

“I’ve never asked one question.” Understanding the barriers among orthopedic surgery residents to screening female patients for intimate partner violence

Lesley Gotlib Conn, PhD*
Aynsely Young, BScN, RN†
Ori D. Rotstein, MD‡
Emil Schemitsch, MD§¶

From *Sunnybrook Research Institute, Toronto, Ont., †Department of Surgery, St. Michael’s Hospital, Toronto, Ont., ‡Keenan Research Centre of the Li Ka Shing Knowledge Institute of St. Michael’s Hospital, Toronto, Ont., §Division of Orthopaedic Surgery, St. Michael’s Hospital, and ¶Department of Surgery, University of Toronto, Toronto, Ont.

Accepted for publication
Apr. 9, 2014

Correspondence to:
L. Gotlib Conn
Affiliate scientist, Clinical Evaluative Sciences
Trauma, Emergency & Critical Care Program
Sunnybrook Research Institute
2075 Bayview Ave. Suite K3W-28
Toronto ON M4N 3M5
Lesley.gotlibconn@sunnybrook.ca

DOI: 10.1503/cjs.000714

Background: Intimate partner violence (IPV) is a global public health problem. Orthopedic surgery residents may identify IPV among injured patients treated in fracture clinics. Yet, these residents face a number of barriers to recognizing and discussing IPV with patients. We sought to explore orthopedic surgery residents’ knowledge of IPV and their preparedness to screen patients for IPV in academic fracture clinic settings with a view to developing targeted IPV education and training.

Methods: We conducted focus groups with junior and intermediate residents. Discussions explored residents’ knowledge of and experiences with IPV screening and preparedness for screening and responding to IPV among orthopedic patients. Data were analyzed iteratively using an inductive approach.

Results: Residents were aware of the issue of abuse generally, but had received no specific information or training on IPV in orthopedics. Residents did not see orthopedics faculty screen patients for IPV or advocate for screening. They did not view IPV screening or intervention as part of the orthopedic surgeon’s role. Residents’ clinical experiences emphasized time management and surgical intervention by effectively “getting through clinic” and “dealing with the surgical problem.” Communication with patients about other health issues was minimal or nonexistent.

Conclusion: Orthopedic surgery residents are entering a career path where IPV is well documented. They encounter cultural and structural barriers preventing the incorporation of IPV screening into their clinical and educational experiences. Hospitals and academic programs must collaborate in efforts to build capacity for sustainable IPV screening programs among these trainees.

Contexte : La violence conjugale (VC) est un problème de santé publique à l’échelle mondiale. Les résidents en chirurgie orthopédique seraient bien placés pour identifier des victimes de VC parmi les patients qu’ils voient dans les cliniques de fractures, mais ils font face à de nombreux obstacles qui les empêchent de les reconnaître et d’entamer un dialogue avec ces victimes. Nous avons voulu vérifier les connaissances des résidents au sujet de la VC et leur degré de préparation à dépister les cas de VC chez leurs patients dans le contexte des cliniques de fractures des hôpitaux universitaires dans le but de concevoir une formation théorique et pratique concernant la VC.

Méthodes : Nous avons organisé des groupes de discussion avec des résidents juniors et intermédiaires. Ces discussions ont mis au jour les connaissances et expériences des résidents en ce qui concerne le dépistage de la VC, leur degré de préparation à dépister la VC chez les patients orthopédiques et à y réagir. Les données ont fait l’objet d’une analyse itérative par approche inductive.

Résultats : Les résidents étaient généralement conscients du problème de violence, mais n’avaient reçu aucune formation théorique ni pratique sur la VC en orthopédie. Ils n’ont été témoins ni du dépistage de la VC ni de la promotion de son dépistage de la part de leurs professeurs en orthopédie. Selon eux, le dépistage de la VC ou une quelconque intervention à ce sujet ne fait pas partie du rôle du chirurgien orthopédiste. Les expériences cliniques des résidents portaient avant tout sur la gestion du temps et l’intervention chirurgicale en procédant efficacement à l’examen clinique et en prenant en charge la problématique orthopédique. La communication avec les patients au sujet de tout autre problème de santé était minime, voire inexistante.

Conclusion : Les résidents en chirurgie orthopédique amorcent un parcours professionnel où la VC est bien documentée. Ils font face à des obstacles culturels et structurels qui les empêchent d’intégrer le dépistage de la VC dans leurs expériences cliniques et didactiques. Les programmes hospitaliers et universitaires doivent collaborer aux efforts visant à promouvoir l’application d’initiatives de dépistage de la VC par les résidents.

