Intimate partner violence in orthopaedic trauma patients
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Chapter 8

Barriers to Screening for Intimate Partner Violence

S Sprague, K Madden, N Simunovic, K Godin, NK Pham, M Bhandari, JC Goslings

Published
Abstract

Background: Health care providers (HCPs) play a vital role in the detection of intimate partner violence (IPV) among their patients. Despite the recommendations for routine IPV screening in various medical settings, HCPs do not routinely screen for IPV. We wanted to identify barriers to IPV screening and to improve the understanding of IPV screening barriers among different HCPs.

Methods: We conducted a systematic review to examine HCPs perceived barriers to screening for IPV. By grouping the studies into two time periods, based on date of publication, we examined differences in the reported barriers to IPV screening over time.

Results: We included a total of 22 studies in this review from all examined sources. Five categories of IPV screening barriers were identified: personal barriers, resource barriers, perceptions and attitudes, fears, and patient-related barriers. The most frequently reported barriers included personal discomfort with the issue, lack of knowledge, and time constraints. Provider-related barriers were reported more often than patient-related barriers.

Conclusions: Barriers to screening for IPV are numerous among HCPs of various medical specialties. Increased education and training regarding IPV is necessary to address perceptions and attitudes to remove barriers that hinder IPV screening by HCPs.
Introduction

Intimate partner violence (IPV) against women has been reported to have a negative impact on both the physical and mental health of victims, which extends beyond the period of abuse (Zolotor, Denham, & Weil 2009). IPV has been defined by the American Medical Association as “a pattern of coercive behaviours that may include repeated battering and injury, psychological abuse, sexual assault, progressive social isolation, deprivation and intimidation” (McCloskey et al. 2007). These behaviors are directed toward a perpetrator’s spouse, common-law partner, sexual or dating partner. The long-term consequences of IPV include health risks, post-traumatic stress disorder, depression and staggering economic costs for the healthcare of victims (Davis 2008).

The lifetime prevalence of IPV has ranged from 20 to 40 percent among women in North America (Renker, 2008). In the documented cases of IPV in Canada alone, 40 percent of women who have experienced IPV suffered a physical injury, and 15 percent of these cases were serious enough to warrant medical attention (Cherniak et al., 2005). These women present to a wide variety of healthcare professionals including emergency room physicians, orthopedic or trauma surgeons, family physicians, and specialists in obstetrics and gynecology. These medical specialists play a vital role in the detection and treatment of IPV among their patients.

Despite this high prevalence and potentially serious consequences of IPV, screening for IPV is often contested in the literature, and several academics and organizations have expressed their lack of support for IPV screening in health care settings. Current guidelines from the U.S. Preventive Services Task Force (USPSTF) state that routine screening for IPV is not recommended (U.S. Preventive Services Task Force 2004). Following its release, the USPSTF’s statement and the methodology used were heavily criticized by medical associations, advocates, and in an Annals of Internal Medicine Editorial (Klevens & Saltzman 2009). Similarly, authors of a 2009 study published in the prestigious Journal of the American Medical Association reported that the results of their trial did not support IPV screening in health care settings (MacMillan et al. 2009). Critics commented on the questionable validity of the findings of this study (Moracco & Cole, 2009), which suffers from enormous loss to follow up, admits to “several methodological limitations” and was conducted under “carefully controlled conditions that may not reflect the reality of most clinical settings” (MacMillan et al. 2009). While some are opposed to IPV screening, several health professional organizations are strong proponents of this practice. The American Medical Association, the American College of Obstetrics and Gynaecology, the American Academy of Paediatrics, the American College of Emergency Physician and the US Centers for Disease Control and Prevention have advocated screening for IPV (Bhandari et al., 2009).

