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ORIGINAL RESEARCH

"I am the doctor": gender-based bias within the clinical practice of emergency medicine in Canada—a thematic analysis of physician and trainee interview data

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Abstract

Objectives While women comprise about half of current Canadian medical students and physicians, only 31% of emergency medicine physicians identify as women and women trainees are less likely to express interest in emergency medicine compared to men. Gender-based bias continues to negatively impact the career choice, progress, and well-being of women physicians/trainees. Although instances of gender-based bias are well documented within other medical specialties, there remains a gap in the literature addressing the role of gender specific to the Canadian emergency medicine clinical environment.

Methods Using a qualitative study with a thematic analytical approach, participants were purposively and snowball sampled from a cross-section of centers across Canada and included emergency medicine attending physicians and trainees. A thematic analysis using an inductive and deductive approach was undertaken. All data were double coded to improve study trustworthiness. Descriptive statistics were used to characterize the study population.

Results Thirty-four individuals (17 woman-identifying and 17 man-identifying) from 10 different institutions across 4 provinces in Canada participated in the study. Six themes were identified: (1) women experience gender bias in the form of *microaggressions*; (2) women experience *imposter syndrome* and question their role in the clinical setting; (3) more women provide *patient care* to women patients and vulnerable populations; (4) gender-related challenges with family planning and home responsibilities affect *work-life balance*; (5) *allyship and sponsorship* are important for the support and development of women physicians and trainees; and (6) women value discussing *shared experiences* with other women to debrief situations, find mentorship, and share advice.

Conclusions Gender inequity in emergency medicine affects women-identifying providers at all levels of training across Canada. Described experiences support several avenues to implement change against perceived gender bias that is focused on education, policy, and supportive spaces. We encourage institutions to consider these recommendations to achieve gender-equitable conditions in emergency medicine across Canada.

Mots clés Égalité des sexes · Pratique clinique · Médecine d'urgence · Recherche qualitative

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Abstrait

Objectifs Bien que les femmes représentent environ la moitié des étudiants et des médecins en médecine au Canada, seulement 31 % des médecins d'urgence qui s'identifient comme des femmes et des femmes stagiaires sont moins susceptibles d'exprimer leur intérêt pour la médecine d'urgence que les hommes. Les préjugés fondés sur le sexe continuent d'avoir une incidence négative sur le choix de carrière, les progrès et le bien-être des femmes médecins/stagiaires. Bien que les cas de biais fondés sur le sexe soient bien documentés dans d'autres spécialités médicales, il reste une lacune dans la documentation traitant du rôle du sexe propre au milieu clinique de la médecine d'urgence au Canada.

Méthodes À l'aide d'une étude qualitative avec une approche analytique thématique, les participants ont été échantillonnés à dessein et en boule de neige dans un échantillon représentatif de centres à travers le Canada et comprenaient des médecins urgentistes et des stagiaires. Une analyse thématique utilisant une approche inductive et déductive a été entreprise. Toutes les données ont été codées en double pour améliorer la fiabilité de l'étude. Des statistiques descriptives ont été utilisées pour caractériser la population étudiée.

Résultats Trente-quatre personnes (17 femmes et 17 hommes) de 10 établissements différents de quatre provinces canadiennes ont participé à l'étude. Six thèmes ont été cernés : (1) les femmes sont victimes de préjugés sexistes sous la forme de microagressions; (2) les femmes sont victimes du syndrome d'imposteur et remettent en question leur rôle dans le milieu clinique; (3) plus de femmes prodiguent des soins aux patientes et aux populations vulnérables; (4) les défis liés au genre que posent la planification familiale et les responsabilités familiales ont une incidence sur l'équilibre entre le travail et la vie personnelle; (5) l'alliance et le parrainage sont importants pour le soutien et le perfectionnement des femmes médecins et stagiaires; (6) les femmes apprécient de discuter des expériences partagées avec d'autres femmes pour faire le point sur des situations, trouver du mentorat et partager des conseils.

