Acceptability of Bilingual Guided Meditation with Second Language Learners in a Culturally Diverse and Economically Disadvantaged School Setting

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High school students experience considerable stress and anxiety. Meditative practices have been found to reduce stress and anxiety, but research has neglected the acceptability of these practices for adolescents. Bilingual guided meditation (BGM) has been shown to be both acceptable and effective in reducing stress and anxiety for second language (L2) learners in college, but its acceptability for culturally diverse high school students is unknown. The current study investigated acceptability of BGM and its components (music, positive suggestion) with L2 learners in a diverse and low-income high-school setting. Qualitative feedback and content analysis were used to investigate the acceptability of the intervention among 99 student and 5 teacher participants. Results indicate that both music and guided meditation were acceptable to the majority of the students and all of their teachers. Students particularly valued the perceived calming effects of the meditation music. Implications for future research and practice are discussed.

Keywords: meditation, acceptability, adolescents, anxiety, stress.

Introduction

School-based behavioural and mental health prevention programming, such as social-emotional learning (SEL) programmes can help students learn skills conducive to the development of resilience (NASP, 2012).

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Students are now facing unprecedented uncertainties associated with the COVID-19 pandemic. Challenges associated with this pandemic may disproportionately impact already vulnerable student populations (Dorn et al., 2020). In the current study, school psychologists collaborated with second language teachers to explore whether it is acceptable to integrate a brief meditation intervention into general education classrooms with the ultimate goal of simultaneously promoting psychological wellbeing and academic enhancement. Such interventions may become more critical given the range and intensity of stressors often disproportionately impacting vulnerable student populations, such as racial/ethnic and linguistic minorities.

Acceptability and Implementation Process Variables

Huey and Tilley (2018) indicated in their meta-analysis of mental health intervention research that the primary focus has been on treatment effects without giving sufficient attention to process variables. Intervention process variables such as cultural congruence, acceptability, implementation fidelity, the relationship between the interventionists and the recipients, and the recipients' perception of the intervention have arguably not been given the scrutiny they deserve in efficacy studies of meditation or mindfulness-based interventions (MBIs) (Proulx et al., 2018). Understanding these process variables are crucial for advancing MBIs. The current study therefore aimed to focus on the intervention process from the student and teacher perspectives. Primarily, this study focused on whether a brief meditation intervention was acceptable in a diverse and low-income high school setting.

As defined by Ayala and Elder (2011, p. 1), acceptability refers to "how well an intervention will be received by the target population and the extent to which the new intervention or its components might meet the needs of the target population." Assessing acceptability from both students' and teachers' perspectives allows for potentially important variations in perspectives to be considered (Bussing et al., 2016). Such variations in perspectives can inform why an intervention may have differential impacts, as well as highlighting different perceptions of the need for intervention (Bussing et al., 2016). The current study utilized a qualitative approach to assess acceptability because qualitative data informs how mindfulness studies are done 'with' students instead of 'on' them (Bannirchelvam et al., 2017). Moreover, in contrast to a purely quantitative approach, qualitative data can provide a more detailed perspective into how cultural and contextual factors can influence the meaning of an intervention for participants (Strauss & Corbin, 1998). In the context of the exploratory nature of the current study, a qualitative approach also allows themes to emerge on potential implementation challenges that can be used to enhance the feasibility of future iterations of the intervention (McKeague et al., 2018).

MBIs for Anxiety in Second Language Learning

Although an increasing accumulation of evidence indicates that MBIs are related to at least small positive gains for most students (Klingbeil et al., 2017), it may be informative to practice to investigate MBIs that can benefit a range of problems simultaneously. An example of this is research on the use of MBIs in second

language learning contexts. For students learning a second language, anxiety about learning that language is one of their most salient school-based stressors (Price, 1991). Reviews of foreign language learning anxiety research (Horwitz, 2016) have found that about 30% to 40% of students identify as foreign language learning anxious. Second language (L2) learning anxiety is considered a situation specific form of anxiety (MacIntyre, 1999), with the classroom being a primary context in which L2 anxiety arises. L2 learning anxiety, also known as foreign language anxiety (FLA), has been defined as "the worry and negative emotional reaction aroused when learning or using a second language" (MacIntyre, 1999, p. 27) as well as the "distinct complex of self-perceptions, beliefs, feelings, and behaviours related to classroom language learning arising from the uniqueness of the language learning process" (Horwitz et al., 1991, p. 31).

