Check for updates

OPEN ACCESS

EDITED BY Kathleen Chim, Hong Kong Metropolitan University, China

REVIEWED BY Maurice Elias, Rutgers, The State University of New Jersey, United States

*CORRESPONDENCE Seada A. Kassie ⊠ s.kassie@mdx.ac.ae

RECEIVED 23 August 2023 ACCEPTED 09 November 2023 PUBLISHED 04 December 2023

CITATION

Kassie SA (2023) Prevention before intervention: introducing mindfulness-based social-emotional learning in higher education institutions across the United Arab Emirates. *Front. Educ.* 8:1281949. doi: 10.3389/feduc.2023.1281949

COPYRIGHT

© 2023 Kassie. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

Prevention before intervention: introducing mindfulness-based social-emotional learning in higher education institutions across the United Arab Emirates

Seada A. Kassie*

Department of Psychology, School of Science and Technology, Middlesex University Dubai, Dubai, United Arab Emirates

In recent years, several studies have indicated that there is a considerable mismatch between the specific set of skills that employers require and the ones that university graduates have to offer. The 2023 report from the World Economic Forum lists 10 core skills that are sought after by global organizations, six of which are categorized under social-emotional learning. As part of its National Employment Strategy 2031, the United Arab Emirates (UAE) aims to build a knowledge-based economy and increase labor productivity. This communicative piece proposes a policy reform across higher education institutions in the United Arab Emirates, seizing as an opportunity the country's growing commitment to increase talent attraction and retention in the rapidly evolving workplace. Seeing the significant association between social-emotional competencies and thriving in dynamic professional settings, the article highlights the prevalence of mental health disorders among the general youth in the UAE, the government's commitment towards awareness and prevention of mental health disorders, the relevance of social-emotional competencies for employability and adaptability in the rapidly evolving workplace, the importance of introducing lessons and training in mindfulness-based social-emotional learning (MBSEL) to build the youth's adaptability in an ever-changing job landscape, and practical measures that can be taken at the institutional level within the UAE context.

KEYWORDS

social-emotional learning (SEL), mindfulness-based social-emotional learning (MBSEL), stress and anxiety disorders, depression and anxiety disorders, higher education, policy reform, evidence-based intervention programs, United Arab Emirates

Introduction

This communicative piece seizes the UAE's growing commitment to implement its strategy for talent attraction and retention as well as to increase mental health awareness, prevention, and intervention practices as an opportunity to propose a reform across institutions providing higher education in the UAE. The article discusses the prevalence of stress and anxiety disorders in higher education and among the general youth in the UAE, potential reasons for such high rates of prevalence, the government's commitment towards awareness and prevention of mental health disorders, the importance of introducing lessons and training in mindfulness-based social–emotional learning (MBSEL), the relevance of social–emotional competencies for employability and adaptability in the rapidly evolving workplace, and practical measures that can be taken at the institutional level within the UAE context.

Stress and anxiety disorders in higher education

There is increasing empirical evidence that highlights the significant and negative association between academic performance and stress and anxiety disorders (Chen et al., 2013; Hassed and Chambers, 2014; Miller et al., 2014; Schwind et al., 2017). These findings also indicate that university students experiencing symptoms of stress and anxiety disorders report not only a drop in academic performance, but also a decline in their overall wellbeing and quality of life. Higher education is characterized by major transitional events such as a change of environment, leaving family and friends behind, and making living arrangements with new individuals; the occurrence of these events is found to coincide with the time common mental health disorders such as stress and anxiety disorders reach their developmental peak (Farrer et al., 2013). University students whose academic performance and social functioning is affected by stress and anxiety report living with significant burden during their university years, which has a knock-on effect on their future personal and professional goals (Davies et al., 2014).

Prevalence of mental health disorders among young adults in the UAE

The UAE has a population of nearly ten million, one third of which is below the age of 25 (Barbato et al., 2021). A 2015 report from the World Health Organization reports 354,000 people in the UAE live with anxiety disorders, while 5.1% of its entire population is diagnosed with depression (World Health Organization, 2017). A 2017 report by WHO shows 75% of the reported cases of mental health disorders in the UAE are mainly accounted for by depression and anxiety. An estimated 17–22% of young adults in the UAE between the ages of 18 and 24 are primarily affected by depressive symptoms, commonly comorbid with stress and anxiety disorders (Gaafar et al., 2021).

Several studies and reports indicate high rates of anxiety symptoms and depressive tendencies among the youth in the UAE. A recent survey involving 3,000 Emirati university students on their perceptions of mental health challenges (The National, 2021) found that nearly half confirmed that their mental health was negatively impacted due to their experiences in higher education, which includes academic workload, assessments, and the lack of mentorship/ supervision. The surveyed university students reported feelings of frustration, hopelessness, anger, and anxiety, which are significant and negative correlates of social-emotional competencies (Conley, 2015). Another cross-sectional study, which included 18-year-old adolescents reported a 28% prevalence rate of symptoms of anxiety and depressive tendencies, proposing age-appropriate interventions in school settings to help students reach their full academic potential (Al-Yateem et al., 2020). A study with a similar design surveyed 600 adolescents and detected depressive symptoms among 17.2% of them, calling for public health interventions geared towards the youth in the UAE (Shah et al., 2020). A systematic review of 14 articles published between 2007 and 2017 found the prevalence rate of clinical depression varied from 12.5 to 28.6% depending on the demographic and clinical characteristics of the studied population. Results of the review indicated that 28.6% of those included in the reviewed articles were young adult students of medicine in the UAE, while 22.2% were studying other subjects at the undergraduate level in UAE universities (Abdul Razzak et al., 2019).

Risk factors associated with depression and anxiety disorders include genetic vulnerability, traumatic events and life experiences, bereavement and grief, loneliness, alcohol and drug use, and underlying psychological and physiological health problems (National Health Services, 2023; National Institute of Mental Health, 2023). In the UAE and among the youth population, peer-reviewed evidence indicates that risk factors for this age group are attributable to stressful life events that include financial insecurity/instability, pre-existing health conditions, stress related to academic performance, lack of social support (Schulte and Thomas, 2013; Mellal et al., 2014; Thomas and Al-Anouti, 2018; Al Marzouqi et al., 2022). Highlighting the sharp rise in the prevalence rates of symptoms in anxiety and depression during and after the global COVID-19 pandemic, recent studies noted attributable sociodemographic factors such as preexisting history of mental health disorders, urban dwelling and lack of family support, fear of the pandemic and apprehension towards vaccination, and heightened media consumption (Saravanan et al., 2020; Thomas and Terry, 2021). Sex and age were also reported as significant predictors, where females and those younger in age were reported to show elevated symptoms (Saravanan et al., 2020; Thomas and Terry, 2021). It is important to note that these findings also highlighted the notable reduction of symptoms as time passed and the initial stages of lockdown and contact restrictions were eased throughout the country.