Conclusions L'inégalité entre les sexes en médecine d'urgence touche les fournisseurs de soins qui identifient les femmes à tous les niveaux de formation au Canada. Les expériences décrites appuient plusieurs avenues pour mettre en œuvre des changements contre les préjugés sexistes perçus qui sont axés sur l'éducation, les politiques et les espaces de soutien. Nous encourageons les établissements à tenir compte de ces recommandations afin de parvenir à des conditions équitables entre les sexes en médecine d'urgence partout au Canada.

Keywords Gender equity · Clinical practice · Emergency medicine · Qualitative research

Clinician's capsule

What is known about the topic?
While gender-based bias affects providers across medicine, there remains a literature gap specific to the Canadian emergency medicine clinical environment.

What did this study ask?
This study sought to understand how the gender of emergency medicine attending physicians and trainees affects their experiences in the ED.

What did this study find?
Findings show that gender inequity exists within the Canadian emergency medicine clinical environment and negatively affects women-identifying providers.

Why does this study matter to clinicians?
Perceived gender-based bias in emergency medicine impacts women trainees and physicians. We outline key changes that will improve gender equity in emergency medicine across Canada.

Introduction

While women comprise about half of current Canadian physicians and trainees, only 31% of emergency medicine physicians identify as female [1]. Women trainees are less likely to express interest in emergency medicine compared to men, which may be attributed to gender bias [2, 3]. Often, this stems from perpetuated implicit gender biases, which are subconscious feelings and prejudices that arise from personal experience, societal stereotypes, and cultural context [4]. Across medicine, women physicians and trainees disproportionately experience gender inequity compared to their male-identifying colleagues [5–10]. Prior research has shown that gender inequities exist across several levels—patient care, career advancement, and personal life.

Female emergency medicine physicians have been shown to experience higher rates of gender discrimination and receive unwanted inappropriate comments [6]. Interestingly, patients, physicians, and nursing staff were reported to be the most frequent sources of discrimination. Gender-based bias can further affect the career development and well-being of women physicians and trainees [5–11]. Evidence has demonstrated that women are less likely to be recognized

as physicians by patients and tend to receive more gender-stereotyping comments. Comments include referring to women as "honey" or "sweetie," viewing young women as inexperienced, and asking intrusive personal questions [7, 8, 12]. Women must prove to their patients that "yes, they are the doctor," where repetitive role misidentification can lead to feelings of inadequacy and mistrust [13].

Although instances of provider gender inequity are well documented within other specialties in medicine, there remains a gap in the literature specific to the Canadian emergency medicine clinical environment. Through analysis of the experiences of emergency medicine providers across Canada, this study aims to illuminate the perceived role that gender plays within the clinical space.

Methods

Study design and setting

Using a qualitative study with a thematic analytical approach, participants were recruited from a cross-section of urban, community, and rural EDs across Canada [14]. This study received ethics approval by the Queen's University Health Sciences and Affiliated Teaching Hospitals Research Ethics Board.

Participant recruitment

Using purposive and snowball sampling, participants included emergency medicine attending physicians, resident physicians, and medical students who had completed either core or elective emergency medicine rotations. Participants were eligible to participate if they practiced or trained in Canadian EDs. Individuals were excluded from participating if they did not practice or train in EM or were pre-clerkship medical students.

Data collection and analysis

A semi-structured interview guide was created with a team of emergency medicine physicians (MB, DD, EB), medical student (GJ), and research scientist (MW), based on themes derived from evidence-based literature and secondary data provided by the Canadian Association of Emergency Physicians (CAEP) Gender Equity Working Group [5, 6, 15–19] (Online resource 1).

The survey was piloted and revised with consultation from the research team. Informed consent and demographic data were collected, and interviews were conducted by one researcher (GJ) from May to December 2022 through the online video-conferencing platform Zoom [20] (Online resource 2). Interviews were audio recorded, transcribed verbatim, and de-identified. Interviews continued until data saturation was reached and there were an equal number of women and men in the entire sample to ensure varied perspectives from individuals that practice in EM. Data saturation was a point in data collection where conducting additional interviews did not contribute to new ideas or themes emerging [21].

