Children's Perceptions of Mindfulness Classes

Charlotte Whitworth[1] & Janet L. Currie[2]

Abstract

Previous research has not consulted children regarding their own open–ended opinions and views on the acceptability of Mindfulness. Therefore, we conducted a pilot study determining children's (n=5 girls, n=4 boys; mean age = 10 years and 4 months) feedback of Mindfulness sessions, utilizing the Smiling Mind Application for 10-12-year-old children. Children completed a written questionnaire after each mindfulness session to gauge their perceptions of the quality of class delivery, including a personal evaluation of the content of the Application. The main themes to arise from the qualitative data showed that participants reported feeling heightened calmness, a more relaxed state and greater mental focus. All but one participant would recommend the Mindfulness program to a friend. However, the older children amongst the group did not find Mindfulness to be as acceptable and appealing as the younger participants and questioned the App's suitability and maturity level. Children's feedback on the App differed from published reviews of similar products previously conducted by adults. The findings suggest that careful selection of App content for Mindfulness–based classes is recommended to suit children's preferences and maturity, especially for those groups reaching the upper primary levels.

1. Introduction

An increasing number of children today are reporting feelings of worry and anxiety (Lawrence et al., 2015; Rowe, 2008). Most stressors for children are similar to those experienced by previous generations, such as school pressure, bullying, their future, friends and family (Blumer, 2015). More recently, a heightened exposure to societal expectations and pressure caused by access to online media has been attributed to 40 per cent of children reporting "worrying too much" (Hagen & Nayar, 2014; Rowe, 2008). Previous research has pointed to a general concern expressed by primary students to slow down and have time to relax. They commonly feel the pressure of engaging in too many activities each week, describing regular feelings of tiredness and stress stemming from an over–scheduled lifestyle (Perkowski & Currie, 2014). With this health and lifestyle factor in mind, teachers and parents are increasingly seeking ways for children to de–stress and regulate feelings of worry and anxiety (Cole, 2014).

It is therefore understandable that Mindfulness programs have become an increasingly popular intervention in the primary school setting for promoting wellness and addressing mental health and stress issues (Carsley, Khoury, & Heath 2018; Harris, 2019; UK Government, 2015; Yang, Zhou, Liu, & Fan, 2019). Mindfulness has been recommended as being helpful for various medical conditions experienced by children (Hong, Hanson, Lishner, Kelso, & Steinert 2018; Weare, 2013), and teachers are increasingly using Mindfulness in their classrooms to help students regulate emotions and behavior (Kaunhoven & Dorjee, 2017; Stone, 2014; Weare, 2012). According to Weare (2013):

When well taught and when practised regularly, it [Mindfulness] has been shown to be capable of improving [children's] mental health and well-being, mood, self–esteem, self–regulation, positive behaviour and academic learning.

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[1] Teacher, Kent Road Public School, Sydney NSW, Australia
[2] Associate Professor, School of International Studies& Education, University of Technology Sydney
15 Broadway, Ultimo NSW 2007, AUSTRALIA

However, despite general research on mindfulness and mindfulness–based interventions growing exponentially over the past 30 years (Cullen, 2011), the perspectives of children have been largely ignored (Davis & Hayes, 2011; Roeser, Skinner, Beers, & Jennings, 2012; Waldron, Hong, Moskowitz, & Burnett–Zeigle, 2018). Specific insight is required into revealing how children (five to 12 years old) perceive Mindfulness–based practice (Ager, Albrecht, & Cohen 2015; Weare, 2013). For example, Felver and Jennings (2016) found that only 8% of published studies had involved youth under the age of 18. If the field of Mindfulness research is still in its infancy, "the study of mindfulness with youth in schools is in the prenatal stage of development" (Felver & Jennings, 2016, p. 1).

Gaining the input of children into the development of Mindfulness programs would help to increase the acceptability and eventual feasibility of programs (Ager, Albrecht, & Cohen, 2015; Roeser, Skinner, Beers, & Jennings, 2012). It is only through such feedback in design that providers of Mindfulness programs can aim to improve the levels of customer satisfaction achieved (Hunter, 2018). 'Delighting' customers at the highest level requires a deep understanding of their desires, appreciation and exceeding their expectations (Hardidge, 2017; Hunter , 2013). This can occur through well–designed qualitative market research discovering feedback on the appeal or perceived benefits of a planned program. This is especially so because children and adolescents today are increasingly discerning about their choices and what activities they will participate in.