Despite recommendations for routine IPV screening in various medical settings, as well as the introduction of IPV screening and intervention protocols in emergency departments (Rhodes et al., 2011), healthcare workers do not routinely screen for IPV even when treating injuries (D’Avolio, 2011). Primary care and emergency room physicians screen about 1.5 to 13 percent of their patients while obstetricians, and gynaecologists screen about 10 percent of their patients for IPV (Waalen et al., 2000). Failure to diagnose IPV and intervene may have detrimental outcomes as 44 percent of
domestic violence related homicide victims had presented to an emergency department within 2 years of their deaths (Davis 2008). As a result of their relative inaction in identifying and providing support to women who experience IPV, health care providers have been criticized for letting these women fall through the cracks. According to Alpert (2007), “[t]he ability of most health professionals to effectively identify, assess, and respond to domestic violence has lagged far behind societal awareness and community responses”.

In response to the low IPV screening rates, a number of researchers have conducted studies to investigate barriers to IPV screening across various medical settings. The reported barriers include time constraints, unpreparedness to screen for IPV and discuss the issue comfortably and thoroughly, lack of clarity about implementation of screening and inadequate referral resources (Sormanti & Smith 2010; Colarossi, Breitbart, Betancourt 2010). Although barriers to screening for IPV are widely reported, a systematic review across studies with an emphasis on a quantitative approach, and informing opportunities for education and research has yet to be conducted. The current authors therefore undertook a systematic review of the published literature to identify frequently reported barriers to IPV screening across different medical sub-specialties to improve the understanding of IPV screening barriers among different health care professionals.

**Methods**

This systematic review adhered to the reporting guidelines of the Meta-analysis Of Observational Studies in Epidemiology (MOOSE) Statement (Stroup et al. 2008).

**Eligibility Criteria**

The authors identified articles in English that met the following eligibility criteria: 1) the study was published before May 2011 (when the literature search was performed), 2) the study reported HCP barriers to screening for IPV and 3) the study was identified in our search process (see next section). Studies were excluded for the following reasons: 1) the article was a review study, meeting abstract, commentary etc.; 2) the paper reported on a duplicate study population; 3) the study did not ask HCPs about barriers to screening for IPV; and 4) the article did not present any quantitative data on barriers to screening (e.g. stating the percentage or proportion of those who reported certain barriers to screening).

**Identification of Studies**

The authors conducted a search of MEDLINE for relevant articles published before May 2011 in all languages. They used the following key words in their search: (Spouse abuse (MeSH) OR Domestic violence (MeSH) OR Partner violence OR Wife abuse) AND (Challenge OR Challenges OR Barrier OR Barriers). To identify any studies that they did not capture with our MEDLINE search, they consulted with a content expert, and reviewed reference lists from articles that fulfilled our eligibility criteria.
Assessment of Study Eligibility

Two of the authors independently assessed the studies identified for full evaluation and resolved disagreements through discussion until consensus was reached. One author additionally verified inclusion of all studies.

Assessment of Methodological Quality

Four reviewers independently graded the methodological quality of included studies, with two reviewers grading each paper. At least one reviewer with methodological expertise and one reviewer with content expertise graded each study. Each of the methodological experts who were involved had a graduate degree in clinical research methods and a great deal of experience in conducting and reporting systematic reviews. The reviewers with content expertise each had an extensive background in IPV-related research through participation in both qualitative and quantitative studies for graduate theses.

Questions adapted from the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement designed for cross-sectional studies (von Elm et al. 2008) were used by reviewers to grade each study. This statement comprised 22 items considered for good reporting of observational studies (von Elm et al. 2008). The STROBE statement was developed to assist authors when writing analytic observational studies, to support editors and reviewers when considering such articles for publication, and to help readers critically appraise published research (von Elm et al. 2008). Although the STROBE statement was not developed as a tool for assessing the quality of published observational research (von Elm et al. 2008), very few checklists exist for critically appraising cross-sectional studies (Katrak et al. 2004; Sanderson, Tatt, & Higgins 2007; Kelley, Clark, Brown, & Sitzia 2003), and the current authors found that none of the previously developed checklists were appropriate for this study. Therefore, they adapted the STROBE statement to assess study quality (Appendix 1). A priori they determined that studies that met at least ten of the eleven reporting criteria within their modified STROBE criteria would be considered high quality, studies that met seven to nine reporting criteria would be considered moderate quality, and studies that met six or fewer criteria would be classified as low quality.