Violence against women is a global public health problem. The World Health Organization (WHO) reports 30% of women worldwide will experience abuse by an intimate partner (intimate partner violence [IPV]).¹ Intimate partner violence is physical, sexual or psychological harm by a partner or spouse, varying in frequency and severity and ranging from a single incident to constant, severe battering.² Significant adverse health outcomes of IPV include physical, psychological and emotional effects, directly or indirectly causing injury and/or death. Among women experiencing IPV worldwide, 42% have had resulting physical injuries.¹

Although most IPV experienced by women is not physical, those who do experience physical harm often endure musculoskeletal injuries. These injuries are the second most common physical outcome of IPV,³ and their treatment frequently requires referral to an orthopedic surgeon. The prevalence of IPV in the orthopedic surgeons' patient population has been found to match that reported in the general population by the WHO. Among women treated by orthopedic surgeons in 2 Ontario fracture clinics 32% report experiencing IPV within the past 12 months, with 2.5% reporting physical injury as the reason for the fracture clinic visit during which data were collected.⁴ International data from nearly 3000 women in injury clinics reveals the overall lifetime prevalence of IPV to be 35%, with 1 in 6 women having experienced IPV within the past 12 months, 3% of which was physical abuse.⁵

Health care providers are well positioned to identify cases of IPV. Screening for IPV is encouraged by many professional organizations — medicine, nursing and other health professions. Screening involves looking for IPV despite the absence of overt signs and/or symptoms.⁶ The 2013 U.S. Preventive Services Task Force recommendation statement on screening for IPV recommends that clinicians perform routine screening on women of childbearing age based on evidence demonstrating its reduction in violence and harm for this group.⁷ Despite these recommendations, many barriers prevent clinicians from screening in various settings. Research suggests a lack of effective interventions for IPV once clinicians have identified it and that lack of education about IPV impedes screening.⁸⁻¹⁰ Resource barriers, including time constraints, poor knowledge of and training in screening practices and inadequate resources for disclosure response, are reported as the most common explanations for not screening.¹¹ A recently conducted randomized controlled trial showed that reducing barriers by providing training and support to clinicians and administrative staff in general practices can achieve a significant increase in referrals to domestic violence support services.¹²

Among orthopedic surgeons, a knowledge gap pertaining to IPV has been identified.¹³⁻¹⁶ Many orthopedic surgeons believe IPV is rare among their female patients, estimating a prevalence of less than 1%.¹⁴ Research confirms orthopedic surgeons' misconceptions about the prevalence of IPV in

fracture clinic patients and the social complexity of abusive relationships.¹⁶ Not knowing how to ask about and respond to IPV are also barriers for these surgeons, with very few reporting having had any training in this area.^{14,16}

These findings have led to a call for targeted IPV education in injury clinics,⁵ specifically for orthopedic surgeons, with a view to removing knowledge barriers and integrating IPV screening into practice.^{15,17} In 2009, the Canadian Orthopaedic Association endorsed surgeons' knowledge of and preparedness for IPV screening and response.¹⁷ However, the endorsement does not address the issue of how surgeons should be provided with the skill set to screen for IPV. In an effort to develop IPV education for incoming orthopedic surgery residents, we undertook a qualitative investigation exploring current residents' knowledge of IPV and their capacity for screening and responding to IPV disclosures. Given the well-documented problem of IPV in this domain, we sought to determine the type of intervention needed among orthopedic surgery residents. Our study, therefore, aimed to identify knowledge gaps, perceived barriers and enablers for practising IPV screening in the clinical orthopedic setting. We report findings among junior and intermediate residents who participated in our study.

METHODS

Participants and sampling

All residents in the orthopedic surgery program at the University of Toronto ($n = 64$) were invited to participate in a focus group. Focus groups are often used in medical education research as an exploratory and evaluative method.¹⁸ Participant recruitment took place between August 2012 and February 2013. Residents were contacted by a research coordinator via email and in person at existing academic sessions. We used a convenience sampling approach.¹⁹ Participation in the research was voluntary. We obtained research ethics approval from the University of Toronto Health Sciences Research Ethics Board.

Data collection and analysis

Four focus groups were conducted averaging 1 hour in duration each. These sessions were moderated by an experienced research coordinator while a second researcher took detailed notes. A semistructured moderator guide was used to lead the discussion.¹⁸ The focus groups were audio-recorded and transcribed. All data were deidentified, and transcripts were anonymized.

An inductive analysis of the qualitative data was conducted in iterative fashion.²⁰ After the first focus group, 2 researchers (L.G.C., A.Y.) began independent coding of the transcript. Each coder identified emerging ideas and concepts to confirm or refute in subsequent focus groups.