L2 learning is reliant on higher-level cognitive processes for language acquisition and performance (McLaughlin et al., 1983). The cognitive component of anxiety, worry, is theorized to interfere antecedently in the processing and storage abilities of working memory (Owens et al., 2012). One component of working memory, the 'phonological loop' for verbal information, is theorized to be particularly flooded by worry, in that worry typically involves an internal verbal dialogue (Rapee, 1993). In addition to L2 learning anxiety, a consideration of the broader ecological context indicates multiple sources of stress, such as acculturative stress (Hwang, 2006; Li et al., 2016), prejudice and discrimination, limited financial resources, and safety concerns in communities (Hinton & Lewis-Fernández, 2011). Thus, the capacity for students who already have L2 learning anxiety to cope with stress may also be exacerbated by a variety of stressors in their lives.

Guided Meditation in the Language Learning Context

Cai (2017) developed a five-minute Bilingual Guided Meditation (BGM) intervention designed to reduce foreign language learning anxiety by means of the cultivation of a relaxed and positive learning environment. By introducing this contemplative practice into the foreign language classroom, Cai (2017) hoped to simultaneously enhance both the learning outcomes of students and their enjoyment of the process of learning a new language. Li et al., (2019) also argued that guided meditation would be particularly well-suited in the language learning context, given that the language used in the guided meditation could function as both a form of language exposure and (over time) a stimulus associated with relaxation and positive learning expectations.

Cai's (2017) ideas have yet to be explored in school-age populations, for whom learning a new language has potentially more immediate social necessities and pressures, such as is the case for ELs in low-income areas. Therefore, the current study was guided by the following research questions:

1. What is the acceptability of the meditation-based practices for students learning a second language and their teachers in a low-income and racially/culturally diverse school setting?

2. What elements of the meditation-based intervention do students and teachers perceive as effective, and why?

3. What suggestions do the students and teachers have for improving the intervention?

Methods

Participants

A public high school in Hawaii voluntarily agreed to participate in the current study. The school's Spanish (three teachers), Japanese (one teacher), and ESL (one teacher) programmes all agreed to participate. Of the 99 student participants, 43% were male. The racial/ethnic minority composition of the entire school was 73% (33% Hawaiian Native/Pacific Islander, 22% Asian, 9% two or more races, 8% Hispanic, 1% American Indian/Alaskan Native, .3% Black), and 37% of its students were listed as economically disadvantaged. Of the eight EL participants, all were foreign born, and their languages included Tagalog (3), Ilocano (1), Mandarin-Chinese (1), Thai (1), Vietnamese (1), and Spanish (1). Further participant and class data are in Table I.

Table I. Demographic and Class Data for Intervention Groups

		Intervention Group	
		Music Meditation (n = 52)	Guided Meditation (n = 47)
Gender			
	Male	22 (42%)	21 (45%)
	Female	30 (48%)	25 (53%)
	Non-binary/Third Gender	0	0
	Prefer not to say	0	1 (2%)
Language Class			
	Spanish	35 (67%)	28 (60%)
	Japanese	17 (33%)	11 (23%)
	ELL	0	8 (17%)

Note. Ages ranged from 14 to 18 (M = 15.59, SD = 1.09). Grade levels ranged from 9th to 12th grade, with most classes featuring a mix of grades, with the exception of one-9th grade Japanese class.