The UAE Government's commitment towards mental health awareness and prevention

As one of the fast-growing economies in the Middle East and North Africa (MENA) region, the United Arab Emirates (UAE) has made the health, happiness, and success of its citizens and residents its top priority, and efforts are being made to enhance global talent attraction and retention (The United Arab Emirates' Government Portal, 2023). As part of its strategy to attract global talent and become a top destination for foreign investments, the UAE has developed a comprehensive framework that allows the country to succeed in multiple domains, including access to comprehensive healthcare and employment opportunities for its citizens and foreign residents. In this regard, one of its primary efforts includes improvements in services geared towards mental health and wellbeing. In 2019, the Ministry of Health and Prevention (MOHAP) launched various programs in clinical services within the mental health field, which include the provision of treatments using telehealth and virtual reality technologies [Ministry of Health and Prevention (MOHAP), 2019a,b]. Despite ongoing efforts to improve wellbeing and social-emotional competencies, 19.9% of the burden of disease in the UAE is accounted for by mental health disorders, wherein 75% of the sufferers are diagnosed with depression and anxiety (Al-Karam and Haque, 2015; The UAE Government, 2017).

The UAE is taking the lead in developing one of the most comprehensive healthcare systems in the MENA region [Ministry of Health and Prevention (MOHAP), 2019a,b]. In recent years, positive developments have been made to provide comprehensive clinical interventions for mental health disorders across primary healthcare service providers. The adoption of digital solutions technology to enhance the provision of clinical care is one such example [Ministry of Health and Prevention (MOHAP), 2019a,b]. Furthermore, the Ministry of Health and Prevention organizes public campaigns in various languages to raise awareness and reduce stigma towards mental health disorders [Ministry of Health and Prevention (MOHAP), 2019a,b]. Most recently, Al Jalila Foundation awarded three Emirati journalists the Mental Health Journalism Fellowship to promote discussion around mental health and social-emotional learning, reduce the stigma surrounding mental health, and produce high quality scientific publications to inform policy making and interventions (Al Jalila Foundation, 2017).

Despite the afore-mentioned efforts, institutions offering higher education in the UAE are yet to take considerable measures towards prevention of and intervention for mental health challenges. Although promising attempts are being made at the national level, measures that are more tangible are required across higher education institutions. Given the prevalence rate of stress, depressive, and anxiety symptoms among youth in the UAE attending universities (Abdul Razzak et al., 2019), institutions need to step-up their efforts to introduce lessons and trainings in enhancing social-emotional competencies. For instance, research findings show the positive association of mindfulness practices and social-emotional competencies with lower scores in depression, increased resilience against stress and anxiety, and improved academic grades and behavior towards education (Elias, 2019; Elmi, 2020; Duncan et al., 2021). Studies also report that one of the ways to cultivate such competencies among the youth is by introducing lessons on mindfulness practices and social-emotional competencies (Feuerborn, 2004; Gueldner and Feuerborn, 2016; de Carvalho et al., 2017; Mihić et al., 2020; Nabizadeh et al., 2021).

SEL and mindfulness practices and their association with stress and anxiety disorders

Social-Emotional Learning (SEL) is an educational framework rooted in the belief that fostering students' social and emotional competencies is essential for their holistic development and overall success (Durlak et al., 2011; McCormick et al., 2015; CASEL, 2020). Emerging from psychological theories of human development, SEL acknowledges the significance of emotional intelligence, selfawareness, empathy, responsible decision-making, and interpersonal skills in both academic achievement and life beyond the classroom (Elias, 2019; Durlak et al., 2022). Historically, SEL gained momentum in the 1990s with the formation of organizations such as the Collaborative for Academic, Social, and Emotional Learning (CASEL), which standardized the core competencies of SEL: self-awareness, selfmanagement, social awareness, relationship skills, and responsible decision-making (CASEL, 2020). These competencies serve as the foundation for SEL program development, which has evolved to incorporate evidence-based practices, such as explicit instruction, experiential learning, and positive classroom climate cultivation.

Current practices in SEL involve the implementation of structured lessons and activities that promote the development of core competencies (Elias, 2019; Elmi, 2020). These practices encompass techniques like role-playing, group discussions, mindfulness exercises, journaling, and collaborative projects, all aimed at enhancing students' emotional intelligence and interpersonal aptitude. Notably, educators have recognized the interconnectedness of SEL with academic and professional achievement, as emotional well-being is increasingly acknowledged as a foundation for effective learning, cognitive growth, and success in the professional realm.

Mindfulness is defined as the practice of attending to the present moment with complete awareness and acceptance to cultivate reflexivity, inner peace, and equanimity (Kabat-Zinn, 2003). There is a growing trend in its use against clinical diagnoses of stress and anxiety disorders (Segal et al., 2012; Arch et al., 2013; La Torre-Luque et al., 2017). Longitudinal and interventional studies that introduce mindfulness training among youth attending higher education found favorable results in combating stress and anxiety symptoms (Barbezat and Bush, 2014; Gallego et al., 2014; Taylor et al., 2014; Burrows, 2015; Irwin and Miller, 2015). Students partaking in such mindfulness interventions report not only a reduction in symptoms of stress and anxiety, but also an increase in their capacity for learning and reflexivity, as well as an increase in life satisfaction, self-compassion, kindness, and general quality of life (Schwind et al., 2017). In addition, students in higher education are continuously encouraged to engage in these practices at home to strengthen their mindfulness skills (Schwind et al., 2017). As a result of such practices, students report positive outcomes in their general ability to manage stress and anxiety. Not only that, but students also report improvement in their general wellbeing and quality of life.

As an alternative to mindfulness practices held inside classroom settings, researchers also propose web-based and computerdelivered interventions to reduce symptoms of depression, anxiety, and stress disorders (Davies et al., 2014). In their systematic review of 14 interventional trials, Davies et al. (2014) reviewed the findings, which included 1,795 university student participants who showed significant improvement in their stress, anxiety, and depressive symptoms. The studies provided web-based training to students, which included cognitive behavioral therapy (CBT), mindfulness practice training using audio, video, pictures, interactive activities, and meditation practices using similar mediums. Self-report measures were used to collect feedback of the participants at structured intervals, which showed significant improvement in their symptoms.

Bringing the two conceptual frameworks together, mindfulnessbased social–emotional learning (MBSEL) is an educational approach that combines principles of mindfulness practices with social– emotional learning techniques (Broderick and Jennings, 2013; Srinivasan, 2019). It aims to promote the development of both mindfulness skills and social–emotional competencies in students. MBSEL integrates the benefits of mindfulness, such as increased selfawareness and attention regulation, with the skills taught through traditional SEL programs, such as empathy, communication, and relationship-building (Srinivasan, 2019). Proponents of MBSEL recognize the potential synergies between mindfulness and social– emotional learning, suggesting that combining these two approaches can lead to more comprehensive and effective outcomes for students' well-being and personal development (Srinivasan, 2019). They advocate for integrating mindfulness practices into traditional SEL programs, enhancing the overall impact of social-emotional education.