The transcript from the second focus group was also coded by the 2 researchers independently. The researchers then met to compare and discuss an emerging overarching coding scheme. Parallel coding continued for the remaining transcripts, after which the researchers met to discuss and finalize the coding and thematic organization of the data. Saturation of themes occurred after 4 focus groups were completed (i.e., the point at which no new data categories were discovered).²¹ We used Nvivo10 software (QSR International) for data management.

RESULTS

Eighteen residents participated in the study. Eight participants were postgraduate year 1 (PGY1). Seven participants were intermediate residents (PGY2–3) with considerable experience in the orthopedics residency. The remaining 3 participants were senior (PGY4) residents. Two focus groups comprised solely PGY1 residents; the

other 2 groups were heterogeneous, involving trainees from PGY1–4 (Table 1). Three participants were women. Owing to the small number of senior resident participants in the study, findings reflect the experiences and attitudes of junior and intermediate residents only (PGY1–3).

Findings revealed 4 main thematic categories pertaining to barriers: knowledge gap, cultural barriers, structural barriers and conceptualizing the surgeon's role (Table 2).

Theme 1: knowledge gap

Junior and intermediate residents had an understanding of the general issue of abuse from their undergraduate medical education. Many described didactic learning on this topic in pediatrics, obstetrics and elder care. Yet, most participants were not aware of the prevalence of IPV among women seen by orthopedic surgeons in fracture clinics. A PGY1 resident in focus group 1 stated, "I think that's what's shocking from the protocol. You said in an anonymous survey of women in the last year 32% were abused in that period, and I think how many people I've seen in my time at fracture clinic and I've never asked one question."

"It's more theoretical"

A number of residents had screened children for abuse in postgraduate pediatric rotations. Despite having completed clinical rotations in orthopedic surgery, a large majority had not screened any patients for IPV in an adult orthopedic setting. A PGY1 resident in focus group 1 explained, "I feel like it's more theoretical because we're taught it, but then in actual practice I've rarely seen it." Another PGY1 resident in focus group 2 with similar exposure to the clinical setting agreed, stating, "I think we've been given some information about it, but as far as dealing with it in real life, that's a totally different thing."

Characteristic	Focus group, no.				Total
	1	2	3	4	
PGY					
1	5	2	0	1	8
2	0	0	2	2	4
3	0	0	2	1	3
4	0	0	2	1	3
5	0	0	0	0	0
Total	5	2	6	5	18
Sex					
Male	3	2	5	5	15
Female	2	0	1	0	3

PGY = postgraduate year.
*Findings from this study are reported from PGY1–3 participants only.

Barriers; major theme	Subtheme	Indicating quote
1. Knowledge gap	Lack of experiential knowledge	It's more theoretical
	Lack of preparedness	I'm not even sure what I would do about it
2. Cultural barriers	Priority is injury manifestation and fix	You're not really thinking about it
	Selective screening	I don't think it's proper to screen everyone
	No role model for screening	It has to trickle from your superiors down
3. Structural barriers	Lack of time	It's like a hundred patients a day
	Lack of privacy	It's so open
	Lack of staff support	It throws the whole clinic off
4. Conceptualizing the surgeon's role	Not the surgeon's role	We're the surgeons, we look at surgical issues
Enablers		
1. Reinforcement		It's just keeping it relevant
2. Champion identification		Hearing from orthopedic surgeons
3. Embedment into current program		There are a lot of educational initiatives

“I’m not even sure what I would do about it”

Most junior and intermediate residents did not feel prepared to respond to an IPV disclosure. As a PGY1 participant in focus group 2 explained, “I’m not really sure what I would do if a lady comes in with a fracture and says, ‘Oh, by the way, I did actually fall and this happened but, by the way, sometimes I get hurt at home because my husband beats me.’” Lack of preparedness to respond due to a training gap was common, as described by a PGY3 resident in focus group 3:

I would add, along with ignorance, I’m not even sure what the protocol would be if I had someone who I suspected was being abused. Again, at [pediatric hospital] it’s easy, you just call this one service and then you kind of wash your hands of it, which is nice for us because we don’t have to get involved in being the treating doctor, as well as the person talking to them about being abused. Here [at adult hospital], if I saw someone, I’m not even sure what I would do about it.

Theme 2: cultural barriers

Cultural barriers refer to the way that orthopedic residents think about the problem of abuse as it relates to their postgraduate education and clinical training.

