

## THE DEVELOPMENT AND IMPLEMENTATION OF A LONGITUDINAL WELLNESS CURRICULUM FOR MCGILL UNIVERSITY'S UNDERGRADUATE MEDICAL PROGRAM

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### ABSTRACT

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*Medical students report high rates of psychological distress and morbidity throughout their training. Poor psychological well-being among medical students can interfere with learning and success in medical school, decrease quality of life, and negatively impact quality patient care. Education may be a promising tool to enhance medical students' resilience, well-being, and mental health. The WELL Office in the Faculty of Medicine at McGill University has developed a novel, 4-year Longitudinal Wellness Curriculum to promote medical students' personal and professional well-being, and foster a culture of resilience within the learning environment. We present a description of the design, development, and implementation of our Wellness Curriculum. We discuss future directions related to Wellness Curriculum research, evaluation, and application. The present Wellness Curriculum may provide an approach to wellness education for other medical programs.*

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**KEYWORDS:** Wellness, Medical students, Mental health, Longitudinal curriculum

## INTRODUCTION

**M**edical education has been reported to be associated with declining well-being of medical students, as well as with high rates of depression, burnout, and anxiety among this population[1]. In recognition of the unintended negative impact of the stringent demands of medical training (e.g., early exposure to death and suffering, acquisition of an overwhelming amount of knowledge, and high-stakes examinations) on students' mental well-being, many medical schools have initiated program and curricular changes to promote students' mental health. Medical schools have started to implement strategies to teach students the skills necessary to cope with the challenges of medical training, as well as to navigate those challenges in a healthy, wholesome, and proactive manner [2]. In this respect, Novack et al. [3] have underscored the importance of fostering the personal growth, self-awareness, and well-being of medical students to enable the development of future "physician-healers". Through the embodiment of these states, medical students may become more capable of sustaining their own reserves and of providing optimum, whole, and compassionate care to patients.

In response to the pressing need to cultivate medical students' well-being, the Undergraduate Medical Education (UGME) unit of the WELL (Wellness Enhanced Lifelong Learning) Office in the Faculty of Medicine at McGill University has developed and incorporated a novel 4-year Longitudinal Wellness Curriculum into the academic curriculum. The overall aim of the Wellness Curriculum is to promote well-being, self-care, self-awareness, and resilience among medical students by teaching them about and engaging them in diverse dimensions of wellness. Here, wellness is defined holistically—as a way of living that actively integrates multiple states of well-being (e.g., social, physical, intellectual, and emotional) in order to maximize students' quality of life, as well as their personal and professional development. Furthermore, the Wellness Curriculum aims to foster cultural changes within the learning environment by creating spaces for community building among medical students, supporting diversity and inclusivity, and removing barriers to seeking mental health support.

This paper starts with a review of previous research on medical students' mental health, including risk and health-promoting factors, as well as curricular and programmatic interventions to support student wellness. This is followed by a description of the design, development, and implementation of the WELL Office's 4-

year Longitudinal Wellness Curriculum. The paper concludes with a discussion of future directions related to Wellness Curriculum research and applications.

## **MEDICAL STUDENT WELL-BEING DURING MEDICAL TRAINING**

The stress of medical training can significantly compromise medical students' well-being and mental health [4, 5]. According to available evidence, while incoming medical students report mental health status similar to that of age-matched, college students, once in medical school, medical students' mental health deteriorates to become poorer than that of age-matched, college students [6, 7]. Indeed, compared to students majoring in other disciplines, medical students consistently report higher rates of depression, anxiety, stress, and suicidal ideation [8-10]. For instance, a cross-sectional study of 4287 medical students across 7 medical schools in the United States found that approximately 50% of students experienced burnout, and 10% experienced suicidal ideation within the past year [11]. A reduction in empathy during medical education has also been reported, particularly as students transition to clerkship [12, 13].