It is evidently clear that when comparing several studies that used MBSEL as a form of intervention, the method of implementation is a major deciding factor for sustained positive student outcomes (Durlak and Dupre, 2008). Systematic and meta-analytic reviews on the effectiveness of SEL and mindfulness-based interventions, particularly in K-12 curriculums, document potential moderators of positive student outcomes, which include intervention delivery format, the use of evidence-based recommended practices and challenges faced at the implementation stage (Durlak et al., 2011; Albrecht et al., 2012; Sklad et al., 2012; Kallapiran et al., 2015; Klingbeil et al., 2017; Fulambarkar et al., 2022). Generally, studies from the past two and half decades categorize intervention delivery formats based on who does the delivery (school staff versus external personnel) and how the delivery is made, i.e., using a curriculum with a specific set of instructional strategies, interventions within the classroom setting, programs having a family or parental involvement component, schoolwide initiatives, and organizational changes that involve reorganizing school structures and new policy formations (Dusenbury and Falco, 1995; Gresham, 1995; Durlak and Wells, 1997; Bond and Hauf, 2004; Fixsen et al., 2005; Durlak and Dupre, 2008; Durlak et al., 2011, 2022; Dusenbury et al., 2015). These studies also describe the characteristics of recommended SEL and mindfulness-based practices as those that provide a connected and coordinated set of activities that achieve set objectives for skills development, those that use active forms of learning to help youth learn new skills, those that have at least one component devoted to developing personal, interpersonal, and intrapersonal skills, and those that target specific SEL skills. In terms of challenges faced at the implementation phase, studies mention that any event that prevents the intended interventions from being successfully implemented is classified as such (Durlak et al., 2011, 2022). This may include delegated staff or external personnel failing to deliver the intervention or unprecedented events unfolding during the implementation phase leading to delays or disruption.

When it comes to choosing specific MBSEL intervention delivery format, studies encourage taking innovative approaches that are tailored to each institution, based on demographic characteristics, availability of resources, and level of training for members of staff responsible for implementing the intervention (Gueldner and Feuerborn, 2016). For instance, studies have published details of specific and context-based interventions, such as the Free Kids, Free Teens framework by Gueldner and Feuerborn (2016) and A Still Quiet Place by Saltzman (2014). Other studies in recent years have used a combination of brief exercises imbedded into existing curricula, such as awareness of the self in the environment, awareness of the external environment, body and breathing exercises, loving kindness, emotion and thought awareness exercises, and meditation exercises that focus on attending to cognitive processes (Salzberg, 1995; Semple and Lee, 2007; Fredrickson et al., 2008; Hooker and Fodor, 2008). However, there is currently limited data available on which approach is the most effective, what should be the duration and frequency of each approach to achieve optimal success, and what type and level of training is required for members of staff; generally, studies encourage adopting brief and mindfulness strategies that are within the

parameters of behavioral and cognitive therapy approaches (Gueldner and Feuerborn, 2016).

Benefits of MBSEL for thriving in the rapidly evolving workplace and the future world

In recent years, several studies have indicated that there is a considerable skills mismatch between the specific set of skills that employers require and the ones that university graduates have to offer (Fischer, 2013; Adams, 2014; Deming, 2015; Anderson and Gantz, 2016). These reports highlight the importance of social-emotional skills in the rapidly evolving workplace. The World Economic Forum (2023) reports the increasing importance of social emotional skills in the workplace, highlighting analytical thinking and creativity as being the top core skills sought after by a growing number of global companies. Out of the total 10 core skills that the report lists, six are categorized under social-emotional learning. These skills include traits of resilience, flexibility and agility, motivation and self-awareness, dependability and attention to detail, empathy and active listening, and leadership and social influence.

Incorporating lessons and practices enriched with MBSEL into existing curriculums has been found to significantly help students thrive and develop skills that could ultimately prepare them for the rapidly evolving workplace (Durlak et al., 2011; Sklad et al., 2012; Conley, 2015). For instance, studies have found that higher levels of mindfulness are associated with reduced emotional exhaustion and increased job satisfaction among employees, which are attributes that could be fostered using targeted and specific mindfulness-based interventions (Wolever et al., 2012; Good et al., 2016; Hulsheger et al., 2018). Using such interventions is crucial in current day workplaces that are characterized by high demands and constant change, where stress management is essential for maintaining well-being and productivity. Furthermore, a meta-analytic review by Joseph and Newman (2010) highlighted the importance of emotional intelligence at the workplace, attributes of which are positively associated with the benefits of MBSEL. These include cultivating self-awareness, selfregulation, empathy, and relationship building (Collaborative for Academic, Social, and Emotional Learning, 2023).

Mindfulness practices imbedded in SEL are also found to improve concentration and attention (Srinivasan, 2019). In a rapidly changing workplace, the ability to stay focused and adapt to shifting priorities is undoubtedly an invaluable skill. Studies demonstrate that mindfulness meditation enhances attention and cognitive skills, which can be advantageous in demanding work environments (Mrazek et al., 2013). MBSEL also encourages responsible decision-making and problem-solving skills, and in workplaces where critical thinking and effective decision-making are essential, these competencies are in high demand. A meta-analysis on the relationship between mindfulness and creativity by Lebuda et al. (2016) highlighted how mindfulness is significantly associated with creative problem-solving and decisionmaking abilities. It is also well-documented that MBSEL enhances empathy, active listening, and communication skills (Srinivasan, 2019). These competencies are found to significantly predict higher job performance and career success, particularly in diverse and collaborative work environments where building strong professional relationships and effective teamwork are crucial (Harms and Crede,

10.3389/feduc.2023.1281949

2010; Compagnone, 2019). Seeing these significant associations, institutions in higher education are encouraged to incorporate MBSEL practices into their teaching to help improve students' readiness for employability in rapidly evolving workplaces, equip them with the competencies required to thrive in dynamic and demanding professional settings, and build their adaptability in an ever-changing job landscape.

Practical measures that can be taken at the institutional level

Incorporating lessons on social-emotional learning competencies is essential for the holistic development of the youth and to help them navigate the challenges of academic, personal, and professional lives more effectively. Based on meta-analytic reviews (Sklad et al., 2012; Duncan et al., 2017; Durlak et al., 2022) that reported the positive effects of implementing Tier 1(universal) SEL and mindfulness-based programs, it is recommended that higher education institutions in the UAE adopt a similar approach by introducing MBSEL as a Tier 1 program, making it a requirement across all levels. Studies also strongly caution against the drawbacks of using MBSEL simply as an add-on to existing curricula, as opposed to taking a practical and transformative approach in using it as part of instructional and content delivery (Gueldner and Feuerborn, 2016; Durlak et al., 2022). As previously suggested, introducing MBSEL in higher education institutions requires taking innovative, yet careful and evidenceinformed approaches based on contextual factors. Moreover, contextualizing general recommendations into the higher education system in the UAE requires an understanding of the cultural and societal nuances, as well as the specific efforts and goals of the country in addressing mental health challenges among its youth. Below are some recommendations for integrating these concepts into the higher education curriculum:

- 1. Cultural Sensitivity, inclusivity, and customization: Ensure that MBSEL teachings and included practices are sensitive to diverse cultural backgrounds and beliefs. MBSEL practices can be adapted to resonate with various cultural and religious perspectives (Haidar et al., 2023). More specifically, acknowledge the cultural values and norms of the UAE while designing the curriculum. Incorporate MBSEL in such a way that its teachings and practices are aligned to religious teachings and cultural practices, respecting the local context.
- 2. Government and institution partnerships: Collaborate with governmental bodies and higher education institutions to develop comprehensive social–emotional well-being initiatives that integrate seamlessly into the education system's existing framework. Studies have shown the positive impact of partnering with government authorities when implementing such initiatives (Kearney et al., 2007; Eddy, 2010). Furthermore, aligning the inclusion of MBSEL teachings and practices to the UAE's broader goals for holistic education could foster positive partnerships between the two stakeholders.
- 3. Collaboration with mental health professionals and local experts: Partner with local mental health professionals, religious leaders, and community organizations to ensure that

the content is culturally appropriate and resonates with the local population, as well as to ensure the accuracy and effectiveness of the content being taught. They can provide insights into evidence-based practices and confirm that the curriculum aligns with psychological best practices (Di Barnes et al., 2006; Fazel et al., 2023).

- 4. Faculty training and involvement: Provide faculty with professional development opportunities that will equip them with the knowledge and skills to facilitate discussions and activities related to mental health challenges and integrate MBSEL practices in culturally sensitive ways. Faculty involvement can greatly enhance the impact of these lessons (McKean, 2011; Dyjur et al., 2017; Baik et al., 2019).
- 5. For instance, a universal (Tier 1) intervention can be incorporated by providing faculty members with comprehensive MBSEL training, accompanied by clear expectations for its seamless integration. Additionally, making it mandatory for first-year students to take MBSEL lessons would foster a symbiotic relationship between faculty efforts and student experiences, enriching their knowledge base. This, in turn, would contribute to a more nuanced understanding of how to refine students' MBSEL experiences throughout their college years.
- 6. Family and community engagement: Recognize the strong and positive influence of family and community on students' well-being (Atkins et al., 2010; Castillo et al., 2019; Abelson et al., 2022; Baxter et al., 2022). Offer workshops and resources that emphasize communication between generations and provide tools for families to support the social–emotional and general well-being of their youth.
- Collaboration with student support services: Collaborate with counseling centers and student support services to create a comprehensive network of resources for students' mental health needs. This could include referrals to counseling services, workshops, and peer support groups, and has been shown to improve help-seeking behaviors for social–emotional challenges among the youth (DiPlacito-DeRango, 2016; Bhaloo, 2021).
- 8. Integration of lessons into existing courses: Embed MBSEL principles and practices into existing courses across disciplines. For example, mindfulness can be integrated into psychology, health sciences, and even business courses to help students understand the benefits of self-awareness, stress reduction, and focused attention (Atkins et al., 2010; Medlicott et al., 2021; Kakunje, 2023). On the other hand, designing and offering dedicated and standalone courses or workshops focused specifically on social–emotional well-being and mindfulness could add significant value (Galante et al., 2018, 2021). These courses could cover topics such as holistic development, self-awareness, emotional regulation, stress management, meditation techniques, cultivating resilience, and positive classroom environment (Srinivasan, 2019; Galante et al., 2021; Medlicott et al., 2021; Shen, 2022).
- 9. Incorporation of experiential learning and utilizing technology: Combine theoretical knowledge with experiential learning opportunities. For example, include guided meditation sessions, group discussions on stress management techniques, and journaling exercises that encourage self-reflection. Such lessons could encourage the development of healthy self-care routines

10.3389/feduc.2023.1281949

that incorporate mindfulness practices (Yeganeh and Kolb, 2009; Fullam and Kowalksi, 2020; Feize et al., 2021). Students could be guided to establish regular exercise, meditation, sleep, and relaxation practices. Furthermore, leveraging technology to deliver content and resources related to mindfulness and psychological wellbeing could add significant value (Kaplan-Rakowski et al., 2021). Online platforms, mobile apps, and virtual reality experiences can provide students with accessible tools for practicing mindfulness and managing stress (Palalas et al., 2020; Kaplan-Rakowski et al., 2021).

- 10. Case studies of students' lived experiences: Use real-life case studies to illustrate the importance of social-emotional wellbeing in various contexts, such as workplace stress, academic pressure, and personal relationships (Rava and Hotez, 2021; Withrow-Clark, 2021; Nardi et al., 2022). This can help create relatable models for students and help them connect theoretical concepts to practical applications.
- Government incentives for implementation: Advocate for government incentives or support for institutions that actively implement SEL initiatives (Jenkins, 2003; Kilbourne et al., 2018). This can encourage institutions to prioritize these practices in their curricula (Scherer and Leshner, 2021; Harris et al., 2022).
- 12. Assessment and feedback: Incorporate assessments and feedback mechanisms to gauge the effectiveness of the curriculum. Regular feedback from students can help refine the content and delivery methods to better meet their needs (Galante et al., 2018; Withrow-Clark, 2021; Nardi et al., 2022; Fagioli et al., 2023).
- 13. Long-term integration and impact assessment: Aim for the integration of MBSEL concepts throughout a student's academic journey. This could involve introductory content for those entering higher education, advanced topics for seniors, and ongoing support post-graduation (Johnson et al., 2019). Furthermore, it is essential to collaborate with local researchers and institutions to conduct longitudinal studies (Duraimani, 2019; MacLean et al., 2020) on the impact of MBSEL programs and practices on reducing the incidence of mental health disorders among the youth.

Conclusion and future directions

Students in higher education can reach their full academic potential and aspire to finding success in their professional lives when they are offered support that is both holistic and long lasting. UAE institutions offering higher education must include mindfulness-based social– emotional learning to combat the increasing prevalence of mental health disorders among the youth and to prepare university graduates for employment and career success in the 21st Century. As part of its National Employment Strategy 2031, the UAE aims to build a knowledge-based economy and increase labor productivity (The United Arab Emirates'

References

Abdul Razzak, H. A., Harbi, A., and Ahli, S. (2019). Depression: prevalence and associated risk factors in the United Arab Emirates. *Oman Med. J.* 34, 274–282. doi: 10.5001/omj.2019.56

Government Portal, 2023). This can only be achieved by supporting its youth holistically, and a good starting point would be to introduce MBSEL interventions across institutions offering higher education. As a perspective piece, this article offers general recommendations on the importance of incorporating MBSEL, opening the way for future researchers to develop, implement, and report interventions based on specifically designed MBSEL programs that are tailored to individual institutions. Points to consider are exercising cautionary steps when assessing and choosing from the different (evidence-based) approaches, using specific intervention and outcome parameters set by existing empirical evidence, and careful consideration of contextual factors unique to each institution. By contextualizing these recommendations within the UAE's cultural and policy landscape, higher education institutions can contribute effectively to the country's efforts to improve the social-emotional well-being of its youth and increase the productivity and adaptability of its workforce.