Data Extraction

Two authors developed a structured data extraction form, and four reviewers (two reviewers per study) extracted data from each eligible study. This structured form ensured that all data was being extracted and recorded consistently and completely by all reviewers. They extracted data on study characteristics, including location of study, type(s) of HCPs involved in the study, method of data collection etc. They extracted data on what HCPs perceived were barriers to screening for IPV, including what proportion of HCPs in the studies identified particular barriers.

Data Analysis

The authors produced an extensive list of barriers that HCPs in the included studies identified. They observed similarities between specific barriers and condensed the list by grouping the barriers based on their common themes. They proceeded to merge notably similar themes into fewer, more general themes. When there was disagreement
between reviewers regarding what the coding of a particular barrier, the reviewers would discuss their reasoning until consensus was reached. Afterward, they constructed a table to identify how many and which studies in particular reported each barrier. They grouped the barriers into five separate categories including personal barriers, resource barriers, attitudes and perceptions, fears, and patient-related barriers.

To identify any changes in the perceived barriers over time, they later grouped the studies by the time in which they were published into two ranges, 1995-2005 and 2006-2010. They analyzed the data from these groups to see any trends in the older versus more contemporary perceptions of barriers to screening for IPV.

Evaluation of Heterogeneity
Before analyzing the data, they hypothesized that a large degree of heterogeneity would be observed between the studies. Differences such as study methodology (e.g., mail survey versus in-person survey), HCPs surveyed (e.g., physicians versus nurses versus dentists), differences in survey tools used or questions asked, variability within and between populations (e.g., socioeconomic status, age, location), or variable study quality could contribute to the heterogeneity.

Results
Study Identification
The authors identified 496 articles through their MEDLINE search that were possibly relevant: 421 of which were excluded after review of titles, either because they were irrelevant to the subject matter or because they were not in English and thereby did not meet the inclusion criteria. An additional 43 studies were excluded after review of abstracts (Figure 1). Fourteen of the remaining (19) studies were excluded after full-text review. Nine of these studies were excluded because they did not include proportion data, four studies were excluded because they did not ask HCPs about barriers to screening for IPV, and one study was excluded due to its use of a duplicate study population, which left 18 articles included from the MEDLINE search (Figure 1). The authors also identified and included two studies after consultation with a content expert, and they included two studies after reviewing the references of other included studies. They thus included a total of 22 studies in this review from all examined sources.

Study Characteristics
Six of the included studies reported mean age of respondents, ranging from 38 to 46 years; nine studies reported a range of ages (Table 1). Overall ages of respondents ranged from 20 to over 80 years. The remaining seven studies did not report ages. The response rates varied widely from 14.6% to 98%, with two studies failing to report response rate and almost half of the studies (9/22, 40.9%) reporting a response rate, of 70% or greater. The percentage of female respondents in the included studies ranged from 9% to 100%. Most studies (17/22, 77.3%) were conducted in the United States.

Of the health care provider types reported, most were physicians (13/22, 59%) and nurses (10/22, 45.4%), followed by surgeons (2/22, 9.1%), chiropractors (2/22, 9.1%), and physician’s assistants (2/22, 9.1%). Twelve studies (54.5%) used a mail survey to identify barriers to screening for IPV, six studies (27.3%) used an in-person...
survey, one study (4.5%) used a self-administered survey, one study (4.5%) used an email survey, one study (4.5%) failed to specify the type of survey used, and one study (4.5%) used more than one type of survey.