Materials

Guided Meditation Group

The classrooms assigned to the guided meditation were provided with a 3-minute audio recording of a bilingual guided meditation in the target language and English. These recordings were based on Cai's (2017) script that invites the students to centre themselves and attend to the relaxing music, followed by a middle section of music, which is followed by encouragement to have a "relaxed…interesting" and "joyful learning time." Students in the EL classroom were provided with a recording in the target language of English due to the wide variety of language backgrounds of the students. Teachers were provided with an intervention introduction script that encouraged the students to try to follow the words in the guided meditation and to keep an open mind.

Music Meditation Group

The classrooms assigned to the music meditation group were provided with a 3-minute audio recording of the background music from the guided meditation. A script provided to the teachers to introduce the intervention encouraged the students to "relax and enjoy the music" but it did not explicitly encourage the students to attend to the music in a mindful manner (some students may have done this by their own volition, but they were only prompted to relax and enjoy the music)..

Measures of Acceptability

Acceptability was explored using feedback questionnaires given to both the teachers and students. Both questionnaires included Likert-type and open-ended questions regarding the acceptability and perceived effects of the intervention, preferred elements of the intervention, as well as recommendations on the structure and delivery of the intervention. The questionnaire given to the teachers included eight Likert-type questions (see Table II in the result section for the questions) with a scale of five (1 = Very much disagree, 5 = Very much agree) and two open-ended questions (What was the best/strongest aspect of the intervention? What would you suggest for improving the intervention for classrooms/students?). The student feedback questionnaire was based on the BGM questionnaire developed by Cai (2017) from her initial trials with the BGM. Of the 11 questions, two questions are open-ended (What did you think about the way the guided meditation was presented? Any other comments?), and three questions include follow-up inquiries to allow students to explain their perspectives.

Procedure of Intervention Implementation

Four foreign language classes were randomly assigned to either the music meditation or guided meditation intervention. The one EL class was prescribed the guided meditation intervention. Prior to beginning the intervention, the teachers were trained by the first author on how to introduce and implement the intervention. A sample script was provided to the teachers as well. For the implementation convenience of the teachers, audio recordings for both the music and the guided meditation were provided. The intervention was to be implemented at the beginning-of-class daily for 10 weeks, followed by the administration of the feedback questionnaire following the final week of the 10-week intervention period. Steps to ensure implementation fidelity included meeting with each teacher individually or as a group once every two weeks to discuss the intervention implementation. During these meetings, the first author asked the teachers' questions, such as, "Are you experiencing any challenges implementing the intervention?" "Is the meditation audio being played at the beginning of every class?" "How are the students responding to the intervention?"

Data Collection

Following the approval of the study by the Internal Review Board of the researchers' university and the participating school's state Department of Education, teachers, students and the parents of students under 18

completed informed assent/consent forms before participating the study. The student feedback questionnaire was administered via a Qualtrics computer survey following the final week of the intervention. The teacher feedback questionnaire was provided via a paper form. A hundred percent of the teachers and 67% of the students completed the questionnaire.

Data Analysis

Student participants ranked their preferred aspects of the guided meditation, as well as provided simple 'Yes, No, or Maybe' responses to questions about the meditation (e.g., "Would you recommend the use of meditation techniques to your friends?"). These responses were analyzed using descriptive statistics (i.e., frequency). Descriptive statistics were also used to analyze teacher feedback about the intervention. The latter items were on a Likert-type scale.

Qualitative data from feedback questionnaires were analyzed using content analysis (Hsieh & Shannon, 2005). Content categories were generated through a process of "inductive category development" (Hsieh & Shannon, 2005). This process involved initially reading all of the feedback questionnaires, and then developing codes based on summarizing synonymous words used by the participants (e.g., "calming," "relaxing," "chill out") within and across "thought units" consisting of meaningful, independent grammatical clauses (Auld Jr & White, 1956). Emergent categories were then developed that captured thoughts or ideas shared across codes. These categories were further refined by the school-based psychologists through an iterative process of reviewing codes and developing consensus regarding their appropriate category.

