

SPECIAL TOPIC

State of Gender Diversity and Equity Policies within Plastic and Reconstructive Surgery in Canada

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Background: Given the growing number of women in plastic and reconstructive surgery (PRS), it is imperative to evaluate the extent of gender diversity and equity policies among Canadian PRS programs to support female trainees and staff surgeons.

Methods: A modified version of the United Nations Women's Empowerment Principles (WEPs) Gender Gap Analysis tool was delivered to Canadian PRS Division Chairs (n = 11) and Residency Program Directors (n = 11). The survey assessed gender discrimination and equity policies, paid parental leave policies, and support for work/life balance.

Results: Six Program Directors (55% response rate) and ten Division Chairs (91% response rate) completed the survey. Fifty percent of respondents reported having a formal gender non-discrimination and equal opportunity policy in their program or division. Eighty-three percent of PRS residency programs offered paid maternity/paternity/caregiver leave; however, only 29% offered financial or nonfinancial support to its staff surgeons. Only 33% of programs had approaches to support residents as parents and/or caregivers upon return to work. Work/life balance was supported for most trainees (67%) but only few faculty members (14%). **Conclusions:** The majority of Canadian PRS programs have approaches rather than formal policies to ensure gender non-discrimination and equal opportunity among residents and faculty. Although residency programs support wellness, few have approaches for trainees as parents and/or caregivers upon return to work. At the faculty level, approaches and policies lack support for maternity/paternity/caregiver leave or work/life balance. This information can be used to develop policy for support of plastic surgery trainees and faculty. (Plast Reconstr Surg Glob Open 2020;8:e3047; doi: 10.1097/GOX.0000000000003047; Published online 23 September 2020.)

INTRODUCTION

The achievement of gender equity worldwide can improve organizational efficiency, customer satisfaction, and corporate profitability.¹ In recognition of these benefits, the United Nations listed gender equality and women's

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Copyright © 2020 The Authors. Published by Wolters Kluwer Health, Inc. on behalf of The American Society of Plastic Surgeons. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal. DOI: 10.1097/GOX.00000000003047 empowerment as 1 of 17 sustainable development goals for an improved and more just world.² Presently, it is unclear whether the benefits of gender equity translate to the medical profession, particularly in specialities such as surgery, a historically male-dominated field.³ Although the number of female physicians has substantially risen from 28% in 2000 to over 40% in 2017,⁴ the number in female surgeons has only slightly increased.^{5,6} As of 2018, only 29% of Canadian surgeons are female, ranging from 9% in cardiac surgery to 59% in obstetrics and gynecology.⁷ Further, the percentage of female full professors in surgery has increased at a rate disproportionately slower than the increases in female medical students and surgery residents – expected to reach 50% only by 2096.⁸

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Despite the low representation of female staff surgeons and professors,⁸ women are increasingly pursuing residency positions in surgical specialties.⁷ In Plastic and Reconstructive Surgery (PRS) specifically, females comprise 23% of staff surgeons and 40% of trainees in the United States.^{5,9} These data suggest that female representation in PRS will ostensibly increase in the future. Despite the increasing number of females, it is unknown if there are adequate policies within Canadian PRS divisions and residency training programs to support gender equity.

Recently, Merchant et al¹⁰ explored the experiences of 16 Canadian general surgery programs directors with parenting during residency training. In this investigation, all program Directors reported a lack of program-specific maternity or parental leave policies. In light of this evidence, it is possible that PRS programs also lack policies in support of female trainees/staff, which may adversely impact their experience. Given that female mentorship and leadership is an important factor to prospective residents, the challenges faced by female surgical residents and staff surgeons may deter qualified females from selecting a surgical specialty.^{6,11,12}

The abiding gender disparities in nationwide organizations prompted the United Nations to develop the Women's Empowerment Principles (WEPs) Gender Gap Analysis Tool. The WEPs Gender Gap Analysis tool aims to help companies evaluate their current practices in promoting gender equity.¹³ Given the growing number of women in PRS, it is imperative to evaluate the extent of gender and equity policies among Canadian PRS divisions and residency programs. To assess these policies, we conducted a survey of PRS programs across Canada by distributing a modified version of the WEPs Gender Gap Analysis tool.

