An exploration of graduate student peer mentorship, social connectedness and well-being across four disciplines of study

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Abstract

Purpose – Student mental well-being is a matter of increasing concern on university campuses around the world. Social, psychological, academic and career aspects of graduate learning are enriched through peer mentorship. Peer-mentoring experiences and the impacts of these relationships on the mental well-being of graduate students remain underexplored in the scholarship of teaching and learning. The purpose of this study was to explore how engagement in formal and informal peer mentorship, as described by students across four academic disciplines, impacts the social connectedness and well-being of graduate students.

Design/methodology/approach – A convergent mixed methods research design was used, with quantitative and qualitative data gathered in parallel to gain a comprehensive, corroborated and integrated understanding of graduate students' perspectives and experiences with peer mentorship. Online survey and interview data were collected from graduate thesis-based master's EdD and PhD students in education, medicine, nursing and social work. The data were analyzed using descriptive statistics and thematic analysis.

Findings – The authors found a commonality of graduate student experiences across disciplines with respect to the diverse psychosocial impacts of graduate peer mentorship. Peer-mentoring relationships offered mentees emotional support, motivation and a sense of community and offered mentors opportunities for self-development and gratification.

Originality/value – This research is unique in its in-depth exploration of the interdisciplinary perspectives and experiences of graduate students from Education, Nursing, Medicine and Social Work. While further research is needed to explore the implementation of structural approaches to support the development of peer-mentoring relationships in graduate education, the multidisciplinary focus and depth and breadth of this inquiry suggest the potential transferability of the study findings to other disciplines and academic settings. The findings from this study further highlight the need for strategic activation of existing program resources to foster greater connectedness and well-being among graduate students.

Keywords Graduate education, Mentorship, Social connectedness, Well-being, Psychosocial support, Peer relationships

Paper type Research paper

Introduction

Student mental well-being is a matter of increasing concern on university campuses around the world. Various factors, including the individualized nature of graduate education, competitiveness, strained student–supervisor relationships and increasing financial demands can negatively impact student well-being (Mackie and Bates, 2019). Working alone may lead some graduate students to experience feelings of isolation (Castello *et al.*, 2017), loneliness (Jamison and Bolliger, 2019) and self-doubt (Cowie *et al.*, 2018; Perez, 2020), all of which can negatively impact their academic outcomes and well-being (Lorenzetti *et al.*, 2019). Research suggests that graduate students across academic disciplines can experience significant stress (El-Ghoroury *et al.*, 2012; Myers *et al.*, 2012; Oswalt and Riddock, 2007), anxiety (Jungbluth *et al.*, 2011) and depression (Rummell, 2015; Wyatt and Oswalt, 2013) during their program. An international study of 2,279 graduate students across 234 academic institutions indicated a higher prevalence of anxiety and depression among graduate students than in the general population (Evans *et al.*, 2018). As a result, the Council of Graduate Schools, representing the Canadian graduate education community, has called for a culture change in academia, the destigmatization of mental health support-seeking and prioritization of mental wellness initiatives among master's and doctoral students (Okahana, 2018). Taken together, this evidence points to a global concern for graduate student mental wellness.

Over the past 30 years, numerous differences have been noted in Canadian graduate students' demographics, contributing to the increasing diversity of the Canadian graduate student population. A report by the Association of Universities and Colleges of Canada (AUCC) (2011) indicated that most graduate students were female, over 30 years old and enrolled full-time. The diversity in age, background, experiences and cultures of graduate students are compounded by their multiple academic (i.e. teaching, research, coursework and supervisory evaluations) and non-academic (i.e. social context, familial expectations and financial) demands, presenting challenges for students' abilities to thrive in their academic environments (Everall, 2018; Luzzo, 2000; Mackie and Bates, 2019). While academic challenges can create temporary stress, which is normal and can inspire growth and success, prolonged, chronic distress, by contrast, can be debilitating (Everall, 2018). To position all students for academic success, graduate programs should take steps to mitigate distress and support learners' well-being as they manage these varied and competing responsibilities.

