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Résumé de l'article

Introduction : L'état de santé mentale des étudiants en médecine est de plus en plus préoccupant. Les étudiants en médecine sont davantage exposés à la dépression, à l'anxiété et à l'épuisement professionnel que les étudiants des autres disciplines. Le Bureau des études médicales prédoctorales (EMPr) de l'Université McGill a mis au point un programme longitudinal sur le bien-être pour favoriser le bien-être, l'autonomie et la capacité d'adaptation des étudiants en médecine.

Méthodes : Nous avons mené une étude qualitative descriptive pour explorer les expériences des étudiants relativement au programme. Nous avons organisé trois groupes de discussion semi-structurés auxquels ont participé 11 étudiants en médecine. Nous avons utilisé une analyse thématique pour l'analyse des données.

Résultats : Nous avons dégagé quatre thèmes principaux liés à l'engagement des participants dans le programme d'études : 1) diverses perceptions de la pertinence et de l'utilité du programme ; 2) les avantages des séances expérientielles, des conférenciers modèles et du personnel de soutien ; 3) des idées sur la programmation du programme adapté aux étudiants et 4) l'importance de la formation en matière de bien-être et des interventions systémiques dans l'enseignement médical.

Conclusions : La plupart des participants ont trouvé le programme intéressant et ont soutenu son intégration dans le programme universitaire. L'apprentissage expérientiel et actif, les diverses approches du bien-être, les séances en petits groupes, les modèles de rôle et les approches centrées sur l'étudiant étaient les méthodes préférées. Les horaires peu pratiques du programme et le scepticisme quant au soutien du système ont été considérés comme des obstacles à l'engagement et à l'adoption du programme. Les résultats de notre étude contribuent à l'élaboration et à la mise en oeuvre de programmes de bien-être dans l'enseignement médical.

Canadian Medical Education Journal

Original Research

Medical students' perspectives on a longitudinal wellness curriculum: a qualitative investigation

Le point de vue des étudiants en médecine sur un programme d'études longitudinal sur le bien-être : une enquête qualitative

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Abstract

Introduction: There is growing concern about the mental health status of medical students. Medical students are at a higher risk for depression, anxiety, and burnout than non-medical students. The Undergraduate Medical Education (UGME) Office of Medical Learner Affairs at McGill University developed a Longitudinal Wellness Curriculum (LWC) to foster medical students' well-being, self-care, and adaptability.

Methods: We conducted a qualitative descriptive study to explore students' experiences with the LWC. We conducted three semi-structured focus groups involving a total of 11 medical students. We used thematic framework analysis for data analysis.

Results: We found four main themes related to participants' engagement with the curriculum: 1) diverse perceptions on curriculum relevance and helpfulness; 2) the benefits of experiential sessions, role model speakers, and supportive staff; 3) insights on student-friendly curriculum scheduling; and 4) the importance of wellness education and systemic interventions in medical education.

Conclusions: Most participants found the curriculum valuable and supported its integration into the academic curriculum. Experiential and active learning, diverse approaches to wellness, small group sessions, role modeling, and student-centered approaches were preferred methods. Inconvenient curriculum scheduling and skepticism over system-level support were seen as barriers to curriculum engagement and uptake. The findings of our study contribute to the development and implementation of wellness curriculum efforts in medical education.

Résumé

Introduction : L'état de santé mentale des étudiants en médecine est de plus en plus préoccupant. Les étudiants en médecine sont davantage exposés à la dépression, à l'anxiété et à l'épuisement professionnel que les étudiants des autres disciplines. Le Bureau des études médicales prédoctorales (EMPr) de l'Université McGill a mis au point un programme longitudinal sur le bien-être pour favoriser le bien-être, l'autonomie et la capacité d'adaptation des étudiants en médecine.

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Résultats : Nous avons dégagé quatre thèmes principaux liés à l'engagement des participants dans le programme d'études : 1) diverses perceptions de la pertinence et de l'utilité du programme ; 2) les avantages des séances expérientielles, des conférenciers modèles et du personnel de soutien ; 3) des idées sur la programmation du programme adapté aux étudiants et 4) l'importance de la formation en matière de bien-être et des interventions systémiques dans l'enseignement médical.

Conclusions : La plupart des participants ont trouvé le programme intéressant et ont soutenu son intégration dans le programme universitaire. L'apprentissage expérientiel et actif, les diverses approches du bien-être, les séances en petits groupes, les modèles de rôle et les approches centrées sur l'étudiant étaient les méthodes préférées. Les horaires peu pratiques du programme et le scepticisme quant au soutien du système ont été considérés comme des obstacles à l'engagement et à l'adoption du programme. Les résultats de notre étude contribuent à l'élaboration et à la mise en œuvre de programmes de bien-être dans l'enseignement médical.

Introduction

Numerous studies have shown that medical student distress is an endemic and pernicious problem in medical schools across the world.[1-5] Incoming medical students report similar mental health status to age-matched, college students, but their mental health deteriorates once in medical school to become poorer than that of age-matched controls.[6,7] Indeed, medical students consistently display higher rates of depression, anxiety, stress, and suicidal ideation than control populations.[8-10] A reduction in empathy during medical education has also been reported, particularly as students transition to clerkship.[11,12] A clear change in how we train and support students is necessary, as psychological morbidity in medical students is associated with a host of negative outcomes, including impaired academic performance, school attrition, medical errors, unprofessionalism, compromised patient care, self-medication, and decreased quality of life.[13]

The literature has identified multiple challenges to medical student wellness. Among medical students, adverse wellness outcomes are associated with individual-level factors such as displaying rigid Type A traits, placing excessive achievement-based demands on themselves, and striving for perfection in their studies.[14-16] At the same time, medical students confront system-level factors that impinge on well-being, such as excessive workload and high expectations for academic performance,[17] rigid scheduling and limited sense of control,[18] mistreatment within the learning environment,[19] and a culture that predominantly prioritizes achievement over wellness and discourages vulnerability and help-seeking.[20]