Thematic analysis, using an inductive and deductive approach, was undertaken to identify emerging patterns in the data through an experiential lens using NVivo12 [22, 23]. To maintain reflexivity throughout the study, both coders, who were medical students, consciously made note of potential biases. Trustworthiness was achieved through qualitative research criteria of credibility, transferability, dependability, and confirmability [24]. This is comparable to quantitative research criteria of validity and reliability. Achieving trustworthiness criteria ensures rigor in qualitative research and provides confidence in a study's methods, data, and interpretation [25]. Triangulation was achieved by interviewing three separate participant groups and by having all data independently double coded by two researchers (GJ, MS). Triangulation enhances study credibility by mitigating bias in qualitative research [26]. The study followed SRQR reporting guidelines.

We acknowledge that gender is a personal experience that encompasses a spectrum of identities. Participants used both female/male and woman/man terms interchangeably throughout the interviews; thus, we utilized both sets of terms throughout the paper to reflect participant's understanding of and reference to gender.

Results

Characteristics of study participants

Thirty-four individuals (17 women, 17 men) from ten institutions across four provinces in Canada participated. Complete demographic data can be seen in Table 1.

Thematic analysis

Six themes were identified that describe gender-based bias within emergency medicine clinical practice. Additional supporting quotations can be seen in Table 2.

Theme 1: women experience gender bias in the form of *microaggressions*

Common microaggressions include role misidentification and inappropriate comments about appearance. Male participants were not recipients of microaggressions and often

witnessed microaggressions directed to female physicians and trainees. Typical sources were from patients, colleagues, and allied healthcare professionals.

"*You'll introduce yourself as the doctor and you'll do their whole history, physical, make a plan, tell them the plan, discharge them and then they're like, 'Oh am I not going to see the doctor today?' And I'm like 'Oh god, like I am the doctor.'" (Resident, woman).*
"*I feel privileged as that individual who doesn't have to reassert themselves as 'Yes I am the physician.' […] People's assumption I think is that I'm the attending physician in the room." (Attending, man).*

Participants expressed difficulty in garnering the respect of a healthcare team in acute situations as a woman. This created an unnecessary burden and undermined female physicians and trainees' confidence.

"*Oftentimes if another tall man walks into the room, then my authority will be undermined."* (Attending, woman).

Theme 2: women experience *imposter syndrome* and question their role in the clinical environment from compounding experiences of gender bias.

Women described developing imposter syndrome throughout their training which continued into their years as staff. Participants found it difficult not to doubt themselves when they were repeatedly reminded that they do not belong.

"*It just makes you question your, in a weird way, worth. […] Over time the more you even subconsciously thought, 'That's not your role. That's not your role. That's not your role.' I think sometimes it can contribute to feeling like maybe I don't belong here.*" (Attending, woman).

Most women felt that they were unaware of imposter syndrome until learning about it on their own. Delayed understanding can further impact individual well-being and career development.

"*It wasn't until I did a bit more of this kind of diversity, equity, and inclusion type of work, and understanding it that I realized a lot of my imposter syndrome is simply a result of being undermined over and over again. […] You don't feel like you're a competent physician at the end of the day because you're getting these external signals that you should be something else."* (Attending, woman).

Table 1 Demographic data

	Variable	*N*/%	Women	Men
Gender identity	Total	34 (100%)	17 (50%)	17 (50%)
	Attending	11 (32%)	5 (45%)	6 (55%)
	Resident	13 (38%)	7 (54%)	6 (46%)
	Clinical clerk	10 (30%)	5 (50%)	5 (50%)
Age	Median	29 years	29 years	29 years
	Interquartile range	7 years	9 years	12.5 years
Experience working in[a]	Urban	34 (100%)	17 (100%)	17 (100%)
	Community	5 (15%)[b]	[b]	[b]
	Rural	5 (15%)[b]	[b]	[b]
Racial and ethnic identity[a]	White	24 (70%)	11 (45%)	13 (55%)
	Chinese South Asian/East Asian Non-White Latin American Non-White North African	10 (30%)[b]	[b]	[b]
Training level*	Attending years in practice	4–31 years (mean = 13 ± 14 years)	4–23 years (mean = 8 ± 8 years)	5–41 years (mean = 17 ± 17 years)
	Senior resident (PGY3-5)	5 (15%)	[b]	[b]
	Junior resident (PGY1-2)	8 (24%)	[b]	[b]
	Clinical clerk	10 (29%)	5 (50%)	5 (50%)