Academic, psychosocial and career aspects of graduate learning are enriched through peer mentorship (Lorenzetti *et al.*, 2019). Researchers have demonstrated that peer mentors can be instrumental in reducing mentees' stress and promoting psychosocial well-being (Chanchlani *et al.*, 2018; Colvin and Ashman, 2010). Peer mentorship can also support the acquisition of leadership skills, increase social support and have a positive impact on mental health (Kukreja, 2018; Lin and Hsu, 2012). Drawing from the literature, our study defined peer mentorship as a *developmental* and *reciprocal* relationship between individuals with varying levels of expertise, who *interact regularly and consistently over time* to transmit knowledge and emotional support and who may switch between mentor and mentee roles (Haggard *et al.*, 2011).

In this study, social connectedness refers to that "aspect of the self that reflects subjective awareness of interpersonal closeness with the social world *[and can be]* a critical component of one's sense of belonging" (Lee and Robbins, 2000, p. 484). Moreover, well-being is viewed as a holistic, multi-dimensional construct (i.e. emotional, intellectual, social, physical, spiritual and occupational) (Hettler, 1977), as self-reported and defined by participants on a wellness continuum (i.e. spanning optimal wellness/healthy lifestyle to major disability from illness) and characterized by awareness, education and growth (Ryan and Travis, 1981). Given this hybrid definition, we use the terms well-being and wellness interchangeably throughout this paper.

The experiences and impacts of peer mentoring on the well-being of graduate students remain underexplored in the scholarship of teaching and learning. The purpose of this study was to explore how engagement in formal and informal peer mentorship, as described by students across four academic disciplines, impacts the social connectedness and well-being of graduate students. Given the psychosocial challenges for graduate students that may precede admission, develop or become exacerbated while completing their degree programs, it is imperative that graduate schools understand the diverse needs of their students and be prepared to offer the necessary wellness supports.

Methods
The research team used a convergent mixed methods research design that included both quantitative and qualitative data, gathered in parallel, to gain an integrated understanding of graduate students' perspectives and experiences of peer mentorship (Bergman, 2008; Kajamaa *et al.*, 2020; Levitt *et al.*, 2018; Maudsley, 2011; Tashakkori and Teddlie, 2010). We chose this pragmatic approach to integrate the descriptive breadth of quantitative data with the interpretive depth of qualitative data (Creswell and Plano Clark, 2018) to better understand the impact of peer mentorship on graduate students' social connections and well-being.

Participants
We recruited participants from amongst the approximately 900 thesis-based master's, EdD and Ph.D. students enrolled for at least one year in one of four professional faculties (Education, Medicine, Nursing and Social Work) at a large public university in Western Canada. We anticipated a strong female participation rate, which may be a product of career differences between females and males, especially within the faculties of Education, Nursing and Social Work, which tend to be female-dominated professions. Based on the North American model, all graduate students (master's and doctoral) are first required to complete their coursework and then engage in their thesis research. Eligible participants included those who had previous experience in formal and informal peer mentorship programs (as either a mentor or mentee).

Materials
A prior systematic review (Lorenzetti *et al.*, 2019) on peer mentorship supported the development of the online survey and semi-structured interview guide for this study. The online survey comprised a series of Likert scale and multiple response questions designed to gather data on demographic variables and perceptions associated with students' peer-mentoring relationships. Members of the research team (which included graduate students) reviewed and revised the survey questions to increase the face and content validity. The interview guide comprised nine open-ended interview questions intended to gather students' perceptions and experiences with peer mentorship and the impacts of peer mentorship on well-being and social connectedness.

Procedure
Ethics approval was obtained prior to conducting this study. The purposeful maximum variation sampling techniques (Palinkas *et al.*, 2015), snowball sampling and a variety of public platforms (i.e. posters, listservs, websites, e-newsletters, social media and word-of-mouth) assisted with student recruitment. Thesis-based graduate students were recruited across four faculties. Participants who agreed to be interviewed were invited to complete the

online survey. Members of the research team conducted in-person interviews. To mitigate possible power imbalances between faculty and graduate students and to reduce potential bias, faculty interviewers were paired with student interviewees from outside of their faculties. All interviews were audio-recorded, transcribed verbatim and anonymized prior to analysis.

