Having to work twice as hard for half the respect:
How female surgical residents at the University of Calgary experience gender-based discrimination during postgraduate training

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I do not have an affiliation (financial or otherwise) with a pharmaceutical, medical device or communications organization.

Je n’ai aucune affiliation (financière ou autre) avec une entreprise pharmaceutique, un fabricant d’appareils médicaux ou un cabinet de communication.
28% of Canadian surgeons are women\(^1\)

More women than ever are entering surgical specialties\(^2\)

Women are paid, promoted, and awarded less than their male colleagues\(^3,4\)

85% of women surgeons recall experiences of gender-based discrimination during training\(^5\)

Gender-based discrimination (GBD): belittling remarks, inappropriate comments and jokes, denial of opportunities, and behaviours that are perceived as hostile or humiliating

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\(^1\) Canadian Institute for Health Information. A profile of physicians in Canada in 2016. 2017.


What are surgical residents experiences of GBD during residency at the University of Calgary?

**Approach:** Sequential explanatory mixed methods design (quan → QUAL)

**Phase I [QUAN]:** Cross-sectional survey of residents across surgical programs in Calgary

**Phase II [QUAL]:** Semi-structured interviews
- Criterion sampling used to interview participants who identified as a woman and had experienced GBD

- Ethical approval granted by University of Calgary (File #17-2484)

Phase I Participants

- 7 out of 8 surgical programs agreed to participate in this study
- 37 participants completed the survey during Phase I
Phase I Results

- High internal consistency for all scale items ($\alpha = .954$)
- Regression model ($R^2 = .230$) → gender the only significant predictor variable ($\beta = -.479$, $p = .003$)

![Bar Chart: During my time as a resident, I have experienced gender-based discrimination]

- No differences between genders about having ever experienced GBD
- Both men and women were perpetrators of GBD
Phase I Results

- Statistical differences present between frequency of GBD
- >60% of women experience GBD at least monthly, only 13% of men
## Phase I Results

<table>
<thead>
<tr>
<th></th>
<th>Men (n=15)</th>
<th>Women (n=22)</th>
<th>Δ</th>
<th>η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of respect from others based on my gender*</td>
<td>1.27 (.704)</td>
<td>2.68 (1.29)</td>
<td>1.42 (.329)</td>
<td>.32</td>
</tr>
<tr>
<td>Inappropriate jokes or comments*</td>
<td>1.60 (.737)</td>
<td>2.50 (1.01)</td>
<td>.900 (.305)</td>
<td>.19</td>
</tr>
<tr>
<td>Belittling Comments*</td>
<td>1.67 (.724)</td>
<td>2.36 (1.09)</td>
<td>.697 (.299)</td>
<td>.10</td>
</tr>
<tr>
<td>Inappropriate sexual comments or jokes*</td>
<td>1.27 (.458)</td>
<td>1.86 (1.04)</td>
<td>.597 (.251)</td>
<td>.09</td>
</tr>
<tr>
<td>Behaviours that are perceived as hostile or humiliating*</td>
<td>1.33 (.900)</td>
<td>1.91 (.971)</td>
<td>.576 (.316)</td>
<td>.13</td>
</tr>
<tr>
<td>Sexual harassment</td>
<td>1.13 (.352)</td>
<td>1.36 (.581)</td>
<td>.230 (.154)</td>
<td>.05</td>
</tr>
<tr>
<td>Denial of opportunities</td>
<td>1.80 (1.32)</td>
<td>1.73 (.883)</td>
<td>-.073 (.361)</td>
<td>.01</td>
</tr>
</tbody>
</table>

