Implementing a Mindfulness Program for Graduate SLP Students at a Hispanic-serving Institution

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Cover Page Footnote

Introduction

Mindfulness has been practiced in particular cultural and social communities all over the world (Khisty, 2010; Hyland, 2009). The benefits of this practice have been well documented (Congleton et al., 2015). Practicing mindfulness entails being in the present moment, calming the busy mind, and relaxing a tense body as a means to promote a healthier and happier life (Brown & Gerbarg, 2009; Campos et al., 2016; Epel et al., 2009; Roberts & Danoff-Burg, 2010). In the past two decades, mindfulness has been making its way into academic programs to facilitate stress management and to incite well-being among students, especially those enrolled in health science programs. Previous studies have shown that implementing mindfulness in the graduate speech-language pathology (SLP) curriculum yielded positive results (e.g., Beck & Verticchio, 2014a; Beck & Verticchio, 2014b). However, these data were primarily collected from white, non-Hispanic/Latinx SLP students. It is not known how students at a Hispanic-serving institution would perceive the integration of a mindfulness course in the curriculum. The purpose of this work is to add participant racial/ethnic diversity to the growing body of literature on the implementation of mindfulness in SLP programs.

Description of Mindfulness. Mindfulness is defined by Kabat-Zinn (1994) as the state of being fully aware, moment by moment, on purpose, and without judgment. Being present or mindful is a quality that can be cultivated by being fully present during routine daily activities. For example, while taking a walk, one may notice the feeling of their feet moving across the sidewalk, while also paying attention to the trees, sky, and other elements in nature. Mindfulness can also be fostered through meditation, which is a formal practice that involves sitting in silence and stillness for a given amount of time while focusing on the breath, a thought or a particular object in order to achieve a mentally clear and emotionally calm state. While there is overlap between meditation and mindfulness in that both involve being in the present moment, mindfulness is practiced by being fully aware and present during everyday activities.

Practicing being in the present moment facilitates stress reduction and can help individuals respond to life's challenges in a calmer way. The benefits of practicing mindfulness can be noted immediately as well as across the long term. Immediate benefits are typically reported as feeling more peaceful, calm and relaxed (Carmody & Baer, 2008; Singh et al., 2012). In addition to cognitive-psychological changes, mindfulness and meditation can impact the physical structure of the brain. A study conducted by Hölzel et al. (2011) showed that meditation makes significant changes to the brain's structure and function. After participants underwent an eight-week meditation practice, they demonstrated increased brain size in crucial areas including: the left hippocampus, which is associated with the ability to learn and retain information; the posterior cingulate cortex, which plays a role in maintaining focused attention; the corpus callosum, which is responsible for communication between the left and right hemispheres of the brain; and the temporal-parietal junction, which is responsible for compassion and empathy (Hölzel et al., 2011). Conversely, the amygdala, which is responsible for feelings of fear, anxiety, and stress, actually decreased in size (Hölzel et al., 2011).

Given the fact that these benefits are becoming widely acknowledged, it makes sense that mindfulness is being implemented as a means to improve overall health and well-being in people's professional, personal and even academic lives. For instance, Crowley and Munk (2017) examined

the positive outcomes of practicing meditation for college students. The study highlighted the stress involved in balancing work, school, family, and other life responsibilities for college students. A 15-week basic meditation program was implemented to determine the impact on the students' well-being. After the program was completed, students were asked to report on how meditation had impacted their outlook on life and their relationships with others. All participants reported an increase in mindfulness, which is defined as being fully aware of what is happening now, as well as manifesting acceptance, curiosity, and openness. Participants also stated that they were more focused on the present moment and reported an increase in reflective thinking after taking the meditation course. Additionally, 96% of participants reported an improvement in their psychological well-being and an increase in feelings of calm, peace, compassion and gratitude (Crowley & Munk, 2017). Mindfulness training has been incorporated in the curricula of physical therapy (Chambers et al., 2016); occupational therapy (Reid, 2013); nursing (Brown et al., 2016); psychology (Myers et al., 2012; Nelson et al., 2001) and medical (Prasad et al., 2016; Warnecke et al., 2010) programs with much success. These positive outcomes are encouraging given that students in healthcare-training programs are likely to encounter high rates of burnout and compassion fatigue (Bullock et al., 2017; Mason & Nel, 2012; Silver et al., 2018; Valgento et al., 2019; Zeman & Harvison, 2017) on top of the mental health concerns that arise in college. Similar success has been accomplished in SLP programs wherein high levels of stress and perfectionism have been documented (e.g., Beck et al., 2020; Lieberman et al., 2018).

