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RESEARCH ARTICLE

Adaptive Mentoring Networks and Compassionate Care: A Qualitative Exploration of Mentorship for Chronic Pain, Substance Use Disorders and Mental Health

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ABSTRACT

This study undertook an exploration of how Adaptive Mentoring Networks focusing on chronic pain, substance use disorders and mental health were supporting primary care providers to engage in compassionate care. The study utilised the Cole-King & Gilbert Compassionate Care Framework to guide qualitative semi-structured interviews of participants in two Adaptive Mentoring Networks in Ontario, Canada. Fourteen physician participants were interviewed including five mentors (psychiatrists) and nine mentees (family physicians) in the Networks. The Cole-King & Gilbert Framework helped provide specific insights on how these mentoring networks were affecting the attributes of compassion such as *motivation, distress-tolerance, non-judgement, empathy, sympathy*, and *sensitivity*. The findings of this study focused on the role of compassionate provider communities and the development of skills and attitudes related to compassion that were both being supported in these networks. Adaptive Mentoring Networks can support primary care providers to offer compassionate care to patients with chronic pain, substance use disorders, and mental health challenges. This study also highlights how these networks had an impact on provider resiliency, and compassion fatigue. There is promising evidence these networks can support the "quadruple aim" for healthcare systems (improve patient and provider experience, health of populations and value for money) and play a role in addressing the healthcare provider burnout and associated health workforce crisis.

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Introduction

Improving access to care for mental illness, substance use disorders, and chronic pain is a widely recognised need in many countries [1–5]. However, the fragmented and siloed treatment systems for these conditions pose significant challenges to achieving this goal [6,7]. The issue is further complicated by provider burnout and the healthcare worker crisis, which have been exacerbated by the COVID-19 pandemic [8,9]. Treating these clinical conditions individually is already complex, however individuals frequently experience multiple conditions simultaneously, this adds to clinical complexity and their access to care becomes even more challenging. [1–4,10–12]Unfortunately, specialised support for patients dealing with multiple conditions is nearly non-existent in Canada, compounding the negative impact of poor access [10–12]. This lack of access leads to patient suffering, unsatisfactory encounters, fragmented care, long wait times, high disability rates, and financial burdens on individuals and the healthcare system [1–4].

The compounding complexity of these conditions hampers access but also impedes healthcare providers' ability to provide compassionate care, increasing the risk of provider burnout [13,14]. Research demonstrates that healthcare providers often hold pessimistic views regarding recovery from chronic illnesses like chronic pain, substance use disorder, and mental illness [15–17]. However, compassion is recognised as a fundamental aspect of a patient-centric healthcare system, with significant impacts on patient health, quality of life, provider-patient relationships, and healthcare costs [18,19]. By promoting a more hopeful outlook through a focus on compassionate care, we can start to address the stigma associated with mental illness, substance use, and chronic pain [10]. Additionally, emphasising compassionate care can

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help mitigate provider burnout by promoting a sense of personal well-being [20].

Studies on access to care highlight the challenges faced by individuals with chronic conditions [21]. Primary care providers often lack confidence and feel uncomfortable in managing patients with mental illness, addictions, and chronic pain [21,22]. Moreover, patients with substance use disorders have reported encountering primary care providers with insufficient knowledge to address their health issues, resulting in denied admission to practices [22]. Building primary care providers' clinical expertise and confidence to deliver compassionate care within a patient's medical neighbourhood is recognised as an important strategy to improve access [1,3,10,19]. However, barriers such as stigma, reimbursement, time constraints, low clinician resiliency, limited tools to address social determinants of health, and gaps in knowledge and confidence hinder efforts to increase primary care capacity [1,2,23]. Furthermore, challenges related to the healthcare provider crisis and burnout requires capacity-building solutions that focus not only on increasing knowledge and confidence but also clinician resiliency [24].