Data availability statement

The original contributions are included in the article/ supplementary material, further inquiries can be directed to the author.

Author contributions

SK: Conceptualization, Investigation, Writing – original draft, Writing – review & editing.

Funding

The author(s) declare that no financial support was received for the research, authorship, and/or publication of this article.

Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

Abelson, S., Lipson, S. K., and Eisenberg, D. (2022). Mental health in college populations: a multidisciplinary review of what works, evidence gaps, and paths forward. *Handbook Theory Res.* 37, 133–238. doi: 10.1007/978-3-030-66959-1_6-1

Adams, S. (2014). The 10 skills employers most want in 2015 graduates. Forbes. Available at: http://www.forbes.com/sites/susanadams/2014/11/12/the-10-skillsemployers-most-want-in-2015-graduates/#25116b622511

Albrecht, N. J., Albrecht, P. M., and Cohen, M. (2012). Mindfully teaching in the classroom: a literature review. *Australian J. Teach. Educ.* 37, 1–14. doi: 10.14221/ ajte.2012v37n12.2

Al Jalila Foundation. (2017). Retrieved from https://www.aljalilafoundation.ae/aljalila-foundation-announces-uae-recipients-of-the-rosalynn-carter-fellowships-formental-health-journalism-program/

Al-Karam, Y., and Haque, A. (2015). *Mental health and psychological practice in the United Arab Emirates*. London: Palgrave McMillan.

Al Marzouqi, A. M., Otim, M. E., Alblooshi, A., Al Marzooqi, S., Talal, M., and Wassim, F. (2022). State of emotional health disorders of undergraduate students in the United Arab Emirates: a cross-sectional survey. *Psychol. Res. Behav. Manag.* 15, 1423–1433. doi: 10.2147/PRBM.S365012

Al-Yateem, N., Bani Issa, W., Rossiter, R. C., Al-Shujairi, A., Radwan, H., Awad, M., et al. (2020). Anxiety related disorders in adolescents in the United Arab Emirates: a population based cross-sectional study. *BMC Pediatr.* 20:245. doi: 10.1186/s12887-020-02155-0

Anderson, C., and Gantz, J. F. (2016). Keys to the future: align workforce readiness skills to ensure student success IDC white paper (IDC #US41207816). Available at: https://msdnshared.blob.core.windows.net/media/2016/06/US41207816.pdf

Arch, J. J., Ayers, C. R., Baker, A., Almklov, E., Dean, D. J., and Craske, M. G. (2013). Randomized clinical trial of adapted mindfulness-based stress reduction versus group cognitive behavioral therapy for heterogeneous anxiety disorders. *Behav. Res. Ther.* 51, 185–196. doi: 10.1016/j.brat.2013.01.003

Atkins, M. S., Hoagwood, K. E., Kutash, K., and Seidman, E. (2010). Toward the integration of education and mental health in schools. *Admin. Pol. Ment. Health* 37, 40–47. doi: 10.1007/s10488-010-0299-7

Baik, C., Larcombe, W., and Brooker, A. (2019). How universities can enhance student mental wellbeing: the student perspective. *Higher Educ. Res. Dev.* 38, 674–687. doi: 10.1080/07294360.2019.1576596

Barbato, M., Al Hemeiri, S., Nafie, S., Dhuhair, B. A., and Dabbagh, N. T. (2021). Characterizing individuals accessing mental health services in the UAE: a focus on youth living in Dubai. *Int. J. Ment. Heal. Syst.* 15:29. doi: 10.1186/s13033-021-00452-4

Barbezat, D. P., and Bush, M. (2014). Contemplative practices in higher education: Powerful methods to transform teaching and learning. Jossey-Bass: San Francisco, CA.

Baxter, A., Wei, Y., Kutcher, S., and Cawthorpe, D. (2022). School-based mental health literacy training shifts the quantity and quality of referrals to tertiary child and adolescent mental health services: a Western Canada regional study. *PLoS One* 17:e0277695. doi: 10.1371/journal.pone.0277695

Bhaloo, N. (2021). Improving faculty capacity to support student mental health. London: The Organizational Improvement Plan at Western University. 183. Retrieved from https://ir.lib.uwo.ca/oip/183

Bond, L. A., and Hauf, A. M. C. (2004). Taking stock and putting stock in primary prevention: characteristics of effective programs. *J. Prim. Prev.* 24, 199–221. doi: 10.1023/B:JOPP.000018051.90165.65

Broderick, P. C., and Jennings, P. A. (2013). Mindfulness for adolescents: a promising approach to supporting emotion regulation and preventing risky behavior. *New Direct. Youth Dev.* 2012, 111–126. doi: 10.1002/yd.20042

Burrows, L. (2015). Inner alchemy: transforming dilemmas in education through mindfulness. *J. Transformat. Educ.* 13, 127–139. doi: 10.1177/1541344615569535

CASEL. (2020). CASEL's SEL framework: what are the core competence areas and where are they promoted? CASEL'S SEL Framework – CASEL.

Castillo, E. G., Ijadi-Maghsoodi, R., Shadravan, S., Moore, E., Mensah, M. O., Docherty, M., et al. (2019). Community interventions to promote mental health and social equity. *Curr. Psychiatry Rep.* 21:35. doi: 10.1007/s11920-019-1017-0

Chen, Y., Yang, X., Wang, L., and Zhang, X. (2013). Randomized controlled trial of the effects of brief mindfulness meditation on anxiety symptoms and systolic blood pressure in Chinese nursing students. *Nurse Educ. Today* 33, 1166–1172. doi: 10.1016/j. nedt.2012.11.014

Collaborative for Academic, Social, and Emotional Learning (CASEL). (2023). Retrieved from: https://casel.org/fundamentals-of-sel/

Compagnone, T. (2019). Examining the association between emotional intelligence and leadership style in nurse leaders. Available at: https://hsrc.himmelfarb.gwu.edu/son_dnp/50

Conley, C. S. (2015). "SEL in higher education" in *Handbook of social and emotional learning: Research and practice.* eds. J. A. Durlak, C. E. Domitrovich, R. P. Weissberg and T. P. Gullotta (New York: The Guilford Press), 197–212.

Davies, E. B., Morriss, R., and Glazebrook, C. (2014). Computer-delivered and webbased interventions to improve depression, anxiety, and psychological well-being of university students: a systematic review and meta-analysis. *J. Med. Internet Res.* 16:e130. doi: 10.2196/jmir.3142 de Carvalho, J. S., Pinto, A. M., and Marôco, J. (2017). Results of a mindfulness-based social-emotional learning program on Portuguese elementary students and teachers: a quasi-experimental study. *Mindfulness* 8, 337–350. doi: 10.1007/s12671-016-0603-z

Deming, D. J. (2015). The growing importance of social skills in the labor market (NBER Working Paper No. 21473). Cambridge, MA: National Bureau of Economic Research.