Most studies included health care providers who were specialized in obstetrics and gynaecology (9/22, 40.9%), family medicine (7/22, 31.8%), internal medicine (4/22, 18.2%), emergency medicine (4/22, 18.2%) and paediatrics (4/22, 18.2%). Other medical specialties included orthopaedics, primary care, oncology, and dentistry.

Figure 1: Flow Chart of Study Process (Adapted From Guyatt et al, 2007)
Table 1. Characteristics of Included Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Year</th>
<th>Location</th>
<th>Health Care Provider Type</th>
<th>Medical Specialty</th>
<th>Females in Sample (%)</th>
<th>Mean Age of Participants (years)</th>
<th>Sample Size</th>
<th>Method of Data Collection</th>
<th>Response Rate (%)</th>
<th>Quality Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhandari</td>
<td>2008</td>
<td>Canada</td>
<td>Surgeons</td>
<td>Orthopaedics</td>
<td>NR</td>
<td>186</td>
<td>Mail survey</td>
<td>51.4</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>CDC</td>
<td>1997</td>
<td>United States</td>
<td>Physicians, Nurses, Physician’s Assistants</td>
<td>Primary Care</td>
<td>66</td>
<td>40</td>
<td>81</td>
<td>In-person survey</td>
<td>76</td>
<td>Low</td>
</tr>
<tr>
<td>Chamberlin</td>
<td>2000</td>
<td>United States</td>
<td>Physicians</td>
<td>Family, Internal, ObGyn</td>
<td>33.8</td>
<td>42.9</td>
<td>297</td>
<td>Mail survey</td>
<td>80</td>
<td>High</td>
</tr>
<tr>
<td>Elliot</td>
<td>2002</td>
<td>United States</td>
<td>Physicians</td>
<td>Family, Internal, ObGyn, Emergency</td>
<td>25</td>
<td>46 ± 14</td>
<td>1075</td>
<td>Mail survey</td>
<td>53</td>
<td>Moderate</td>
</tr>
<tr>
<td>Ellis</td>
<td>1999</td>
<td>United States</td>
<td>Nurses</td>
<td>NR</td>
<td>92.5</td>
<td>59</td>
<td>40</td>
<td>Mail survey</td>
<td>39.6</td>
<td>Moderate</td>
</tr>
<tr>
<td>Erickson</td>
<td>2001</td>
<td>United States</td>
<td>Physicians</td>
<td>Family, Pediatrics</td>
<td>41.6</td>
<td>NR</td>
<td>310</td>
<td>Mail survey</td>
<td>57</td>
<td>Moderate</td>
</tr>
<tr>
<td>Fawole</td>
<td>2010</td>
<td>Nigeria</td>
<td>NR</td>
<td>NR</td>
<td>78.5</td>
<td>38 ± 8.16</td>
<td>298</td>
<td>In-person survey</td>
<td>90.3</td>
<td>Low</td>
</tr>
<tr>
<td>Fikree</td>
<td>2004</td>
<td>Pakistan</td>
<td>Physicians</td>
<td>ObGyn</td>
<td>95</td>
<td>NR</td>
<td>100</td>
<td>In-person survey</td>
<td>98</td>
<td>High</td>
</tr>
<tr>
<td>Furnis</td>
<td>2007</td>
<td>United States</td>
<td>Nurses</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>385</td>
<td>Survey – type unclear</td>
<td>NR</td>
<td>Low</td>
</tr>
<tr>
<td>Gerber</td>
<td>2005</td>
<td>United States</td>
<td>Physicians, Nurse practitioners</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>59</td>
<td>Mail survey</td>
<td>84</td>
<td>Low</td>
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<tr>
<td>Study</td>
<td>Year</td>
<td>Location</td>
<td>Health Care Provider Type</td>
<td>Medical Specialty</td>
<td>Females in Sample (%)</td>
<td>Mean Age of Participants (years)</td>
<td>Sample Size</td>
<td>Method of Data Collection</td>
<td>Response Rate (%)</td>
<td>Quality Score</td>
</tr>
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<tr>
<td>Klein</td>
<td>2008</td>
<td>United States</td>
<td>Physicians, Counsellors</td>
<td>Family, Internal, OB/Gyn, Pediatrics, Emergency</td>
<td>38.4 (physicians) 87 (counsellors)</td>
<td>NR</td>
<td>835</td>
<td>Mail survey</td>
<td>61 for physicians, 42.8 for counsellors</td>
<td>Low</td>
</tr>
<tr>
<td>Lapidus</td>
<td>2002</td>
<td>United States</td>
<td>Physicians</td>
<td>Family, Pediatrics</td>
<td>NR</td>
<td>NR</td>
<td>438</td>
<td>Mail survey</td>
<td>49</td>
<td>Moderate</td>
</tr>
<tr>
<td>McGrath</td>
<td>1996</td>
<td>United States</td>
<td>Surgeons, Physicians, Nurses, Social workers, Midwives</td>
<td>OB/Gyn, Pediatrics, Emergency</td>
<td>69</td>
<td>NR</td>
<td>207</td>
<td>Self-administered survey</td>
<td>59</td>
<td>Low</td>
</tr>
<tr>
<td>Ortiz</td>
<td>2005</td>
<td>United States</td>
<td>Physicians, Nurses</td>
<td>Family, OB/Gyn</td>
<td>40</td>
<td>NR</td>
<td>74</td>
<td>Mail survey, Survey – type unclear</td>
<td>92</td>
<td>Low</td>
</tr>
<tr>
<td>Owen-Smith</td>
<td>2008</td>
<td>United States</td>
<td>Nurses</td>
<td>OB/Gyn, Oncology</td>
<td>100</td>
<td>NR</td>
<td>6</td>
<td>Email survey</td>
<td>85.7</td>
<td>Moderate</td>
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<tr>
<td>Parsons</td>
<td>1995</td>
<td>United States</td>
<td>Physicians</td>
<td>OB/Gyn</td>
<td>22.4</td>
<td>NR</td>
<td>933</td>
<td>Mail survey</td>
<td>14.6</td>
<td>High</td>
</tr>
<tr>
<td>Rodriguez</td>
<td>1999</td>
<td>United States</td>
<td>Physicians</td>
<td>Internal, OB/Gyn</td>
<td>42</td>
<td>46 ± 10.4</td>
<td>400</td>
<td>Mail survey</td>
<td>69</td>
<td>Moderate</td>
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<tr>
<td>Shearer</td>
<td>2006</td>
<td>United States</td>
<td>Chiropractors</td>
<td>24.6</td>
<td>NR</td>
<td>297</td>
<td>Mail survey</td>
<td>61</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Shearer</td>
<td>2006</td>
<td>United States</td>
<td>Chiropractors</td>
<td>48</td>
<td>NR</td>
<td>93</td>
<td>In-person survey</td>
<td>54</td>
<td>Moderate</td>
<td></td>
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</table>
Table 1. Characteristics of Included Studies (Continued)