Adaptive Mentoring Networks are a novel professional development initiative that has been developed by the authors based on their previous work in this area [25–29]. These networks are being implemented in several provinces across Canada to build primary care capacity around chronic pain, mental health and substance use disorders to mitigate issues regarding access to care [25–27,30]. We have characterised Adaptive Mentoring by three concepts: mentorship that adapts to the learning needs of mentees; building compassionate provider communities, and the bi-directional value for both mentors and mentees. Adaptability of mentoring allows for the customisation of how mentors and mentees engage to fit the learning needs of the mentee [31]. Adaptation can include different environments (e.g. in-person, virtual, synchronous and asynchronous), forms of mentoring (e.g. one-on-one, group and peer mentoring), purposes and duration (e.g. discussing single episodes of care versus longitudinal discussions spanning years) and can be tailored to the mentee's evolving expertise [32]. Compassionate provider communities are developed by mentors and mentees engaging in a safe space that allows for supportive and non-judgemental conversations around clinical challenges [26–28]. These conversations enable knowledge sharing and support the mentees in overcoming barriers to the practical implementation of clinical best practices. However, these interactions go beyond translating knowledge by addressing the stresses, fears, and anxieties mentees face in providing complex care [26,27]. This augments mentees' clinical resiliency and professional satisfaction [26,27]. The concept of compassionate provider communities shares similarities to compassionate communities in palliative care, however these communities in Adaptive Mentoring focus on creating a compassionate experience for healthcare providers [33]. Providing bi-directional value for mentors and mentees is a hallmark of mentoring. Mentors can benefit from increased clinical knowledge, improved resiliency, and professional satisfaction by engaging in these compassionate provider spaces [34,35]. The focus of this intervention on compassionate provider communities, provider resiliency and satisfaction offers an approach to continuing professional development that pushes beyond knowledge, confidence and behaviour change to focus on provider wellbeing. This may be a necessary approach for Continuing Professional Development (CPD) to support the ongoing engagement of healthcare providers amid significant provider burnout.

Adaptive Mentoring offers a promising approach within the complex landscape of CPD interventions related to substance use, chronic pain, and mental health [36]. By leveraging social and developmental learning theories and clinical champions, this form of mentoring aims to address contextual barriers and facilitate behaviour change. As a CPD offering, it can augment other CPD programs that focus on motivation, knowledge, and self-efficacy [36].

Currently seven provinces in Canada are implementing these Adaptive Mentoring Networks, engaging a range of interprofessional primary care clinicians to develop primary care capacity in addressing chronic pain, mental health and substance use disorders [25,26]. These networks connect primary care providers (as mentees) with mentors who are experts in these clinical domains. Mentoring in these networks includes different forms (1:1, group, peer) and takes place in a variety of environments (in person, video, email, messaging) that support synchronous and asynchronous interactions. Evaluations of these programs have demonstrated positive impacts on knowledge, attitudes, confidence, clinician resiliency and professional satisfaction. Reported impacts on clinician behaviour included supporting more patients with mental illness, substance use or chronic pain; more clinically complex patients; fewer specialist referrals, and improved compassionate relationships with their patients [25–27]. These evaluations provide insight into the impacts of these networks but do not describe how they are influencing challenges to providing compassionate care.

The objective of this study was to explore how Adaptive Mentoring Networks fostered a growth in compassionate care among mentor and mentees participants in this CPD initiative. We described and explained the participants' mentoring experience by utilising the different facets of compassion from the Cole-King & Gilbert Compassionate Care Framework [37]. This framework identifies six attributes that underpin compassion, which were used to guide this study. The six attributes include *motivation, sensitivity, sympathy, empathy, distress tolerance* and *non-judgement*.

Materials and Methods

Setting

We focused on two Adaptive Mentoring Networks, the Collaborative Mental Health Network (CMHN) and Medical Mentoring for Addictions and Pain (MMAP) based in Ontario, Canada. Both networks operated for over a decade and in 2018 they included 677 family physicians as mentees along with 67 mentors who were experts in mental health, addictions, or chronic pain. Both mentors and mentees in these programs had diverse representations from urban to rural and academic to community-based practice settings [27].