Analyses
Quantitative and qualitative data were analyzed separately and then integrated into key themes and visualizations that represented the findings. Quantitative analysis of the survey data ($n = 47$) involved calculating descriptive statistics (e.g. frequencies and percentages) using SPSS 26 (Mac). Each of the interview transcripts were analyzed in duplicate by two members of the research team, using an open coding and iterative process. A thematic analysis approach (Braun and Clarke, 2006) guided the inductive and comparative exploration of higher-order conceptual representations and patterns that emerged as themes from interviews (Merriam, 2009; Miles *et al.*, 2014). Iterative review and ongoing team discussions helped resolve any discrepancies in coding and achieve consensus in theme identification; this team approach to analysis contributed to inter-rater reliability, credibility, confirmability and dependability (Moorley and Cathala, 2019). Integration of the quantitative and qualitative data involved dataset comparability and merging descriptive findings gleaned from the survey data with emergent qualitative themes (Ozawa and Pongpirul, 2014).

Findings
Participant characteristics
A total of 62 full-time and primarily domestic graduate students participated in the semi-structured interviews; 47 (76%) of whom responded to the online survey. Our findings are discussed in terms of notable trends across the four disciplines, as small sample sizes prevented the computation of further statistical subgroup analyses. Table 1 illustrates the various participant demographics. Most participants were enrolled in Medicine ($n = 23$, 49%) or Education ($n = 10$, 21%) and were female ($n = 40$, 82%), reflecting the naturally occurring disproportionate number of female graduate students across the four disciplines. The majority of participants were between 25 and 44 years of age ($n = 30$, 64%), in their first two years of study ($n = 28$, 60%) and had not yet begun writing their thesis or dissertation ($n = 26$, 55%).

Emergent themes and sub-themes
As illustrated in Figure 1, the following five themes emerged from the integration of the online survey and interview data:

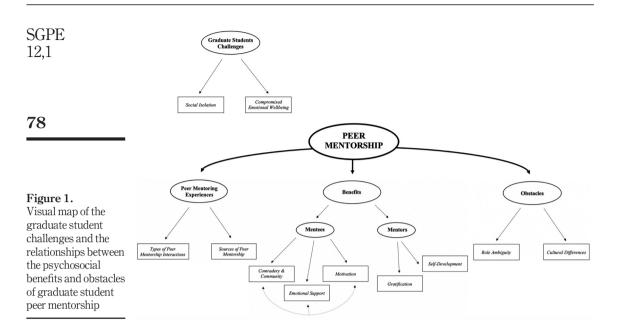- graduate student challenges;
- peer-mentoring experiences;
- peer mentorship benefits to mentees;
- peer mentorship benefits to mentors; and
- obstacles to peer mentorship.

In the sections that follow, central themes and sub-themes are presented using direct quotes attributed by participant number and the first letter of the student's discipline (E – Education, M – Medicine, N – Nursing, S – Social Work).

Variable	Qualitative: interviews ($N = 62$)	Quantitative: survey ($N = 47$)
Sex	n (%)	n (%)
Males	11 (18)	7 (15)
Females	51 (82)	40 (85)
Age range (yrs)		
<25		8 (17)
25–34		18 (38)
35–44		12 (26)
45–54		8 (17)
55+		1 (2)
Faculty affiliation		
Education	14 (23)	10 (21)
Nursing	7 (11)	7 (15)
Medicine	31 (50)	23 (49)
Social Work	10 (16)	7 (15)
Year of study		
One		12 (26)
Two		16 (34)
Three		7 (15)
Four		4 (9)
More than four		8 (17)
Type of student		
Domestic	49 (79)	
International	13 (21)	
Distance student		
Yes	5 (8)	
No	57 (92)	
Thesis/dissertation		
Not yet in progress		26 (55)
Writing in progress		21 (45)
Reported graduate student challenges		
Yes	30 (48)	

Theme 1: graduate student challenges. Almost half (30 out of 62) of the students who participated in this study reported that they experienced several challenges associated with graduate education, such as social isolation and compromised emotional well-being, that impeded their psychosocial well-being and ability to engage in their academic studies. These challenges, often discussed in relation to pressures to achieve standards of excellence within a competitive academic culture, were perceived to negatively impact students' learning experiences, motivation and sense of belonging.