Further, despite the relative explosion in the number of Mindfulness–based mobile Applications (Apps) that have become available as an alternative medium for delivering training, there is little information or feedback available on their quality (Mani, Kavanagh, Hides, & Stoyanov, 2015), let alone from the child–focused target audience. For example, Matte (2019) claims:

As meditation becomes a more popular tool in dealing with stress and anxiety in school and at home, this is a great free collection for families who want some help getting started…Smiling Mind offers quality programs that lead kids and adults through a series of meditations.

However, where is the evidence to state that what is delivered is acceptable from the child's point of view? How do we know that what has been planned and delivered is genuinely acceptable and enjoyable from the child's point of view?

To achieve success in pitching a new Mindfulness App to children, developers would normally have spent time understanding what matters to their clientele, how to deliver this, and do it well (Hardidge, 2017). However, there is a lack of published studies reporting feedback in the child's own voice. Therefore, the aim of our pilot study was to unveil some of these hidden aspects regarding the acceptability of mindfulness according to a group of primary students taking part in practical Mindfulness classes. It differs from previous studies in that it involved an App and was truly open–ended in framing and interpreting the children's responses. Our pilot study is borne out of the belief that children should have a 'say' on what recreational activities they wish to participate in, and be provided with a voice to give their opinion and feedback on health programs.

2. Method

2.1 Study Design

To investigate the acceptability of Mindfulness–based classes, we invited a group of primary–aged children to take part in an initial pilot study evaluation conducted before their afternoon swimming training session, once a week for three weeks. We defined the concept of Mindfulness in simple terms of an individual paying attention to what's happening in the present moment in the mind, body and external environment, with an attitude of kindness and openness (UK Government, 2015).

A qualitative research design was used to gauge the participants' opinions of the pilot program, using a process evaluation approach. Qualitative methods were appropriate as they investigated the children's perspectives of their experiences in the classes (Rubin & Babbie, 2008). A process evaluation assesses the quality of a program's practical implementation and delivery, if activities were delivered and well received by participants as intended (US Centers for Disease Control & Prevention, 2019). It identifies any barriers experienced that may have affected the results of the program and whether or not changes can be made to the program to prevent this (Hawe, Degeling, & Hall, 1990). Therefore, we aimed to measure the success of the pilot program based on whether, according to the participants, the program was considered to be enjoyable, effective, and delivered in an appropriate and desirable manner.

The first step of the process evaluation assessed the participants' views on the quality of their class experience, whether they enjoyed themselves, what they may have gained, and whether they would recommend it to others. Practical and facility–based issues were evaluated, such as the children's views on the suitability of the venue, and whether or not it was deemed to be convenient and comfortable, such as easy to get to, run at a convenient time, and if the class facilities were considered appropriate. Finally, any issues relating to the content of the Mindfulness program itself were explored. We determined whether the participants found the content of the Mindfulness Class 'Smiling Mind' Application recording ('App') interesting and relevant, and if it was considered by the participants to be presented in the best way possible. The views of the children to the age–appropriateness of App's content was also evaluated.

2.2 Ethical Clearance

Following approval by the appropriate institutional research ethics committee, informed parental consent was gained and all participants provided written and verbal assent prior to engaging in the pilot study.

2.3 Participants and Setting

Fifteen participants aged between 8-13 years were invited to take part in the pilot study. All participants attended primary school and were members of a swimming squad which trained at a local community aquatic center immediately following the class. The classes took part in a recreation meeting room at the center venue. With 11 volunteering to participate, only data from the 9 students participating in all three sessions were included (n = 5 girls, n = 4 boys, mean age = 10 years and 4 months). The participants all live and attend primary school within a high socio–economic profile metropolitan region of North–Western Sydney (Australian Bureau of Statistics, 2011). Further, the majority of schools located in this geographic area have an above–average Index of Community Socio–Educational Advantage (ICSEA) (ACARA, 2014).

