer computer based-health risk assessment, with prompt for the health care provider or to usual care	Usual care
Trautman *et al.* (2007)	USA	ED	Women aged≥18 attending ED during enrolled period. Excluded if acute or critically ill, illiterate, mental status impeded, disoriented, intoxicated, would not separate from their partner or already enrolled from the previous study period	Self-reported computer base health survey in a private area at study site. Medical records of all subjects were reviewed	Usual care
Houry *et al.* (2008)	USA	ED	All patients aged 18-55 years attending ED. Able to speak and read English. And capable of standing for 20 minutes	Patients who screened positive on a computer kiosk-questionnaire for IPV in the past year were provided with resource and information and invited for follow-up interview at 1 week and three months. Number of violence related 911 calls 6 months before and 6 months after the initial ED visited for selected participant were reviewed	Usual care

Author & year	Country	Setting	Inclusion Criteria	Screening method	Comparison
Macmillan *et al.* (2009)	Canada	12 Primary care sites (family practice, CHC), acute care sites (ED, Obs & Gynae clinic	English-speaking female patient aged 18 to 64 years, could be seen individually and were well enough to participate	Women in the screened group self-completed WAST, information about positively screened woman was given to a clinician before the visit, subsequent referral/ discussion were at the discretion of the clinician, non-screened group self-completed WAST after their visit to a clinician	IPV screening vs no screening
Svavarsdottir, *et al.* (2010)	Iceland	ED HRPCC	Women aged 18-68 years attending ED or HRPCC, able to read and write Icelandic or English, excluded if under the influence of drugs or alcohol	Completion of self-reported questionnaire (WAST) followed by participation in an interview	None/ usual care
Koziol-McLain *et al.* (2010)	New Zealand	ED	English speaking women aged $\geq$ 16 attending ED during selected shifts, excluded if presented with organic or functional impairment based on clinical assessment, requiring emergency treatment, couldn't speak English, or entered into study during a previous visit	Screened using a 3 item IPV screen, statement about the unacceptability of violence, risk assessment and referral	Usual care
Hugl-Wajek, *et al.* (2012)	USA	ED	Women aged between $\geq$ 18 -60 attending ED, excluded if too ill or too injured to participate in screening interview or declined screening	Incidence an prevalence data was collected by a single trained DV advocate using a standard screening form from the Hospital Advocacy programme	Usual care

Table 3: characteristics of included studies in the review: Barriers to IPV screening in ED

Author (year)	Country	Setting	Design	Sample Eligibility	Sampling method	Sample Size
Yam, (2000)	USA	-	Phenomenology	Women who had sought help for abuse related injuries at a hospital emergency department within the past 12 months	Purposive	Five participants
Dowd *et al.* (2002)	USA	ED	Qualitative	Full or part time physicians or nurses working in the ED, Any women (18-65 yrs. of age) who was the caregiver of at least one child, able to speak English or Spanish,	Convenience	59 Mothers, 21 nurses, 17 Physicians
Elliott *et al.* (2002)	USA	-	Cross sectional postal survey	General internist, family practitioners, obstetricians-gynaecologist, emergency medicine physician	National systematic sample	2400 contacted, 1103 participated
Ramsden & Bonner (2002)	Australia	ED	Screening Pilot project	All women ≥ 16 years presenting to the ED	Convenience	245 women screened
Kramer *et al.* (2004)	USA	ED Primary Care clinic	Survey	Adult women attending ED and primary care clinics during specific study period	Convenience	1268 women
Sethi *et al.* (2004)	UK	ED	Survey	Women aged 18-80 years attending ED, who are not too ill to participate	Convenience	200 women
Hurley *et al.* (2005)	Canada	ED	Survey	non-critically ill patients, aged 16–95 years who presented to the ED during specified data collection time frames	Convenience	514
Gutmanis *et al.* (2007)	Canada		Postal survey	General practitioners and specialist employed in family practice, emergency medicine, obstetrics and gynaecology and public health, Nurses employed in family practice/ physician offices, emergency care, maternal, new born, and public health	Random	1000 nurses, 1000 physicians
Yonaka *et al.* (2007)	USA	ED	Cross sectional survey	Nurses working in the ED	Convenience	33 nurses
Ritchie *et al.* (2009)	New Zealand	ED	Qualitative descriptive design/ Evaluation research	All registered nurses and social worker working in the ED	Convenience	11 nurses
DeBoer, et al (2013)	USA	ED	Cross-sectional survey study	Registered nurses working in the ED, critical care units, labour room, general medical/telemetry floors, the inpatient psychiatric unit, the case management and the nursing resource team.	Convenience	156 nurses
Zijlstra et al (2015)	Netherlands	ED	Qualitative	ED staff, including physician, physician assistant, nurses, receptionists, and ED mangers	Convenience	18 (3 physician, 4 physician assistants, 2 receptionists, 7 nurses, 2 ED managers