In response, medical schools have adopted diverse interventions to improve student well-being.[21] Preventive interventions include student-led initiatives and wellness programs aimed at cultivating resilience, mindfulness, self-care, cognitive restructuring, and positive habits.[19,22-26] Reactive interventions include early screening and identification of students in distress and destigmatizing and facilitating access to mental health support.[27] Structural interventions targeting curricular changes and the learning environment, include pass/fail grading, longitudinal collaborative learning approaches, faculty and peer mentoring, flexible scheduling and accommodations, and mistreatment interventions.[19,23,28,29]

Skills-based longitudinal wellness curricula have emerged as a new area of intervention, but there is scant research exploring their effectiveness and medical students' valuation of them.[1,30,31] In a recent mixed-methods study conducted at the Mayo Clinic Alix School of Medicine-AZ, an examination of their multifaceted wellness curriculum, including curriculum-embedded seminars, a wellness committee, student-driven programming, and mental health services, was undertaken.[30,31] The results outlined in the initial publication of this study indicated a decrease in perceived stress and an increase in overall well-being over the course of the academic year, with no significant difference in outcomes between medical students who participated in the wellness curriculum and those who did not.[30] Furthermore, students' responses revealed that unscheduled time (e.g., protected time away from academic activities) had the most significant impact on their well-being, followed by student-led activities as the second-most influential factor.[30] In a separate article discussing additional qualitative data derived from this study, the researchers documented that medical students preferred diverse conceptualizations of wellness that allowed for individual choice and flexibility.[31] Additionally, students viewed wellness as closely connected to their learning environment, leading them to be skeptical of mandatory wellness initiatives that did not address issues within the learning environment.[31]

The Office of Medical Learner Affairs (formerly The WELL Office) at McGill University employs a multipronged approach to student well-being (e.g., mental health and career counselling, education, academic advising, and advocacy), which included the establishment of the Longitudinal Wellness Curriculum (LWC) (Table 1) in 2016.[32] The aim of the LWC is to foster medical students' well-being, adaptability, and self-care, and to promote a culture of wellness within the learning environment. Drawing from Bill Hettler's holistic and interconnected model of wellness,[33] the LWC targets areas of social, emotional, physical, intellectual, spiritual, financial, and occupational medical student wellness. The wellness sessions use diverse teaching and learning methodologies, including large group psychoeducation lectures, workshops, student-led activities, and simulated sessions. Guest speakers include medical students and residents, physicians, allied health professionals, and motivational speakers. The wellness sessions are scheduled during protected academic curriculum time. Based on years of feedback from student leadership, attendance at the wellness sessions is predominantly self-selected to facilitate autonomy, buy-in, and engagement with the curriculum.

Table 1. Overview of the LWC

McGill's Longitudinal Wellness Curriculum
UGME Office of Medical Learner Affairs

	YEAR 1 FUNDAMENTALS OF MEDICINE AND DENTISTRY							
Academic timeline	Block A Global Health	Block B Respiration	Block C Circulation	Block D Renal	Block E Digestion	Block F Defenses	Block G Infection	Block H Movement
Wellness Dimensions	Emotional, Social, Intellectual & Occupational	Spiritual & Occupational	Social, Financial, Occupational & Physical	Emotional & Occupational	Physical & Occupational	Emotional, Intellectual & Occupational	Social	Determined by students
Wellness Sessions	• *Adaptability* • *Diversity* • *Study skills adapted to medicine* • *Student-led physical activity* • *Career panel* • *Career planning*	• *Mindfulness* • *Career panel*	• *Personal relationships* • *Med1 financial wellness* • *Career panel* • *Student-Led physical activity*	• *Inspiration from a role model* • *Career panel*	• *Mindful eating* • *Career panel*	• *Procrastination* • *Self-compassion* • *Career panel*	• *Advocacy* • *Diversity*	• *Wellness topic chosen by cohort*

	YEAR 2 FUNDAMENTALS OF MEDICINE AND DENTISTRY & TRANSITION TO CLINICAL PRACTICE			
Academic Timeline	Block I Sexual Reproduction	Block J Human Behavior	Winter Semester	Transition to Clerkship
Wellness dimensions	Physical & Occupational	Social, Intellectual & Occupational	Social, Occupational, Emotional & Occupational	Social, Intellectual & Financial
Wellness Sessions	• *Sexuality* • *Career panel*	• *Sex, gender and sexual orientation* • *Peer support* • *Suicide prevention* • *Career panel*	• *Ice cream rounds & Career rounds* • *Simulation session on diverse sexuality and gender* • *Elective planning*	• *CBT techniques and peer mentoring* • *Med-2 financial wellness*

	YEAR 3 CORE CLERKSHIP		
Academic Timeline	Fall – Winter Semesters		Wellness and Career Fair
Wellness Dimensions	Emotional, Social & Occupational		Occupational, Financial & Emotional
Wellness Sessions	• *Ice cream rounds* • *Career planning*		• *CaRMS* • *Med-3 financial wellness* • *Residency program fair* • *Stress management*

	YEAR 4 SENIOR CLERKSHIP		
Academic Timeline	Fall Semester	Winter Semester	Transition to Residency
Wellness Dimensions	Occupational	Occupational, Emotional & Social	Emotional, Social, Intellectual, Financial, Spiritual & Occupational
Wellness Sessions	• *CaRMS* • *CV preparation* • *Personal letter preparation* • *Interview preparation* • *Rank order list*	• *Interview support group* • *CaRMS anxiety support group* • *Unmatched day support group* • *Post-match day support group* • *Unhappily matched support group*	• *Inspirational talk* • *Med-3 financial wellness* • *Time management* • *Conflict resolution* • *Feedback emotional response* • *Ice cream rounds* • *Art* • *Practical tips from residents*