Psychological morbidity, distress, and compassion fatigue are risk factors associated with a host of negative outcomes for medical students, including impaired academic performance, medical errors, unprofessional behavior, compromised patient care, self-medication, attrition from medical school, and decreased quality of life. [14] Accordingly, it has been widely recognized that, in order to experience medicine as a rewarding and fulfilling career, as well as to enhance quality patient care, medical students and physicians need to be well. [15] Therefore, to support medical students' well-being and adoption of healthier life-styles, it is crucial to advance wellness promotion practices at multiple levels (e.g., individual and institutional).

Medical school is intrinsically demanding and challenging, with some aspects of training inadvertently posing barriers to students' mental health [16]. In a systematic review of the literature, Dyrbye, Thomas, and Shanafelt [17] identified six causes of medical student distress. The first cause embraces a constellation of stringent requirements that medical students have to adjust to in the medical school learning environment. This includes: (a) significantly increased workload and performance expectations, while working with highly competent and driven peers, such that academic recognition is more competitive; (b) reduced time for leisure and rest, which often results in neglect of support systems and isolation; and (c) frequent rotations between clinical sites and teams, with each rotation requiring new knowledge and rapid adaptation. The second cause of distress among medical students concerns ethical challenges, as medical students may witness supervisors who engage in cynicism and unethical behavior towards patients. Third, medical students are distressed by exposure to death and human suffering in the clinical environment, which frequently gives rise to overwhelming emotions and existential considerations, with medical students

often reporting feeling unprepared for the impact of these experiences. The fourth distressing factor is that, within their learning environment, medical students may encounter abuse and mistreatment, mainly in the form of humiliation and belittlement. Such abuse not only erodes mental health, but may also affect career choice, patient care, and institutional engagement. What aggravates the situation is that abuse in medical school settings is seldom reported due to the fear of reprisal and a medical culture of silence, where mistreatment is seen as a “rite of passage” [18]. The fifth cause of distress among medical students arises from potential financial difficulties: students accrue significant educational debt that often exerts pressure and concern with little availability to work part-time. Sixth, in addition to stressors specific to the medical program, medical students experience stressors common to other students of their age, such as personal illness and relationship dissolution. In addition to the six distressing factors reviewed above, Noori et al. [19] identified gender, racial, and sexual orientation disparities in medical student well-being, alluding to unique structural and social barriers experienced by minorities, which require further consideration and intervention.

Furthermore, two other aspects of the culture of medicine—namely, perfectionism and mental health stigma—have also been reported to contribute to medical student distress. With regard to the former, Yanes [20] argued that a culture of perfection in medical schools may leave students with a pervasive sense of inadequacy if the standards of faultlessness and flawlessness are not met. Maladaptive perfectionism (i.e., excessive evaluative concerns) in medical students has been found to be associated with distress and neuroticism, and to be predictive of depressive symptoms [21]. Similarly, stigma surrounding vulnerability deters medical students from seeking help when in need and poses barriers for wellness development. In this respect, Wallace [22] noted that the stigma of mental illness in medicine is maintained by cultural practices that teach students to perceive psychological illness as a weakness or as a character flaw, to place a low priority on their own health, to deny having any health problems or to deal with them on their own, as well as to work even when unwell.

While risk factors reviewed above have been extensively studied in previous research, less is known about health-promoting factors in medical students. Yet, focusing on the resources (both intrinsic and extrinsic to medical students) that promote well-being is an established public-health concept that can foster medical students' wellness [23]. In a recent study, Thomson, McBride, Hosford, and Halaas [24] found positive associations between approach-oriented coping styles (i.e., directly confronting a stressor) and having social support systems, on the one hand, and resilience among medical students in the United States, on the other hand. Furthermore, Slonim, Kienhuis, Di Benedetto, and Reece [25] found that higher levels of mindfulness and self-care correlated with lower distress levels among medical students. Finally, Kotter et al. [23] reported that regular physical exercise, ability to distance oneself from work, and lower resignation

tendencies were predictors for mental health. Of note, these authors unanimously encouraged medical schools to intervene at multiple levels by teaching mental health promotion strategies (e.g., self-care and healthy coping styles) through formal or informal programming, promoting wellness activities, and fostering institutional cultural change in order to support students' self-care efforts.