“You’re not really thinking about it”

Findings revealed that treatment of the presenting injury is often the sole clinical priority when residents see injured patients. The resident is much less likely, if at all, to be attuned to psychosocial concerns. Intermediate-level residents in particular described being focused on treatment based on patients’ radiographs; none expressed concern with talking to patients and exploring etiology. As a PGY3 participant in focus group 4 explained, as a result of their treatment focus, orthopedic surgeons “have the reputation of being a bit less touchy-feely, a bit less talkative, a bit more goal-directed and up-front, and very quick with our decision-making.” Another PGY3 participant in focus group 3 described this treatment approach as follows: “The injury is what it is, you see it on the x-ray. It happened and let’s get it fixed.”

“I don’t think it’s proper to screen everyone”

Most participants found routine, universal screening of orthopedic patients difficult to envision in practice. Some felt that the emergency department was a more appropriate setting for IPV screening because a complete health history is expected, whereas in a fracture clinic this is not the norm. For example, a PGY2 resident in focus group 3 commented, “I think they’re being screened as they come through the emerg, so I don’t think that screening them again in the fracture clinic adds anything.” Some residents were clear about who would not require screening among their patients. This included those with obvious mechanisms of injury, such as a child who fell off his bike and

broke his arm, and patients not fitting the stereotype of an IPV victim. For instance, a PGY1 resident in focus group 1 posed a rhetorical question about screening both sexes: “What about the huge guy that gets hurt on the construction site? Are you going to ask him if he’s safe at home?”. However, this was not a uniform belief as another PGY1 participant in focus group 1 commented, “I think it’s important. I think men get abused.”

“It has to trickle from your superiors down”

According to residents, IPV screening was not part of the current practice or training approach of their clinical supervisors. No participant had observed an orthopedic faculty or senior trainee team member screen for IPV. A PGY2 resident in focus group 4 commented, “I’ve never actually seen screening being done in fracture clinic.” A PGY3 resident in focus group 4 confirmed this, stating, “I don’t actively try to get patients to admit to being abused, nor have I really seen any of my mentors or teachers do the same.”

Theme 3: structural barriers

Structural barriers relate to the organization of the clinic and training described by residents as being suboptimal for IPV screening and response. Three main barriers are found to influence residents in this regard: time, space and staff support.

“It’s like a hundred patients in a day”

Residents believed that the brief amount of time spent with patients was not conducive to IPV screening by either surgeons or residents. Lack of time was perceived to limit their attention to the immediate orthopedic problem. A PGY1 resident in focus group 2 stated, “There’s definitely very little focus on social anything in a high-volume fracture clinic. You’re kind of looking at: Is the fracture healing? Is the wound okay? Awesome — see the next patient. That’s kind of it.” Some participants felt that time constraints impeded the formation of sufficient patient rapport that would lead to an IPV disclosure; a PGY1 participant in focus group 1 commented, “I think it takes time to build that relationship for them to disclose something so personal.”

“It’s so open”

Lack of privacy to speak with patients was believed to hinder residents’ screening opportunities. Participants felt the proximity of stretchers prevented confidential conversations. Clinic settings were described by PGY1 and PGY3 residents, respectively, as “one large room with multiple beds,” where patients are “separated by a single screen.”

“It throws the whole clinic off”

Residents indicated that, owing to patient volume, clinic staff offered minimal support for initiatives that extend

appointments. Delays in patient flow were perceived to frustrate nurses and clerical staff, who were left to manage aggravated, waiting patients. As described here by a PGY3 resident in focus group 3, when spending unexpected time with a single patient, “You have unhappy patients and unhappy staff because the patients in the waiting room are yelling at the front desk, the front desk is telling nurses to hurry up, the nurses are mad. So it’s unfortunately a vicious cycle.” While acknowledging that, as a PGY1 resident from focus group 1 described, “in a fracture clinic setting there’s a lot of pressure on you to just see patients quickly,” there was also the belief that screening and response were manageable. A PGY1 resident in focus group 1 explained, “If you do pick up on something, I think it’s prudent to take a step back, try to get them in a private setting, and then ask them more pointed questions.” Strategies that were discussed for addressing this barrier with patients for whom IPV was suspected or disclosed included admitting patients to hospital or asking them to stay until the end of clinic when more time was available.

Theme 4: conceptualizing the surgeon’s role

“We’re the surgeons, we look at surgical issues”

All participants felt that knowledge of IPV and IPV screening were relevant to their practices; yet, they questioned the surgeon’s role in investigating or intervening if s/he suspected IPV, or if a patient had sustained and disclosed IPV — physical or otherwise — that was not directly related to the orthopedic injury. Many participants felt that dealing with IPV was not part of the surgeon’s specialized knowledge and expertise. For instance, a PGY1 resident in focus group 2 stated, “It’s not really something that we would deal with; it’s not a surgical problem, right? And we kind of deal with the surgical problem.”