Social isolation. Participants discussed the challenge of increased social isolation throughout their graduate studies. For many, the graduate experience began with the initial excitement of taking courses with a cohort of peers who served as a valuable support system. However, as the coursework expectations increased and some initiated their independent research projects, student accounts were replete with instances of becoming isolated and losing desired social supports. One participant said, "the feelings of [. . .] isolation and loneliness were the worst part of my graduate program" (M29). Loneliness was most closely associated with the research phase of graduate education, "[. . .] it is a lonely process of writing and commitment and putting your head down and wading through stuff that is just so difficult

Figure 1.
Visual map of the
graduate student
challenges and the
relationships between
the psychosocial
benefits and obstacles
of graduate student
peer mentorship

emotionally, mentally, academically" (N6). Several participants also identified that it can be challenging to remain motivated in graduate school given the competitive academic culture. Given the finite number of opportunities and resources available to graduate students (S7), one participant stated, "[. . .] it creates this perception of competition that's unnecessary and is completely in conflict with [. . .] a positive academic environment" (N7).

Compromised emotional well-being. Many participants described a compromised sense of emotional well-being, associated with feelings of inferiority, intimidation, a lack of self-confidence and the fear of being recognized as an imposter. One participant said:

> I had this reputation of being somebody who knows more programming like there's like that fear that I will mess up and I won't be able to help them and then I'll like be a fraud (M18).

Another participant explained, "I think we all have these feelings that we just think we can't write well [. . .] you question yourself [. . .] every time you hand in a paper" (N2). These insecurities seemed to also generate feelings of being overwhelmed and exhausted: "[. . .] you're sleep deprived, you're stressed out, you're always on edge that the teacher is going to call on you about the one thing you didn't read" (S8).

Numerous participants emphasized how their struggles to incorporate self-care and work–life balance practices, while trying to accomplish all that was required of them in their academic and personal lives, compromised their emotional well-being. As one participant stated:

> [. . .] it's hard and especially when you're working fulltime and you've got a family and you're trying to get [chuckle] all these things done, sometimes you just feel like screaming (E13).

Other interviewees mentioned the challenges associated with prioritizing their self-care and mental health:

> [. . .] that is I think the steepest part of the learning curve [. . .] balancing my work and my school and then also having a social life [chuckle] and being a healthy individual, is a big challenge (E6).

Participants suggested that a more concerted effort to promote peer mentorship opportunities could help graduate students manage these challenges.

Theme 2: peer-mentoring experiences. Participants across the four disciplines described the types of mentoring relationships (i.e. formal/informal and dyad/group) they had experienced, the different roles they assumed (i.e. mentor, mentee or both) and where they sought peer support (i.e. internal/external to program).

Types of peer mentorship interactions. In the context of the definition of peer mentoring adopted for this study, participants underlined the significance of having a peer mentor or several peer mentors. Most survey participants reported connecting with their peers for support individually face-to-face ($n = 41, 87\%$), in group face-to-face meetings ($n = 32, 68\%$) and via email ($n = 31, 66\%$). Other forms of interactions less frequently reported included the use of social media (such as WhatsApp or Skype), texting or telephone.

The typical frequency of meetings between peers was reported as once a month ($n = 14, 30\%$), once a week ($n = 14, 30\%$) or more than once a week ($n = 9, 18\%$). The remaining 22% ($n = 10$) indicated that they met with peers "as needed" ($n = 4, 40\%$), every two weeks ($n = 2, 20\%$), twice per week ($n = 1, 2\%$) or once per semester ($n = 1, 2\%$), with some even stating that they rarely or never met with peers ($n = 2, 20\%$). When asked whether interactions with peers included formal meetings, informal meetings or both, most participants indicated a combination of formal and informal meetings ($n = 24, 52\%$). Participants contended that the primary purpose of *formal* meetings with peers was to write together ($n = 3, 6\%$), offer peer review or feedback ($n = 8, 17\%$), discuss milestone progress ($n = 8, 17\%$) or provide emotional support ($n = 4, 9\%$). Six percent ($n = 3$) of survey participants reported they formally met with their peers to team-teach undergraduates with a faculty lead, enhance their understanding of their program or institution and seek advice from senior students.