[a]Variable combined due to small sample sizes

[b]Data not presented as sample size less than 5

Table 2 Additional supporting quotations

Theme	Supporting quotations
Theme 1: women experience gender bias in the form of *microaggressions*	*"I do find that people tend to take me, or other women especially, who look younger, less seriously than maybe our male colleagues. And then something recent a patient said, 'I didn't know we were letting women be doctors these days.'"* (Resident, woman) *"I had it happened to me once. The other day we had a visiting resident from another site, who looked at me and was like, 'Oh, are you the nurse for this bed?' And the amount to which I was surprised by it shows how rarely it happens to me. I was like, 'Oh, I've never been mistaken for a nurse in my 4 years of being here.'"* (Resident, man) *"I was working with the program director who's female, and then walked into a room, and they addressed me as doc. I had to like physically turn my body to face the attending, and then refer to her as doctor and the boss, and really make it clear that they should be directing their questions to them. […] But yet my white maleness gives a lot of patients the impression that I again, I look like an emerg doc to them in the traditional way they view doctors. […] I never had once been mistaken for anything other than the doctor in the hospital, and I know from my female and racialized colleagues, they experience it on a weekly basis. Or more."* (Clinical clerk, man)
Theme 2: women experience *imposter syndrome* and question their role in the clinical environment from compounding experiences of gender bias	*"When other people are questioning you, of course you question yourself. I think the other thing is that once you've had these negative experiences, you've had someone taking over room from you, or a nurse refusing to do what you ask them. It definitely makes it harder for you to have confidence the next time you want to do those things. It definitely leads to imposter syndrome."* (Resident, woman) *"Sometimes you have to work a little extra hard to command that attention. You do question, is it my personality, is it my knowledge, like what is it? Or is it just because I'm a female."* (Resident, woman) *"I think females are often told like, 'Oh, well you're soft. You need to toughen up.' But I think if we put males through a similar degree of microaggressions then maybe they wouldn't have the same confidence."* (Attending, woman)
Theme 3: women provide more *patient care* to women patients and vulnerable populations	*"I think there's been instances where being a female in the emergency department has been really helpful. […] There's been lots of times where sensitive topics like even just sexual history or doing pelvic exams. It's been beneficial to be a female because I feel like female patients themselves are much more open to letting me ask those questions and letting me do those exams. I've definitely seen a couple of male attendings, or male medical students get denied those opportunities."* (Clinical clerk, woman) *"With female patients they're going to be more likely to open up to you if you take the time to create that space for them. If they have a male family physician and they're embarrassed about something that's… I don't know, I'm gonna pull an example, like dyspareunia or something where they feel like you can understand them. […] And they see you not only as their physician, but as like another human being. And so, I think for sure there are times where I've leaned into my gender."* (Attending, woman) *"When I was in emerg I got the feeling that as a male learner, if a woman came in or a young woman came in with pelvic complaints, or anything sort of on those lines. I don't know if I was fully included in that. […] I wonder if the fact that I'm male sort of impacts an attending's or resident's willingness to involve me in a case with a woman like that. Which in turn will affect my learning because it means I'm not necessarily exposed to that."* (Clinical clerk, man)
Theme 4: gender-related challenges with family planning and home responsibilities affect *work-life balance*	*"Our understanding of what it means to take time off to care for children I think that it is not fair, it is not equitable. There is no appropriate support, and it's going to hold me back in my residency. It's going to change my opportunities for leadership positions, it's going to change my opportunities to do research and all of these things. And it shouldn't."* (Resident, woman) *"Infertility disproportionately affects female physicians, […] I went through several years of IVF. […] And the amount of work juggling and the physical experience of going through hormone injections and egg retrieval and recovery [..] and trying to manage a full-time emergency medicine practice while keeping that confidential was excruciatingly difficult. […] All of that impacts my earning ability, my progression through my career, my clinical experience. And those are things that I notice my male physician husband does not experience."* (Attending, woman) *"But the reality is even for my female colleagues who are two physician couples… And again, there's data to support this, a lot of the childcare responsibilities and home responsibilities really still do fall to the female partner. That does totally impact how they're able to contribute from a career standpoint. And I think our departments have become much more supportive of female colleagues. […] But the societal stuff, that's not limited to the emergency department in your interactions with patients. There's also lots of societal family expectations."* (Attending, man)