Data trustworthiness was enhanced by having the first author and the school-based psychologist at the site independently analyze the same feedback sheet by reviewing all the coding. They then met to resolve any discrepancies between coders. For example, for the question "What did you think about the way the guided meditation was presented?" the category 'appreciated the meditation' emerged through the reading of thought units such as "It was a smart thing to do because it gave us time to be calm and relaxed before class." In addition, prior to the intervention implementation, the school-based psychologist and participating teachers were consulted regarding their perspectives on the intervention's potential utility. Member checking (participant validation) was also implemented by sharing a summary of the main findings with these stakeholders from the research site in order to confirm the veracity of the data. Debriefing with the research team at the university was also used to review the data interpretation in accordance with the methodology of the qualitative study.

Results

Research Question 1. What Is the Acceptability of the Meditation-Based Practices for Students Learning a Second Language and Their Teachers in a Low Income and Racially/Culturally Diverse School Setting?

Student Acceptability

Responses from the music meditation group resulted in the following categories.

Enjoyed intervention (31%). Examples were:

> "It was a smart thing to do because it gave us time be calm and relaxed before class."

> "I think it allowed us student[s] to get a break when we just walk into class to calm down and not have to get straight into more work. Instead we got to sit for a minute and chill out."

Implementation challenges (31%). Examples were:

> "A lot of people talked during the meditation, which made it work less. The music is calming, but I wish it was a little longer."

> "It should be louder, when [the] meditation is on, people should stop talking and get off their phones to get the full experience."

Usure about the way the meditation was presented (20%). For example:

> "I guess it was fine, I don't know."

Did not like meditation (11%). For example:

When the meditation was presented, I thought it would be interesting to try. When we did it, I was bored because I wasn't doing anything."

Repetitive (6%). For example:

> "Because of the constant repetition, playing the same track every single day, caused me to be annoyed by the song that is played every single morning."

The responses from the guided meditation group resulted in the following categories.

Enjoyed intervention (30%). Examples were:

> "It was an interesting way to use meditation for students."

> "It helped me process all my thoughts and get the bad thoughts out of my brain…I just had to breath[e]."

Implementation challenges (38%). Examples were:

> "It was fine, it just needs [to be] a little more clear on your part because all it says is 'clear your mind' while some people do not know how to clear their minds[;] go more in depth about it." (note: the meditation script does not use the words "clear your mind").

> "I think it could have been improved because people were talking during it."

Unsure about the way the meditation was presented (22%). For example:

> "Thought it was alright, never saw the point."

Did not like guided meditation (11%). For example:

> "I didn't like the talking one because it made me stressed. I don't know why."

Students in the guided meditation group also were asked to rank which elements of the meditation they liked the most. Eighty-one percent ranked music as the most preferred element, followed by positive suggestion input (11%) and guided meditation (8%). The students in the guided meditation groups were also asked to justify (write "why") their rankings. Their responses resulted in the following categories.

Calming music and/or enjoys music (67%). For example:

> "Everyone loves music, it changes how a person feels or their mood."

Liked the guided meditation (9%). For example:

> "Because it guides me [in] a new direction."

Did not like guided meditation (9%). For example:

> The person talking made it harder for me to focus because the voice wasn't pleasant to hear."

Did not like intervention (7%). For example:

> "I choose that order because I think if anything that the music was the best part. Mind you that the music wasn't good, it was just simply the least cringe."

Overall enjoyment of intervention elements (7%). For example:

> "Because it make[s] us feel better in [the] morning and it give[s] [us] something to learn more about."

Two other acceptability-related questions were: "Are you going to use the [Guided Meditation or Music Relaxation] technique in your life in the future?" (Q7) and "Would you recommend the use of the [Guided Meditation or Music Relaxation] technique to your friends?" (Q8). Over 80% of students in both groups responded with either a "yes" or a "maybe" to both questions.