<table>
<thead>
<tr>
<th>Study</th>
<th>Year</th>
<th>Location</th>
<th>Health Care Provider Type</th>
<th>Medical Specialty</th>
<th>Females in Sample (%)</th>
<th>Mean Age of Participants (years)</th>
<th>Sample Size</th>
<th>Method of Data Collection</th>
<th>Response Rate (%)</th>
<th>Quality Score*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugg</td>
<td>1999</td>
<td>United States</td>
<td>Physicians, Nurses, Physician’s assistants, Medical assistants</td>
<td>Family</td>
<td>70</td>
<td>NR</td>
<td>206</td>
<td>Mail survey</td>
<td>86</td>
<td>Moderate</td>
</tr>
<tr>
<td>Warburton</td>
<td>2006</td>
<td>United Kingdom</td>
<td>Dentists, Nurses, Clinical assistants, Dental hygienists</td>
<td>Dental and Unspecified</td>
<td>64</td>
<td>NR</td>
<td>73</td>
<td>In-person survey</td>
<td>97</td>
<td>Moderate</td>
</tr>
<tr>
<td>Yonaka</td>
<td>2007</td>
<td>United States</td>
<td>Nurses</td>
<td>Emergency</td>
<td>87.9</td>
<td>NR</td>
<td>33</td>
<td>In-person survey</td>
<td>NR</td>
<td>Low</td>
</tr>
</tbody>
</table>