Residents did not see themselves as the optimal care provider to address the broader issue of IPV, as illustrated by a PGY1 resident in focus group 1: “Because as an orthopedic surgeon, you screen and pick it up, but ultimately we’re not the ones who are translating it into actual action in the community.” Another PGY1 resident in focus group 1 stated, “There’s a difference between abuse and physical abuse. I mean, financial abuse, sure, that’s a real issue, but the orthopedic fracture clinic may not be the best place to discuss that. Like, it isn’t really your role. But physical abuse, I think, is a lot more relevant, a lot more important for people in our position to pick up on.” However, only a minority of participants felt strongly that regardless of their specialty, they were well positioned and willing to screen patients for IPV. It was suggested by 2 participants (residents in PGY1 and PGY2) that any trained health care provider could effectively encourage a patient to consider disclosing her/his situation and assist them to seek help.

Enablers to the implementation of IPV screening and response among residents

Three themes pertaining to enablers to IPV screening and response were identified: reinforcement, champion identification and embedment in the current program.

Theme 1: reinforce the issue

There was strong consensus among participants that efforts to sustain awareness of IPV must be ongoing. The focus group discussion itself was viewed by participants as a useful forum to remind them about the importance of IPV awareness. A PGY1 participant in focus group 2 explained, “I think even just having this session just puts it back on the radar as something that you’re going to be watching out for. Most residents felt capable of addressing sensitive issues, such as IPV, with their patients, but felt the reminder to ask about IPV specifically was needed. A PGY3 participant from focus group 3 stated, “I think through all of our career so far we’ve dealt with, not necessarily abuse, but we’ve dealt with something that’s very emotionally charged, and had to tell the patient, tell a family member something and follow it up with those questions. So I think we can deal with that part. I think it’s just keeping it relevant, on top of our minds, and just building it into our daily practice.”

Theme 2: identify champions

Participants described the positive influence of champions within their field. Shared experience was believed to be an effective enabling tool. A PGY1 resident in focus group 2 stated, “Hearing from other clinicians who’ve had experience, ideally orthopedic surgeons, who’ve had experience screening and then having positive results and being able to hear how they dealt with it would be beneficial.” Clinical role modelling was similarly viewed as enabling, as described by another PGY1 participant in focus group 2: “If I see it in a clinical setting, like if I were to be in emerg, as a medical student, and something like that happened and the emerg doc is like, ‘Okay, now I have to go talk to the nurse because now we’re going to call this organization, and all this is going to happen because of that,’ then I’m like, ‘Oh, okay.’ Then I’m going to remember it, right?”

Theme 3: embed IPV education in an existing, mandatory program

There was agreement among participants that focused IPV education must be embedded within the existing postgraduate training program. Incorporating information into established mandatory learning sessions was considered to be critical to success. As explained by a PGY1 resident in focus group 4, “There are a lot of educational initiatives within which IPV could be relevant.” Participants identified a number of existing teaching seminars

where they believed discussions of IPV would fit seamlessly. Residents cautioned against the use of online teaching or optional seminars, which a PGY3 participant in focus group 4 described as “guaranteed won’t be utilized, and probably easily brushed over or deleted.”

DISCUSSION

Findings from this qualitative study enhance our current understanding of junior and intermediate orthopedic surgery residents’ knowledge and awareness of IPV and offer some insight into their experience with and exposure to IPV training. Residents in this study were aware of the issue of abuse generally and how it manifested clinically in vulnerable populations, such as children and elderly patients. Their knowledge of any kind of screening pertained to these populations. They had comparatively little knowledge of the relevance of IPV and IPV screening for adult orthopedics patients. During their orthopedic surgery training, they received little to no specific information or preparedness training on IPV in orthopedics patients. Residents did not see orthopedics faculty members screen for IPV or support screening. In this regard, participants believed that providers working in other specialties and settings, such as the emergency department, were better positioned to screen and respond to IPV disclosures. Neither junior nor intermediate residents viewed IPV screening or intervention as part of the orthopedic surgeon’s role. Residents’ current experiences in fracture clinic emphasized time management and direct patient care issues by effectively getting through clinic and dealing with the surgical problem. Communication with patients about other health issues was described as minimal or nonexistent.