Mentors were recruited from within and outside the networks. Internal candidates were mentees who progressed into mentoring roles while participating in the networks. After recruitment, mentors received an orientation session and a mentor's manual outlining their role and objectives of the networks and remunerated for their time. Participation in these voluntary networks involved recruiting mentees through communication channels for health professionals. Interested mentees registered with either or both programs at no cost and completed an intake survey. They were then matched to a team of 2–3 mentors in a similar geographic region. Mentees could connect with their mentors as needed, using various mentoring environments (e.g. in person, telephone, email), primarily email [26,27].

The mentees connected to a mentor team formed a small group, with mentor: mentee ratios typically at 1:10. The group sizes ranged from 20–40 mentees. These groups met every 4–8 weeks, for didactic teaching and clinical case discussions. The meetings took place in person or via tele/videoconferencing. These small groups provided opportunities for group and peer mentoring. Additionally, mentees and mentors were part of a network-wide messaging platform. The platforms supported text based asynchronous communications for clinical discussions, resource sharing and gathering multiple perspectives rapidly. CMHN and MMAP had separate platforms. More than 50% of mentees in both networks had participated for over three years. The majority interacted with the networks approximately four times/year using various forms of mentoring, including 1:1 and groups [27,28].

Study Design and Recruitment

We selected a qualitative descriptive approach to gain insight into participants' mentoring experience in these networks. This approach stays close to the descriptions of experiences and perceptions of the participants [38]. The flexibility of this approach is suited to studying human phenomenon. However this flexibility can be criticised, when it results in under-explained aspects of the research process [39]. Accordingly, we used the Cole-King & Gilbert theoretical framework to guide our data collection and analysis to ensure clarity and credibility of our findings.

The eligibility criteria for this study included active participants in either program in 2018. We used convenience sampling to recruit voluntary participants from active program members. The opportunity to participate in this study was open to all mentors or mentees in the program (i.e. interested, and available to participate). This strategy of sampling is consistent with exploratory studies [40]. Between May and August 2018, we recruited mentors and mentees through multiple posts on the programs' messaging platforms and emails to all active members inviting them to voluntarily participate in this study.

Sample Size

Our sample size was determined by using the five considerations outlined under the concept of information power [41]. These considerations asked the researcher to reflect on the study aim, sample specificity, theoretical background, quality of dialogue, and strategy for analysis. Recognising that our study was exploratory, our aim was narrow in studying a specific population (mentors and mentees of the two programs). Semi-structured interviews were conducted by one research analyst, and the analysis strategy included an in-depth analysis of participants' narratives. Although there is no precise formula for determining sample size in qualitative research, the nature of the topic, the scope of the study and the time spent with each respondent helped in determining when the probability of new insights emerging was low. We continued to recruit beyond our projected 10–12 to ensure we

achieved the desired instances for the themes identified.

Data Collection

In the healthcare literature, there are multiple conceptualisations of compassion from patient and healthcare provider perspectives [14,18]. This study focused on the Cole-King and Gilbert Compassionate Care framework [37] as it provides a clinically relevant definition of compassion: "A sensitivity to the distress of self and others with a commitment to try and do something about it and prevent it". It also provides a framework of six attributes that underpin compassion: *motivation, sensitivity, sympathy, empathy, distress tolerance* and *non-judgement*. Motivation is described as the interest to care, support, and do something to help someone in distress. Sensitivity is a capacity to notice when others need help. Sympathy is our emotional response to distress in others. Empathy is both the affective and cognitive elements to recognise a person's struggles and make sense of them. Distress tolerance is the ability to bear the difficult emotions we see in others and not be overwhelmed. Non-judgement is to accept and validate another person's struggles.

After considering options from the literature and engaging in discussions with experts and our research team, we chose this framework. The decision was based on the alignment of its attributes with themes identified in previous evaluations of these mentoring networks [26,27]. We believed this framework would facilitate a deeper exploration of these themes and identify new themes. The senior author and research analyst were external to the programs, while AR, JH, and JS were previous mentors.