The LWC strategically weaves wellness initiatives throughout the four-year medical training, ensuring alignment with academic content at each stage. The curriculum is delivered synchronously both in person and virtually. During the foundational Fundamentals of Medicine and Dentistry (FMD) phase, the curriculum introduces interactive wellness lectures tailored to correspond with the study systems explored in Year 1 and early Year 2. Year 1 lectures encompass diverse themes such as mindfulness, relationships, self-compassion, study skills, diversity, and career panels. In Year 2, the lectures cover critical topics including sexuality, mental health and suicide prevention, peer support, and financial wellness. Attendance at the lectures is voluntary, with an average of 44 students attending each session out of a total class size of approximately 180, which varies by year. As students enter the Transition to Clinical Practice phase towards the latter part of Year 2, the curriculum shifts gears by incorporating experiential learning through mandatory simulated sessions focused on providing care to sexual minorities. Additionally, it fosters peer support via 'ice cream rounds,' small support groups facilitated by Wellness Consultants, which students must attend initially, and once present, they have the option to leave. During Clerkship (Years 3-4), mandatory wellness sessions are adapted to upcoming transitions, offering specific support for the Canadian Resident Matching Service (CaRMS) application and matching process, stress management,

tailored ice cream rounds, and addressing special topics for the transition to residency. If mandatory activities are missed, students are asked to complete a make-up activity, such as watching a relevant psychoeducational video, listening to an episode of the Office's wellness podcast, and reporting their take-home message.

Including the perspectives of medical students has been recognized as an evidence-based principle to the design, development, and deployment of wellness curricula, but there is a paucity of literature regarding students' experiences with and perceptions of these programs in general.[31,34] Therefore, we aimed to gain insights from medical students regarding their experiences with the LWC, with an emphasis on helpful and unhelpful aspects.

Methods

We conducted a qualitative descriptive study to achieve a detailed understanding of medical students' perceptions and experiences of the LWC. Qualitative research is exploratory, descriptive, and contextual, and is concerned with the meanings that individuals ascribe to their lived experiences.[35] This approach is particularly appropriate for the study of curriculum and program design and assessment, as it illuminates why and how a program exerts its impact, as well as its strengths and weaknesses.[36,37] It can also provide rich information about the facilitators, barriers, and unintended side effects associated with engagement with the curriculum.[36] In qualitative research, description data are obtained from informants who have direct experience with the phenomenon, and it is reported using the participants' language, while highlighting researchers' interpretations to facilitate understanding across multiple stakeholders.

This study used focus groups for data collection, given their efficiency in gathering information from multiple participants concurrently. Focus groups offer practicality and cost-effectiveness compared to other qualitative data collection methods, such as individual interviews.[38] Focus groups possess the potential to unveil not just group dynamics but also individual viewpoints, fostering an environment for both common and diverse perspectives to emerge spontaneously.[38] Medical students have expressed feeling valued, respected, and heard during focus groups, highlighting their significance in providing a safer space for collective student expression.[39] Furthermore, focus groups demonstrate versatility, being effectively employed across various research areas, from evaluating wellness programs to exploring nuanced aspects of medical education.[40-42] Their ability to capture both group dynamics and individual perspectives, their practical utility, and adaptability to the study's topic underpin their selection as the preferred method for this research endeavour.

By eliciting and centralizing students' narratives of their experiences with the LWC via focus groups, we were able to achieve a rich and contextualized description of the strengths and weaknesses of the curriculum in a manner that can support its optimization, as well as inform curricular efforts in other universities. Members of the research team included medical educators and mental health professionals with expertise in medical learner wellness and curriculum design and implementation. The study received ethics approval by McGill University's Faculty of Medicine and Health Sciences IRB (#A10-B50-18B).

Recruitment

We employed purposive sampling to ensure that our participants possessed experience with and knowledge about the phenomenon under study,[43] specifically having experienced the LWC. Our target group consisted of students across all four years of medical training who attended the LWC throughout their training. Our diverse recruitment strategy included distributing materials through e-newsletters, making announcements during wellness sessions, and leveraging word-of-mouth recruitment facilitated by class leaders. Prospective participants received a recruitment email outlining the study's purpose, inclusion criteria, and containing the informed consent form. Feedback from students from different years was crucial for informing the relevancy and helpfulness of the LWC at various stages of training.

Data Collection

Once we obtained written informed consent from participants, we scheduled the focus groups via Zoom and outside of academic hours to facilitate participant comfort, participation, and to respect pandemic-related restrictions. Data were collected from May to September 2022. For each focus group, we attempted to schedule six participants, a number recommended in the literature for focus group size.[44] However, recruitment was a challenge, especially for certain cohorts. Nonetheless, three focus groups were conducted, totaling 11 participants. The first group included five fourth-year medical students; the second group included two third-year medical students; and the third group included four second-year medical students. The focus groups ranged from 75-90 minutes in

duration. The first author, an experienced master's level qualitative data collector (CV) who was not affiliated the Office of Medical Learners Affairs, conducted all focus groups, with the aim of encouraging participants to be more comfortable and speak more openly regarding their experiences with the LWC. A research assistant was present during the focus groups to take notes during the interviews and help with logistics.

We used a semi-structured interview protocol comprising nine open-ended questions to guide the interviews (Table 2). We formulated the interview questions leveraging our team's expertise and insights from existing research on medical students' views regarding wellness education.[26,40] Each interview addressed participants' experiences of the LWC, focusing on helpful and unhelpful aspects, barriers and facilitators to attendance and engagement, impact, and recommendations. To facilitate co-construction, the interviewer asked clarifying questions, offered observations for participants to comment on, and encouraged participants to take the lead in the telling of their stories. The research assistant transcribed all interviews semi-verbatim, using participant pseudonyms (two randomly selected letters) and removing any identifying details. We provided participants with a $25 gift certificate for food service to thank them for their time and participation.