Teacher Acceptability

All five participating teachers were provided with feedback questionnaires at the end of the study. The teachers were asked to rate their agreement on a five-point Likert-type scale (ranging from 1 = Very much disagree to

5 = Very much agree) found in Table II. Teacher ratings across these items indicated overall satisfaction with the intervention (see Table II). However, teacher ratings were lowest (M = 3.20) for the items: "The language-level used was appropriate for this class" and "The students understood the purpose for engaging in meditation."

Table II. Teacher Feedback Form Ratings on Likert-type Items

Item	Average Rating (*n* = 5)
The language-level used was appropriate for this class.	3.20
The students seemed interested in engaging in meditation.	4.00
The students understood the purpose of engaging in meditation.	3.20
Meditation is helpful for students.	4.80
The guided meditation was more helpful for the students than the music meditation.	3.00
Do you think most of the students will be interested in using meditation in their own lives in the future?	3.60
Are you more motivated to use meditation techniques in your classes in the future as a result of this intervention?	4.80
Note. 1 = Very Much Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Very Much Agree.	

Research Question 2. What Elements of the Meditation-Based Intervention were Perceived as Effective According to the Student and Teacher Participants?

Student Perceptions

Perceived relaxation effect. The majority of students in both groups reported feeling either "very relaxed" (BGM group 26%, Music group 33%) or "somewhat relaxed" (BGM group 43%, Music group 38%).

Perceived anxiety reduction. This was addressed by the question "Did you feel less anxious in your [name] class?" This was answered on a three-choice prompt: yes, no, or maybe. The majority of students in both groups responded either "yes" (BGM group 34%, Music group 42%) or "maybe" (BGM group 32%, Music group 25%) to this question.

Perceived academic enhancement. Three questions addressed perceived academic enhancement resulting from their meditation intervention. The first question, "Did you feel that your mind became clear after the [Guided Meditation or Music Relaxation] practice?" was answered on a three-choice prompt: yes, no, or maybe. The majority of students in both groups responded either "yes" (BGM group 38%, Music group 37%) or "maybe" (BGM group 36%, Music group 46%) to this question.

The second question, "Did you feel the [guided meditation or music relaxation] practice was useful to enhance your concentration ability in the class?" was answered using one of four options: very useful, somewhat useful, not sure, or not useful. The majority of students in both groups responded either "very useful" (BGM group 21%; Music group 23%) or "somewhat useful" (BGM group 40%; Music group 40%;) to this question.

The third question, "Did you feel the meditation technique affected your performance in your [name] class?" was answered with one of three options: yes, no, or maybe. For students in the music meditation group, 17% responded 'yes,' 27% responded 'no,' and 56% responded 'maybe.' For students who answered "yes," they were also asked "why" this was the case. Eleven students (21%) provided qualitative responses to this "why" prompt. Their responses resulted in the following categories.

Relaxed/Calm (55%). Examples were:

"It made me feel somewhat relaxed."

"I could talk with friends easier and feel less scared."

Increased focus (45%). For example:

"I became relaxed and was able to focus on the class and not other things."

For this same question, responses from students in the guided meditation group resulted in 17% responded 'yes,' 30% responded 'no,' and 53% responded 'maybe.' Ten (21%) students provided responses to the "why" prompt. Their responses resulted in the following categories.

Increased focus (50%). For example:

"It made me forget everything else that was happening and be more focused on what was going on in the class allowing me to absorb more information."

Relaxed/calm (30%). For example:

"Made me more relaxed so I could do my work."

General/Vague 'good. (20%). For example:

"Good ways."

Perceived generalization of meditation effects. One question ("Did you feel any changes in your life outside of class as a result of the [Guided Meditation or Music Relaxation] practice?") investigated the perceived generalization of meditation effects. This question was answered with one of three options: yes, no, or maybe.