Qualitative, semi-structured individual interviews were conducted by a research analyst with 5 mentors and 9 mentees of the networks. The semi-structured interview guide was developed deductively using Cole-King and Gilbert's Compassionate Care Framework. The length of the interviews ranged from 20 to 45 minutes. The interviews were recorded with permission of the interviewees, and then transcribed verbatim by a professional transcriptionist. After transcription, the recordings were erased. We specifically looked for how participants discussed the six attributes for developing compassion and how the mentoring networks supported family physicians to provide compassionate care around mental illness, addiction, and chronic pain. Ethical approval for this study (Protocol #: 00035993) was granted by an institutional review board at the University of Toronto, Toronto, Ontario, Canada.

Analysis

We used the thematic analysis approach of Braun and Clarke to review the transcribed interviews, generate codes, and develop descriptive themes [42]. The analysis began with a transcription of the audio recordings by a professional transcriber and then relocated into Dedoose, a qualitative software program. The transcripts were coded line-by-line by the research analyst and underwent several in-depth reviews by the senior author (SS), resulting in the development of numerous open codes. Subsequently, the open codes were collapsed and grouped, forming descriptive categories using the six attributes from Cole-King and Gilbert's Compassionate Care framework [37]. Finally, categories were refined and converged to create central themes. The themes were provided to two members of the research team (AR and SS) for further feedback and refinement. The research team engaged in consistent and iterative dialogue while comparing the data collected and the framework.

Results

All five mentors were psychiatrists, and all mentees were primary care providers, mostly family physicians and one psychotherapist (Table 1). Both the mentors and mentees interviewed for this study were from the

Table 1. Participants' Demographic Information.

Study Participants	Mentors ($n = 5$)		Mentees ($n = 9$)	
Clinician type	Psychiatrists	100% (5/5)	Family physicians	89% (8/9)
			Family physician and psychotherapist	11% (1/9)
Practice type	Group practice	40% (2/5)	Group practice	56% (5/9)
	Solo practice	20% (1/5)	Solo practice	22% (2/9)
	Hospital practice	40% (2/5)	Community Health Centre	22% (2/9)
Gender	Male	80% (4/5)	Male	11% (1/9)
	Female	20% (1/5)	Female	89% (8/9)
Number of years in programs*	0–5 Years	0	0–5 years	56% (5/9)
	6–10 years	20% (1/5)	6–10 years	0
	11–20 years	80% (4/5)	11–20 years	33% (3/9)

*Data for duration in the program was not collected for one mentee.

MMAP and CMHN networks, providing representation from both programs. Eighty percent of mentors were either in group practice or hospital practice, while 56% of the mentees were in group practice and the rest were either in solo practice or part of a community health centre (team-based interprofessional primary care with integrated health and social services). Eighty percent of mentors were men, and eighty nine percent of mentees were women, which reflects the gender distribution in both programs. Eighty percent of the mentors have been participating in the program for over 10 years. For the mentees, 56% were in the program for five or less years and 33% had been participating for over 10 years (Table 1). Data for duration in the program was not collected for one mentee.

Participants in this study identified the importance of compassion in clinical practice, particularly when working with patients with mental illness, substance use, and chronic pain. All participants were able to describe and explain their experiences with the mentoring programs and how it contributed to their knowledge, skills, and attitude for providing compassionate care to these patients. Table 2 provides quotations that illustrate how each of the six attributes to compassion were described by the mentors and mentees in the interviews. Below is a summary of findings around

Table 2. Attribute of compassion with illustrative mentor/mentee quotations.