Mindfulness in SLP Programs. Ann Beck and Heidi Verticchio described the implementation of mindfulness into SLP curricula (Beck & Verticchio, 2014a; Beck & Verticchio, 2014b; Beck et al., 2015; Beck et al., 2017). In their recent work, Beck and Verticchio (2018) investigated changes in self-compassion among 44 SLP and doctorate of audiology (AuD) students enrolled in a counseling course. Pretest and posttest data collection tools included the Self Compassion Scale (SCS), a questionnaire about mindfulness, and journals (Neff, 2003). The counseling course, which met for one hour and 50 minutes Monday through Friday over the span of three weeks, included short lectures and discussion, role play, reflective journaling over topics discussed in class, and group presentations on cultural aspects of counseling and counseling techniques. The daily mindfulness activity was a replication of Beck and Verticchio (2014) and Beck et al. (2017). For the journaling portion, researchers used a systematic sampling method similar to random sampling to assign students to write in either a counseling journal or a gratitude journal (Beck & Verticchio, 2018). The counseling journal assignment entailed writing about experiences and perceptions of counseling experiences two to five times a week, while the gratitude journal assignment required the students to reflect every night on three things that happened during their day for which they were thankful (Beck & Verticchio, 2018). SCS scores of students who kept gratitude journals decreased slightly from pretest to posttest, whereas the SCS scores of students who kept counseling journals increased. Both the pre-test and post-test mindfulness questionnaires revealed that students felt that mindfulness was an important quality for a clinician to have. Themes arising in the pretest responses relative to this questionnaire item included "clinician professional outcomes" and "facilitating the client-clinician relationship". In the posttest, the "facilitating the client-clinician relationship" theme persisted and an additional theme "helps to understand self so can better help others" was discovered in the students' responses. In terms of perceptions of effectiveness of meditation, responses regarding the relaxing and enjoyable nature of the program decreased over time. However, responses referring to being focused, clearing the mind, and being nonjudgmental increased over time. Thus, incorporating daily mindfulness practice and counseling

journaling in a counseling course appeared to have a positive effect on the ways SLP and AuD students viewed themselves giving rise to well-being, which can promote their professional growth.

Thus far, the research has shown that SLP students who learn mindfulness techniques as part of their curriculum have positive outcomes (Beck & Verticchio, 2014a; Beck & Verticchio, 2014b; Beck & Verticchio, 2018; Beck et al., 2015; Beck et al., 2017). This work will present data collected from students enrolled at a Hispanic-serving institution with the purpose of adding diversity to the mindfulness literature on SLP students.

Methods

Research Design. This pilot study was conducted using a qualitative research paradigm, which allows for the collection and analysis of rich, individualized data. Data were collected using a 6-question pen and paper anonymous exit survey at the conclusion of the program. Responses to open-ended questions were analyzed using thematic analysis procedures (Braun & Clarke, 2014; Clarke & Braun, 2018), while multiple choice responses were explored using descriptive statistics.

Participants. Prior to the implementation of the program, institutional review board approval was secured, and a convenience sample of 40 graduate students gave informed consent before participating. One student opted out mid-program for religious reasons because they felt the program conflicted with their religious values. Of the 39 remaining students, 31 met post-hoc inclusion criteria, which included attending all program sessions and completing the exit survey (Medina & Mead, 2020). The age range of the sample was 22-29 years with 29 females and 2 males. The ethnic/racial breakdown of the group was 27 Hispanic/Latinx, 3 white, and 1 Asian.

Elements of the Mindfulness Program. The following sections describe aspects of the mindfulness program including details about the facilitator and program design.

Mindfulness Facilitator. The facilitator of this pilot mindfulness program was a full-time faculty member in the students' SLP program and a registered yoga teacher who completed a Mindfulness-Based Stress Reduction (MBSR) training (Potter, n.d.). While credentials can be earned in yoga (Yoga Alliance, n.d.), they are not required to provide this type of practice to students (Jain, n.d.).