Sources of peer mentorship. The majority ($n = 43, 91\%$) of survey respondents indicated that support from other students was beneficial during the research and thesis/dissertation writing phases of their degrees. While 62% ($n = 29$) of students said it was important to receive support from peers in their same program or discipline, 57% ($n = 27$) did not think peers needed to be at the same point or year in program.

Theme 3: peer mentorship benefits to mentees. Participants who had experiences as a mentee focused on the benefits they gained from peer mentorship, such as comradery and community, emotional support and motivation to persist.

Comradery and community. Graduate students reported that peer mentorship increased their understanding of the academic culture at their institution ($n = 34, 72\%$) and increased their sense of belonging to a community or reduced their feelings of isolation ($n = 41, 87\%$). Peer-mentoring relationships enabled students to engage in more meaningful and friendly conversations around academic milestones and processes (e.g. research processes, writing, candidacy and thesis examination preparation) and increased their awareness of available resources ($n = 40, 85\%$). In these forums, described as free of power differentials, participants reported being able to exchange best practices such as developing time management skills ($n = 11, 23\%$) and building self-confidence ($n = 28, 60\%$). One interviewee stated, "I think the sense of being part of a community, an academic community is important just to at least validate what you're doing" (E3). According to another interviewee:

> [...] you're actually able to ask questions without feeling like you are going to like mess everything up because sometimes when you talk to someone that you don't feel is in your same level, for example someone from faculty [...] you might not [...] feel confident to ask what you need [...] [with peers] I knew I was able to ask questions and I wouldn't be judged (E14).

In addition to fostering knowledge around academic operations, participants mentioned that peer-mentoring relationships provided them with a feeling and awareness of belonging to a group of individuals with similar ideas, needs, goals and experiences. One interviewee said:

> I think culture is so important, to have a culture where you feel supported on all aspects, not just from your supervisor or your committee but also from your community of graduate students (M6).

This emerging group of mentors and mentees was described as a "safe environment" (M29) where frustrations could be freely voiced, and questions asked without judgment. As one student expressed, "that's what peer support does is normalizes your experience and give you a community of belonging because all humans need belonging" (S8).

Participants also discussed the value of peer-mentoring connections that acknowledged the various roles and responsibilities graduate students hold outside of academia. As one interviewee said:

> What I value is when they connect with me as a person and they say well as a woman who's raising children, who's working full-time, just pointers of selfcare and work-life balance and those become more helpful to me than the actual solving of certain issues (E8).

For students, these shared experiences of life beyond graduate school helped them bond with their peers: "that support and that comfort you know there's something about that – going through a lived experience together certainly creates a sense of [. . .] bonding" (N4).

Participants also emphasized the importance of ensuring there was reciprocity in peer mentoring. Through genuine intentional exchanges, interviewees described the collaborative sharing and giving by both mentees and mentors:

> I would say we, we put on and took off those hats all the time so we were you know acting sometime as a mentor, sometimes as a mentee [. . .] it was very reciprocal (E13).

The social network that emerged from peer-mentoring relationships appeared to promote a culture of togetherness and well-being. Over time, some mentoring bonds intensified and developed into mutual fondness and friendship, allowing students to gain knowledge in a casual, relaxed forum. One interviewee expressed: "I value the knowledge that they have to share [. . .] and I also value their friendship" (S9).

Emotional support. Building upon the previous sub-theme of comradery and community, interviewees discussed the importance of feeling safe in their peer relationships. Participants reported that they felt a genuine, deep investment from their peer mentors:

> [. . .] when I'm feeling overwhelmed, I feel like I'm by myself so I talk to somebody and find out that they're having the same experience so it's more like emotional support (E6).

Another participant acknowledged that:

> I was able to help them and give guidance [. . .] but [. . .] they found more value in the mentorship when it came to relating at that emotional psychological level. I think that's where I made more of an impact with them (S9).

Interviewees also emphasized how their peer mentors comforted and helped them feel less overwhelmed by pending deadlines. For example:

> [. . .] you're exhausted [. . .] you just literally are crying in the bathroom [. . .] to just have somebody else be like hey it's okay you're going to do this, it's fine, don't worry about it, like your life is going to go on (N4).