*The quality score is based upon the modified STROBE Statement for cross-sectional studies. NR = not reported.
Study Quality
Questions adapted from the STROBE statement for cross-sectional studies were used to evaluate the quality of the 22 selected studies. We categorized five studies as high quality, nine studies as moderate quality, and eight studies as low quality (Table 1).

Personal Barriers
In more than half of the included studies (12/22, 54.5%), HCPs reported personal discomfort with discussing the topic of IPV as a barrier (Figure 2). This was followed by concern for personal safety (5/22, 22.7%) and concern of misdiagnosis (3/22, 13.6%). Forgetting to ask about abuse, personal history of abuse, and lack of confidence to refer victims was each reported as a barrier to screening for IPV in two studies.

Resource Barriers
The most frequently reported resource barriers were time constraints (18/22, 81.8%), lack of knowledge, education, or training regarding screening of abuse (15/22, 68.2%), and inadequate follow-up resources and support staff to assist victims (14/22, 63.6%) (Figure 2). This was followed by the lack of an office protocol for addressing IPV (4/22, 18.2%) and inadequate procedures and locations for screening (2/22, 9.1%).

Attitudes and Perceptions
The most frequently reported perception was that it is not the HCP’s role to screen for IPV (10/22, 45.5%) followed by the perception that HCPs have more pressing issues to address (4/22, 18.2%), that abused women should be blamed for the abuse (4/22, 18.2%), and that abuse is rare (2/22, 9.1%) (Figure 2). In addition, the perception that battered patients do not want a referral and that what HCPs view as abuse, the patients view as normal, were each reported in one study.

Fears
Fear of invading the patient’s privacy and fear of offending patients who were not abused were each reported as barriers to screening in half of the included studies (11/22, 50%) (Figure 2). This was followed by fear of the partner’s reaction and making life more difficult for the victim (4/22, 18.2%). Fear of police involvement and fear that the patient will stop seeing the HCP if he or she asked about abuse were each reported in one study.

Patient-related Barriers
The most frequently reported patient-related barrier was that the patient’s language interfered with effective screening (3/22, 13.6%), followed by the perception that patients with psychosocial issues and/or difficult personalities were difficult to screen (2/22, 9.1%), and that the abused victim would stay with the abuser anyway (2/22, 9.1%) (Figure 2). The perception that patients would deny battering as a cause of injury, that patients feared repercussions of being identified, that patients would not mention abuse in their medical history, and that patients would not be aware of their rights were each reported in one study.
Changes in Perceived Barriers Over Time

Nine of the twenty-two studies included in our review were published between 2006-2010, while thirteen studies were published within the 1995-2005 range. Most of the perceived barriers were reported proportionately between studies from these ranges, including time constraints, lack of office protocol, the perception that it is not within a HCP’s role, language barriers, and the fear of making patients angry if they were not abused.

There were some discrepancies in the barriers that were reported between studies published in the earlier versus later range. Seven of the nine (87.5%) studies from the more recent range cited personal discomfort with the issue of IPV as a barrier to screening, as compared to five of the thirteen (38.5%) studies published between 1995-2005. Inadequate follow-up resources/support staff to assist in victim education, safety planning, legal advocacy and referral and feelings that HCPs cannot help patients who are abused were cited as barriers in four of the nine (44.4%) studies published between 2006-2010 as compared to ten of the thirteen (76.9%) of the studies from the earlier range. Three of the nine (33.3%) of studies published within 2006-2010 indicated that the HCP’s fear of making the patients angry if they were not abused as a barrier to IPV screening, while six of the nine (66.7%) studies from 2006-2010.