Accordingly, medical schools in North America have started to adopt structural changes to diminish student distress [19]. Among such strategies adopted by several medical schools, including McGill University's medical program, are the following innovations: (a) curricular changes (e.g., adopting pass/fail grading, mentoring programs, and small-group learning activities to foster group cohesion and social support); (b) screening tools for self-assessment and identification of students in distress; (c) student-led Wellness Committees that promote wellness activities; and (d) facilitating access to mental health services, with most schools now having a center for student counselling [1, 19, 26]. In addition, the Accreditation Council of the Liaison Committee on Medical Education mandates that medical schools prioritize student wellness by offering education on well-being, self-care, and resilience, as well as by providing opportunities for students to engage in activities that foster mental and physical well-being [27].

However, despite the adoption of the strategies outlined above, research addressing formal wellness curriculum in undergraduate medical Education remains scarce [28]. The Vanderbilt University School of Medicine's medical student wellness program was the first published model [29]. This program incorporates three core components: an advisory college program, a student wellness committee, and a longitudinal curriculum titled the Vanderbilt Medical Student (VMS) Live. The VMS Live focuses on "the personal development of physicians-in-training" [29, p.107] and consists of a series of annual thematic workshops focusing on self-reflection and group discussion. According to the authors of the program, student response to the program has been highly satisfactory, as evidenced by the students' positive feedback on formal program evaluation [29].

More recently, Argawal et al. [30] published the first two years of the Northwestern University's Feinberg School of Medicine's 4-year longitudinal wellness curriculum. This curriculum aims to teach students about "the unique challenges of medical careers; to foster positive psychology, resilience, and self-awareness; and to encourage students to be both supportive to others and seek help themselves" [30, p.105]. The curriculum is delivered in the small-group format. Groups of approximately 8 students meet monthly with faculty leaders to discuss the wellness topic of the month and to address any struggles or issues experienced. Course evaluations in this program revealed that, while most students grew more aware of their limitations and more willing to ask for help, some students also reported discomfort about engaging in personal disclosures with peers [30].

Despite the scarcity of research addressing formal wellness curricula in UGME, and taking into account the well-documented benefits of preventive interventions in resilience, mindfulness, self-awareness, self-care, coping strategies, social support, physical exercise, work-life balance, financial management, and facilitated small-group confidential discussions[1, 19, 31-33], many medical schools have started to offer targeted wellness interventions, frequently in the form of electives or extra-curricular courses or activities [28].

A recent study by Ayala et al. [34] highlighted the importance of involving students' perspectives in the development of wellness curriculum and programming in medical education. Students identified self-care activities that included a range of social, physical, and psychological strategies. More specifically, ten self-care clusters identified by students were "nourishment, hygiene, intellectual and creative health, physical activity, spiritual care, balance and relaxation, time for loved ones, big picture goals, pleasure and outside activities, and hobbies." [34, p.237] The authors suggested these activities as a guide for educational approaches to self-care.

Overall, a commitment to medical student well-being is a priority and a shared responsibility of medical programs and students.[1] As students are exposed to countless stressors and transitions throughout their medical training, it is important to use a variety of preventive and treatment interventions to more effectively promote student mental well-being and prevent psychological morbidity in this population. In what follows, we describe the role of the UGME WELL Office in the Faculty of Medicine at McGill, including its multifaceted approach to student wellness. This will be followed by an exploration of the design and implementation of the Longitudinal Wellness Curriculum in UGME.

## **THE WELL OFFICE: SUPPORTING MEDICAL LEARNERS' WELL-BEING AT MCGILL**

The WELL Office was established in 2013 as a joint effort of the Offices of Student Affairs and Resident Affairs in the Faculty of Medicine at McGill. The WELL Office's mission is to support health professional learners (i.e., undergraduate and postgraduate medical training, as well as other schools of health professions) throughout their training by creating, promoting, and sustaining a culture of wellness and resilience within the learning environment. The WELL Office takes a multi-level approach (e.g., individual, community, and educational) to well-being and offers prevention, promotion, outreach, and treatment services in the area of wellness. More specifically, the UGME WELL Office provides the following services to medical students: (a) the Longitudinal Wellness Curriculum (see the next section for further detail); (b) wellness support, including individual personal counselling sessions, workshops (e.g., mindfulness and

stress-management), and support groups for under-represented students (e.g., LGBTQ and student parents); (c) academic support for students experiencing academic difficulties or in need of accommodation; (d) counselling and advising for students who have experienced mistreatment in the learning environment; (e) an anonymous online mistreatment reporting system that is frequently reviewed and has support from key leadership in the Faculty Deanery; (f) medicine career planning and advising; and (g) referrals to other university and community support services.