Di Barnes, M. A., Carpenter, A., and Dickinson, C. (2006). The outcomes of partnerships with mental health service users in inter-professional education: a case study. *Health Soc. Care Commun.* 14, 426–435. doi: 10.1111/j.1365-2524.2006.00661.x

DiPlacito-DeRango, M. L. (2016). Acknowledge the barriers to better the practices: support for student mental health in higher education. *Canadian J. Scholarship Teach. Learn.* 7. doi: 10.5206/cjsotl-rcacea.2016.2.2

Duncan, M. J., Patte, K. A., and Leatherdale, S. T. (2021). Mental health associations with academic performance and education behaviors in Canadian secondary school students. *Can. J. Sch. Psychol.* 36, 335–357. doi: 10.1177/0829573521997311

Duncan, R., Washburn, I. J., Lewis, K. M., Bavarian, N., DuBois, D. L., Acock, A. C., et al. (2017). Can universal SEL programs benefit universally? Effects of the positive action program on multiple trajectories of social-emotional and misconduct behaviors. *Prev. Sci.* 18, 214–224. doi: 10.1007/s11121-016-0745-1

Duraimani, S. L. (2019). A cross-sectional and longitudinal study of the effects of a mindfulness meditation mobile application platform on reducing stress and anxiety. *Int. J. Yoga* 12, 226–232. doi: 10.4103/ijoy.IJOY_56_18

Durlak, J. A., and Dupre, E. P. (2008). Implementation matters: a review of research on the influence of implementation on program outcomes and the factors affecting implementation. *Am. J. Community Psychol.* 41, 327–350. doi: 10.1007/ s10464-008-9165-0

Durlak, J. A., Mahoney, J. L., and Boyle, A. E. (2022). What we know, and what we need to find out about universal, school-based social and emotional learning programs for children and adolescents: a review of meta-analyses and directions for future research. *Psychol. Bull.* 148, 765–782. doi: 10.1037/bul0000383

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., and Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: a metaanalysis of school-based universal interventions. *Child Dev.* 82, 405–432. doi: 10.1111/j. 1467-8624.2010.01564.x

Durlak, J. A., and Wells, A. M. (1997). Primary prevention mental health programs for children and adolescents: a meta-analytic review. *Am. J. Community Psychol.* 25, 115–152. doi: 10.1023/A:1024654026646

Dusenbury, L., and Falco, M. (1995). Designing effective prevention programs; how good science makes good art. J. Sch. Health. 65, 420-441.

Dusenbury, L., Newman, J., Weissberg, R. P., Goren, P., Domitrovich, C., and Mart, A. (2015). "Developing a blueprint for education in social and emotional learning, preschool through high school: the case for state learning standards" in *Handbook on social and emotional learning: Research and practice*. eds. J. A. Durlak, C. E. Domitrovich, R. P. Weissberg and T. P. Gullotta (New York: Guilford)

Dyjur, P., Lindstrom, G., Arguera, N., and Bair, H. (2017). Using mental health and wellness as a framework for course design. *Papers Postsecondary Learn. Teach.* 2, 1–9. doi: 10.11575/pplt.v2i.42227

Eddy, P. L. (2010). *Partnerships and collaborations in higher education*. School of Education Book Chapter. 38. Available at: https://scholarworks.wm.edu/educationbookchapters/38

Elias, M. J. (2019). What if the doors of every schoolhouse opened to social-emotional learning tomorrow: reflections on how to feasibly scale up high-quality SEL. *Educ. Psychol.* 54, 233–245. doi: 10.1080/00461520.2019.1636655

Elmi, C. (2020). Integrating social emotional learning strategies in higher education. *European J. Investigat. Health Psychol. Educ.* 10, 848–858. doi: 10.3390/ejihpe10030061

Fagioli, S., Pallini, S., Mastandrea, S., and Barcaccia, B. (2023). Effectiveness of a brief online mindfulness-based intervention for university students. *Mindfulness* 14, 1234–1245. doi: 10.1007/s12671-023-02128-1

Farrer, L., Gulliver, A., Chan, J. K., Batterham, P. J., Reynolds, J., Calear, A., et al. (2013). Technology-based interventions for mental health in tertiary students: systematic review. *J. Med. Internet Res.* 15:e101. doi: 10.2196/jmir.2639

Fazel, M., Soneson, E., Sellars, E., Butler, G., and Stein, A. (2023). Partnerships at the interface of education and mental health services: the utilisation and acceptability of the provision of specialist liaison and teacher skills training. *Int. J. Environ. Res. Public Health* 20:4066. doi: 10.3390/ijerph20054066

Feize, L., Faver, C., and Gorabi, V. (2021). Employing experiential learning as a tool to teach mindfulness cognitive behavioral therapy (MCBT) to Latino social work graduate students. *J. Teach. Soc. Work.* 41, 16–41. doi: 10.1080/08841233.2020.1846668

Feuerborn, L. L. (2004). Promoting emotional resiliency through classroom instruction: The effects of a classroom-based prevention program. University of Oregon, Eugene.

Fischer, K. (2013). The employment mismatch. The Chronicle of Higher Education. Available at: http://www.chronicle.com/article/The-Employment-Mismatch/137625

Fixsen, D. L., Naoom, S. F., Blasé, K. A., Friedman, R. M., and Wallace, F. (2005). *Implementation research: a synthesis of the literature (FMHI publication no. 231)*. Tampa: University of South Florida. Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., and Finkel, S. M. (2008). Open hearts build lives: positive emotions, reduced through loving-kindness meditation, build consequential personal resources. *J. Pers. Soc. Psychol.* 95, 1045–1062. doi: 10.1037/a0013262

Fulambarkar, N., Seo, B., Testerman, A., Rees, M., Bausback, K., and Bunge, E. (2022). Review: Meta-analysis on mindfulness-based interventions for adolescents' stress, depression, and anxiety in school settings: a cautionary tale. *Child Adolesc. Mental Health* 28, 307–317. doi: 10.1111/camh.12572

Fullam, J., and Kowalksi, K. (2020). Using inquiry based experiential learning to teach mindfulness to students and teachers. *Q2S Enhancing Pedagogy* 155.

Gaafar, R., Moonesar, I. A., Chung, N. H., and Suliman, D. (2021). Promoting children and adolescents' mental health in the United Arab Emirates in the 21st century. International Health Policies. Available at: https://www.internationalhealthpolicies.org/ featured-article/promoting-childrens-adolescents-mental-health-in-the-united-arabemirates-in-the-21st-century/

Galante, J., Dufour, G., Vainre, M., Wagner, A. P., Stochl, J., Benton, A., et al. (2018). A mindfulness-based intervention to increase resilience to stress in university students (the mindful student study): a pragmatic randomised controlled trial. *Lancet Public Health* 3, e72–e81. doi: 10.1016/S2468-2667(17)30231-1

Galante, J., Stochl, J., Dufour, G., Vainre, M., Wagner, A. P., and Jones, P. B. (2021). Effectiveness of providing university students with a mindfulness-based intervention to increase resilience to stress: 1-year follow-up of a pragmatic randomised controlled trial. *J. Epidemiol. Community Health* 75, jech-2020-214390–jech-2020-214160. doi: 10.1136/ jech-2020-214390

Gallego, J., Aguilar-Parra, J., Cangas, A., Langer, Á., and Mañas, I. (2014). Effect of a mindfulness program on stress, anxiety and depression in university students. *Span. J. Psychol.* 17:E109. doi: 10.1017/sjp.2014.102

Good, D. J., Lyddy, C. J., Glomb, T. M., Bono, J. E., Brown, K. W., Duffy, M. K., et al. (2016). Contemplating mindfulness at work: an integrative review. *J. Manag.* 42, 114–142. doi: 10.1177/0149206315617003

Gresham, F. M. (1995). "Best practices in social skills training" in *Best practices in school psychology-III*. eds. A. Thomas and J. Grimes (Washington, DC: National Association of School Psychologists), 1021–1030.