Figure 2: Barriers to Screening for IPV
Consistency of Barriers Across Specialties

Barriers reported by HCPs in the included studies were similar across various medical specialties, except that musculoskeletal- and dental-related specialties did not report any barriers characterized as patient-related. Each of the four following barriers was reported by all specialties: personal discomfort with the issue, lack of knowledge, time constraints, and fear of making patients angry if they were not abused.

Discussion

The authors’ systematic review found a wide range of barriers to screening for IPV perceived by HCPs in various medical subspecialties. The major barriers to screening for IPV reported by HCPs were attributable to a lack of resources. The most frequently reported resource barriers were time constraints; lack of knowledge, education, or training regarding screening of abuse; and inadequate follow-up resources and support staff to assist victims. Of the personal barriers, fears, and perceptions, the most frequently reported barriers to screening were personal discomfort with the issue of IPV, fear of invading the patient’s privacy or offending patients if they were not abused, and the belief that it is not the HCP’s role to screen, respectively. Patient-related barriers were much less often reported as barriers to screening for IPV than HCP-related barriers. The current findings are consistent with those of Waalen and colleagues in their 2000 review of 12 studies addressing barriers to screening for IPV by HCPs and interventions to increase HCP screening behaviors, in which they found that lack of provider education and lack of effective interventions were the most frequently reported barriers in both open-ended interviews and written surveys; limited time was most frequently reported in open-ended interviews, and fear of offending or endangering the patient was reported most frequently in written surveys (Waalen et al., 2000). The current review improves upon Waalen’s review by including more recent studies and by considering a greater number of studies. Furthermore, within the current review, authors examined the differences in reported barriers over time.

The current authors also found that the barriers reported by HCPs in the included studies were similar across various medical specialties. This is comparable to the findings of the same study by Waalen et al. in which the lists of barriers reported by health professionals were similar despite differences in methods and provider population (Waalen et al., 2000).

Although a number of studies have suggested that patients support IPV screening (Friedman et al. 1992; McCauley, Yurk, Jenckes, & Ford 1998), the current findings indicated that several attitudes and perceptions held by HCPs act as barriers to screening, which may be related to lack of education and personal discomfort with the issue. Education, and training for HCPs should address such perceptions in an attempt to remove these barriers (Elliott et al., 2002). In addition, these resources should clearly outline the role and responsibilities of HCPs in addressing IPV and highlight the importance of screening in their practice (Chamberlain & Perham-Hester 2000). According to Erickson, Hill and Siegel (2001), family practitioners who were more educated and experienced with the issue of domestic violence were less likely to report lack of time as a screening barrier. This suggests that the perceived lack of time to screen for IPV, which was the most frequently reported barrier in this review, may be a result of
lack of knowledge, and that with increased training and experience, time constraints may become less of an issue.

The 22 studies included within the review were published over the span of 1995-2010. Due to this considerable range, the authors expected to see some differences in the reported barriers to IPV screening in earlier versus later studies. They hypothesized that these differences might be attributed to system-level changes including policy physician training. The fact that a greater proportion of the more recent studies indicated that HCPs’ personal discomfort was a barrier in screening, as compared to earlier studies reflects a need for more training on the matter of IPV so that HCPs may feel more comfortable and confident in their ability to screen for it in their patients. Conversely, the authors also found that a lesser proportion of more contemporary studies cited inadequate follow-up resources/support staff to assist in victims and feelings that HCPs cannot help patients who are abused as barriers, which may reflect recent improvements in the area of physician education and resources in the area of IPV.

Three of the nine (33.3%) studies published within 2006-2010 demonstrated that HCPs’ perceptions that they had more pressing issues as a barrier, as compared to one of the thirteen (7.7%) studies from the earlier range. This could be because of increased workload demands on the contemporary HCP.