Participants also reported that through their mentorship circles, peers facilitated the identification of coping strategies that supported them in achieving a healthy and more productive work–life balance ($n = 24, 51\%$).

Motivation. Data revealed that peer mentors helped mentees maintain the motivation required to remain in their graduate programs. One interviewee said, "She motivated me to do the work [. . .] [when] I just wanted to give up and just, just check out of life, for a while" (E8). In some ways, mentors served as a hard "reset" for mentees to try again; their encouragement and physical presence provided them with a positive role model and inspired them to persist in their degrees. As one student said, "seeing her succeed made it possible for me too" (N5). Another participant who perceived the social support mentors provide as motivating said:

> I know that feeling of being so lonely and not being very motivated to do it on your own so it's nice to have someone who is going to just sit with you at the same table and spend the whole day you know at the library [. . .] I honestly couldn't do it without having like that support (M29).

Theme 4: peer mentorship benefits to mentors. As participants reflected on the times they served as peer mentors, they expressed how mentoring also positively enriched their personal growth, academic lives and well-being.

Gratification. Mentors reported experiencing feelings of satisfaction when they felt appreciated and valued by their peers. One interviewee stated:

> [. . .] it makes me feel good as a person that I can help you. It tells me that if you come to me that you see some value in me as a person and I find value in that [. . .] you are appreciative of me (S9).

Another participant noted: "I really, really did enjoy kind of pass[ing] on my wisdom [. . .] knowing that you, you can offer something of value to someone else" (M19). Peer mentors were also mindful of the need to role model the support that they benefitted from early in their own studies: "I felt like it was a nice thing to give back because I've always received such great help from other students" (M28). As reflected in the following quote, interviewees reported a contagion effect, where doing good toward others created a culture of positivity:

> To be able to pass that on to somebody else to better set up their experience so that you know it, it continually gets better within programs and, you know we're actually moving towards the goal of learning and training excellent professionals [. . .] that's exciting (E12).

Self-development. Participants talked about how peer-mentoring experiences validated their sense of self-worth, expertise, knowledge and abilities:

> I found that [. . .] it helps you just reflect on, on your own achievements and build confidence that you, you have overcome challenges and so you can overcome them again (M22).

Participants stressed that their self-confidence ($n = 28, 60\%$) increased over time as a result of being a peer mentor, helping them combat their own feelings of low self-efficacy regarding their academic abilities. Specifically, mentoring helped participants develop their thesis ($n = 32, 68\%$), reinforce knowledge of methods ($n = 32, 68\%$) and deliver feedback ($n = 33, 70\%$), including feedback on writing ($n = 27, 57\%$). For instance, one interviewee stated: "I do feel more confident in supporting people and well maybe I actually maybe do know what I'm talking about" (N5). Another interviewee noted:

> I felt really confident when someone trusted me or like wanted my opinion on something that mattered to them and so [. . .] it [. . .] increased my self-esteem for when I made my own decisions (S6).

Theme 5: obstacles to peer mentorship. Contrasting the benefits of peer mentorship, the final theme reflects perceived and experienced obstacles associated with these relationships.

Role ambiguity. Participants discussed the difficulties of participating in mentoring relationships when individuals are unsure of role expectations, as well as the structure, processes and focus of mentoring. Respondents expressed the value of time, and how tensions develop when mentor–mentee relationships are not prioritized. One participant said:

> I'm kind of resentful of some of the time that I've spent when things don't happen or when they don't follow up and so sometimes I wish [. . .] there were more strictly defined [. . .] student, mentor sort of relationship (M5).

Similarly, another interviewee said:

> I think the one thing that I've sort of struggled with is how often to reach out to my mentee [. . .] trying to find that balance of being there but not being too sort of overbearing (E2).

This declared commitment to the relationship seemed to be repeatedly endorsed by participants but was paralleled by the need to set appropriate boundaries to ensure that "lines" were not blurred, especially when faced with multiple competing roles (e.g. mentor, teaching assistant and friend). For instance, one participant said, "sometimes it can get challenging in that [. . .] you need to draw a line in terms of your commitment" (N6). The discomfort associated with representing various roles, some of which denoted power differentials (e.g. teaching assistant performing assessment duties), created a significant challenge for students trying to foster open and genuine mentoring relationships:

> I guess one thing that was a little bit tricky was my mentor was a TA in one of my courses so we had to have a conversation about that, like how do we separate those roles and how [. . .] do we navigate that (E2).