## **THE UGME LONGITUDINAL WELLNESS CURRICULUM**

Based on the available literature and recommendations by medical educators as well as medical students themselves, the authors have designed a novel and sustainable Longitudinal Wellness Curriculum that spans the four years of UGME. The overarching aim of this curriculum is to promote well-being, self-care, self-awareness, and resilience in medical students by educating and engaging them in diverse dimensions of wellness. As students are frequently unaware of the challenges associated with the medical program and profession [30], the curriculum also helps students to develop a more realistic understanding of how the demands of medicine may affect their well-being and how to proactively support themselves or seek help when facing difficulties. In line with the CanMEDS role of the Professional that reflects an ongoing commitment to the self in the areas of self-awareness and personal care, the curriculum purports to instill in medical students a self-directed and lifelong approach to self-care that may contribute to their sustained personal and professional success and satisfaction. Finally, the curriculum fosters institutional cultural change and reduces barriers, such as stigma, to engagement in wellness. In essence, the inclusion of Wellness Sessions within the time covered by the academic curriculum conveys the explicit message that student well-being is a priority in the program, which may address students' feelings of guilt when spending time away from academic/clinical duties. [33] Ultimately, Wellness Sessions serve to promote a more unified and supportive community of students interested in learning about and practicing wellness, which may lead to healthier and more optimal health care systems in the future.

The Wellness Curriculum draws from Hettler's [35] interconnected model of wellness. Hettler defined wellness as a multi-dimensional and holistic concept that encompasses an active, self-directed, and evolving process whereby individuals make choices towards achieving an optimal existence. In Hettler's model, wellness comprises the following six dimensions: social, emotional, physical, intellectual, spiritual, and occupational. In addition, given that medical students occupy a niche with higher levels of educational debt, and considering previous evidence demonstrating that financial literacy among medical students contributes to their well-being [36, 37], our Wellness Curriculum also includes the financial dimension of

wellness. These seven wellness dimensions guide the research, classification, and integration of content into the Wellness Curriculum.

The Wellness Curriculum primarily integrates curriculum components and programming elements that have been previously found to be effective and useful for primary prevention, and that have been well-received by medical learners [1, 28, 32, 38]. The Wellness Curriculum is informed by special considerations tailored to the needs of the local program. In addition, the authors work closely with the Medical Student Wellness (MSW) Committee which takes the lead in the development and facilitation of some Wellness Sessions in the curriculum. The MSW also provides feedback to ensure that medical students' needs are represented in the curriculum. With regard to attendance, Wellness Sessions are optional during Fundamentals of Medicine (FMD) (the first year and the first half of the second year) and mandatory during clinical practice.

The Wellness Curriculum consists of interactive lectures, small-group discussions, motivational talks, student-led activities, simulated educational sessions, and an online learning module (see Table 1 for a detailed outline). In addition to their individual learning objectives, all Wellness Sessions reflect the following MDCM Learning Objectives: (a) demonstrate a commitment to personal health and well-being in order to foster optimal [personal care and] patient care and (b) exhibit self-awareness and manage influences on personal wellbeing and professional performance. Under these guiding objectives, Wellness Sessions are designed and facilitated by expert practitioners and researchers, high-performance athletes, and medical students themselves.