The results of this review were limited by several factors, one of which included small sample sizes and low response rates in some of the included studies. In addition, the heterogeneity across the included studies as a result of variations in study design, methodology, provider characteristics and specialties, limited the direct comparison of studies. Another limitation was the high number of low- and moderate-quality studies that were included in the review, and the inclusion of articles that were only published in English. The authors did not include grey literature in our review, which may introduce bias because published articles are more likely to show positive results.

Additionally, although most of the included studies reported demographic information on their respondents (e.g. age range, mean age, sex), the vast majority of studies pooled their data and did not report their findings by age and/or sex. This limited the authors’ ability to report any trends in perceived barriers in male versus female and younger versus older health care providers. This would be valuable information in developing strategies to engage a wide range of health care providers. Similarly, it would be beneficial to explore discrepancies in reported barriers to IPV screening based on the economy of the countries included in our review. However, only two of the studies included in the review took place in non-industrialized nations, while the remaining twenty took place in either Canada, the United Kingdom, or the United States (all industrialized nations). The authors feel that it would be biased to identify differences in reported barriers between non-industrialized versus industrialized nations with such a small sample of studies from non-industrialized nations. They would recommend that future reviews take into account potential variation in reported barriers to IPV screening between health care providers of different sex, age, as well as socioeconomic status. As the literature base on IPV screening grows, it would be also be valuable to learn of occupation-specific barriers to IPV screening which may indicate which health care providers are best suited to successfully identify and respond to cases of IPV. The authors recommend that this is examined in future reviews.
Some bias may have been introduced in grouping older versus more recent studies based solely on their date of publication. Frequently, results of a study are published several years after the study was initially conducted. Unfortunately, the authors were limited to the information that the studies reported with regards to the time frames of their study, from data collection to publication. Seven of the twenty two studies included in the review (31.1%) reported the time period that data was collected, making it impossible to compare differences in reported barriers over time based on grouping studies by the time they were conducted.

Despite these limitations, the review had several strengths, including a thorough and systematic search of the literature, followed by thorough and systematic screening of the studies for inclusion, and completion of data abstraction from the included studies by multiple independent reviewers. This review was also strengthened by its broad inclusion criteria. The results of this review indicated numerous barriers to IPV screening that need to be addressed to increase IPV screening by HCPs. This review has demonstrated that provider-related barriers were reported more often than patient-related barriers in the current literature. The authors feel that this finding is promising and that these barriers are easier to address and can be done so systematically through change in policy and education of health care providers. It serves to advocate for the continued training of medical professionals to recognize and treat IPV cases, which will ultimately increase the quality of life for victims. Education and training for HCPs should focus on increasing awareness and exploring perceptions on IPV screening to remove barriers. Future research should explore optimal methods of disseminating IPV information among HCPs and developing efficient methods of screening.

Acknowledgements

We would like to acknowledge Sarah Jiwa and Manraj Chahal for their assistance in the preparation of this manuscript.

List of Included Studies


References

### Appendix 1: Study Quality Checklist

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<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Unclear</th>
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<td>Were the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection appropriate?</td>
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<td>Were the eligibility criteria, the sources, and methods of selection of participants appropriate?</td>
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<td>Were the outcome measures and potential confounders clearly described and appropriate?</td>
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<td>For each variable of interest, did the authors provide sources of data and details of methods of assessment (measurement)?</td>
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<td>Were any efforts to address potential sources of bias utilized?</td>
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<td>Did the authors provide an appropriate explanation of how the study size was arrived at?</td>
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<td>Were appropriate statistical methods utilized?</td>
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<td>Did the authors explain how missing data were handled?</td>
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<td>Did the authors report numbers of individuals at each stage of study—e.g. numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, and analysed?</td>
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<td>Did the authors provide characteristics of study participants (e.g. demographic, clinical, social) and information on potential confounders?</td>
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<td>Did the authors report other analyses done—e.g. analyses of subgroups and interactions, and sensitivity analyses?</td>
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