For students in the music meditation group, 15% reported 'yes,' 56% reported 'no,' and 29% reported 'maybe.' Students who answered "yes," were also asked "in what ways" there were changes. Six (12%) students in the music meditation group responded to this prompt. Their responses resulted in the following categories.

Calmer (100%). Examples were:

> "It's in the first period, so I tend to be more relaxed throughout the day."

> "Yes, because when I am stressed I will remember how to meditate and it will calm me down."

> For students in the guided meditation group, 11% reported 'yes,' 53% reported 'no,' and 36% reported 'maybe.' Ten (21%) students provided responses to the "in what ways?" prompt. Their responses resulted in the following categories.

Calmer (60%). For example:

> "Outside of class, I am much more calmer, and happy no matter what has happened."

> *Enhanced mood/energy* (40%). Examples were:

> "More positivity."

> "It makes me less sleepy."

Teacher Perceptions

The five participating teachers were asked to provide written responses to the following question: "What was the best/strongest aspect of the intervention?" Their responses resulted in the following categories.

Calming/grounding routine (100%). Examples were:

> "Calming the students after they arrived in class and making them more receptive to the lesson."

> "I was impressed how the 9th graders were so 'into' it. They reminded me daily to do it. It started the class off with a more grounded atmosphere."

> "It's nice to use it as an aide, so that the students start the class with a better disposition."

Research Question 3. What Suggestions did the Students and Teachers Have for Improving the Intervention?

Student Suggestions

The responses from the music meditation group resulted in the following categories.

Addressing implementation challenges (44%). Examples were:

> "Maybe if you could have a couple more songs/tracks to play to keep people from being bored."

"Kids in this class are too loud to meditate."

"Sometimes when the meditation period starts, other people would pretend to be laying down, but their phone would be under the desk doing other things."

Wanting more meditation (38%). For example:

"We should meditate all day."

Providing alternatives to meditation (19%). For example:

"I don't like meditation music because it reminds me of something that makes me uncomfortable."

The responses from the guided meditation group resulted in the following categories.

Addressing implementation challenges (62%). Examples were:

"Turn off all lights and windows, reduce the stereo volume, some of the meditations were very loud and not relaxing."

"It should be a little longer, mainly the music."

Wanting more meditation (38%). For example:

"I feel all classes should do this before class starts."

Teacher Suggestions

Participating teachers were asked the following question: "What would you suggest for improving the intervention for classrooms/students?" Their responses resulted in the following categories.

Addressing Implementation challenges (60%). Examples:

"It may work even better if more students were more motivated to learn a new language."

"Sometimes some students were noisy and distracting others during the meditation."

Providing more meditation options (40%). Examples were:

"After the survey they (the students) wanted to continue the meditation but <u>all</u> preferred to do it with only the music."

"Sometimes the students asked if there were other meditation tracks."

Discussion

The overall results of this study indicated that the use of meditation in L2 classrooms was acceptable to the majority of students and all of their teachers, and that the majority of students in both music meditation and guided meditation groups reported at least moderate benefits from their assigned intervention. Moreover, both student and teacher participants provided feedback informative to the development of subsequent iterations of meditation-based interventions in the classroom for adolescents. The results and implications of this study are discussed in greater detail below.

Acceptability of Meditation-Based Intervention

The current study indicates that challenges with acceptability encountered included factors consistent with Sekhon et al.'s (2017) Theoretical Framework of Acceptability. Such factors include the match/mismatch between a student's background and the type of intervention used, student knowledge/cognition of the intervention, prior experiences with meditation, the perceived effectiveness of the meditation intervention (for relaxation and/or academic enhancement), as well as motivation (i.e., perceived benefits) for engaging in the meditation intervention. Although students in this study noted challenges with the implementation of the intervention, the majority of student participants reported at least considering the continued use of the meditation intervention and/or recommending it to friends. The students' overall openness to continue using their respective meditation was consistent with their self-reports of experiencing relaxation, anxiety reduction, and academic enhancement in both intervention groups.