YEAR 1: Fundamentals of Medicine and Dentistry							
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
<p><b>Wellness Afternoon:</b> <b>The Diversity of the Wellness Curriculum</b></p> <p><b>Hardwiring Resilience for Success as a Health Professional Student</b> <i>Wellness Consultant</i></p> <p><b>Re-Learning How to Study for FMD Based on the Science of Learning</b> <i>Academic Lead, Curriculum Design and Implementation</i></p> <p><b>Budgeting, Debt Management, and Disability Insurance</b> <i>Early Career Specialist</i></p>	<p><b>Mindful Breathing: A Practice with Evidence-Based Benefits</b> <i>Family Physician</i></p>	<p><b>Wholehearted Relationships: Developing and Sustaining Healthy Relationships</b> <i>Relationship Researchers from the Dept. of Psychology</i></p> <p><b>MSW Physical Activities</b></p>	<p><b>Your Life as a Basement Membrane: Mindful Anxiety Self-Management</b> <i>PhD Candidate in Human Development</i></p>	<p><b>Food for Thought: Healthy Nutrition on the Go for Health Professionals</b> <i>Nutritionist</i></p>	<p><b>Defenses: An Introduction to the Faculty Code of Conduct &amp; Mistreatment Policy</b> <i>Assistant Dean, Student Affairs</i></p>	<p><b>Living Your Values: How to Live Purposefully and Help Your Patients Too</b> <i>Counselling Psychologist</i></p>	<p><b>Performing Well When the Stakes are High</b> <i>Mental Performance Consultant and Professional member of the Canadian Sport Psychology Association</i></p>
YEAR 2: Fundamentals of Medicine and Dentistry & Transition to Clinical Practice							
Block I Sexual Reproduction	Block J Human Behavior		Transition to Clinical Practice				
<p><b>Sexuality and the Health Professional Student</b> <i>Sex Therapist</i></p>	<p><b>The Alphabet Soup of Sexual and Gender Diversity</b> <i>Director LGBT Family Coalition</i></p>		<p>Pediatrics Rotation: <b>Introduction to Ice Cream Rounds</b>, <i>Wellness Consultant</i></p> <p>Online Module: <b>The Learning Environment</b>, <i>The WELL Office</i></p>				

	<p><b>Suicide Prevention Awareness and the Sentinel Training</b> <i>MSW</i></p>	<p>Simulated Sessions: <b>Practical Approach to Diverse Sexuality and Gender</b>, <i>The WELL Office</i></p> <p><b>Transition to Clerkship</b></p> <ul style="list-style-type: none"> <li>Lecture: <b>Easing the Transition to Clerkship: Strategies from Cognitive Behavioral Therapy</b>, <i>Wellness Consultant</i></li> <li>Small Group: <b>Financial Budgeting: Residency Applications and Elective Planning</b>, <i>Financial Advisor</i></li> </ul>
<p><b>YEAR 3: Core Clerkship</b></p>		
<p><b>Psychiatry Rotation: Ice Cream Rounds</b>, <i>Wellness Consultant</i></p> <p><b>Career and Wellness Fair Day</b></p> <ul style="list-style-type: none"> <li>Motivational Talk: <b>Mount Everest: Climb to the Summit of the Highest Mountain on Earth!</b> <i>Motivational Speaker</i></li> <li>Lecture: <b>Hidden Costs of CaRMS</b>, <i>Early Career Specialist</i></li> <li><b>MSW Activities</b></li> </ul>		
<p><b>YEAR 4: Senior Clerkship</b></p>		
<p><b>Transition to Residency Wellness Half-Day</b></p> <ul style="list-style-type: none"> <li>Lectures: <ul style="list-style-type: none"> <li><b>RX Wellness to Apply: What You Should Know: Tips from Residents to Future Residents</b>, <i>Senior Resident</i></li> <li><b>Motivational Talk: Road to Mental Readiness: Resilience and Well-being</b>, <i>Lieutenant-Colonel</i></li> </ul> </li> <li>Workshops: <ul style="list-style-type: none"> <li><b>Being in the Spotlight: How to Remain Calm and Confident Under the Pressure of Evaluation</b>, <i>Mental Health Professional</i></li> <li><b>Financial Wellness: Debt Management &amp; Budgeting After Graduation</b>, <i>Financial Advisor</i></li> <li><b>Ice Cream Rounds for Future Residents</b>, <i>PGME Wellness Consultant</i></li> <li><b>The Dark Side of Medicine: Lessons for Strength and Resilience</b>, <i>Physician</i></li> <li><b>Applying Mindfulness to Manage Pain and Suffering</b>, <i>Physician</i></li> <li><b>Women in Medicine</b>, <i>The F Word Representatives</i></li> <li><b>Building Professional Relationships in Residency</b>, <i>Career Advisor</i></li> <li><b>Time Management for Residents</b>, <i>Physician</i></li> </ul> </li> </ul>		