METHODS

Following ethics approval from Sunnybrook Health Sciences Centre and the University of Toronto, a modified version of the WEPs Gender Gap Analysis questionnaire tool was sent (March 2019) to all Canadian PRS Residency Program Directors and Division Chairs.

Survey Development

The present survey was modified from WEPs Gender Gap Analysis tool.¹⁴ The United Nations developed the WEPs Gender Gap Analysis in response to growing disparities between men and women in nationwide organizations, with the aim to identify where gender gaps reside and design strategies to decrease this gap. We sought to modify the tool to determine where gender gaps lie for female surgical residents and staff surgeons. As such, the Principle Investigator (L.S.) received approval form the Gender Equality & Social Sustainability Program United Nations Global contact group to revise the WEPs Gender Gap Analysis tool. A steering committee consisting of a research assistant (J.J.), a resident (H.R.), 2 staff surgeons (L.S. and J.L.), and a PRS division chair (C.F.) iteratively refined the WEPs Gender Gap Analysis tool to make it relevant to the medical and Canadian context. During this process,

questions specific to companies or economic development were removed. Once the modified survey had been developed, 2 individuals (L.S. and J.L.) piloted the survey.

The Survey

The survey consisted of 3 sections: (1) participant demographics, (2) division or residency program demographics and (3) the gender and equity surveys (Tables 1, 2) (see table 1, Supplemental Digital Content 1, which outlines the questions answered by participants, http://links.lww. com/PRSGO/B465) (see table 2, Supplemental Digital Content 2, which outlines the questions answered by participants, http://links.lww.com/PRSGO/B466). In section one, age and gender were obtained. In the second section, participants provided information such as: (1) total number of faculty or trainees, and (2) gender composition of the division or residency program. The third portion of the survey assessed the division or residency program gender and equity policies. This section included gender discrimination policies; paid maternity and paternity leave policies; gender non-discrimination and equal opportunity in recruitment and professional development processes; leadership commitment and support for women's empowerment; support for work/life balance and parental leave; and finally, approaches to ensure an environment free of violence and harassment. Question types included short answers and multiple-choice answers.

Participants

Eligible participants were active Division Chairs and Residency Program Directors at the following Canadian institutions: Dalhousie University, McGill University, McMaster University, Université de Montréal, University of Alberta, University of British Columbia, University of Calgary, University of Manitoba, University of Ottawa, University of Toronto, and University of Western Ontario. Individuals were identified through the Canadian Society of Plastic Surgeons (CSPS) Member Roster (https://plasticsurgery.ca/). Participants were excluded if they were no longer active Division Chairs or Residency Program Directors in Canada.

Participant Recruitment

An email invitation was sent from the Principal Investigator (L.S). The email introduced the study as well as its objectives and provided a link to the survey, which was

Table 1. Canadian Plastic and Reconstructive Surgery Divisions and Residency Training Programs

University Dalhousie University McGill University McMaster University Université de Montréal University of Alberta University of British Columbia University of Calgary University of Calgary University of Manitoba University of Ottawa University of Toronto University of Western Ontario

UN Theme	Modified Tool	
Equal opportunity, inclusion, and nondiscrimination (Reference: Q2 UN tool)	Does your division have a gender nondiscrimination and equal opportunity policy?	
Equal opportunity, inclusion, and nondiscrimination (Reference: Q3 UN tool)	Does your division have an approach to ensure gender nondiscrimination and equal opportunity in recruitment processes?	
Equal opportunity, inclusion, and nondiscrimination (Reference: Q4 UN tool)	Does your division have an approach to ensure gender nondiscrimination and equal opportunity in professional development and promotion processes?	
Leadership promotes gender equity (Reference: Q1 UN tool)	Does your division have leadership commitment and support for gender equality and women's empowerment?	
Community: Supporting parents as caregivers (Reference: Q9 UN tool)	Does your division have an approach to accommodate the work/life balance of all members?	
Community: Supporting parents as caregivers (Reference: Q6/Q7 UN tool)	Does your division have an approach to offer and support paid maternity/paternity/ caregiver leave?	
Community: Supporting parents as caregivers (Reference: Q8 UN tool)	Does your division have an approach to support (nonfinancially) members as parents and/or caregivers?	
Health, Safety, and Freedom of violence (Reference: Q10 UN tool)	Does your division have an approach to ensure an environment free of violence and harassment?	