Duration and Scheduling. The program took place during students' weekly clinical seminar course, which runs for 15 weeks in the evening. The mindfulness component was incorporated during the first 45 minutes of class for eight consecutive weeks. This ensured that there were no conflicts with other classes or clinical practicum schedules.

Transformation of Classroom into a Meditation Studio. The regular college classroom was transformed into a meditation studio with the purpose of helping students to let go of the academic atmosphere and all of its demands. The desks were covered with white tablecloths and arranged into forward-facing rows. In setting up the desks this way, students could see the facilitator and they also had a sense of privacy since they were not facing each other. Several LED candles were interspersed along each row and served as the primary light source for the room. Subtle scents such as lavender were diffused throughout the room while 432 Hz music played in the background,

both of which created a calming ambience. The classroom projector screen was used to show meditation images and guided meditations via YouTube. A sign was posted on the classroom door that read "Ssshhhhhh, quiet and peace inside" to remind students to enter in silence.

Instructional Content. During the 8-week program, students learned about the principles of mindfulness and meditation through scheduled discussion topics. The first of these topics consisted of comparing and contrasting mindfulness and mediation. It was explained that both had to do with being in the present moment and being fully aware of one's thoughts and emotional and physical states. However, being mindful is practiced throughout the day during any type of activity in which one might be engaging. Meditation, on the other hand, is a formal practice whereby an individual sits quietly and practices stillness and putting space between thoughts. The goal of meditation is to think less and clear the mind, whereas the goal of mindfulness is to be totally present with one's daily activities. When explaining meditation to the students, the facilitator shared details such as when, where, how long, and how often to meditate. Considerations for meditating alone versus in a group were discussed. The students were introduced to the Chakras, which is a system of energy centers in the body originally described in the ancient text of the Vedas between 1500 BC and 500 BC (Schneider, 2019). The concept of 432 Hz music was also introduced. According to Collins (2015), a musician and researcher, 432 Hz music is registered in the inner ear differently than other frequencies, resulting in a more resonant and pleasant listening experience.

In addition to discussing particular topics each week, students were led in the practice of various mindfulness and meditation techniques including breathing techniques, guided meditation, and yoga postures. The group practiced breathing techniques such as alternate nostril breathing, diaphragmatic breathing, and counting the duration of inhaling and exhaling breaths. Guided meditations were primarily conducted by the facilitator and included sensory perception activities and breath awareness. On other occasions, the group participated in guided meditations by experts such as Jon Kabat-Zinn, Deepak Chopra, and Eckhart Tolle, which were accessed on YouTube. Yoga was also incorporated in the program to facilitate body and breath awareness, as well as physical relaxation, to help students cultivate calming and present moment skills that could be used throughout their day-to-day routine. Given the confines of the classroom in which the program took place, the types of yoga poses taught to the group were only those that could be completed in seated or static standing positions. Examples of the poses taught and practiced included 'Mountain Pose', 'Tree Pose', '3-Point Pose', as well as the 'Warrior' and 'Triangle' poses. To ensure accessibility for varying physical abilities and comfort levels, modifications were demonstrated for all poses. Each session, students were reminded to use their chairs and table tops as needed to facilitate balance and stability. All of the aforementioned topics and techniques came up during multiple sessions throughout the eight weeks since they are all interconnected components of practicing mindfulness and meditation.

Suggested Independent Activities. Students were encouraged to continue their meditation and mindfulness practice on a daily basis. They were provided with recommendations for smartphone applications that would guide them through daily meditations and breathing techniques. Additionally, students were reminded during each session of ways to be mindful throughout the day by focusing on sense perception during daily activities. Examples of this included: noticing the texture of their shoelaces while tying their shoes; feeling the bristles of a toothbrush against their gums while brushing their teeth; tuning into each of the ambient noises in their homes; or

focusing on their breathing before getting out of their cars. To facilitate frequent reminders and dissemination of ideas for independent mindfulness practice, a closed Facebook group was developed for the students. While the facilitator was the primary contributor to this group message board, the students were invited to post and share their own resources, such as inspirational memes and pictures, quotes, YouTube videos, and articles about mindfulness and meditation.