Table 2 (continued)

Theme	Supporting quotations
Theme 5: *allyship and sponsorship* are important for the support and development of women physicians and trainees	*"When it [allyship] comes from somebody who's in that position of power […] I think it has more impact coming from them. And so that's why I believe when you're being an ally it's just being kind of vocal and having that intent is really helpful."* (Clinical clerk, woman) *"I think it's a concept of recognizing that we're a team and not wanting to be in a space that doesn't value you. I think that's really at the heart of some of this stuff. If you feel like you can't rely on your colleagues to support you in these ways, it'd be hard to feel like you are part of a team. […] I think that's what part of being an ally is, making sure that the team space is receptive and safe and making sure that they know they have supports. I don't know that I necessarily know how best to do that, I'm trying to learn. Certainly it's nothing I was taught about how to be an ally. Just over the years, I've tried to ask friends of mine, 'What can I do, what is helpful to you in this situation, or what would I be able to do in this situation to be in support of you?'"* (Resident, man) *"I think, allyship is incredibly important. I would say it is important but also is sponsorship. We talked about this idea that it's not just about being present for someone, but also making sure that their career is as rich and fruitful as it was for you. […] That idea of sponsorship, going beyond allyship and beyond mentorship, and really actually using your political capital or your reputation or whatever it is, to enhance their career. And it's not just about maintaining their career or sort of taking one step that's better than status quo, it's actually taking it to the next step, which is actively making it better."* (Attending, man)
Theme 6: women value discussing *shared experiences* with other women to debrief situations, find mentorship, and share advice	*"I do take a very deliberate attempt when I have female learners, and if I feel that they've had microaggressions or instances of gender bias during their shifts to debrief them and to share my experiences. I think putting a name and a label to it is helpful for them, because they may not necessarily understand what's happening. And then again it can get internalized and then down the road becomes imposter syndrome."* (Attending, woman) *"It's interesting how automatically when you're working with other women in the department, they'll like offer you advice on that [gender bias] because they've had to go through it too. They're like 'This is how I've become better at getting people to take me seriously as the resuscitation leader, and listening to me, and actually looking to me, and not looking to my male resident.' And I think my strategies for how to overcome that and just be better at it is to take the advice of the women who've gone before me and try to internalize that."* (Resident, woman) *"I have a couple of mentors at different stages of training and in residency, early in practice, late in practice, and seeing the different ways that they've navigated the culture has been really beneficial. It's also allowed me to sort of pick and choose the strategies that I think would work best for me. So yeah, that's been very important. And especially that all the women I work with have been so open about their experiences in emergency medicine, and willing to give advice."* (Clinical clerk, woman)

Male participants found that they were respected in their role and did not experience imposter syndrome.

> *"People just respect what I have to do."* (Resident, man).

Theme 3: women provide more *patient care* to women patients and vulnerable populations

While women expressed gratitude and purpose in providing trauma-informed care to patients; with that can arise an increased burden of feeling like a token woman. Women participants reported perceiving that they were asked to see women patients based on their own gender identity more than their male colleagues.

> *"Being a woman […] is advantageous at times because patients with perpetrators of violence who identify as male tend to see female identifying figures, […] they tend to be a little bit more comfortable with them […] and honest about their disclosures."* (Clinical clerk, woman).
>
> *"You're going to always be the token woman who has do the gynecological exam when a woman [patient] comes in."* (Attending, woman).

Female staff felt that sensitive exams and counseling are not well remunerated in the ED, and there can be a dissonance in wanting to provide excellent care and be compensated appropriately.

> *"Females tend to be asked more to do things that are time consuming and less well remunerated."* (Attending, woman).

Interestingly, several male trainees lacked opportunities to perform gynecological exams on female patients, which can ultimately impact their clinical skills.