Participants also expressed the dichotomy between the need to create a supportive atmosphere in peer mentorship, alongside an aura of competition among peers who serve as mentors. Although peer mentors are often expected to share both their knowledge and personal challenges or experiences with their peers, they expressed a concern that appearing vulnerable in front of peers could diminish their academic reputations. As one participant said:

> I think there is a bit of vulnerability about how much you share and how much you give, expose I should say of yourself and [. . .] part of that feeds into that competitiveness about marks and funding (N6).

As another contended, "[. . .] there's a financial gain by being better than your neighbor" (N7).

Cultural differences. Cultural competence refers to the ability of individuals to develop and maintain meaningful relationships with people of varying cultural backgrounds. Some students in the study noted that cultural differences among peers can unintentionally hinder a peer-mentorship relationship. As one interviewee stated:

> It's cultural differences that sometimes we don't understand and that maybe if a mentor, if this mentorship program consider this aspect they can in advance take like a time to say okay what's your background, what are the [. . .] characteristics of your culture, how do you understand this kind of relationship so that maybe this issues that I'm mentoring do not affect the mentor, mentee relationship (E5).

Discussion

The primary goal of this study was to explore the psychosocial impacts of peer mentorship experiences on graduate students. Drawing on the integration of survey and interview data from participants across the four faculties of Education, Medicine, Nursing and Social Work, Figure 1 illustrates the 5 major themes and 11 sub-themes that reflect the potential of peer mentoring to counter graduate education challenges while promoting social connectedness and well-being.

Almost half of the participants in our study reported they had experienced challenges in their graduate programs that impeded their social connectedness and well-being and, in turn, their ability to thrive in their academic studies. Our findings highlight an increasing global concern regarding the mental well-being of students in postsecondary institutions (Evans *et al.*, 2018). Graduate education can be a challenging journey, intended to promote growth, maturity and the advanced development of academic and professional competencies. Over time it is common for students to compare themselves to their peers, fixate on the successes of others and question their own achievements and abilities. Our participants described this sense of wanting to succeed and stand out above the group, which fueled a real and perceived competitiveness with respect to finite awards and recognitions, leadership opportunities, teaching positions across programs and future employment prospects.

Four of our five emergent themes focused on the psychosocial benefits and challenges associated with graduate student peer mentorship. Participants discussed their peer mentorship experiences as purposeful in their intent to share, sometimes influence, and at times, transform self and others in these relationships. While our findings revealed that most graduate peer-mentoring relationships developed organically, formally structured programs can expand students' ability to access diverse peer perspectives, experiences and knowledge. Peer-mentoring experiences were diverse in type (i.e. formal and informal, individual and group, in-person and remote) and source (i.e. same program/discipline and any program year) across academic disciplines, suggesting that students value and benefit from access to multiple peer-mentoring constellations. These findings are especially encouraging given the recent challenges Coronavirus Disease 2019 (COVID-19) has presented in exacerbating student isolation and eroding mental wellness (Chirikov *et al.*, 2020) and suggest that there may be untapped opportunities for offering peer-mentoring programs via various remote, online and electronic modalities (e.g. zoom, skype and telephone). Consistent with previous research (Cross *et al.*, 2020; McLean, 2004), peer-mentoring relationships helped students experience a sense of belonging to the broader graduate peer community; this enabled them to develop friendships, remain motivated and seek emotional support throughout their graduate studies. Our data also confirmed the reciprocity inherent in these relationships and the fulfillment, confidence and personal growth that peer mentors and mentees can experience when sharing their knowledge and expertise with peers.

Our findings suggest that although peer mentorship may positively impact graduate student social connectedness and well-being, confusion surrounding mentoring role expectations and competing personal demands may negatively affect the progress of these relationships. Ill-defined mentoring roles may lead to dissatisfaction, ineffectiveness, a lack of commitment and anxiety, which may negatively impact the interpersonal connections that typically develop in mentoring relationships (Ebbers and Wijnberg, 2017). Similarly, dominant cultural expectations or impositions may be an obstacle to mentorship and contribute to cultural division among peers (Budge, 2006). The inability to recognize and be cognizant of cultural differences in values, dispositions and practices between peer mentors

and mentees could impede students' ability to expand and strengthen their social network and protect their psychosocial well-being.