Gueldner, B. A., and Feuerborn, L. L. (2016). Integrating mindfulness-based practices into social and emotional learning: a case application. *Mindfulness* 7, 164–175. doi: 10.1007/s12671-015-0423-6

Haidar, A., Nwosisi, E., and Burnett-Zeigler, I. (2023). The role of religion and spirituality in adapting mindfulness-based interventions for black American communities: a scoping review. *Mindfulness* 14, 1852–1867. doi: 10.1007/s12671-023-02194-5

Harms, P. D., and Crede, M. (2010). Emotional intelligence and transformational leadership: A meta-analysis. Available at: http://digitalcommon.unl.edi/leadershipfacpub/14

Harris, B. R., Maher, B. M., and Wentworth, L. (2022). Optimizing efforts to promote mental health on college and university campuses: recommendations to facilitate usage of services, resources, and supports. *J. Behav. Health Serv. Res.* 49, 252–258. doi: 10.1007/ s11414-021-09780-2

Hassed, C., and Chambers, R. (2014). *Mindful learning: Reduce stress and improve brain performance for effective learning.* Exile Publishing: Auckland, NZ.

Hooker, K. E., and Fodor, I. E. (2008). Teaching mindfulness to children. *Gestalt Review* 12, 75–91. doi: 10.5325/gestaltreview.12.1.0075

Hulsheger, U. R., Walkowiak, A., and Thommes, M. S. (2018). How can mindfulness be promoted? Workload and recovery experiences as antecedents of daily fluctuations in mindfulness. *J. Occup. Organ. Psychol.* 91, 261–284. doi: 10.1111/joop.12206

Irwin, M., and Miller, J. P. (2015). Presence of mind: a qualitative study of meditating teachers. J. Transformat. Educ. 14, 86–97. doi: 10.1177/1541344615611257

Jenkins, R. (2003). Supporting governments to adopt mental health policies. *World Psychiatry* 2, 14–19.

Johnson, J., Bauman, C., and Pociask, S. (2019). Teaching the whole student: integrating wellness education into the academic classroom. *Student Success* 10, 92–103. doi: 10.5204/ssj.v10i3.1418

Joseph, D. L., and Newman, D. A. (2010). Emotional intelligence: an integrative metaanalysis and cascading model. *J. Appl. Psychol.* 95, 54–78. doi: 10.1037/a0017286

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: past, present and future. *Clin. Psychol. Sci. Pract.* 10, 144–156. doi: 10.1093/clipsy.bpg016

Kakunje, A. (2023). Mental health education integration into the school curriculum needs to be implemented. *Arch. Med. Health Sci.* 11, 1–2. doi: 10.4103/amhs. amhs_131_23

Kallapiran, K., Koo, S., Kirubakaran, R., and Hancock, K. (2015). Review: effectiveness of mindfulness in improving mental health symptoms of children and adolescents: a meta-analysis. *Child Adolesc. Mental Health* 20, 182–194. doi: 10.1111/camh.12113

Kaplan-Rakowski, R., Johnson, K. R., and Wojdynski, T. (2021). The impact of virtual reality meditation on college students' exam performance. *Smart Learn. Environ.* 8:21. doi: 10.1186/s40561-021-00166-7

Kearney, K. S., Self, M. J., Bailey, L., Harris, E., Halcomb, S. H., Hill, B., et al. (2007). Building an academe and government partnership in workforce education: challenges and possibilities. *J. STEM Teach. Educ.* 44.

Kilbourne, A. M., Beck, K., Spaeth-Rublee, B., Ramanuj, P., O'Brien, R. W., Tomoyasu, N., et al. (2018). Measuring and improving the quality of mental health care: a global perspective. *World Psychiatry* 17, 30–38. doi: 10.1002/wps.20482

Klingbeil, D. A., Renshaw, T. L., Willenbrink, J. B., Copek, R. A., Chan, K. T., Haddock, A., et al. (2017). Mindfulness-based interventions with youth: a comprehensive meta-analysis of group-design studies. *J. Sch. Psychol.* 63, 77–103. doi: 10.1016/j. jsp.2017.03.006

La Torre-Luque, A., Díaz-Piedra, C., and Buela-Casal, G. (2017). Effects of preferred relaxing music after acute stress exposure: a randomized controlled trial. *Psychol. Music* 45, 795–813. doi: 10.1177/0305735617689953

Lebuda, I., Zabelina, D. L., and Karwowski, M. (2016). Mind full of ideas: a metaanalysis of the mindfulness-creativity link. *Personal. Individ. Differ.* 93, 22–26. doi: 10.1016/j.paid.2015.09.040

MacLean, H., Braschi, E., Archibald, D., Sanchez-Campos, M., Jebanesan, D., Koszycki, D., et al. (2020). A pilot study of a longitudinal mindfulness curriculum in undergraduate medical education. *Canadian Med. Educ. J.* 11, e5–e18. doi: 10.36834/ cmej.56726

McCormick, M. P., Cappella, E., O'Connor, E. E., and McClowry, S. G. (2015). Socialemotional learning and academic achievement: using causal methods to explore classroom-level mechanisms. *AERA Open* 1:233285841560395. doi: 10.1177/2332858415603959

McKean, G. (2011). Mental health and well-being in postsecondary education settings. *CACUSS*, 1–59.

Medlicott, E., Phillips, A., Crane, C., Hinze, V., Taylor, L., Tickell, A., et al. (2021). The mental health and wellbeing of university students: acceptability, effectiveness, and mechanisms of a mindfulness-based course. *Int. J. Environ. Res. Public Health* 18:6023. doi: 10.3390/ijerph18116023

Mellal, A., Albluwe, T. I., and Al-Ashkar, D. A. (2014). The prevalence of depressive symptoms and its socioeconomic determinants among university students in Al Ain, UAE. *Education* 159.

Mihić, J., Oh, Y., Greenberg, M., and Kranželić, V. (2020). Effectiveness of mindfulness-based social-emotional learning program CARE for teachers within Croatian context. *Mindfulness* 11, 2206–2218. doi: 10.1007/s12671-020-01446-y

Miller, J. P., Irwin, M., and Nigh, K. (2014). *Teaching from the thinking heart: The practice of holistic education*. Information Age Publishing: Charlotte, NC.