"Opportunities—I don't want to say taken away from you—but sometimes you might have to modify the procedures you need to do based on the gender you're in. […] I don't think it's a major negative impact, but more of like a small, maybe deviation for a potential learning opportunity." (Resident, man).

Theme 4: gender-related challenges with family planning and home responsibilities affect *work-life balance*

Participants agreed that the childbearing parent typically encounters more challenges with balancing responsibilities between work and life. This further extends into maintaining career productivity and attaining clinical opportunities.

"Especially when I was pregnant sometimes people will make comments like, 'Oh, you'll have to drop out of residency.'" (Resident, woman).
"There are sometimes when it is more challenging to be the birthing parent and female. […] I had three kids; with each child I've still been able to maintain academic momentum and professional momentum. I don't know if that would have been the case if I were the birthing parent." (Attending, man).

Medical students can be impacted by biases that women are unable to be both successful emergency medicine physicians and have families. Trainees may have doubts pursuing emergency medicine due to perceptions of a culture that is not supportive of them.

"Male preceptors […] will sometimes make comments when I would talk to them about my decision of doing the 5-year vs. 2 + 1 emerg program of, 'Oh, well you also have to consider that you'll be a mom one day and a wife.' […] And I was like, dude I didn't even tell you if I want kids or if I want to be married or anything." (Clinical clerk, woman).

Theme 5: *allyship and sponsorship* are important for the support and development of women physicians and trainees

Both allyship, showing support for a disadvantaged group that you are not a part of, and sponsorship, using social capital to advance opportunities for others, are integral to support women physicians and trainees.

"We rely on the word of men to other men to kind of get our issues across. I just wonder why it's not enough for us to be listened to in the first place." (Resident, woman).

Most women felt that receiving support specifically from male colleagues provided more opportunities in leading resuscitations and high acuity procedures, and diffused micro- and macroaggressions in the clinical space.

"There's male staff physicians that will intentionally step out of the room when a female resident is leading [a code] so that the interdisciplinary staff are forced to have to direct things to the resident." (Resident, woman).
"I'm trying to be very cognizant and open about some of the potential challenges that our female colleagues may experience. […] Perhaps, advocating for female trainees in the workplace, not just as a response to a negative event, but in an overall promotional capacity." (Attending, man).

Theme 6: women value discussing *shared experiences* with other women to debrief situations, find mentorship, and share advice

Women across stages of training found relationships with other women in emergency medicine to be crucial in cultivating their own career.

"When female trainees may not see themselves reflected in the profession or don't think that it will be supportive of their gender, they just won't apply, they won't even put an application in." (Attending, man).
"I remember the first time I worked with a female attending and I just remember it was a very good shift because I just felt like I could see myself in this person's shoes." (Clinical clerk, woman).

Partaking in women groups were beneficial for females to debrief gender bias in the ED and share unique advice. Women found these groups empowering and supportive of their career progression.

"I worked to cultivate female-only spaces for myself in emerg because I think there are a ton of male-only spaces naturally. […] We need to create space for women by women about women." (Resident, woman).

Discussion

Interpretation

This study explored gender bias within the clinical practice of emergency medicine in Canada using a sample of emergency medicine physicians and trainees. Six themes were identified that encompassed microaggressions, imposter syndrome, patient care, work-life balance, allyship and sponsorship, and shared experiences. The identified themes

provided several avenues for improvement to address the barriers preventing gender equity.

Previous studies

Previous studies have demonstrated that gender bias is a prominent issue across medicine and disproportionately affects women-identifying emergency medicine providers [5, 6, 10, 27–29]. Similar to prior research, female participants in our study described more microaggressions in the workplace and received less trust from patients and providers compared to male participants [13]. Other literature speaks to the idea that imposter syndrome experienced by women providers stems from ongoing gender bias [30–32]. Our participants described that feelings of inadequacy were not due to their own shortcomings but from repetitive questioning of their competency. Interestingly, there are few studies exploring the utility of allyship and sponsorship in emergency medicine, although it has been found to be crucial in supporting women physicians/trainees in other medical specialties [33–35]. Our participants endorsed the benefits of effective allyship and sponsorship to both reduce gender bias and empower women. Further, trainees that anticipate having increased family care work in their future may find emergency medicine less appealing as a career due to stereotypes related to traditional gender roles perpetuated by departmental cultures and societal expectations. As identified by participants, some emergency medicine preceptors commented to women trainees that a career in emergency medicine is not feasible if they desired to be married or start a family in the future. Assumptions regarding what specialties trainees are interested in based on their gender can lead to discriminatory treatment that prevents women from entering the field [36, 37].