Table 2. Women's Empowerment Principles (WEPs) Gender Gap Analysis Tool and Modified Tool¹⁴

Q. Question. The modified WEPs Gender Gap Analysis Tool assessed themes similar to the parent survey (UN Gender Gaps Analysis Tool). The question stems assess an approach to women's empowerment across the themes of leadership, workplace, marketplace, and community. Each question stem is followed by several answer choices, highlighting commitment, implementation, measurement, and transparency.

hosted by Survey Monkey (Seattle, Wash.). Before survey initiation, informed consent was obtained. Following the initial email, 2 reminder emails were sent to participants.

Statistical Analysis

All responses were reviewed for completeness, and all data were used. Descriptive data (including frequencies, percent, and mean) were calculated for each response. Open-ended questions were reviewed, and important quotes were extracted and coalesced into tables.¹⁵

RESULTS

All Canadian PRS residency program directors and division chairs were contacted to complete the survey (n = 22). The response rate was 55% for program directors (N = 6) representing a total of 72 trainees and 91% for division chairs (N = 10) representing 185 faculty. PRS programs had 1–29 trainees enrolled at the time of the survey, while divisions were composed of 10–57 full time faculty. The gender distribution of trainees was 62% male to 38% female and for faculty, 75% to 25%.

Only 50% of program directors reported having a gender non-discrimination and equal opportunity policy (Table 3). However, most programs (83%) had an approach to ensure gender non-discrimination and equal opportunity in trainee selection and in training opportunities. During the interview process, all residency programs forbid inquiring about the status or plans of the following: marriage, pregnancy, or care responsibilities, and the majority (80%) took proactive steps to recruit all genders. Only 60% of residency programs ensured physicians on selection committees participated in unconscious bias training. With regard to training opportunities, most residency programs (80%) offered mentorship programs with specific support for women. Furthermore, some residency programs (60%) offered leadership coaching or development trainings and educational opportunities with specific support for women, and few (40%) offered specific programs to build the pipeline of qualified women for leadership level opportunities.

All programs had an approach to offer and support paid maternity/paternity/caregiver leave, but only 33% had an approach to support trainees as parents and/or caregivers. Of the programs that had support for trainees as parents/caregivers (n = 2), only one provided an option for a phased return to work after leave and only one had protected time for breast feeding/ pumping. Despite this, most programs (83%) had an approach to accommodate work/life balance of trainees. All programs offered peer mentoring, while most offered modified program options (75%) or flex-time (50%). One respondent commented: "Much of this is driven by our post-graduate medical education (PGME) office and the University. There is a lot of support for mental health, wellness, gender, sexuality and work life balance."

Similar to the residency program directors, only 56% of division chairs (Table 4) had a gender non-discrimination and equal opportunity policy. During the staff recruitment process, 75% of division chairs had an approach to ensure gender non-discrimination and equal opportunity. Nonetheless, selection committees were lacking in the following realms: designation of a person to oversee gender selection bias/gender discrimination (17%), taking proactive steps to recruit women in traditionally underrepresented roles (33%), ensuring gender-balanced interview panels (33%), and ensuring all staff on the selection committee participate in unconscious bias training (17%). Turning our attention to professional development and promotion processes, only 29% had an approach to ensure gender non-discrimination and equal opportunity, with no leadership coaching, development trainings, or educational opportunities for women. Despite this, most division chairs (71%) had leadership commitment and support for gender equality and women's empowerment.