1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Frequently, 5 = Almost Always
*statistical significance if p<0.007 (two-tailed); Bonferroni correction; Mann-Whitney non-parametric test
Eta squared (η²) measure of effect size; 0.01 = small; 0.06 = moderate; 0.14 = large
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<tbody>
<tr>
<td><strong>Nursing staff</strong>*</td>
<td>1.67 (.724)</td>
<td>3.14 (1.17)</td>
<td>1.47 (.339)</td>
<td>.36</td>
</tr>
<tr>
<td><strong>Patients</strong>*</td>
<td>2.07 (1.10)</td>
<td>3.18 (1.00)</td>
<td>1.12 (.350)</td>
<td>.27</td>
</tr>
<tr>
<td><strong>Allied Health</strong>*</td>
<td>1.13 (.352)</td>
<td>1.95 (1.17)</td>
<td>.821 (.266)</td>
<td>.18</td>
</tr>
<tr>
<td><strong>Attending physicians</strong>*</td>
<td>1.40 (.507)</td>
<td>2.14 (.941)</td>
<td>.736 (.267)</td>
<td>.17</td>
</tr>
<tr>
<td><strong>Fellows and senior residents</strong>*</td>
<td>1.27 (.458)</td>
<td>1.95 (.899)</td>
<td>.688 (.252)</td>
<td>.18</td>
</tr>
<tr>
<td><strong>Administrative staff</strong>*</td>
<td>1.13 (.352)</td>
<td>1.73 (1.08)</td>
<td>.594 (.247)</td>
<td>.12</td>
</tr>
<tr>
<td><strong>Resident colleagues</strong></td>
<td>1.20 (.414)</td>
<td>1.68 (.945)</td>
<td>.482 (.228)</td>
<td>.07</td>
</tr>
<tr>
<td><strong>Medical students</strong></td>
<td>1.27 (.458)</td>
<td>1.73 (1.08)</td>
<td>.461 (.258)</td>
<td>.04</td>
</tr>
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1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Frequently, 5 = Almost Always
*statistical significance if \( p < 0.005 \) (two-tailed); Mann-Whitney non-parametric test
Eta squared (\( \eta^2 \)) measure of effect size; 0.01 = small; 0.06 = moderate; 0.14 = large
## Phase I Results

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>In the emergency room*</td>
<td>1.40 (.507)</td>
<td>2.64 (1.22)</td>
<td>1.246 (.291)</td>
<td>.33</td>
</tr>
<tr>
<td>On the hospital ward*</td>
<td>2.00 (1.13)</td>
<td>2.91 (1.23)</td>
<td>.909 (.399)</td>
<td>.15</td>
</tr>
<tr>
<td>In the operating room*</td>
<td>1.73 (.799)</td>
<td>2.64 (.953)</td>
<td>.903 (.300)</td>
<td>.20</td>
</tr>
<tr>
<td>In clinic</td>
<td>1.80 (.775)</td>
<td>2.05 (.999)</td>
<td>.245 (.307)</td>
<td>.01</td>
</tr>
</tbody>
</table>

1 = Never, 2- = Rarely, 3 = Sometimes, 4 = Frequently, 5 = Almost Always

*statistical significance if p<0.0125 (two-tailed); Mann-Whitney non-parametric test

Eta squared (η²) measure of effect size; 0.01 = small; 0.06 = moderate; 0.14 = large
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<tbody>
<tr>
<td><strong>My gender has negatively influenced the feedback that I have received from my superiors (e.g., senior resident, fellow, or staff physician)</strong></td>
<td>4.73 (.594)</td>
<td>3.36 (1.33)</td>
<td>-1.37 (.322)</td>
<td>.32</td>
</tr>
<tr>
<td><strong>I get fewer learning opportunities (e.g., operative autonomy, OR time) than residents of the opposite gender</strong></td>
<td>4.33 (1.23)</td>
<td>3.41 (1.22)</td>
<td>-.924 (.411)</td>
<td>.16</td>
</tr>
<tr>
<td><strong>The formative feedback I receive (e.g., feedback on the fly, debriefs) will often involve comments about my personal traits and characteristics</strong></td>
<td>3.73 (1.28)</td>
<td>2.82 (1.22)</td>
<td>-.915 (.417)</td>
<td>.11</td>
</tr>
<tr>
<td><strong>My gender has negatively influenced the summative assessment (e.g., ITERs) I have received</strong></td>
<td>4.60 (.868)</td>
<td>3.82 (1.22)</td>
<td>-.782 (362)</td>
<td>.14</td>
</tr>
</tbody>
</table>