Strengths and limitations

As with most qualitative research and use of purposive and snowball sampling to recruit participants, sampling bias is a concern. While effort was made to ensure that participants with varied perspectives were interviewed, there may be experiences not fully captured in this study, such as individuals with non-binary gender identities and diverse racial identities, and family medicine trained emergency medicine physicians. This limits the transferability of findings to these groups of emergency medicine physicians and trainees. Given that participants were asked to describe past experiences, recall bias could be affecting the data. Further, despite the interview guide not referencing sex terminology with respect to gender identity many participants used sex and gender terms interchangeably. This may reflect participant's own understanding and reference to gender. Perhaps individuals used the terms interchangeably, because they found their sex and gender identity to be congruent. As the sample was limited to participants with binary gender identities, interpretations cannot be drawn as to how individuals with diverse gender identities would use the terms. The use of sex and gender terminology as synonyms may also reflect a lack of understanding of gender identities and a possible avenue for knowledge interventions.

There are several noteworthy study strengths. To our knowledge, this is the first qualitative study in Canada to examine gender-based bias in emergency medicine clinical practice and further adds to the current expanding evidence base. This study involved a cross-section of emergency medicine physicians and trainees across the country and had an equal representation of women and men, which allowed for comparison of experiences and amplified that the recurrent themes of gender inequity exist across Canada. The qualitative study design allowed us to gather in-depth perspectives on the lived experiences of impacted individuals and the individuals who witnessed it. Data saturation gave assurance that no major themes were missed in the study sample.

Clinical implications

This research has informed three recommendations for institutions to consider when aiming to improve gender equity:

1. *Increase awareness and education to empower providers to make small changes in their everyday practice*: Gender equity training can be incorporated into simulation training, department rounds, or workshops. One study used a gender-based microaggressions simulation case to encourage discussion surrounding gender bias and practice addressing microaggressions in the ED [38]. Authors noted that the session was met with positive feedback and provided participants with tools to address microaggressions in their own practice.
2. *Provide training and advice to all providers on how to be an effective ally and sponsor:* Educational interventions can be augmented by including training on effective allyship. Female participants described the benefits of sponsorship and allyship; however, felt that oftentimes the onus fell on them to educate their colleagues. An allyship workshop that was piloted in a pediatric center focused on individual accountability and speaking up against discrimination through allyship [39]. The workshop was successful in increasing awareness and self-reflection, and empowering participants to respond to discrimination.
3. *Policies should be created with gender equity in mind:* Residency training and early career often coincide with prime childbearing years for women, which makes it

challenging to start a family without formal and equitable policies [40, 41]. A comprehensive return-to-work policy was piloted and met positively with stakeholders at Stanford's ED that focused on standardized parental leave, return-to-work clinical scheduling guidelines, breastfeeding, childcare, and related resources [42].

Research implications

Future research should include participants who identify as gender-diverse and from additional intersectional identities to understand their unique perspectives and guide proposed initiatives. As well, research could focus on investigating factors that affect trainee's choice for and against a career in emergency medicine.

Conclusion

Gender inequity in emergency medicine affects women-identifying providers at all levels of training and practice across Canada. Perceived gender bias in the clinical space can then negatively impact career development, well-being, and clinical performance. Institutions are encouraged to self-reflect on their emergency medicine departmental culture and consider implementing tailored interventions that target the barriers identified in this study. We hope that by enacting these changes that emergency medicine in Canada can work toward being a more equitable and inclusive specialty, that will both attract a new generation of gender-diverse providers and improve the clinical space for women-identifying physicians and trainees.

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Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there are no conflicts of interest.

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