Few division chairs (29%) had an approach to support, financially or non-financially, maternity/paternity/ caregiver leave. Although all staff were encouraged to take maternity/paternity/caregiver leave, there was no mentorship/succession planning before going on maternity/ paternity/caregiver leave, no protected time for breast feeding/pumping upon return, and no time off to attend

Table 3. Responses to WEPs Modified Tool for Program Directors

Question	Subquestions	Ν
Does your P	astic Surgery residency program have a gender nondiscrimination and equal opportunity policy?	
Yes		3
No		2
I am not a	1	
/	astic Surgery residency program have an approach to ensure gender non-discrimination and equal unity in trainee selection?	
Yes	inty in trainee selection:	5
No		5
I am not a	ware	1
For yes	Forbid inquiring about the status or plans of the following: marriage, pregnancy, or care	5
	responsibilities, during the interview process	
	Have due diligence and remediation processes to identify and address violations of recruitment	4
	policies that are based on gender discrimination	4
	Take proactive steps to recruit all genders Ensure gender-balanced interview panels during selection processes	4
	Ensure that both women and men candidates are shortlisted for interviews	5
	Ensure job descriptions use gender neutral language and images	5
	Ensure all physicians on selection committees participate in unconscious bias training	3
/	astic Surgery residency program have an approach to ensure gender nondiscrimination and equal	
	inity in training opportunities?	_
Yes		5
No I am not a	1/2/2	1
For yes	Offers mentorship program(s) with specific support for women	4
1 of yes	Offers leadership coaching with specific support for women	3
	Offers access to professional networks (internal and/or external) with special support for women	4
	Offers development trainings and educational opportunities with specific support for women	3
	Offers specific programs to build the pipeline of qualified women for leadership level opportunities	2
	lastic Surgery residency program have an approach to offer and support paid maternity/paternity/	5
	er leave?	
Yes No		
I am not a	ware	1
Other		"This is not program
		specific, programs
		exist through
		PGME and resident
		association"
Does your P	astic Surgery residency program have an approach to support (nonfinancially) trainees as parents	
and/or	caregivers?	
Yes		2
No		$\frac{2}{4}$
I am not a For yes	Ware Provides support and encouragement to take maternity/paternity/caregiver leave	4 2
FOI yes	Provides mentorship before going on maternity/paternity/caregiver leave	2
	Provides an option for a phased return to work after maternity/paternity/caregiver leave	1
	Provides referrals/recommendations for childcare	2
	Has protected time for breast feeding or pumping	1
	Provides breastfeeding/pumping rooms that are clean and safe	2
	Offers time off to attend healthcare appointments with dependents	$\frac{2}{2}$
	Consults with male and female trainees to determine if parental and caregiver benefits meets	2
Does your P	trainee needs astic Surgery residency program have an approach to accommodate the work/life balance of all trainees?	
Yes	as ourgery residency program have an approach to accommodate the work/ me balance of an transcess	4
No		2
I am not a		
For yes	Offers flextime	2
	Offers peer mentoring	4
	Offers modified program options	3
	Addresses wellness	4

healthcare appointments with dependents. Notably, only one division chair reported their program had an approach to accommodate work/life balance for its members. This unique approach was for both men and women, and included peer mentoring and flex-time.

Overall, the Division chairs made several comments while completing the survey (Table 4). In particular, one individual stated: "This is an extremely important issue. I think many believe this 'battle was won' years ago and therefore there is nothing else that needs to be done. In fact, I think a renewed commitment to these issues needs to be made."

DISCUSSION

Our modified WEPs survey reached all Canadian PRS programs/divisions and had a response rate of 55%–91%. Only approximately 50% of programs or divisions had a non-discrimination and equal opportunity policy, but the majority had approaches to this for trainee selection