1 = Strongly Agree, 2 = Agree, 3 = Neither Agree nor Disagree, 4 = Disagree, 5 = Strongly Disagree

*statistical significance if p<0.0125 (two-tailed); Mann-Whitney non-parametric test

Eta squared (η²) measure of effect size; 0.01 = small; 0.06 = moderate; 0.14 = large
Phase II Results

- 64% (n=14) of women from Phase 1 completed a semi-structured interview
  - Audio-recorded (654 minutes of data) and transcribed (149 pages of transcribed data)
  - Saturation reached after sixth interview

- Data was independently analyzed by 2 investigators via inductive thematic analytic methods\(^{10,11}\)
  - Guided by feminist theory\(^{12}\)

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“...it's horrific, I’ve never experienced so much disrespect from people in any aspect of my life aside from the way that female nurses, and, honestly, that have had some really bad experiences with male nurses as well, and they won’t take orders, they won’t necessarily listen to what I have to say, and they’ll say that my plan doesn’t make sense and that I don’t know what I’m talking about, but I’ve never seen a nurse talk to a male resident that way at all... It’s a huge part of my residency. It’s very stressful. Like I said, I’ve only ever maybe cried twice ever, since being a medical student related to work and it’s only ever been because of nurses. ... Questioning my expertise and competence, they'll push back more as opposed to if a male resident would give them the orders. I’ll have to repeat myself multiple times for them to actually... and I don’t mean listen to me but just acknowledge that I even said something to them. I have to work exceptionally harder for them to be nicer to me than my male counterparts. They fall over all the males...I think females tend to be more passive aggressive and they can be very strongly passive aggressive to us, to the point that we just have to take it. I could never report it. There’s nothing solid there for me to report, but the only time that I’ve ever felt really discouraged or that I was incapable of my job was after an interaction with a nurse.”

- Relationship between nursing and women residents described as “toxic,” involving bullying, push back, lack of respect
“We have to girl flirt. Especially with the nurses, you have to girl flirt your a** off to get them to like you. [...] Oh, just chit-chat and smiling, and heaven forbid you said something in a non-“please and thank you, thank you so much,” type sentence, then it would be like, “forget it.” They will not take direction, like you have to work hard to earn their trust and respect or they just ... you just have to, it’s not worth it not to.”

“I found the nurses were the roughest part most of the time. Often we’ll be in the OR and they will either completely ignore my pager or they refuse to get our gloves. They get all the male resident gloves and they just get ours or don’t know our size or something, and then I have had the nurse physically shove me to the side and also push me with our Mayo stand. This has happened so many times where I’m about to assist and they’re like, ‘Excuse me, this is my spot’; and they push me... And then there was another experience when this nurse was refusing to glove and I was just sitting there, and then I had gotten my gloves and she was yelling at me that I didn’t get my gloves and she was just trying to pick everything that I did to be wrong and loudly yell at me so that everyone would know that I was a bad resident or something. It happened multiple days in the course of the week that she happened to be in all my ORs. I was really disheartened every time I saw her. No one said anything about when she was clearly attacking me for things I didn’t even do.”

• Inappropriate behaviors without consequence or intervention
• “Girl flirting” a strategy used to navigate challenging relationships
"you need to be more confident and more assertive to get the same respect. And I think you do have to prove yourself just a little bit more." - #3

"that's a huge part of it is just getting respected by the nurses and being treated with respect" - #11

"you just have to work twice as hard as your male co-residents to get any sort of respect." - #12

"They [staff] totally don't respect me. They don't know anything about me. How can they respect me? They don't even see me as a human, they see me as a tool." - #8

"I think, what's the most mind-boggling thing to me is I've never been so disrespected in my life." - #11

"I do feel significantly less respected than my male counterparts for sure, and that's across the board." – #11