Data analysis

We employed thematic framework analysis to analyze the semi-structured interview transcripts.[44,48] This analytical process was manually carried out in five interconnected stages, and accordingly, these steps were followed: familiarization, identifying a thematic framework, indexing, charting, mapping, and interpretation. The process started with familiarization with the data by reading each interview transcript multiple times, while often listening to the accompanying recording to garner an overall sense of the transcript. Subsequently, a line-by-line analysis of each transcript was performed, highlighting quotes that pertained to different aspects of the LWC curriculum experience and writing notes at the margin of the transcript (i.e., descriptive statements, short phrases, and concepts) to facilitate the development of a thematic framework. The stages of indexing and charting involved sorting the highlighted quotes and making comparisons within and between participant cases. Highlighted quotes that reflected similar concepts were then grouped into themes for each transcript. We emailed each participant a description of themes generated from their focus group along with relevant quotes and asked them to provide feedback within two weeks. Three participants (one from each group) responded and indicated that the analysis was representative of their experiences.

Table 2. The semi-structured interview guide

Area of Questioning	Specific Questions
Priming question	How was your general experience of attending the Wellness Curriculum sessions?
Experience	Can you please describe aspects of the Wellness Curriculum that worked well for you? Can you please describe aspects of the Wellness Curriculum that did not work well for you?
Facilitators and barriers	What barriers, if any, did you experience in attending or engaging with the Wellness Curriculum sessions? What facilitated, if anything, your engagement with the Wellness Curriculum sessions?
Impact	What impact, if any, did the Wellness Curriculum have on your personal wellbeing? Please provide some examples to the extent you feel comfortable. What impact, if any, did the Wellness Curriculum have on your professional development? What role does the Wellness Curriculum play in the way you view the medical program at McGill?
Recommendations	What suggestions do you have to make the Wellness Curriculum more useful to medical students? Is there anything you would like to share that we may not have discussed?

Once each transcript was analyzed, all themes were compared across all interviews. The process of interpretation involved movement between understanding individual quotes, seeing relationships between quotes, and establishing links between all data.[48] We developed themes that captured participants' common and unique experiences of the curriculum. We offer a detailed description that captures participants' experiences with the LWC, including quotes that capture the diverse meanings of each theme.

We used a variety of strategies for rigor and quality of data analysis.[49,50] The first author conducted the data analysis of the interviews and the second author served as auditor. The entire research team discussed and offered feedback regarding the thematic structure and interpretation of the findings. We used member checking to ensure we understood participant responses during each interview and subsequently solicited participant feedback regarding

the findings. We offered a detailed description of the context in which the findings were developed (e.g., setting of the study) and a comprehensive account of all research procedures (e.g., recruitment challenges, data collection, and analysis). Lastly, we maintained a detailed audit trail of all the steps taken during the study and of all data.

Results

Participants

We conducted three semi-structured focus group interviews involving a total of 11 medical students. The participants' ages ranged from 21 to 29, with eight identifying as female and three as male. The participants represented diverse ethnic backgrounds, including Canadian, Chinese, European, South-East Asian, Middle Eastern, and Arab Canadian. Most participants reported being middle class, and one participant indicated a low socioeconomic status.

Resulting themes

Participants addressed their experiences of the LWC at length, alluding to aspects of the curriculum that work and did not work for them, particularly regarding their learning and engagement. Four themes were developed: 1) diverse perspectives on curriculum relevance and helpfulness; 2) the benefits of experiential sessions, role model speakers, and supportive staff; 3) insights on student-friendly curriculum scheduling; and 4) the importance of wellness education and systemic interventions in medical education.

Theme 1: Diverse perspectives on curriculum relevance and helpfulness. Participants' descriptions of the curriculum can be conceptualized on a continuum, ranging from highly enriching to less fruitful experiences. When talking about the curriculum's relevancy, participants concentrated on the curriculum's content, applicability, and developmental progression. Most participants described the curriculum as "very good," "quite helpful," and "very diverse." AE alluded to the pertinence of the topics: "I don't think that there was ever a wellness day that I was like, 'Oh, I didn't need to know that.'" UW commented on the applicability of the sessions: "I realized that they're actually very important topics that would benefit me afterwards in medical school." Lastly, OL identified the richness of the curriculum:

> *I was very happy [the curriculum] was there and I learned a lot from the sessions … I really enjoyed the variety of them. My impression at the start was that it was going to be a lot about self-care and self-compassion, which was important, but then learning that I also had financial wellness, I was like, 'Oh my gosh, I would have never thought about this.'*

In contrast, many fourth-year participants voiced concerns about the curriculum lacking sequential progression, with content not becoming progressively more complex or tailored to the evolving needs of students as they advanced through their medical training, which hindered its relevancy and potential educational gains. . These participants identified the content of the sessions as "basic," especially during FMD, which led to disengagement. AH explained:

> *[The curriculum] made sure that you weren't illiterate about these topics, so it allowed everybody to be on a baseline … But as soon as you had any sort of baseline knowledge of what was being talked about, a lot of times it was so basic that you could disconnect, and you didn't really take out much from it.*

Additionally, these participants mentioned the curriculum lacked a developmental trajectory. IC clarified:

> *I felt like it was pretty repetitive, right? I kept expecting something new or something that would be more tailored for clerkship or residency. But I feel like what we've been hearing in the last couple of months during the lectures, I could have learned in [first year] and it would have been as useful.*

Lastly, the fourth-year participants described some of the content as impractical. For instance, AH said: "A lot of these lectures are theoretically very interesting and idealistic … It's nice to hear about it, but it doesn't really translate necessarily to real-world practice (AH)."