Residents in this study had limited knowledge of the prevalence of IPV in the general population and, thus, in orthopedics patients. Medical and surgical trainee misperceptions about the problem of abuse in other populations and their lack of preparedness to address it have been previously demonstrated.²²⁻²⁴ Among U.S. pediatric medicine residents, one-third of graduates were exposed to fewer than 5 cases of child abuse,²³ whereas 50% of Canadian residents had seen 5 or fewer cases of possible abuse during training.²⁴ These findings resonated with the experiences of our participants, among whom even PGY3 trainees had minimal if any experience with IPV screening and were not prepared to manage IPV disclosures. In addition to demonstrated knowledge gaps, our participants described lack of exposure to clinical preceptors who were screening injured patients for IPV. Narayan and colleagues²³ reported that pediatric residents’ increased clinical experiences were associated with improved preparedness to identify abused children. Residents in this study have identified the enabling influence of champions within orthopedic surgery. Role modelling by faculty and mentors in ortho-

pedic training units is therefore 1 plausible strategy that may lead to increased uptake of IPV screening, as this form of social learning has been effective with surgeons in other domains when imparting nonsurgical skills.²⁵ Given the critical role of clinical preceptors, it is essential that these individuals become armed with a knowledge base to screen and respond to IPV. This may occur through faculty development initiatives and should be integral to training programs for future orthopedic care providers.

Residents in our study believed that other care providers are already screening their patients, and that 1 screening experience for patients may be enough to elicit a disclosure. Neither of these assumptions is supported by current evidence. To the contrary, research suggests that neither emergency department clinicians nor primary care providers are routinely screening patients²⁶⁻²⁹ and that disclosure rates may increase when screening questions are asked at every clinical encounter.³⁰ Moreover, residents expressed differing views about the appropriateness of IPV screening by orthopedic specialists, stating that on the one hand IPV screening would be more acceptable from an emergency department clinician because they are often asking social history questions, but that on the other hand orthopedic specialists cannot establish sufficient patient rapport owing to short clinical visits, such as those that are typical in an emergency setting. Sprague and colleagues¹⁵ report similar findings related to perceived barriers for patients and trainees in their study of orthopedic faculty and residents. Timing, opportunity, and patient-clinician relationships were interrelated aspects of the screening process that residents in our study grappled with.

The structural barriers that residents described are substantial and, in fact, they overlap categorically with the cultural barriers that were also identified. Protecting valuable clinic time focused on the provision of orthopedic care while simultaneously providing a nonsurgical intervention, such as IPV screening and response, requires a shift in the current way of thinking about the structure and function of the academic fracture clinic setting. Previous research highlights the importance of organizational support to effectively implement and sustain IPV screening programs, including time management and resource allocation.^{31,32} Successful IPV intervention programs use comprehensive approaches, including ongoing staff and clinician training and institutional policy integration, which are instrumental to sustainability.³³ For instance, the implementation of a multifaceted IPV training and support program in a general practice setting in the United Kingdom has equipped clinicians and administrative staff to screen and respond to IPV effectively and has increased referrals for support.¹² However, findings from our study suggest that in academic fracture clinic settings, junior and intermediate residents experience structural barriers that are closely tied to cultural ideas of what orthopedic surgeons do in a fracture clinic and how they do it well. Residents in our study have

learned that effectively managing high patient volumes and maintaining clinic flow while maximizing attention to direct patient care issues and follow-up care are most desirable. This finding suggests that junior and intermediate residents are training for efficient care, but not necessarily for the breadth of patient-centred care. The concept of efficiency has been used to characterize residents' socialization experience in hospital inpatient wards where trainees are implicitly taught to keep the transfer of patient information succinct and communications with inpatients brief.³⁴ In the academic fracture clinic, the practice of efficiency lends to residents' current perception that there is no time to talk to patients about nonsurgical issues, as this approach might result in slower and less efficient care. Based on residents' reported experiences, the net effect will be longer patient wait times and potential conflict among clinic staff and surgical faculty. The clinical and educational implications of this finding are important. In order for an educational intervention to be successful, contextual barriers produced by both the hospital and the academic institution must be jointly addressed.^{35,36} Efforts to increase faculty knowledge of and support for IPV screening and response in the fracture clinic setting should be accompanied by structural modifications to optimize faculty and trainee opportunities to exercise this new knowledge and practice. Thus, the success of an IPV screening program in this setting requires both structural and cultural changes to organizational and individual conceptualizations of quality learning and patient care. Hospitals and academic programs must collaborate in efforts to build capacity for sustainable IPV screening programs among orthopedic surgery trainees, nonsurgical staff and faculty members.