Limitations

While the present study explored the psychosocial impacts of peer mentorship across four diverse faculties, our focus was limited to a single institution and disciplines that are predominantly care-centered and female dominated. Hence it is unknown whether there may be marked differences among the following:

(1) student populations enrolled in other graduate schools in Canada and elsewhere;

(2) student respondents who are primarily Indigenous, racialized or belong to marginalized identity groups; or

(3) disciplines that are less care-centered (e.g. engineering, physics and cell biology).

Similarly, this study attracted a homogeneous group of graduate students (primarily female and Canadian) with some experience or knowledge of peer mentoring. Future research efforts should focus on validating our findings across various ethnicities, disciplines and academic institutions.

Related to the notion of reflexivity, while we did our best as researchers to remain objective and disclose and mitigate potential biases through the collection and analysis of data, we recognize we are not impartial. As faculty leaders within graduate education programs, we have preconceived notions and knowledge regarding the power of peer mentorship. Nonetheless, we acknowledge this as a consequence of the data collection and analysis process, which would otherwise be impossible to control. Also, not obtaining any participant or third-party review authenticity checks of the qualitative interview data may have posed potential risks for increased bias in the development of themes and sub-themes. Finally, while we achieved a 76% response rate for the survey from among those who were interviewed, a complete response rate would have made it easier to assess the participant demographics in a more unified manner.

Practical implications and future recommendations

Although there are many benefits to peer mentorship, these can also act as barriers to peer mentor–mentee relationships. For instance, the sharing of personal information may create deeper mentoring connections but also exposes student vulnerabilities in a competitive culture. While competition is certainly not unique to graduate education and comprises a broader systemic ethos that individuals will encounter throughout their lives, the results of our study suggest that programs and institutions can cultivate safe forums within graduate education to help graduate students develop healthy strategies to manage academic stressors. Faculty and graduate administrators should explicitly acknowledge this reality and work to mitigate these negative effects while amplifying the positive impacts of peer mentorship. Positive messaging from those in leadership roles, and specific initiatives such as group peer-review of manuscripts, scholarship and grant applications, can dilute individual competitiveness and foster a team approach to collective achievement at the program and institutional levels.

Findings from this research may inform future disciplinary and institutional-level efforts to design structured and accessible peer-mentoring initiatives that promote graduate students' social and psychosocial well-being. Our findings suggest that embedding peer-mentoring experiences within graduate academic training may explicitly support students' social and well-being needs. It is important for faculty and graduate administrators to view

graduate students on a wellness continuum from when they begin their programs through to when they complete. There may be times, dependent upon where they are in their personal and academic lives, during which graduate students will require support to maintain their psychosocial well-being and academic progress. A holistic view of graduate students' academic achievements that encompasses students' social connectedness and well-being is an appropriate and ethical responsibility of all academic programs (Schwartz-Mette, 2009). Therefore, it is imperative that we consider both the emotional and personal realities that students bring into their programs, and the range of challenges that may develop while students are in program. It is essential that programs support graduate students in accessing campus mental health services; however, programs should also work to change structures and processes that impede or create unnecessary barriers for students (e.g. timing and access to course offerings, social isolation and competitive culture). Understanding the psychosocial benefits of graduate peer mentorship can help inform the strategic activation of existing resources within programs to foster greater connections and well-being among graduate students.

Conclusion

This study addresses a critical gap in the literature on peer mentorship in graduate education by revealing the type and prevalence of peer supports that graduate students across disciplines provide to one another that can enhance student well-being. Notably, little variation was found across four care-centered disciplines concerning the reported experiences of graduate students in their mentoring relationships and experienced graduate education challenges. The findings from this study amplify students' voices in describing their experiences of peer mentorship, and the role of peers in supporting psychosocial well-being. In addition, our study provides insights and suggestions for how and why programs, faculties and universities can enhance graduate student social connectedness and well-being in their organizational and institutional structures and processes.

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