Attribute	Quote from mentee/mentor
Motivation	"Since it's a voluntary organisation to join, it's already people that are looking to motivate themselves to do better at it … the fact that they join means that they are interested and willing to expand". (mentee) "Many of my mentees have been there between 10 and 15 years, they have developed capacity and skill, and have become opinion leaders within the city that we're in and are looked up to by other family physicians not in the group, to get advice about patients". (mentor)
Sensitivity	"There's a tendency to just say, 'oh you've misused your Tylenol 3, you're fired'. I've learned strategies and skills to be able to manage that without dismissing the patient or making it into a behaviour problem. It becomes more of a 'how do I support this person to do the right thing?' And I've found that the most valuable piece, in the addiction and mental, addiction and pain world … [is]how to work with the patient rather than dismiss them out-of-hand … , 'well, you screwed up, so you're out'." (mentee)
Sympathy	"Well, empathy is putting yourself in the shoes of patients. And sympathy is giving your emotions to that person, even though you – can't put yourself in their place. But, having the emotion to share – what I say is, we have this invisible table that we both put our emotions onto, and we just share them together … And if you're not taught how to put your vulnerability out there … there's many, many times where I know I would have missed the boat, if I carried on a normal conversation; Now I stop, and you notice that there's more to this. And you break a shell of vulnerability and secrecy with the patient. That opens an enormous healing space. You know, you can tell I love this ". (mentee)
Distress Tolerance	"I spend a lot of time one-on-one with physicians reaching out to me, who need advice, not just about one patient, but about struggling with their practice. And that would just be a private conversation … So there's an awful lot of that you don't see on the portal, that I do … but, you know, people have reached out to me or I've reached out to them". (mentor)
Empathy	"A lot of what the network is particularly good at helping people with is the difficult patient; the patient that they don't like, or that they think is problematic in some way; they have a personal reaction to the patient. And, I think we're particularly good at helping them figure out why and negotiating what to do about that, but it requires a willingness on the part of the primary care provider to say, you know, 'this person really pisses me off'. Or, 'I hate it when I see their name on the list', – there's a kind of a vulnerability involved in doing that. And I think that's a barrier for some people. I think some people don't like to feel like they're negative about their patients, or don't know what to do with them or you know, anything that feels to them like they're not being the kind of doctor they want to be, is a bit of a challenge". (mentor)
Non-Judgement	"Physicians needed a safe place to discuss some very difficult and overwhelming things, and sometimes even some unsafe practices. If you're going to change those practices in a way that's healthy for the providers, for their colleagues and the teams that they work in, but also, ultimately, healthy and compassionate for the patients that they serve, you need to treat the physicians with compassion as well, and with a safe place to discuss these things. I think that captures the compassion that we hope to deliver in the doctor-patient relationship, but also in our professional lives, amongst each other" (mentee)
Time Constraints	"The way most physicians practice, there's too much to do, and they're juggling things. Occasionally something feels like you don't get to it in time, or it intrudes out of the workday in a way that's less than ideal. I think for mentees in primary care, there are more barriers; time really is of the essence; I think that the network's offer the best model for providing just-in-time targeted, effective backup. But even that, even fifteen minutes or twenty minutes, for a busy primary care doc, can feel like it's pushing them late".
Compassionate Provider Communities	"The fundamental thing I didn't know before [I participated in the CMHN], was that mental-health care and primary care isn't equivalent to psychiatry. It's a different practice. We [psychiatrists] see patients for an hour. Most family docs don't see patients for an hour. We are driven by models of behaviour and human pathology. Family docs are working from a preventative model … though we see the same patients, and even though I think psychiatry can inform primary care, the practice of primary mental-health care, is not psychiatry; I don't think I or psychiatry realises that. We're at risk of imposing our models on primary care in a way that's a poor fit so that's been eye-opening for me … most of the mental-health care delivery in this province is by primary care. They see far more psychiatrically ill patients than psychiatrists do, so I think, humbly working with primary care, is where we're going to solve the issues around access".

each of the six attributes from the Cole-King and Gilbert framework [37].

Motivation

Most study participants described themselves as motivated to be caring, good role models, supportive and helpful to each other; identifying it as one of the reasons they joined the network. They described themselves as being intrinsically motivated to provide care that is compassionate. They also described their willingness to model compassionate behaviour and provide advice as a part of the longitudinal mentoring relationships in the programs.