Table 4. Responses to WEPs Modified Tool for Division Chairs

Question	Subquestions	Ν
	tic Surgery division have a gender nondiscrimination and equal opportunity policy?	_
Yes No		51
I am not awa	are	2
Other		1
		"The University does.
		There is not one specific
D		for Plastic Surgery"
	tic Surgery division have an approach to ensure gender nondiscrimination and equal in recruitment processes?	
Yes	in rectument processes:	6
No		ĩ
I am not awa	are	1
For yes	Forbid inquiring about the status or plans of the following: marriage, pregnancy, or care	6
	responsibilities, during the interview process	1
	Have due diligence and remediation processes to identify and address violations of recruitment policies that are based on gender discrimination	4
	Has a designated person on the selection committee who oversees gender selection bias/	1
	gender discrimination	_
	Takes proactive steps to recruit women at all levels	4
	Takes proactive steps to recruit women in traditionally underrepresented roles	2
	Ensure gender-balanced interview panels during selection processes	2 2 3
	Ensure that both women and men candidates are shortlisted for interviews Ensure job descriptions use gender neutral language and images	3 6
	Ensure for descriptions use gender neutral language and mages Ensures all staff on selection committees participate in unconscious bias training	1
Does your Plas	tic Surgery division have an approach to ensure gender nondiscrimination and equal	
	in professional development and promotion processes?	
Yes		$\frac{2}{1}$
No Lom not our		$\frac{1}{3}$
I am not awa Other	a e	э 1
oulei		"We are required to follow
		regulations from our
		department, Faculty of
		Medicine, and provincial
		health authority"
For yes	Mentoring program(s) with specific support for women	1
	Leadership coaching with specific support for women Access to professional networks (internal and/or external) with special support for women	$\begin{array}{c} 0\\ 0\end{array}$
	Development trainings and educational opportunities with specific support for women	0
	Specific programs to build the pipeline of qualified women for leadership level	0
	opportunities	
· ·	tic Surgery division have leadership commitment and support for gender equality and	
	powerment?	~
Yes No		5 1
I am not awa	ire	1
For yes	Communicates the relevance of gender equality and women's empowerment	4
,	Identifies areas where further improvements can be made	3
	Includes a rationale for prioritizing gender	0 0
	Articulates the link between gender equality and other areas of medical and surgical	0
	performance Advocates for gender equality and women's empowerment in education and research	3
	forums	5
Does your Plas	tic Surgery division have an approach to offer and support paid maternity/paternity/	
caregiver lea	ive:	
Yes		2
Yes No		2 3
Yes No I am not awa		2
Yes No		2 "We have a mechanism
Yes No I am not awa		2 "We have a mechanism for recruitment of
Yes No I am not awa		2 "We have a mechanism for recruitment of locum coverage,
Yes No I am not awa		2 "We have a mechanism for recruitment of locum coverage, and our provincial
Yes No I am not awa		2 "We have a mechanism for recruitment of locum coverage,
Yes No I am not awa		2 "We have a mechanism for recruitment of locum coverage, and our provincial medical association has
Yes No I am not aw Other		2 "We have a mechanism for recruitment of locum coverage, and our provincial medical association has maternity/paternity
Yes No I am not awa Other Does your Plas or caregiver	tic Surgery division have an approach to support (nonfinancially) members as parents and/	2 "We have a mechanism for recruitment of locum coverage, and our provincial medical association has maternity/paternity benefits."
Yes No I am not aw Other Does your Plas or caregiver Yes	tic Surgery division have an approach to support (nonfinancially) members as parents and/	2 "We have a mechanism for recruitment of locum coverage, and our provincial medical association has maternity/paternity benefits."
Yes No I am not awa Other Does your Plas or caregiver	are tic Surgery division have an approach to support (nonfinancially) members as parents and/ s?	2 "We have a mechanism for recruitment of locum coverage, and our provincial medical association has maternity/paternity

(Continued)

Table 4. (Continued)