Theme 2: The benefits of experiential sessions, role models, and supportive staff. Participants commented on different aspects of the wellness sessions that led to engaging experiences. First, they preferred experiential and interactive sessions that afforded opportunities for engaging with other students and practice helpful skills. For instance, OL recounted the benefits of an experiential session:

> *They [the session facilitators] were like, 'We want everybody listening to do this mindful breathing with us.' It's super easy, super accessible. You can immediately practice this great new skill and see the benefit of it firsthand. And it really is a good way to engage and catch people's attention.*

Many participants identified ice cream rounds as very helpful because they "allowed for human connection with colleagues and realizing you are in the same boat" (MA). A few participants enjoyed the wellness day as it offered "options," (AR) "flexibility," (UW) and opportunities to connect with other students, making it a "fun day where everyone was together with friends" (DJ). Some participants highlighted the simulated sessions with gender and sexual diverse patients, with EK explaining that they are "some of the most meaningful" in the curriculum, as students get to learn and practice how to "care for and communicate with marginalized populations."

Second, all participants preferred and appreciated 'insider' speakers as role models, such as medical residents or senior medical students, "small group leaders," (AH) and "faculty that students connect with." (DJ) Sessions led by residents were deemed more relatable and compelling, with multiple participants expressing the sentiment that residents has been in their "shoes" not too long ago. For instance, AR reflected on her experience:

> *I got to experience the session where we were able to interview a resident. I liked that because we were very active in that process. It was definitely super engaging. I really walked away from that being like, 'Okay, the feelings I'm having now are normal.' Having these folks who'd gone through the same thing is really reassuring.*

Additionally, for practical topics, such as financial wellness, residents or senior medical students were also deemed as preferred speakers, given their "neutrality" (AE) and current and "concrete" (JV) knowledge on important considerations for medical students, such as disability insurance.

Although 'insider' speakers were preferred, several participants mentioned that "passionate" speakers was a key consideration. MA also identified outsider speakers, such as psychologists and psychotherapists as facilitators to attendance, humorously saying that it was a form of "free therapy." Many participants also called for more diverse speaker representation to foment inclusiveness. YN indicated: "I don't feel represented. I just feel like if someone who was similar to my situation was able to comment on that as well, it would make me feel more included and more inclined to listen as well."

Lastly, most participants noted the importance of having staff from the Office of Medical Learner Affairs leading the LWC. EK elaborated: "The [staff] clearly care about the students. And I think that's really a strength of the [Office] and the wellness curriculum." It seems that the staff's role in medical student wellness as well as relationships developed with students facilitated attendance, engagement, and legitimacy of the LWC. OL remarked:

Having somebody whose job is to take care of us students come and tell you, 'Okay, I've brought this person here because I think their value, their voice is important, and I think it will help you.' Like, I want to listen up because she thinks it's important... [The Wellness Consultant] showing her face regularly, it made me feel like this is more legitimate.

Similarly, IC elaborated:

> *When I knew [the Wellness Consultant] was going to be presenting, I was always more keen (sic) on going… That's one of the stakeholders that's there for us, advocating and trying to implement all these things that in the long run might be beneficial.'*

Theme 3: Insights on student-friendly curriculum scheduling. Most participants appreciated the accommodating and accessible nature of the wellness curriculum. When unable to attend the session, students found the recordings "helpful because if you missed it, you can always listen to it as a podcast" (YN). Additionally, participants saw advantages to a hybrid structure of lectures either in person or on zoom. AR noted that Zoom "is a great way to get more participation." In person "incentives" (YN) were also recognized, such as having the wellness sessions in the middle of the day or in between lectures as students are already in class and is convenient for them to stay.

Despite the curriculum's accessible nature, all participants identified the suboptimal scheduling of the wellness sessions as a clear barrier to attendance and engagement. For instance, IC explained:

> *The timing of the lectures, especially during FMD was a barrier. The wellness lectures were often put during the last week of a Block like right before an exam … Students don't attend them, because they need time to study… If it was a bit earlier on in the Blocks, then people would probably be more willing to attend.*

Even when able to attend the sessions, some participants identified not being able to be fully present due to competing demands. For example, UW stated that their attention "would not be necessarily focused on the

wellness topic per se," as they would be "focused on the block exam."

Theme 4: The importance of wellness education and systemic interventions in medical education. Most participants noted their appreciation for the Program's adoption of the LWC, seeing it as a gesture of caring and support for their wellness. YN explained how it validated the students' self-care efforts:

> *It's just a good reminder that we have a right to feel good. It teaches us that throughout med school we've had the opportunity to have dedicated time for that … In the future we should integrate that into our practice and find ways to make us and our colleagues feel better as well.*

UW also alluded to how the internalization of "softer skills" can lead to culture changes within the field:

> *I think that it kind of shows that McGill has our back... I think we're slowly moving towards a newer form of medicine where it's important that the physician takes care of themselves too. These concepts will help our own learning, but also help our own teaching and fostering a better culture.*

The Program's support was seen as supporting the sustainability of the profession. AE explained, "Doctors have such high burnout rates that if you're not teaching students these wellness skills, then you're kind of setting them up for failure in the future."

On the contrary, some participants were more critical of the Medical Program's implementation of the LWC. A major area of discontent seemed to be the Program's reliance on the wellness curriculum over structural changes to foment student wellness. DJ reflected on what she heard from other students:

> *I felt like a lot of people were complaining about those lectures and that kind of gave a negative aspect to it … What we heard often was that instead of having lectures about mental health and student wellness, they'd prefer to have more actions taken from their faculty. I was involved in the wellness community, so it was always hard to hear people complaining and not really get involved or try to help us help them better.*

In a similar vein, the Medical Program's support of the curriculum was largely seen as performative. MA elaborated:

> *Even though there are a lot of really great aspects of it that I am grateful for and that have had a positive impact on me. I still view it globally as something that McGill Medicine needs for accreditation … And my God, they will get their accreditation, even if it means that you have a last-minute lecture right before your exam, or they make something that's mandatory, that's really inconvenient for you.*

Mistreatment, which can profoundly affect learner well-being, was another issue that influenced some participants' perceptions of the curriculum. Some argued that the curriculum should include mistreatment information early on and better prepare and support students dealing with mistreatment. EK shared her experience:

> *There's a lot of lost faith because people report and then nothing happens. And personally, I've experienced mistreatment, where like I was in a very difficult situation with a staff, and I felt completely unsupported. I agree with having an early session [in the LWC] about mistreatment, but also talking about the stigma, as there is a lot that weighs on a medical student when reporting.*

Discussion

The LWC appears to offer a promising strategy towards supporting medical student well-being, integrating a preventive approach carried out by students themselves, with support and endorsement from the program administration." Most participants found the curriculum helpful and enriching, noting its comprehensive and diverse approach to wellness and relevancy to their lives as medical students. This is in line with previous research on students' preferred approaches to wellness.[30-31] Despite specifying the curriculum was important to the learning environment, fourth-year medical students predominantly felt disengaged from the curriculum, perceiving it to be lacking a structured developmental progression, failing to increase in complexity and practical applicability over their medical degree. This discrepancy with the other groups may be attributed to various factors, including differences in student buy-in, variations in baseline wellness knowledge, and variations in time spent with the curriculum. Additionally, it may be influenced by having experienced the entire curriculum as students in their final year and assessing its overall impact on their development

as professionals with the impending transition to residency. Further research may find answers to these questions. Still, this finding confirms that carefully tailored content, consultation with students, and student buy-in is essential, as disengaging wellness activities offer little value to students.[14]

The participants revealed aspects of the curriculum that can support more engaging, enriching, and helpful experiences. Preferred wellness activities are in line with previous research with physicians in training, namely experiential and simulated activities where they get to practice skills and develop self-awareness and self-reflection,[51] facilitated ice cream rounds where they get to share and connect with their peers,[52] and wellness days that allowed for activity choice and flexibility.[31] Additionally, participants unanimously preferred 'insider' speakers of the medical community (e.g., senior students, residents, staff from the Office) referring to the potential for role-modeling, relatedness, and meaningfulness. This finding echoes research on the value of informal mentorship for medical students and to the importance of speaker/mentor representation, especially for underrepresented students.[53] Several participants also alluded to a sense of trust and legitimacy established by the LWC staff, which was critical for attendance and engagement. This may suggest the benefits of involving curriculum leadership that reflects the values of and advocates for student wellness.

The culture within medicine has faced criticism for imposing excessive demands on physicians and trainees concerning work, productivity, and self-sacrifice, often at the expense of long-term sustainability, self-care, and overall well-being. .[34] There has been a call for institutions to address self-care and to reflect on how it is viewed and supported by the top (e.g., administration and faculty).[21,34] Our findings align with this call, as participants expressed appreciation for non-mandatory wellness sessions integrated into protected academic time, available both in-person and online.

While most participants appreciated the Medical Program's deployment of the LWC as a gesture of caring for their well-being, the students displayed skepticism and dissent towards wellness efforts that did not address systemic barriers to wellness, such as learning environment burdens, echoing previous findings.[31] This skepticism, particularly evident among fourth-year medical students, compromised their buy-in to the LWC, prompting the need for systemic changes. The suboptimal scheduling of wellness sessions, especially those close to exams, was identified as a structural barrier necessitating scheduling efforts that allow students to prioritize and practice wellness without additional academic burdens or costs.

Moreover, consistent with previous research[17], participants conveyed the detrimental impact of mistreatment. Feeling unsupported by the medical program contributed to the cultivation of mistrust among medical students toward the program, potentially extending to other services or strategies adopted by the program, including wellness initiatives. Therefore, there is a pressing need to equip students with knowledge about mistreatment, reporting mechanisms, and supportive resources while actively fostering a broader culture of equity, safety, and accountability in the learning environment. Aligning with prior research, it is emphasized that designing wellness interventions is most effective when they are crafted to meaningfully alleviate student burdens.[30]

Despite relying on a small sample size, our study revealed abundant and varied participant experiences with the curriculum. However, we cannot definitively assert that the sample provided sufficient insights to fully address our research objective[54]. We encountered recruitment challenges with first-year students, preventing us from accessing their perspectives. Additionally, we acknowledge the potential impact of selection bias on our findings. Importantly, underrepresented voices in medicine, such as those of Black and Indigenous students, are absent from this study, underscoring the necessity for future research with more diverse samples to capture varied perspectives within the medical student community. While the results provide valuable insights, the transferability of the findings to other schools is constrained by the modest sample of medical students at McGill and the fact that participation in the LWC was largely optional.

Additionally, although having an interviewer independent from the Office of Medical Learners Affairs may have encouraged greater trust from participants, it is possible that students may have still felt pressured to echo sentiments that they may have believed the Office or the greater student body may have espoused. Still, the information gained through this qualitative study can inform the LWC and curriculum efforts developed by other schools, as well as guide future quantitative studies on curriculum evaluation and effectiveness.

Conclusions

Our study explores medical student engagement with a longitudinal wellness curriculum embedded in the core academic medical curriculum. The results suggest that longitudinal curriculum efforts are feasible, with students providing diverse suggestions for improving these types of initiatives. Key factors for curriculum acceptability and engagement include adopting student-centered approaches, diverse and holistic wellness topics, experiential and active learning strategies, role-modeling, peer support, and removing barriers to access (e.g., scheduling). Additionally, while the curriculum may support primary prevention, it must work in alignment with broader interventions, including system-level strategies and specialized mental health support, for sustainable student well-being and to facilitate student trust in their medical education systems.