Sensitivity

Several participants recognised that time restraints in busy clinical practices are not conducive to providing compassionate care for patients with mental health, addictions, and chronic pain. The majority of participants engaged in the mentoring programs because they strongly believed that they could not "turn a blind eye" or avoid difficult conversations. Conversations with mentors helped mentees increase their skill at navigating these conversations sensitively. These conversations were also beneficial in supporting the motivation of participants to be sensitive and compassionate.

Sympathy

Several participants described how discussions helped them understand the differences between sympathy and empathy, and that compassionate care requires both concepts. Participants went on to describe how they view sympathy as the ability to feel sorrow when they (the patient) are feeling unhappy about something.

Distress tolerance

Overall, most study participants explained that it is a physician's responsibility to be able to bear difficult emotions without feeling overwhelmed by their patients' distress. Some participants described this as a more private emotion thus requiring a more private conversation between mentor and mentee. These interactions with their mentors and sometimes with peers helped manage their distress tolerance.

Empathy

Empathy was seen as being the valuable capacity to put oneself "in the patient's shoes". All participants described understanding the importance of recognising their patients' feelings and making sense of their own feelings and emotional response to the patient.

Non-judgement

Several participants described the importance of providing patients with a non-judgemental clinical encounter and learning the skills to provide this. It was also seen as being important to provide physicians with a non-judgemental space to discuss difficult clinical encounters and situations.

The interviews provided insights into how Adaptive Mentoring was helping support compassionate care in two new areas: time constraints and compassionate provider communities. Interviewees noted that time constraints are a significant barrier to providing compassionate care. This was mainly due to limited time during clinical encounters and the demanding nature of their workload. The issue of limited time was further compounded by the complexity of clinical cases. In addition, heavy clinical demands, and a lack of timely support, such as traditional consultations, hindered compassionate care. However, interviewees found that just-in-time advice and support offered by the programs helped address these barriers by providing effective assistance for managing clinical complexity within the limited time available during clinical visits. The idea of compassionate provider communities was noted in several interviews with both mentors and mentees, particularly related to having a safe, and at times private, space for discussions. These spaces allowed for mentees to talk about difficult clinical interactions, feeling overwhelmed and navigating associated negative emotions. The quote in Table 2 related to compassionate provider spaces is an example of how mentors in these programs were developing a deeper appreciation and empathy for the challenges mentees are facing and the significant differences between tertiary and primary care.

Discussion

The findings in this study provide a preliminary understanding of how Adaptive Mentoring Networks can support compassionate care for patients, especially in the complex intersections between chronic pain, substance use, and mental illness. The Cole-King and Gilbert framework provided a structure that was

important in developing more specific insights into how these programs affected attributes of compassion, such as *motivation, distress tolerance, non-judgment, empathy, sympathy*, and *sensitivity*. This study contributes to the existing framework by identifying two new areas: time constraints and compassionate provider communities. The research provides novel insights into the role of compassionate provider communities, and the development of skills and attitudes associated with compassionate care.

This study adds to the existing work around Adaptive Mentoring programs by furthering our understanding of the relationship between compassionate provider communities in this program and compassionate care [26,27]. In particular the findings around the attributes of *motivation*, *distress tolerance* and *sensitivity* provide insights in how these communities can support compassionate care. Both mentors and mentees identified that relationships with other members of the community improved their *motivation* to engage in compassionate behaviours. Though *motivation* can have an intrinsic element to it, this study revealed how longitudinal mentoring relationships can shape attitudes that support motivation. Additionally, the study identified the potential for program participants to serve as role models and have an impact on the motivation of clinicians outside of the program. This study also helps us understand how the supportive, non-judgemental relationships in these communities can help participants to share and work through difficult situations (*distress tolerance*) and learn how to navigate difficult conversations with *sensitivity*. Furthermore, these communities can improve *distress tolerance* through timely and supportive relationships by helping to address the stresses and fears of participants around clinical uncertainty and the ongoing suffering of their patients. This idea of communities supporting a clinician's distress tolerance is consistent with the existing literature around compassion [18].