Question	Subquestions	Ν
Other		2
For yes	Provides support and encouragement to take maternity/paternity/caregiver leave	2
Toryes	Provides support and choungement to take materinity/paterinity/caregiver reave Provides mentorship/succession planning before going on maternity/paternity/caregiver leave	0
	Provides an option for a phased return to work after maternity/paternity/caregiver leave	1
	Provides referrals/recommendations for childcare	0
	Has protected time for breast feeding or pumping	Ő
	Provides breastfeeding/pumping rooms that are clean and safe	Ö
	Offers time off to attend healthcare appointments with dependents	Ö
	Conducts member surveys to determine if parental and caregiver support meets member	0
	needs	0
Does your Pl	astic Surgery division have an approach to accommodate the work/life balance of all members?	
Yes		1
No		3
I am not aware		1
Other		2
For yes	Addresses work/life balance for men and women	1
	Offers flextime	1
	Offers peer mentoring	Ō
	Offers modified program options	õ
	Addresses wellness	1
Comments		
	"Equality needs to be provided to all members regardless of gender, race etc. Any approach to address inequalities of the past should not come at the expense of discriminating	
	against current members." "Significant progress but still a long ways away: no maternity policy, parental leave or hiring policy"	
	"University and departmental policies are very restrictive regarding job accommodation (no	
	part-time appointments or job sharing permitted)." "I strive to pay close attention to this as a division issue and would hope that PRS is an	
	exemplar compared to other surgical specialties—it continues to be a work in progress— diversity is a big issue that permeates the selection process for residents but we have 65%	
	female in the program—at a leadership level this continues to be a challenge" "This is an automathy important issue. I think many ballors this 'battle use you' years are	
	"This is an extremely important issue. I think many believe this 'battle was won' years ago	
	and therefore there is nothing else that needs to be done. In fact, I think a renewed	
	commitment to these issues needs to be made."	

and learning opportunities, as well as staff recruitment. Divisions lacked an approach to ensure gender nondiscrimination and equal opportunity in professional development and promotion processes, although they reported commitment to supporting gender equality and women's empowerment. Work/life balance was encouraged and supported for residents; few approaches existed for faculty. Finally, most residency programs offered paid maternity/paternity/caregiver leave, whereas the minority of divisions offered financial or non-financial support for staff members for similar duties. Interestingly, very limited support existed for trainees as parents and/or caregivers.

Our observation that division chairs encouraged staff to take maternity/paternity/caregiver leave, while failing to offer (1) mentorship/succession planning before going on maternity/paternity/caregiver leave, (2) protected time for breast feeding/pumping upon return, and (3) time off to attend healthcare appointments with dependents, is alarming given that residency training and early years in practice for female surgeons directly coincides with prime reproductive years.^{16,17} Without formal policies to support female surgeons during pregnancy and thereafter, they may face stigma and perceive a lack of support.^{18,19} As such, female surgeons are more likely to delay parenthood compared to their male colleagues.²⁰ with other specialties are more likely to use assisted reproduction, have a longer time to conceive and take a shorter maternity leave.²¹ Despite these challenges, the number of female residents pregnant during training is increasing.^{10,22} Among all specialties, surgical residents report the lowest support for pregnancy during training.²³ The lack of perceived support is valid, given that >50% of U.S. general surgery program directors surveyed by Sandler et al.¹⁷ believe that *no* time during training was best to have a child. We observed that most PRS programs in Canada did not have an approach to support trainees as parents/caregivers. It is likely that the lack of formal policies observed among Canadian PRS programs may place an additional burden on residents or faculty when planning pregnancy/ caregiver leave.

Furthermore, it is more difficult to standardize an approach, compared with a formal policy. For this reason, different programs may attract, or fail to attract, the diverse group of medical trainees, which will inevitably evolve into residents. Previous literature has observed that a lack of maternity leave policies, obstacles to breastfeeding,¹⁰ and stigma from colleagues results in a female surgeon's increased desire to choose a less demanding specialty²⁴ and revisit their career choice.¹⁹ In light of this evidence, it is clear that the dissatisfaction of female residents and faculty may deter qualified medical students from selecting a career in surgery.