Ministry of Health and Prevention (MOHAP). (2019a). Mental health: published work on mental health in the United Arab Emirates – 1992 – 2019. Ministry of Health and Prevention. Available at: https://www.mohap.gov.ae/Files/MOH_OpenData/1579/ Mental%20health.pdf

Ministry of Health and Prevention (MOHAP). (2019b). MOHAP unveils digital solutions technologies in the mental health field and train young doctors on the virtual reality experience. Available at: https://www.mohap.gov.ae/en/MediaCenter/News/Pages/2034.aspx

Mrazek, M. D., Franklin, M. S., Phillips, D. T., Baird, B., and Schooler, J. W. (2013). Mindfulness training improves working memory capacity and GRE performance while reducing mind wandering. *Psychol. Sci.* 24, 776–781. doi: 10.1177/0956797612459659

Nabizadeh, S., Kord Noghabi, R., Yaghoobi, A., and Rashid, K. (2021). Comparison of the effectiveness of mindfulness-based stress reduction and mindfulness-based social-emotional learning on the components of social-emotional competence and academic performance. *Res. School Virt. Learn.* 9, 103–117.

Nardi, W. R., Elshabassi, N., Spas, J., Zima, A., Saadeh, F., and Loucks, E. B. (2022). Students' experiences of an 8-week mindfulness-based intervention at a college of opportunity: a qualitative investigation of the mindfulness-based college program. *BMC Public Health* 22:2331. doi: 10.1186/s12889-022-14775-5

National Health Services. (2023). NHS. Available at: https://www.nhs.uk/mental-health/conditions/depression-in-adults/causes/

National Institute of Mental Health. (2023). NIMH. Available at: https://www.nimh. nih.gov/health/topics/anxiety-disorders

Palalas, A., Mavraki, A., Drampala, K., Krassa, A., and Karakanta, C. (2020). Mindfulness practices in online learning: supporting learner Self-regulation. *J. Contemp. Inquiry* 7, 247–277.

Rava, J. A., and Hotez, E. (2021). Mindfulness and wellbeing among college students during the COVID-19 pandemic: a qualitative analysis of emergent themes and concerns. *Cureus* 13:e20755. doi: 10.7759/cureus.20755

Saltzman, A. (2014). A still quiet place: A mindfulness program for teaching children and adolescents to ease stress and difficult emotions. Oakland, CA: New Harbinger Publications.

Salzberg, S. (1995). Loving-kindness: The revolutionary art of happiness. Shambhala Publications, Inc., Boston, MA.

Saravanan, C., Mahmoud, I., Elshami, W., and Taha, M. H. (2020). Knowledge, anxiety, fear, psychological distress about COVID-19 among university students in the United Arab Emirates. *Front. Psychiat*. 11:582189. doi: 10.3389/fpsyt.2020.582189 Schulte, S. J., and Thomas, J. (2013). Relationship between eating pathology, body dissatisfaction and depressive symptoms among male and female adolescents in the United Arab Emirates. *Eat. Behav.* 14, 157–160. doi: 10.1016/j.eatbeh.2013.01.015

Schwind, J., McCay, E., Beanlands, H., Martin, L. S., Jennifer Martin, J., and Binder, M. (2017). Mindfulness practice as a teaching-learning strategy in higher education: a qualitative exploratory pilot study. *Nurse Educ. Today* 50, 92–96. doi: 10.1016/j.nedt.2016.12.017

Segal, Z. V., Williams, J. M. G., and Teasdale, J. D. (2012). *Mindfulness-based cognitive therapy for depression*. New York, NY: Guilford Press.

Semple, R. J., and Lee, J. (2007). *Mindfulness-based cognitive therapy for anxious children: A manual for treating childhood anxiety*. New Harbinger Publications.

Shah, S. M., Al Dhaheri, F., Albanna, A., Al Jaberi, N., Al Eissaee, S., Alshehhi, N. A., et al. (2020). Self-esteem and other risk factors for depressive symptoms among adolescents in United Arab Emirates. *PLoS One* 15:e0227483. doi: 10.1371/journal. pone.0227483

Shen, Y. (2022). Mitigating students' anxiety: the role of resilience and mindfulness among Chinese EFL learners. *Front. Psychol.* 13. doi: 10.3389/fpsyg.2022.940443

Sklad, M., Diekstra, R., Ritter, M. D., Ben, J., and Gravesteijn, C. (2012). Effectiveness of school-based universal social, emotional, and behavioral programs: do they enhance students' development in the area of skill, behavior, and adjustment? *Psychol. Sch.* 49, 892–909. doi: 10.1002/pits.21641

Srinivasan, M. (2019). SEL every day: Integrating social and emotional learning with instruction in secondary classrooms (SEL Solutions Series). W. W. Norton & Company: New York.

Taylor, B. L., Strauss, C., Cavanagh, K., and Jones, F. (2014). The effectiveness of selfhelp mindfulness-based cognitive therapy in a student sample: a randomised controlled trial. *Behav. Res. Ther.* 63, 63–69. doi: 10.1016/j.brat.2014.09.007 The National. (2021). Nearly half of Emirati students say mental health affected by COVID-19 pandemic, poll finds. Available at: https://www.thenationalnews.com/uae/nearly-half-of-emirati-students-say-mental-health-affected-by-covid-19-pandemic-poll-finds-1.1184538

The UAE Government. (2017). Health and fitness: mental health. Available at: https://u.ae/en/information-and-services/health-and-fitness/mental-health

The United Arab Emirates' Government Portal. (2023). The UAE strategy for talent attraction and retention. Available at: https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/strategies-plans-and-visions/human-resources-development-and-education/the-uae-strategy-for-talent-attraction-and-retention

Thomas, J., and Al-Anouti, F. (2018). Sun exposure and behavioral activation for hypovitaminosis d and depression: a controlled pilot study. *Community Ment. Health J.* 54, 860–865. doi: 10.1007/s10597-017-0209-5

Thomas, J., and Terry, J. P. (2021). Containing COVID-19 risk in the UAE: mass quarantine, mental health, and implications for crisis management. *Risks Hazards Crisis Public Policy* 13, 9–27. doi: 10.1002/rhc3.12237

Withrow-Clark, R. S. (2021). Investigating the lived experiences of community college students who have practiced meditation. Dissertation. Stockton, CA: University of the Pacific.

Wolever, R. Q., Bobinet, K. J., McCabe, K., Mackenzie, E. R., Fekete, E., Kusnick, C. A., et al. (2012). Effective and viable mind-body stress reduction in the workplace: a randomized controlled trial. *J. Occup. Health Psychol.* 17, 246–258. doi: 10.1037/a0027278

World Economic Forum. (2023). The future of jobs report 2023. Available at: The Future of Jobs Report 2023 | World Economic Forum (weforum.org)

World Health Organization. (2017). Retrieved from: https://www.who.int/publications/m/item/mental-health-atlas-2017-country-profile-united-arab-emirates

Yeganeh, B., and Kolb, D. (2009). Mindfulness and experiential learning. OD Practitioner 41, 13–18.