Compassionate provider communities play an important role in supporting compassionate care by offering just-in-time clinical support. By providing rapid access to ongoing specialist support, these communities can reduce the burden of accessing such assistance. This challenge of accessing timely specialist support is often time-consuming and unavailable for months or years, adding to the heavy clinical demands of the providers in the programs [2,10]. This reduction in barriers to timely and ongoing support, can enable mentees to better navigate complex clinical discussions more compassionately and effectively within the constraints of limited time.

This study also identifies evidence that compassionate provider communities can foster a deeper appreciation of diverse clinical realities between participants. This deeper appreciation can cultivate a shared understanding that can build stronger connections between participants supporting the development of a community. The promotion of a greater understanding of different clinical realities provides insights into how these communities can evolve and the impact it can have on mentors and mentees. Furthermore, this finding can point at the potential of these communities to bridge some of the silos in healthcare, such as tertiary to primary care or facilitating interprofessional collaboration. This bridging can reduce barriers to access, fragmented care and help improve the professional satisfaction of participants. This finding can be of potential value with the interest in fostering interprofessional primary care teams [43,44].

Another effect of these communities in supporting compassionate care is related to a reduction in compassion fatigue [45,46]. Compassion fatigue can be a stress response that includes fatigue, emotional exhaustion, and a reduced capacity for empathy and sympathy among healthcare providers resulting from the exposure to their patients traumatic experiences and suffering [46]. By helping to support motivation and reduce distress tolerance, these compassionate provider communities can reduce compassion fatigue. Interestingly, compassion fatigue can be linked to increased provider burnout, which is of relevance amid a healthcare worker crisis. Previous studies have identified that Adaptive Mentoring programs can improve both compassionate care and provider resiliency [26,27]. Our study adds to this by helping to understand the manner by which burnout and resiliency can be affected by participation in these compassionate provider communities.

The second area of novel findings is related to the acquiring and refining of skills and attitudes that support compassion. Previous studies of Adaptive Mentoring Networks have identified their impact on participant's knowledge, skills and behaviours related to providing chronic pain, substance use and mental health care [25–27]. This study helps us to understand how the conversations and mentoring interactions in these programs can support participants to explore, learn and improve their skills related to *sympathy, empathy, sensitivity and non-judgment*. The impact on these skills is consistent with other studies of these Adaptive Mentoring programs [26]. The literature around compassionate skills identifies the importance of affective skills (*sympathy* and *empathy*) and communication skills (*sensitivity* and *non-judgement*) in

supporting compassionate care [18,19,47]. An important implication of this study's findings related to these four skills is centred on how Adaptive Mentoring programs can address issues around stigma that are significant barriers to care for those with chronic pain, mental illness and substance use disorders [1,2,26]. Another implication of identifying skills that can support compassion is that compassion can be viewed as a competency in healthcare. The idea of compassion as a competency vs an innate virtue that one possesses is increasingly endorsed by patients, healthcare providers, and health systems [18,19,47]. By viewing compassion as a competency, it allows us to consider how to build and implement interventions to better support compassionate care and reduce stigma. The literature around interventions for compassion as a competency is nascent and has focused on developing skills through reflective practice, experiential learning, and role modelling [18,19,47]. All three of these mechanisms have been described in Adaptive Mentoring. In this study and in previous work we have seen how role modelling can be mediated in Adaptive Mentoring through the interactions between mentors and mentees [27,29]. We have also seen how mentoring supports both mentors and mentees to reflect on their own clinical practices [27]. By engaging in discussions that are anchored in personal clinical experiences the process is centred on experiential learning. This further adds to our understanding of how an Adaptive Mentoring Network is an intervention that can support compassion.