Despite the increasing number of female medical students, there remains an underrepresentation of women residents and faculty in PRS.²⁵ As of 2016, 35% of PRS residents and 16% of the American Society of Plastic Surgeons members were female.²⁶ The scarcity of female plastic surgeons contributes to a lack of same-sex mentors for prospective female students.²⁷ Not only do female medical trainees value same-sex mentors,²⁸ but an absence of such mentors limits opportunities for female physicians to advance academically.^{29,30} We observed that not a single PRS program offered leadership coaching, development trainings or educational opportunities for women. The lack of academic advancement opportunities for women may lead to fewer publications,³¹ conference attendance and university appointments. Of note, PRS has the fewest number of female authors compared with all other specialties, with only 13% of authors publishing in *Plastic and Reconstructive Surgery* being female.³² In addition, female medical trainees may be deterred from a career in surgery due to stigma of the "surgical personality", a primarily androcentric perception of surgery.³³ These concerns are well-founded, given that a female who chooses a career in surgery is 10 times more likely to experience gender discrimination-which will result in a negative impact on her professional opportunities⁶—than her male colleagues.³⁴ Phillips et al²⁹ observed that although explicit gender bias have decreased, implicit bias persists in plastic surgery and has a negative impact on females at all levels of training. These data, as well as the results from the National Academy of Sciences report which state that a significant barrier to women in Sciences is systematic gender bias,³⁵ suggest that unconscious bias training is important. We observed that only 60% of residency programs or 17% of divisions ensured all staff on selection committees for residents or staff respectively participated in unconscious bias training. In addition, we observed that division chairs, for the most part, did not have a designated person who oversaw gender selection bias/gender discrimination. To mitigate explicit/implicit gender bias, we suggest that proactive steps must be taken to (1)recruit women in traditionally underrepresented roles, (2) ensure gender-balanced interview panels and (3) ensure all staff on the selection committee participate in unconscious bias training.

To the best of our knowledge, our survey is the first to examine division chairs and residency program directors report of gender and equity policies within Canadian PRS divisions and training programs. The present investigation has many strengths. First, it employed a validated and internationally recognized analysis tool. The WEPs Gender Gap Analysis tool was created and refined by the United Nations, and lightly modified by our research group to be applicable to medicine. In addition, our research team obtained a high response rate for this survey. As such, the answers provided should be an adequate representation of Canadian PRS programs.

Nonetheless, this investigation is not without limitations. Our sample size was limited by the number of Canadian PRS programs – rather small compared to the number of U.S. or European programs. Furthermore, geographic trends or differences among program could not be determined due to the finite number of PRS programs and our goal to maintain anonymity. Also, our survey focused on gender as a binary construct (male or female), although we recognize that gender may be defined on a spectrum. In addition, to prevent survey fatigue, our survey had a limited number of questions. Our survey thus assessed an important aspect of equity but is not comprehensive in assessing all elements of diversity or equality. We focused on the issues related to gender in PRS, but equity of residents and staff goes beyond the concept of gender to include race, sexual orientation, religion, etc. There are, therefore, issues related to gender that have not been addressed through our analysis. We encourage additional research to further explore these important issues. Lastly, there was no indication that undue influence has affected the completion of the WEPs Gender Gap Analysis in corporations, and so we are confident this was not a factor in our investigation. Nonetheless, to mitigate the perception of undue influence, we ensured all participants that only national data would be published. In doing so, we reduced concerns regarding the influence of participants responses on their institution's reputation. It was made clear to all participants that our goals were to address and improve gender and equity policies, not assess personal opinions or bias, or penalize individual programs.

Overall, it is evident that the medical sector has been slow to implement policies in support of female residents and faculty. To facilitate this change, policies should be put in place to support gender and equity for all residents and faculty members. For instance, in the present investigation, we observed that only 1 of 11 Canadian PRS programs had option for a phased return to work. To appeal to the diverse group of trainees in surgery, Canadian PRS programs must develop policies to support both male and female residents as parents or caregivers. Recently, the Emergency Medicine residency training program at Stanford developed a successful progressive antepartum relief and return to work program for pregnant residents.³⁶ It is thus possible to develop policies to support both residents and faculty in their personal and professional endeavors. Although we observed that the majority of Canadian programs had approaches to ensure gender non-discrimination and equal opportunity, policies are required to decrease the individual burden on residents and faculty. Providing sufficient gender non-discrimination and equal opportunity among PRS programs will support individuals not only as physicians, but as mentors to the diverse group of medical trainees who will be welcomed into the field. In addition, well-formed policies will ensure that all incoming trainees feel welcomed into PRS, and the field as a whole is prepared to accommodate the needs of its members.

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