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References

1. Bourcier D, Far R, King LB, et al. Medical student wellness in Canada: time for a national curriculum framework. *Can Med Ed J.* 2021;12(6):103-7. https://doi.org/10.36834/cmej.73008
2. Tian-Ci Quek T, Wai-San Tam WX, Tran B, et al. The global prevalence of anxiety among medical students: a meta-analysis. *Int. J. Environ. Res. Public Health* 2019;16, 2735. https://doi.org/10.3390/ijerph16152735
3. Tam W, Lo K, Pacheco J. Prevalence of depressive symptoms among medical students: overview of systematic reviews. *Med Educ.* 2019;53(4):345–354. https://doi.org/10.1111/medu.13770
4. Hope V, Henderson M. Medical student depression, anxiety and distress outside north America: a systematic review. *Med Educ.* 2014;48(10):963–79. https://doi.org/10.1111/medu.12512
5. Heinen I, Bullinger M, Kocalevent RD. Perceived stress in first year medical students - associations with personal resources and emotional distress. *BMC Med Educ.* 2017;17(4). https://doi.org/10.1186/s12909-016-0841-8
6. Brazeau C, Shanafelt T, Durning S, et al. Distress among matriculating medical students relative to the general population. *Acad Med.* 2014;89(11):1520-5. https://doi.org/10.1097/ACM.0000000000000482
7. Kötter T, Tautphäus Y, Scherer M, Voltmer E. Health-promoting factors in medical students and students of science, technology, engineering, and mathematics: design and baseline results of a comparative longitudinal study. *BMC Med Educ*. 2014;14:134. https://doi.org/10.1186/1472-6920-14-134
8. Dyrbye L, Thomas M, Shanafelt T. Systematic review of depression, anxiety, and other indicators of psychological distress among US and Canadian medical students. *Acad Med.* 2006;81(4):354-73. https://doi.org/10.1097/00001888-200604000-00009
9. Heinen I, Bullinger M, Kocalevent RD. Perceived stress in first year medical students - associations with personal resources and emotional distress. *BMC Med Educ*. 2017;17(4),1-14. https://doi.org/10.1186/s12909-016-0841-8
10. Rotenstein L, Ramos M, Torre M, et al. Prevalence of depression, depressive symptoms, and suicidal ideation among medical students: a systematic review and meta-analysis. *JAMA.* 2016;316(21):2214-36. https://doi.org/10.1001/jama.2016.17324
11. Bellini L, Shea J. Mood change and empathy decline persist during three years of internal medicine training. *Acad Med.* 2005; 80(2):164-7. https://doi.org/10.1097/00001888-200502000-00013
12. Hojat M, Gonnella J, Mangione S, et al. Empathy in medical students as related to academic performance, clinical competence and gender. *Med Educ.* 2002;36(6):522-7. https://doi.org/10.1046/j.1365-2923.2002.01234.x
13. Kreitzer M J, Klatt M. Educational innovations to foster resilience in the health professions. *Med Teach*. 2017;39(2):153-9. https://doi.org/10.1080/0142159X.2016.1248917
14. Moir F, Yielder J, Sanson J, Chen Y. Depression in medical students: current insights. *Adv Med Educ Pract.* 2018;9:323–33. https://doi.org/10.2147/AMEP.S137384
15. Bergmann C, Muth T, Loerbroks A. Medical students' perceptions of stress due to academic studies and its interrelationships with other domains of life: a qualitative study. *Med Educ Online*. 2019;24(1):1603526. https://doi.org/10.1080/10872981.2019.1603526
16. Thomas M, Bigatti S. Perfectionism, impostor phenomenon, and mental health in medicine: a literature review. *Int J Med Educ.* 2020;11:201–13. https://doi.org/10.5116/ijme.5f54.c8f8
17. Dyrbye L, Thomas M, Shanafelt T. Medical student distress: causes, consequences, and proposed solutions. *Mayo Cli Proc.* 2005;80(12):1613-22. https://doi.org/10.4065/80.12.1613
18. Neufeld A, Malin G. Exploring the relationship between medical student basic psychological need satisfaction, resilience, and well-being: a quantitative study. *BMC Med Educ.* 2019;19(405). https://doi.org/10.1186/s12909-019-1847-9
19. Noori S, Blood A, Meleca J, Kennedy V, Sengupta D. Current directions in medical student well-being. *Col Med Rev.* 2017;1(2):10-19. https://doi.org/10.7916/D8572PZK
20. Hankir A, Zaman R. Stigma and mental health challenges in medical students. *BMJ Case Rep.* 2014;(2014):bcr2014205226. https://doi.org/10.1136/bcr-2014-205226
21. Klein HJ, McCarthy S M. Student wellness trends and interventions in medical education: a narrative review. *Humanit Soc Sci Commun.* 2022;9(92). https://doi.org/10.1057/s41599-022-01105-8
22. Daya Z, Hearn J. Mindfulness interventions in medical education: a systematic review of their impact on medical student stress, depression, fatigue and burnout. *Med Teach.* 2018; 40(2):146-53. https://doi.org/10.1080/0142159X.2017.1394999
23. Dyrbye L, Shanafelt T. A narrative review on burnout experienced by medical students and residents. *Med Educ.* 2016;50(1):132-49. https://doi.org/10.1111/medu.12927
24. Hutchinson TA, Liben S. Mindful medical practice: an innovative core course to prepare medical students for clerkship. *Perspect*