**Table 1** The Longitudinal Wellness Curriculum

In the first year of medical school, students are invited to attend eight Wellness Sessions integrated into the system-based approach to medical learning. The Wellness Sessions introduce students to core wellness topics to facilitate their transition and adjustment to the medical school journey. The lectures (ranging from 30 minutes to 1.5 hours) cover topics such as resilience and coping strategies, study skills, mindfulness, anxiety self-management, healthy relationships, core values and meaning, and aspects of the learning environment, including student mistreatment. Each lecture provides students with (a) evidence-based knowledge and strategies for optimizing well-being and performance; (b) space for discussion; and (c) experiential exercises, when possible. Prior to each lecture, students receive 1 or 2 resources (e.g., podcast, article, or talk) to support their self-directed learning. In addition, the first-year curriculum also includes a physical exercise afternoon led by MSW.

In the second year, wellness activities are tailored towards fostering social aspects of wellness, with students learning about diversity sensitivity and inclusivity within the medical program. These wellness activities serve to represent the lived experiences of gender/sexual minority students, foster understanding and appreciation of diversity in the medical student community, and help students better serve the needs of diverse Canadian populations. In previous research, socially inclusive and affirming institutional environments that integrate diversity have been reported to be associated with student well-being, satisfaction, and learning [39].

Second-year students are also invited to attend two lectures on healthy sexuality and sexual/gender diversity by sexuality experts. These lectures help prepare students for a mandatory simulated educational intervention on diversity conducted at the Steinberg Centre for Simulation and Interactive Learning. This educational and empowering initiative initially came from the students who identified themselves with diverse sexualities and genders and who felt that the previous version of the MDCM curriculum was too conservative and heteronormative. This educational intervention consists of engaging medical students in simulated clinical case scenarios aimed at fostering their comfort and competencies in sexual health care provision to gender/sexual minorities. In groups of 4, each student interviews a culturally diverse simulated patient who may present with concerns related to sexuality across the lifespan (adolescent, elderly), LGBTQ health, or contraception and abortion. After completion of the scenario, the student receives feedback from two evaluators (i.e., a senior medical student and an expert in diversity). The feedback centers on students' ability to convey understanding, empathy, respect and sensitivity to the patient.

In the context of the demands associated with transitioning to clinical practice (TCP), the second-year Wellness Curriculum includes structured learning activities to support students during this process and to remind them of on- and off-campus support resources. Considering the high prevalence of suicidal ideation among medical students and the need to increase the visibility of this problem [10], the MSW designed and

introduced a suicide prevention awareness lecture into the curriculum. The suicide prevention lecture covers suicide warning signs, strategies to identify and approach a peer who may be struggling, as well as relevant information about professional resources and the Sentinel Suicide Prevention Training for the students who may wish to receive formal training.

In addition, the WELL Office's Wellness Consultant facilitates an introduction to ice cream rounds in the Pediatrics rotation. An ice cream round is a single confidential, small-group session of 20 students that offers students a safe space where they can reflect on their professional vulnerabilities, offer mutual support, and share resilience strategies. The session follows a semi-structured format that unfolds from check-in to establishing round rules, discussion, and check-out. Ice cream is provided to facilitate an informal and collegial atmosphere.

Finally, towards the end of TCP, the MDCM program schedules a week of activities aimed to facilitate medical students' transition to clerkship. As part of these activities, students attend a Wellness lecture facilitated by the Wellness Consultant on cognitive behavioral strategies to deal with common stressors during clerkship. At this point of the program, given that over time and particularly during the 3rd year, medical students decrease their use of active coping strategies and start using avoidant strategies, [40] a lecture on constructive and active coping strategies was deemed to be particularly relevant. Previous research has demonstrated that avoidant strategies are associated with both poorer academic performance in the clinical years and poorer mental health [40]. During this week, students can also self-select to attend a financial workshop on residency applications and elective planning.