The findings of this study, when added to the existing work around Adaptive Mentoring Networks can have implications at a program level (micro) and a regional/provincial and national level (meso/macro) [26,27]. At a program level this study adds to the current understanding of how these networks support compassion, particularly around acquiring and refining of attitudes and skills. However, they do not have a structured process for acquiring these skills. Given the growing acknowledgement of the importance of compassion in healthcare, especially in the context of the opioid crisis there is an opportunity to add compassionate care for patients to the goals of these programs [14]. By identifying compassion as a goal, there would be an impetus to identify competencies to support compassion and to create structured educational content and mentoring activities to further aid the development of the relevant attitudes and skills. At a meso/macro level the quadruple aim of improved patient experience, improved clinical experience, lower costs and better outcomes has been identified as an important goal [48]. When we add the findings of this study to previous work we are developing a clearer picture of how Adaptive Mentoring Networks can support the quadruple aim by impacting access, provider resilience, stigma reduction and compassion [26,27]. There is an opportunity for healthcare institutions and funders to consider supporting continuing professional development interventions like Adaptive Mentoring in the pursuit of improved clinical care but also as a potential tool to address provider burnout, resiliency and helping to bridge between silos of care. In Canada we have seen a national commission identify the value of mentoring to address some of the issues around access and quality of care and have also seen funding support provided at both the provincial and national levels for these interventions [2]. However, it is important to highlight that building compassion as a competency requires more than interventions focused on training but also institutional and health systems support [18].

Limitations

An important limitation is around the certainty of how widely applicable these findings are to the participants in the programs studied as well as other Adaptive Mentoring Networks. This limitation can be addressed by undertaking additional qualitative studies in other programs as well as a quantitative approach to further validate these findings. This study looked at programs that only had physician participants; thus, it is unknown to what extent these findings are applicable to the broader healthcare provider community. Though there are some indications that the findings of this study are consistent with evaluations of Adaptive Mentoring Networks that have a multidisciplinary mix, there would be value in seeking to validate these findings in a broader healthcare provider population. We noted that the majority of mentor participants in the two programs were men and the majority of mentee participants were women [27]. Although this finding could be attributed to the small sample size, in fact the gender distribution in this study mirrors the ratios previously reported by both programs. We did not further examine gender issues in mentorship, nor gender mismatches between mentors and mentees for this particular study. The gender disparities noted in our sample are reflective of the low rates of women in medical leadership [49]. Future studies could provide important insights into the impact of institutional sexism and discrimination and its impact on mentoring. In response to this disparity a majority of the Adaptive

Mentoring Networks, in Canada, are using an equity, diversity, inclusion and accessibility lens to change their recruiting and selections protocols for mentors. The data from this study was collected over five years ago and could be a potential limitation. However, is unlikely these findings have significantly changed and may be more relevant with the current health workforce crisis [8].

Conclusion

This study provides novel insights into how Adaptive Mentoring interventions can support compassionate care for patients by creating communities of healthcare providers that facilitate the translation of skills and mitigate compassion fatigue. The impact of Adaptive Mentoring on provider wellbeing also highlights the opportunity to explore both the design and impact of CPD interventions on the wellbeing of clinicians. As we work to address the issues of access and capacity in mental health, substance use disorders and chronic pain care, the findings of this exploratory study, in combination with the literature on Adaptive Mentoring Networks supports the idea that CPD initiatives should incorporate the concepts of compassion and provider wellbeing, in service of patient care.

Significance

This study provides valuable insights on how innovations like Adaptive Mentoring Networks can support compassionate care through compassionate provider communities and impacts on skills. These Compassionate Provider Communities for healthcare providers can expand our view of how CPD interventions can impact well being in addition to clinical knowledge. As health care institutions and funders seek to address issues of access they can look to fund and build CPD interventions that also support compassionate care and provider well being aligning with the Quadruple aim.

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Institutional Ethics Approval

Ethical Approval for this study (Protocol #: 00035993) was granted by the University of Toronto, Toronto, Ontario, Canada.

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