Data Collection. Students completed an anonymous exit survey after their final session. The survey which consisted of six questions, presented in multiple choice and open-ended formats, explored the students' satisfaction regarding program structure and content, feedback for improving future mindfulness programs, and their personal reflections on mindfulness in general (Appendix) (Medina & Mead, 2020). Upon completion, exit surveys were coded with a participant identification number and compiled into an electronic spreadsheet in preparation for analysis.

Data Analysis. Two questions that generated data on program feedback were analyzed for the purposes of this study. The remaining four survey questions, which did not generate data on the structure of the program, were not analyzed for the purposes of this study. Descriptive statistics were used to quantify students' responses to the multiple-choice question Q1, "Of the following, what were the three most enjoyable aspects about participating in this project?". The predetermined aspects that students could select included breathing techniques, ambience, music, guided meditation, Facebook page, and the Netflix video "On Meditation". Responses to the open-ended question Q6 "What can you recommend to improve upon future meditation projects?" were analyzed using thematic analysis procedures.

The purpose of thematic analysis is to qualitatively investigate and describe individual participant responses on a micro as well as a macro level (Braun & Clarke, 2006), wherein the micro level of analysis entails considering the individual nuances captured in each participant's response. Analysis on the macro level allows for generalization of these nuances across the group through the development of themes. The first step in thematic analysis involves multiple readings of the raw data to achieve familiarity with the data set (Braun & Clarke, 2006). Each response was color-coded according to semantic similarity as part of the initial coding process, which resulted in the emergence of preliminary groups. To ensure mutual exclusivity and to rule out redundancy, groups were collapsed in instances of semantic overlap (Anderson & Felsenfeld, 2003). The themes that emerged as a result of this process were interpreted and synthesized with descriptive statistics.

Reliability. Data fidelity was ensured throughout the analysis phase via regular checking of the analyzed data against the master data sheet. Given the interpretative nature of this work, procedures were put in place to minimize researcher bias. Interrater agreement was achieved with a graduate SLP student with training in clinical research methods. The research team's thematic groups were deidentified and relabeled by the graduate student reviewer. Labels from both parties were compared and considered to be in agreement if semantic meaning was retained, which resulted in 100% congruency.

Results

Results from the statistical analysis of data generated from Q1 revealed that students most frequently selected breathing techniques, ambience, and music as the most enjoyable aspects of the program (Table 1). The least frequently selected option was the Netflix video "On Meditation".

Table 1

Frequency of students' selections of "three most enjoyable aspects" of the program

Aspect	Number of selections
Breathing techniques	20
Ambience	19
Music	19
Guided meditation	13
Facebook page	5
Netflix video "On Mediation"	4

NOTE: The total number of selections *(n = 85)* is less than the expected number (*n* = 93) because 6 participants selected fewer than three aspects. One participant's responses were disqualified because more than three selections were made.

Thematic analysis of students' narrative responses to Q6 yielded three major themes: scheduling, structure, and content. Scheduling was the most frequently cited aspect that should be changed in future programming (Table 2).

Table 2

Themes derived from students' feedback on improvements for future programs

Theme	*n*	Exemplar quotes and student codes
Scheduling	16	"Time. After clinic, late at night, when hungry it is hard to meditate." [P2] "Maybe not doing such a long meditation, only because of how long Monday's can be for full time students in clinic. I do meditate better on my own when I'm not so tired." [P3] "Maybe not have it after such a long day, sometimes just too tired." [P8] "An earlier class time..." [P9] "Not have it so late in the day when you're tired and need to unwind and prepare for the next day." [P17] "Not after clinic and class." [P19] "Meditating less later in the evening." [P25] "Try to incorporate short meditations after class and not having anything last more than 30 minutes." [P26]
Structure	8	"I think that short meditation would help keep students engaged." [P1] "Start with small time frames for meditating and work up to longer meditations." [P10] "Shorter meditation times." [P14] "Begin with shorter sessions in the beginning and gradually increase." [P16] "Begin with short meditations and get to longer ones as the project goes on." [P31]
Content	5	"Incorporate more guided meditation. I feel this helps with the beginning meditator..." [P4] "...more guided meditations, they were wonderful." [P9] "I did not find the YouTube video as effective. I thought the actual practicing of the meditation was most effective." [P18] "Add a yoga class." [P20] "More guidance during meditation to increase self-awareness." [P23]

Discussion

The purpose of this work is to add participant racial/ethnic diversity to the growing body of literature on the implementation of mindfulness in SLP programs. Pilot data were collected from graduate students who were enrolled in a graduate SLP program at a Hispanic-serving institution.