The third-year Wellness Curriculum continues with ice cream rounds in the Psychiatry rotation, with smaller groups of 7 to 14 students that meet at their respective rotation sites. In addition, there is a Career and Wellness Fair Day to prepare students for the upcoming challenge of applying to residency. The day starts with career-related lectures intended to demystify the CaRMS application process and to arm students with appropriate tools to build their residency applications. This is followed by a financial lecture on the hidden costs of CaRMS, so that students can start to effectively plan their budgets. The day ends with a motivational talk by a Quebec climber who has climbed seven summits, including Everest. The talk is intended to inspire students to believe in their dreams and persevere despite life obstacles. Afterwards, students self-select to participate in wellness activities (e.g., mandala coloring and hiking) organized by MSW.

Finally, the fourth-year Wellness Curriculum seeks to prepare students for the transition to residency. Students attend a Wellness Day that starts with a 30-minute lecture by a senior resident on the role of residents and techniques to maximize their success in residency. This lecture is followed by a motivational

talk by a Lieutenant-Colonel who specializes in mental health and resilience training in the armed forces. The latter talk offers strategies to strengthen students' ability to respond to the psychological demands of residency life. Afterwards, students participate in two self-selected 60-minute workshops. To meet students' diverse interests and needs, workshops include various topics, such as performance anxiety, the dark side of medicine, women in medicine, debt management and budgeting, and time management.

## **FUTURE DIRECTIONS**

In order to effectively cultivate medical student wellness and minimize factors that can compromise students' mental well-being and development, a multi-faceted approach incorporating individual, systemic, and cultural interventions needs to be adopted by medical schools. The present paper provided a brief review of the design, development, and implementation of the UGME WELL Office's Longitudinal Wellness Curriculum. The ultimate goal of this curriculum is to introduce and foster holistic well-being, self-care, resilience, and feeling of community among the medical students. In further research, the impact of the Wellness Curriculum will need to be evaluated so as to assess its effectiveness and enable optimal resource allocation [1]. To this end, the present authors will conduct a qualitative, focus group study to investigate the experiences of, attitudes to, and impact of the Wellness Curriculum on medical students' personal and professional wellness development. Four semi-structured focus groups of ten student participants from the same promotion year spanning the four years of the program will be conducted. Formal wellness session evaluations will be used to contextualize the findings from the focus groups.

To enable an exploratory, descriptive, and contextual understanding of students' lived experiences with the curriculum, a qualitative research approach will be used. The choice of the qualitative methodology is underpinned by the widely accepted assumption that qualitative research, by virtue of being exploratory, descriptive, and contextual, is best suited to capture the meanings that individuals ascribe to their lived experiences [41]. The use of a qualitative approach in the prospective study will be particularly appropriate for the purpose of curriculum and program evaluation, as a qualitative approach is capable of illuminating why and how a program exerts its impact, as well as of exposing the program's strengths and weaknesses [42]. It is also expected to provide rich information about the motivators, facilitators, barriers, and unintended side effects associated with engagement with the curriculum [43].

This envisaged research will make several contributions to the field of undergraduate medical education. First, the participants' accounts can highlight potential benefits and challenges of the Longitudinal Wellness Curriculum, and these insights can serve as recommendations for further refinement and improvement of a more tailored and effective program for this population. Second, given the primacy of self-reflexivity, well-being, and personal care for competence in medical students, the findings may highlight not only the impact

of the curriculum on these areas, but also the processes of change to maximize success in these areas. Third, the results may help determine which of the wellness-related activities, in students' perceptions, are the most effective and impactful, thereby pointing to priority strategies and resource allocation for wellness initiatives in UGME. Fourth, this qualitative study will serve as a platform for larger quantitative studies in this area, providing meaningful insights on outcomes and mechanisms for changes. Fifthly and finally, as the curriculum is evaluated and information about its impact is gathered, we anticipate the publication of learning guides and objectives for the wellness session. This would allow other medical programs to draw from our Longitudinal Wellness Curriculum as a framework for wellness education at their institutions. ■

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