Importantly, while residents in this study identified enablers to IPV education and training in their program, strategies that they felt would be most effective were those that do not add any additional work on their part. Residents expressed a lack of interest in participating in any educational activity that could be perceived to increase their already heavy workload. While completely unsurprising, this finding reinforces the complexity with which IPV screening and response implementation among residents is met within the academic environment: if IPV is not fundamentally viewed as part of the orthopedic surgery residents' core training program, it will not be perceived as necessary. Embedding IPV awareness and preparedness into existing mandatory postgraduate training is needed to transform their future professional role identity and practice.

Limitations

There are some limitations to this study. Participants were all trainees in the same orthopedic surgery program. Resident experiences in other training programs with other fracture clinic settings may be different than those described here. In addition, the perspectives accounted for

here are limited to those of PGY1–3 residents. Senior residents (PGY4–5) may have different experiences than junior and intermediate residents that are not reflected in the present data. Although the knowledge and experiences of the 3 senior (PGY4) residents who participated in this study were thematically congruent with those reported here, the research team could not report with certainty that they had reached data saturation among senior residents, whose exposure to the clinical environment was presumably greater than that of PGY1–3 residents. Despite very determined efforts to recruit PGY5 trainees for participation in the study, we were unable to do so. The barrier to participation among PGY5 residents is unknown. The unique or similar experience of these senior orthopedic residents is, therefore, an area for further research. Finally, an acknowledged limitation of focus group research is that participants may feel uncomfortable or unwilling to speak their minds in front of their peers. Given that participation in this study was voluntary and that there was presentation of opposing views and opinions, it appears that residents who volunteered for this study spoke candidly.

CONCLUSION

While IPV is considered an important issue in the practice of medicine, junior and intermediate orthopedic surgery residents face a number of significant and inter-related barriers to screening patients for IPV in their clinical experience: lack of knowledge of IPV, lack of faculty role modelling, lack of time, lack of privacy and the belief that this is not the surgeon's role. Enablers to IPV awareness that residents identify reinforce the complex relationship between residents' learning, professional identity formation and clinical experiences. Based on findings from our study, we developed and implemented an educational and interactive IPV awareness and response training seminar that was mandatory for incoming orthopedic surgery residents at the University of Toronto in 2013. The seminar aimed specifically to address the barriers of IPV knowledge, preparedness for IPV screening and response and role understanding. During the seminar, 2 highly respected orthopedic surgeons who have championed awareness of IPV in orthopedics for many years delivered information about the evidence and its relevance to the orthopedics profession in general as well as to their own practices. Residents were subsequently trained by a nurse educator to screen for and respond to IPV and engaged in simulated clinical scenarios with patient actors to practise newly acquired IPV screening and response skills. While these efforts are a first step to address individual level barriers for new residents, this study has identified a number of key contextual issues that arise in the clinical environment that should also be considered in the development and implementation of targeted IPV screening programs.

Future research should also consider how to determine the effectiveness of implementing IPV screening and response in the academic fracture clinic setting.

Competing interests: None declared.

Contributors: All authors designed the study. L. Gotlib Conn and A. Young acquired and analyzed the data, which O. Rotstein also analyzed. L. Gotlib Conn and O. Rotstein wrote the article, which all authors reviewed and approved for publication.