Given that 87% of this study's participants were Hispanic/Latinx, the preliminary results presented shed light on aspects of mindfulness practice that are enjoyable and important to them.

In reflecting on the program, student feedback was an essential element. Outside of the exit survey, students voluntarily provided feedback on the program via email and in casual conversation. It was through these authentic encounters, that the facilitator learned what aspects of the program the students found most enjoyable. Therefore, it is recommended that future programs include an outlet such as weekly journal writing that gives students an opportunity to ponder, absorb, and question their experiences. Such an activity would serve two purposes. First, journaling allows for a continuous feedback loop between the students and the facilitator, which would allow for adjustments to be made as needed on a weekly basis. Additionally, reflection journals have been shown to be an important part of the growth process both personally and professionally, which can have a therapeutic effect (Pretorius & Ford 2016; Webster-Wright, 2013). Thus, it would be important to include a form of journaling and reflective practice that allows for stream of consciousness writing, whereby a topic is not preselected. This practice is culturally sensitive for those who are not accustomed to sharing personal information in a group setting (Proulx et al., 2018) in that it would serve as an anonymous, private outlet to provide feedback about the program.

Though this pilot study formally collected student comments at only one point via the exit survey, this feedback is valuable for developing future programs. For instance, when asked to rate the "three most enjoyable aspects" of the program, breathing techniques, ambience, and music were the most frequently rated aspects. These results were not surprising, given that they are sensory in nature and more of an experience in comparison to participating in a Facebook group or watching a video. Guided meditation, which is sensory based, may not have been rated as frequently because it did require effort, stillness, and practice. These preliminary results indicated the importance of the sensory aspects such as sight, sound, and smell in the implementation of mindfulness programs. Other platforms aside from Facebook for sharing resources, facilitating communication outside of sessions, and reminding students to practice techniques should be carefully considered. Social media outlets and their popularity amongst certain age groups change over time. A possible alternative for future programs would be to use university learning management systems (e.g., Canvas, Blackboard, Moodle) because they offer the same features without the distractions or potential issues with access. Using session time to expose the students to celebrity vignettes of their experiences with meditation (Netflix video) was not as highly rated as the other aspects of the program. Perhaps a resource like this could be made available outside of the session time, so that those who are interested can access it at their leisure. Similarly, vignettes can be used to highlight experiences of mindfulness practitioners who have the same cultural background as the students.

Students' qualitative feedback about aspects of the program they would change gave rise to three themes: Scheduling, Structure, and Content. Many students reported that the program was held too late in the evening. Prior to each session, most of the students had spent the day at their clinical externship sites, commuted to campus, then attended a 3-hour academic course. It is understandable that many reported being tired and having difficulty concentrating. Therefore, many suggested scheduling as an aspect to be changed. This pilot program was scheduled as a component of the students' clinical seminar course for which they were already registered. Whether they participated in the program or not, they would still have to attend their clinical seminar at 8:00 pm due to the graduate SLP program schedule. While Beck & Verticchio (2014a)

reported success with their early morning sessions, the current graduate program's schedule does not offer this type of flexibility. For the development of future mindfulness programs, these findings should be considered in light of the students' academic schedules. Another viable option may be to record sessions so students can access them on-demand in cases where scheduling is problematic.

Students also described the structure of the sessions, particularly the length of meditations, as an aspect to be changed. Specifically, several students reported that intervals of quiet time during guided meditation were too long, which is a finding that supports García-Campayo et al. (2017), which explored Hispanics and mindfulness practice. Given that guided meditations were rated as the third most enjoyable aspect of the program, this outcome seems contradictory. Throughout the program, the facilitator began the meditation component of the sessions with short 1-2-minute periods of breathwork and stillness. These periods increased by a minute each week over the first seven sessions. During the last session, which was also the day the students completed the exit surveys, the facilitator presented a 15-minute guided meditation by Jon Kabat-Zinn. This could explain why the students commented on the length of the meditations. Therefore, it is important to structure future mindfulness programs beginning with short meditations then gradually increasing the length of time. The final theme was derived from the student feedback about program content, wherein four of the five comments suggested more guided meditation. One comment specifically stated that they had a preference for practicing meditation rather than viewing a video about it, which provides insight on why the Netflix vignettes may not have fared well in the exit survey. Another comment recommended adding a yoga class.