Music Meditation versus Guided Meditation

Feedback from most of the students and some of the participating teachers indicated that the music elements of the meditation were generally preferred over the guided voice/prompts. Of students in the guided meditation group, 81% ranked music as their most preferred element of the meditation. Student preference for the music component of the meditation was further evidenced by the fact that all three classes voted to continue the meditation after the intervention study ended, though only with the music meditation. No studies were found directly comparing adolescent preferences for different types of meditation. However, the wealth of research on the functions and impacts of listening to music have found that the regulation of emotional arousal and mood is a fundamental aspect of this experience (Schäfer et al., 2013). Emotional induction techniques through the use of music have also been found to lead to at least short-term changes in emotional arousal and mood (Ribeiro et al., 2019). The emotional appraisal of different kinds of music have also been found to impact the degree of mind-wandering, i.e., self-generated and referential thought (Taruffi et al., 2017). Mind-wandering has been associated with decreased capacities to attend to immediate tasks (Franklin et., 2011).

Thus, it may be the case that the participants who preferred the music elements of the guided meditation over the guided imagery element were experiencing the music itself as a conduit to emotional (e.g., "calming") induction. This explanation is supported by research that for adolescents, one of the primary

functions of listening to music is to relieve tension/stress (North, et al., 2000). It is also the case that several students were observed to be on their cell-phones during the meditation time, and some of the teachers wondered whether motivation to learn a new language influenced student receptivity to the intervention. Therefore, future research should explore whether different adolescents have preferences for different types of meditation, and whether other variables (such as motivation) influence the perceived function of meditation. Further exploring the impact of classroom management on academic motivation and intervention acceptability is also warranted by this study, due to the noted occasional issues with off-task motor (i.e., cell-phone use) and verbal (e.g., talking during the intervention) behaviours. Although teacher reports revealed that these distracting behaviours often stemmed from fewer than four students during each incident, it is likely that antecedent strategies to enhance student buy-in and/or provide students disinterested in the meditation alternative choices (e.g., rest, reading, or doing class assignments quietly) would enhance the quality of intervention implementation (Thompson & Gauntlett-Gilbert, 2008; Wisner, 2017).

Limitations and Directions for Future Research

Intervention Content, Structure, and Delivery

Out of 72 comments about the structure of the intervention, 15 comments from the students reflected uncertainty about the purpose of the intervention, such as "[I] thought it was alright, never saw the point." Given these findings, meditation interventions such as those used in the current study may benefit from explicit psychoeducation and/or integration of mindfulness teaching as supports for the intervention. It may also be informative to examine whether this psychoeducation has differential impacts if delivered by the in-class teacher, an outside professional trained in mindfulness and/or meditation, or through supplemental materials such as videos. Such procedural elements may be critical to the success of such interventions. For example, Cai's (2017) success in the BGM in her foreign language classes might have been related to her own strong interest and training in meditation. This may have improved Cai's ability to model expected behaviours associated with meditation (e.g., neutral affect, relaxed body posture, non-reactivity to distractions, etc.). Per Social Learning Theory (Bandura & Walters, 1977), this modeling of meditation by an experienced practitioner could help scaffold the learning of meditation skills by novice learners. Research emphasizes the importance of interventionists having their own mindfulness and/or meditation training (Crane et al., 2010, 2012) in order to provide models that embody the attitudes, behaviours, and skills associated with mindfulness and meditation. It may also be the case that training teachers to supplement meditation interventions in their classrooms with additional psychoeducation may enhance student perceptions of teacher support and empathy, which are both associated with lower levels of learning anxiety in students (Piechurska-Kuciel, 2011; Djafri & Wimbarti, 2018). The finding that academic performance significantly improves when school personnel implement SEL interventions rather than outside interventionists (Durlak et. al, 2011) further underscores the importance of providing school personnel with the requisite implementation skills and training for such interventions.