References

- World Health Organization. Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence. Switzerland: The Organization; 2013 Jun 20.
- Centers for Disease Control and Prevention. Intimate partner violence: definitions. Available: www.cdc.gov/violenceprevention/intimatepartnerviolence/definitions.html (accessed 2013 Jul. 17).
- Bhandari M, Dosanjh S, Tornetta P, et al. Violence against women health research collaborative. Musculoskeletal manifestations of physical abuse after intimate partner violence. *J Trauma* 2006;61:1473-9.
- Bhandari M, Sprague S, Dosanjh S, et al. The prevalence of intimate partner violence across orthopaedic fracture clinics in Ontario. *J Bone Joint Surg Am* 2011;93:132-41.
- PRAISE Investigators. Prevalence of abuse and intimate partner violence surgical evaluation (PRAISE) in orthopaedic fracture clinics: a multinational prevalence study. *Lancet* 2013;382:866-76.
- Moyer VA. Screening for intimate partner violence and abuse of elderly and vulnerable adults: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med* 2013;158:478-86.
- Screening for intimate partner violence and abuse of vulnerable adults. U.S. Preventive Services Task Force recommendation. *Ann Intern Med* 2013;158:I-28.
- Waalén J, Goodwin MM, Spitz AM, et al. Screening for intimate partner violence by healthcare providers: barriers and interventions. *Am J Prev Med* 2000;19:230-7.
- Gutmanis I, Beynon C, Tutty L, et al. Factors influencing identification of and response to intimate partner violence: a survey of physicians and nurses. *BMC Public Health* 2007;7:12.
- Beynon CE, Gutmanis IA, Tutty LM, et al. Why physicians and nurses ask (or don't) about partner violence. A qualitative analysis. *BMC Public Health* 2012;12:473.
- Sprague S, Madden K, Simunovic N, et al. Barriers to screening for intimate partner violence. *Women Health* 2012;52:587-605.
- Abbasi K. Improvement in practice: the IRIS case study. London (UK): The Health Foundation; 2011.
- Sprague S, Madden K, Dosanjh S, et al. Intimate partner violence and musculoskeletal injury: bridging the knowledge gap in orthopaedic fracture clinics. *BMC Musculoskelet Disord* 2013;14:23.
- Della Rocca GJ, Sprague S, Dosanjh S, et al. Orthopaedic surgeons' knowledge and misconceptions in the identification of intimate partner violence against women. *Clin Orthop Relat Res* 2013;471:1074-80.
- Sprague S, Swinton M, Madden K, et al. Barriers to and facilitators for screening women for intimate partner violence in surgical fracture clinics: a qualitative descriptive approach. *BMC Musculoskelet Disord* 2013;14:122.
- Bhandari M, Sprague S, Tornetta P, et al. (Mis)perceptions about intimate partner violence in women presenting for orthopaedic care: a survey of Canadian orthopaedic surgeons. *J Bone Joint Surg Am* 2008;90:1590-7.
- Canadian Orthopaedic Association Intimate Partner Violence Working Group. Intimate partner violence. Position statement. Available: www.coa-aco.org/images/stories/library/health_policy/IPV_Statement.pdf (accessed 2012 Nov 28).
- Barbour RS. Making sense of focus groups. *Med Educ* 2005;39:742-50.
- Bernard HR. *Research methods in anthropology: qualitative and quantitative approaches*. Walnut Creek (CA): AltaMira; 1995.
- Pope C, Ziebland S, Mays N. Qualitative research in health care. Analysing qualitative data. *BMJ* 2000;320:114-6.
- Corbin J, Strauss A. *Basics of qualitative research: techniques and procedures for developing grounded theory*. 3rd ed. Los Angeles (CA): Sage; 2008.
- Sprague S, Kaloty R, Madden K, et al. Perceptions of intimate partner violence: a cross sectional survey of surgical residents and medical students. *J Inj Violence Res* 2013;5:1-10.
- Narayan AP, Socolar RRS, St Claire K. Pediatric residency training in child abuse and neglect in the United States. *Pediatrics* 2006;117:2215-21.
- Ward MGK, Bennett S, Plint AC, et al. Child protection: a neglected area of pediatric residency training. *Child Abuse Negl* 2004;28:1113-22.
- Park J, Woodrow SI, Reznick RK, et al. Observation, reflection, and reinforcement: surgery faculty members' and residents' perceptions of how they learned professionalism. *Acad Med* 2010;85.
- Reid SA, Glasser M. Primary care physicians' recognition of and attitudes toward domestic violence. *Acad Med* 1997;72:134-9.
- Rodriguez MA, Bauer HM, McLoughlin E, et al. Screening and intervention for intimate partner abuse: practices and attitudes of primary care physicians. *JAMA* 1999;282:468-74.
- Chamberlain L, Perham-Hester KA. The impact of perceived barriers on primary care physicians' screening practices for female partner abuse. *Women Health* 2002;35:55-69.
- Goff HW, Shelton AJ, Byrd T, et al. Preparedness of health care practitioners to screen women for domestic violence in a border community. *Health Care Women Int* 2003;24:135-48.
- Taket A, Wathen CN, MacMillan H. Should health professionals screen all women for domestic violence? *PLoS Med* 2004;1:e4.
- Ernst AA, Weiss SJ. Intimate partner violence from the emergency medicine perspective. *Women Health* 2002;35:71-81.
- D'Avolio DA. System issues: challenges to intimate partner violence screening and intervention. *Clin Nurs Res* 2011;20:64-80.
- O'Campo P, Kirst M, Tsamis C, et al. Implementing successful intimate partner violence screening programs in health care settings: evidence generated from a realist-informed systematic review. *Soc Sci Med* 2011;72:855-66.
- Szymczak JE, Bosk CL. Training for efficiency: work, time, and systems-based practice in medical residency. *J Health Soc Behav* 2012;53:344-58.
- Pronovost PJ. Navigating adaptive challenges in quality improvement. *BMJ Qual Saf* 2011;20:560-3.
- Stevens DP, Shojania KG. Tell me about the context, and more. *BMJ Qual Saf* 2011;20:557-9.