Taken together, feedback received from the students who participated in this pilot study indicated that the students enjoyed learning and practicing mindfulness techniques. These preliminary findings add a voice of diversity to what is already known about implementing a mindfulness program in the SLP curriculum.

A Note About Terminology and Cultural Appropriation. A growing issue in the practice of mindfulness and yoga in the Western culture is the presence of cultural appropriation. It is paramount that facilitators developing mindfulness programs educate themselves on the history and roots of terminology and phrases commonly used in sessions. Without this understanding, there is a risk of inappropriately representing the significance of these terms to the people of the cultures and religions of which they originated. For example, the Sanskrit term "namaste" has become a term frequently used in popular Western culture. It is not uncommon to hear this word at the conclusion of a yoga class or to see it on yoga studio merchandise. According to Devarajan (2020), using "namaste" in these commercialized contexts divorces the word from the meaning that is conveyed when it is used by Hindi speakers. Even though facilitators may be using such terms with positive intentions, the impact on some individuals may be negative (Mitchell, 2020). Additionally, it is prudent to be aware that some participants may have varying views of practicing mindfulness meditation that are grounded in religion and culture. To some, the word "meditation" may carry a negative connotation. It is recommended to establish a safe environment where such topics can be discussed openly without fear or judgement.

Conclusions

The purpose of this study was to add participant racial/ethnic diversity to the growing body of literature on the implementation of mindfulness in SLP programs. It presents feedback from students, 87% of whom were Hispanic/Latinx, regarding enjoyable aspects of the program and areas for change, with considerations for the development of future mindfulness programs. Ambience, including music, was deemed most enjoyable. Student responses related to the program's Facebook page revealed the importance of choosing the most appropriate platform that takes students' ages and social media access into consideration. When planning the program, students' academic and clinical schedules should be considered in addition to religious calendars as well as their cultural and familial obligations. Duration of guided meditations should incrementally increase over time. Giving students the opportunity to express preferences for content could enhance the program, in that the topics and techniques could be tailored to their interests. However, in the spirit of being culturally sensitive, program facilitators should offer anonymous modes for students to provide feedback. One such way is by incorporating stream of consciousness reflective journaling, wherein anonymously sharing reflections with program facilitators is optional. Incorporating a feedback loop between the students and the facilitators has the potential to optimize the overall experiences for graduate students across disciplines and cultures.

Limitations and Future Research

The original intent of this pilot study was not to study how a predominantly Hispanic/Latinx student body perceived and responded to mindfulness programming. This limited the breadth and of the results generated in this study. Similarly, the results were limited by data collection methods; data were collected at only one point in the study. The format of Q1 prevented students from providing novel responses about what they really enjoyed most about the program. Similarly, the exit survey did not include any clinic-based questions (e.g., 'How will you use these strategies in your clinical practice?'). Future studies should include pre-test/post-test data collection methods, as well as regular intervals for data collection throughout program implementation. Data collection techniques such as journaling would allow facilitators to monitor student feedback while also giving students a space to observe their own progress in their practice of mindfulness. Four survey questions were not analyzed for the purposes of this study because they did not generate responses related to the structure of the program. Asynchronous remote participation options should be made available to address scheduling conflicts.

Disclosures

The authors have no financial or non-financial relationships to disclose.

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Appendix

Exit Survey

1. Of the following, what were the three most enjoyable aspects about participating in this project?
   a. Facebook page
   b. Ambience (the room setup)
   c. Music
   d. Guided meditations
   e. Breathing techniques
   f. Netflix Video "On Meditation"
2. Did your perception of meditation change over the duration of the project? Please explain.
3. Do you think meditation can help with stress management? Please explain
4. What was most difficult about learning to meditate?
5. Do you expect to continue your meditation practice?
6. What can you recommend to improve upon future meditation projects?