In addition to considering the role and competencies of the person or programmes delivering the intervention, researchers have also found that providing adolescents with leadership roles and the perception of choice in the intervention implementation enhanced intervention acceptability (Thompson & Gauntlett-Gilbert, 2008; Wisner, 2017). Some of the students in the present study thought that two intervention materials, the type of background music used and the quality of the voice in the guided meditation audio, could have been more attractive. Therefore, providing students with choices (e.g., choosing different meditation music and voice options) may increase their ownership and acceptance of the meditation by integrating their preferred intervention elements through multiple iterations of the intervention implementation.

Additionally, feedback from the participating teachers indicated that the language used in the guided meditation may have been too complex for the students' current language proficiency. This indicates the need to align, provide explicit practice, and scaffold the language used in the guided meditation so that it can be understood by students with different language backgrounds and aptitudes.

Implications for Practice

The current acceptability study provides several implications for mental health providers and educators on integrating brief meditation as a means to promote psychological wellbeing in the classroom for second language learners. First, despite several implementation challenges noted by the student participants, both meditation interventions were found acceptable by the majority of the students and all of their teachers. Feedback from all of the participating teachers described the meditations as a "grounding" or "calming" exercise that functioned as a classroom routine so that all of the classes continued using some kind of meditation audio after the 10-week intervention period. Second, the feedback from the teachers highlighted the importance of assessing the linguistically diverse students' current language proficiency level prior to intervention and then aligning the complexity of the oral language of the intervention with the students' language proficiency level. Third, student feedback reflected a desire for a greater variety of meditation audio. Therefore, acceptability for adolescents may be enhanced by providing more meditation options. Fourth, in the guided meditation group, 2 of 47 students reported feeling "less relaxed" following the meditation, therefore, it is important to provide students uncomfortable with meditation with alternative choices.

Fifth, the findings of this study also point towards the differential functions of meditation. Although there is considerable overlap between the different types of meditation, the adolescents in this study tended to perceive meditation as a means to relaxation. Student participants' comments about relaxation were rarely complemented by comments on other potential benefits of meditation, such as enhanced self-awareness and insight. These findings may indicate that in the absence of explicit training in the different functions of meditation, adolescents may adhere to preconceptions or folk beliefs about meditation. These preconceptions might potentially narrow their perception of an intervention's impacts, as well as their acceptability of the intervention. It may also be that the dosage of a 3-minute meditation in one class may be too small for these

students to experience and perceive other benefits of meditation, given the multiple stressors in their environment.

Conclusion

This study adds to the literature by exploring the acceptability of incorporating the BGM in the second language learning classroom in a culturally diverse high school. The majority of the high school students in this study reported at least moderate benefits in terms of relaxation from both music and guided forms of the 3-minute meditation. Feedback from the student participants revealed that developmentally-informed adaptations may be important for the acceptability and effectiveness of such interventions. This feedback, as well as observations of the students' participation in the intervention by their teachers, indicate that it is acceptable to incorporate a 3-minute meditation in the regular classroom as an intervention to help students to learn subject matter in a relaxed and calming environment. This study also advanced the understanding of what components of meditation interventions (i.e., music or guided) adolescents might prefer. The students' and teachers' overall positive reactions to the intervention in the present study are consistent with other research (e.g., Klingbeil et al., 2017) on the benefits of school-based MBIs. Future improvement of the intervention should focus on enhancing student understanding of and motivation for the intervention. Such adaptations can be integrated not only into the content of the intervention, but in the delivery (e.g., role of interventionist, knowledge/skill of interventionist, modality of presentation) as well.

Endnote

This article is derived primarily from a larger study that was part of the first author's unpublished doctoral dissertation (Kimble, 2019). Portions of these findings were presented as a poster at the 2020 National Association of Schools Psychologists Annual Meeting, Baltimore, Maryland, United States.

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