"You constantly have to qualify that you are qualified." - #4

"I feel like as soon as they walk in, they're like the charming male resident and all the nurses just do whatever they want and are very friendly and whereas I have to kiss *** in order to be just liked by the nurses, let alone be respected." – #9

"when you interact with other specialties you get less respect from those other specialties." – #14

I think I just always felt like I had to work a little bit harder and that it was a little bit less like my male colleagues could get away with things - #7

"You’re constantly working just to be liked and respected." – #11

"You do get overlooked for the guys, and there’s surgical nurses defer to the male residents, until they know you." - #2

"There was one time I walked into the OR with a male medical student and it was kind of an emergency situation or whatever, and my attending hadn’t gotten there yet, but the anesthetist walks over to the male medical student and shakes his hand as if he’s the male attending, never even thought that I was the more senior of the two." - #11

"They (nursing) just seem to have a lack of respect for our orders and don't take them as seriously." - #12

"what you’re saying, it’s not perceived as being as well respected as the male colleagues." - #14

"I just feel like we have to work so hard to be even treated as human, not even on the same level as the male residents, just even so they will treat us with respect, like specifically nurses." - #12

"And then they just don’t listen to our orders. They question everything, and then you just have to work twice as hard as your male co-residents to get any sort of respect. I’m going to just kill them with kindness. I finally feel like we are friends and it's great, but it was hard. My first two years of residency was basically just spending twice as much time as the guys would doing the same consult because they don’t get the equipment for you that you need or anything like that."
“In the OR I’ve felt like I can’t even ask for an instrument because I don’t want to upset them [nursing] because if I ask for something from them they will huff and they will be mad at me and then they won’t do things for me later. I’m actually a worse surgeon or worse assistant because I feel like I can’t upset the nurses, so I have to change what I would do in the OR.”

“There have been times when the nurse literally didn’t follow my orders and I had to report them, because it was actually something that would have changed the patient’s outcomes. They just didn’t trust my orders and I had to involve the two surgeons who had written notes on them previously to be like, ‘This is why this is being done, this is why I’m doing this order.’ And they would have compromised the patient’s […] They could have made the person crash that night, but didn’t believe me.”
Lack of respect from patients and family members, but observing how male colleagues get automatic respect
Commonly mistaken for a non-physician healthcare professional

“A man can fly into the room and just be very clinical and brief and leave and a patient would never question that or complain. But if a woman ever did that a lot of patients would actually complain.”

“I think this happens daily, if not multiple times a day, I think for most women in surgery, especially most minority women. Being confused for a nurse happens multiple times a day and it’s something that is so... I don’t even see it anymore as a form of discrimination because it happens so commonly. Being confused for cleaning staff, cafeteria staff, that happens relatively regularly as well, especially to (ethnic) minority female surgery residents.”
• Social exclusion
• Surgery as a “boys club”
• Poor quality feedback that emphasized personal traits over clinical competence
• Unsolicited advice about having a family

“Someone told me that I shouldn’t have children in residency because people would lose respect for me.”

“And the feedback I received was about being like, “domineering,” and “bossy”, and things like that. [...] that was actual formal feedback.”

“Or even just the staff, I think they mean very well sometimes. ‘Oh, when are you thinking about having kids?’ I’m like, maybe I’m not thinking about having kids. And your response to that shouldn’t be, ‘Oh, good, you can focus on your career.’ That should never be the response to I’m not thinking about having kids.”
“How do you change the system where criticizing the system means criticizing the people who control your entire future? [...] and this is shared among female surgical residents I think across all specialties, yes we want to make a change, but we feel like we have to keep our mouth shut.”

- Impact on wellness
- Participants felt they could not take action out of fear of future consequences
Conclusions

1. Female surgical residents experience a higher frequency of GBD than males.
2. Female residents became desensitized to these experiences.
3. Nurses and patients are most prevalent source.
4. Females feel they have to work twice as hard to be respected during their training.
5. Impacts well-being, patient safety, education.
6. Deliberate action is required to tackle structural barriers and patriarchal culture in surgery.
Thank you!

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