Med Educ. 2020;9(4):256–9. https://doi.org/10.1007/s40037-020-00591-3
25. Ishak W, Nikravesh R, Lederer S, Perry R, Ogunyemi D, Bernstein C. Burnout in medical students: a systematic review. *Clin Teach.* 2013;10(4): 242-5. https://doi.org/10.1111/tct.12014
26. Lee J, Graham AV. Students' perception of medical school stress and their evaluation of a wellness elective. *Med Educ.* 2001;35(7): 652-9. https://doi.org/10.1046/j.1365-2923.2001.00956.x
27. Moutier C, Norcross W, Jong P, et al. The suicide prevention and depression awareness program at the University of California, San Diego school of medicine. *Acad Med*. 2012;87(3): 320–6. https://doi.org/10.1007/s40596-021-01439-6
28. Drolet BC, Rodgers S. A comprehensive medical student wellness program-design and implementation at Vanderbilt School of Medicine. *Acad Med.* 2010;85(1):103–10. https://doi.org/10.1097/ACM.0b013e3181c46963
29. Slavin SJ, Schindler DL, Chibnall JT. Medical student mental health 3.0: improving student wellness through curricular changes. *Acad Med*. 2014;89(4):573–7. https://doi.org/10.1097/ACM.0000000000000166
30. Edmonds VS, Chatterjee K, Girardo ME, Butterfield R J, Stonnington CM. Evaluation of a novel wellness curriculum on medical student wellbeing and engagement demonstrates a need for student-driven wellness programming. *Teach Learn Med.* 2022;35(1):52–64. https://doi.org/10.1080/10401334.2021.2004415
31. Chatterjee K, Edmonds VS, Girardo ME, Vickers KS, Hathaway JC, Stonnington CM. Medical students describe their wellness and how to preserve it. *BMC Med Educ*. 2022;22(510). https://doi.org/10.1186/s12909-022-03552-y
32. Velez C, Gupta N, Gendreau P. The development and implementation of a longitudinal wellness curriculum for McGill University's undergraduate medical program. *Int J Whole Pers Care.* 2019;6(22):6-21. https://doi.org/10.26443/ijwpc.v6i1.188
33. Hettler B. Wellness promotion on a university campus. *Fam Community Health.* 1980;3(1):77-95. https://doi.org/10.1097/00003727-198005000-00008
34. Shanafelt TD, Mungo M, Schmitgen J, et al. Longitudinal study evaluating the association between physician burnout and changes in professional work effort. *Mayo Clin Proc.* 2016;91(4):422–31. https://doi.org/10.1016/j.mayocp.2016.02.001
35. Creswell J, Poth C. Qualitative inquiry & research design: choosing among five approaches. 4th ed. Thousand Oaks (CA): Sage; 2018.
36. Glatthorn A, Boschee F, Whitehead B. Curriculum leadership: development and implementation. Thousand Oaks (CA): Sage; 2006.
37. Vaterlaus JM, Higginbotham BJ. *Qualitative evaluation methods* The Forum for Family and Consumer Issues; 2011. Available from: http://www.ncsu.edu/ffci/publications/2011/v16-n1-2011-spring/vaterlaus-higginbotham.php. [Accessed Mar 20, 2023].
38. Onwuegbuzie AJ, Dickinson WB, Leech NL, Zoran AG. A qualitative framework for collecting and analyzing data in focus group research. *Int J Qual Methods.* 2009;8:1-21. https://doi.org/10.1177/160940690900800301
39. Nestel D, Ivkovic A, Hill R, et al. Benefits and challenges of focus groups in the evaluation of a new graduate entry medical programme. *Assess Eval High Educ*. 2012;37(1):1-17. https://doi.org/10.1080/02602938.2010.494232
40. Hill-Mey PE, Merrill RM, Kumpfer KL, Reel J, Hyatt-Neville B. A focus group assessment to determine motivations, barriers and effectiveness of a university-based worksite wellness program. *Health Promot Perspect.* 2013;3(2):154-164. https://doi.org/10.5681%2Fhpp.2013.019
41. Lie D, Shapiro J, Pardee S, Najm W. A focus group study of medical students' views of an integrated complementary and alternative medicine (CAM) curriculum: students teaching teachers. *Med Educ Online.* 2008;13(3):1-13. https://doi:10.3885/meo.2008.Res00252.
42. Walling A, Istas K, Bonaminio G, et al. Medical student perspectives of active learning: a focus group study. *Teach Learn Med.* 2017;29(2):173-180. https://doi:10.1080/10401334.2016.1247708
43. Rudestam KE, Newton RR. Surviving your dissertation: a comprehensive guide to content and process. 3rd ed. Thousand Oaks (CA): Sage; 2007.
44. Krueger RA. Focus groups: a practical guide for applied research. 2nd ed. Thousand Oaks (CA): Sage; 1994.
45. Frasier P, Slatt L, Kowlowitz V, Kollisch D, Mintzer M. Focus groups: a useful tool for curriculum evaluation. *Fam Med.* 1997; 29(7): 500-7.
46. Hull S, DiLalla L, Dorsey J. Student attitudes toward wellness, empathy, and spirituality in the curriculum. *Acad Med.* 2001;76(5):520. https://doi.org/10.1097/00001888-200105000-00053
47. Lie D, Shapiro J, Pardee S, Najm W. A focus group study of medical students' views of an integrated complementary and alternative medicine (CAM) curriculum: students teaching teachers. *Med Educ Online.* 2008;13(3):1-13. https://doi.org/10.3885/meo.2008.Res00252
48. Rabiee F. Focus-group interview and data analysis. *Proc Nutr Soc.* 2004;63(4):655–60. https://doi.org/10.1079/pns2004399
49. Guba EG, Lincoln YS. Fourth generation evaluation. Newbury Park (CA): Sage; 1989.
50. Shenton AK. Strategies for ensuring trustworthiness in qualitative research projects. *Educ Inf.* 2004; 22, 63-75. https://doi.org/10.3233/EFI-2004-22201
51. Smith S, Kassam A, Griggs L, Rizzuti F, Horton J, Brown A. Teaching mindfulness-based stress management techniques to medical learners through simulation. *Can Med Educ J.* 2021;12(1):e95–e97. https://doi.org/10.36834/cmej.69821
52. Hategan A, Riddell T. Bridging the gap: Responding to resident burnout and restoring well-being. *Perspect Med Educ.* 2020;9(2):117–22. https://doi.org/10.1007/s40037-020-00567-3
53. Wekam V, Vance-Chalcraft HD. Investigating prior mentoring experiences of medical students and its perceived benefits. *J Microbiol Biol Educ.* 2022; 23(1):e00209-21. https://doi.org/10.1128/jmbe.00209-21
54. Malterud K, Siersma VD, Guassora AD. Sample size in qualitative interview studies: guided by information power. *Qual. Health Res.* 2016;26(13):1753-1760. https://doi.org/10.1177/1049732315617444