2.4 Data Collection

2.4.1 Procedures.

Participants completed written questionnaires (see Figure 1) after the completion of each class to capture participant feedback and views of the mindfulness classes (Patton, 1990). This allowed participants to answer open–ended questions about their enjoyment levels, state their opinions of the class content, and other implementation aspects of the program, providing any reasons.

2.4.2 Measures.

Written questionnaires were selected as the instrument to collect data. They were convenient and able to be completed at the venue easily with pencil and paper after the class. Unfortunately, children under 10 years of age may have difficulty in effectively self–reporting and describing certain behaviors in writing, and may over–report or under–report certain individual behaviors. Although the questions were written in very simple, age–appropriate language able to be understood at the lower Year 3 level (age 8-9 years), children may require a relatively high level of literacy to complete them (Kervin et al., 2006).

2.4.3 'Smiling Mind' App.

The Smiling Mind App audio–recording for children aged 10-12 years was used in each Mindfulness session (Smiling Mind, 2018a). Smiling Mind was rated second (scoring 3.7 out of 5, or 'Good') in Mani, Kavanagh, Hides and Stoyanov's (2015) evaluation of 560 Mindfulness–based mobile Apps, reviewing engagement, functionality, visual aesthetics, information quality and subjective quality subscales. Each audio recording began with 20-30 seconds of standard instructions, that is, with eyes closed or half–closed, sitting crossed–legged or lying on the floor. These instructions were repeated at the beginning of every recording. The three programs selected for the pilot study were "Belly Breathing" which ran for 6 minutes and 20 seconds, focusing on relaxing the body using deep breathing. "Exploring Sounds" at 6 minutes and 50 seconds duration focused on deep breathing and being mindful of sounds, and "The Wish Tree" was 6 minutes and 30 second in duration, using creative imagery to create a positive mood and focused on regulating emotions. Each session is different in storyline and intent– the first session focused on deep breathing into the stomach, the second session focused on being mindful of sounds, and the third focused on imagining a safe and mindful place to be able to regulate emotions and feelings. All sessions concluded with a bell sound, where participants could open their eyes once they could not hear the ringing of the bell any longer.

2.4.4 Researcher observations.

The researchers also recorded observations of participant behavior during the Mindfulness sessions. This allowed the researchers to provide a context or perhaps distinct contrast to the data gathered in the questionnaires (Mulhall, 2003). Comparing observational notes to the questionnaire data and noting real–time reactions to occurrences during the session, for example reactions by participants to content in the audio recordings they may have found surprising, allowed the researchers to gain further insight into the participants' personalities and behaviors (Patton, 1990).

2.5 Data Analyses

The data from the questionnaires were transcribed verbatim and then coded according to the procedures outlined by Corbin and Strauss (1990), allowing for identification of patterns and themes within the data. This generated insight into the perceptions and views of the participants taking part in the sessions. However, due to the research being conducted with child participants, the responses to the questionnaires were shorter than those that may have been expected to be given by adults (Kervin et al., 2006). They often contained spelling mistakes. Some participants were able to provide longer responses and detailed opinions. However, there were a number of responses that consisted of very few words, making interpretation of responses quite difficult. A child would often give an opinion but not elaborate on their reasoning.

2.6 Limitations of the Study

This pilot study is limited to considering a group of primary–aged students' perceptions of a series of three Mindfulness sessions using the *Smiling Mind* Application. As this was a convenience sample (Ferber, 1977), there was not a broad range of participants included so the findings of this study cannot be generalized to represent the opinions of all NSW primary school students. It is an assumption of the study that the participants' responses were honest and representing their true opinions.

3.   Findings

3.1 Perceptions of the Quality of Class Delivery

3.1.1 Enjoyable aspects.

Participants were asked about the elements of the Mindfulness sessions that they may have found enjoyable and which features may have been considered to be less enjoyable. Over half of the group of participants stated they were satisfied with the program. Five out of nine participants indicated there were no elements of the session that they did not enjoy.

The two predominant aspects of the session that participants stated they enjoyed most were (a) the nature of the breathing exercises, and (b) the relaxed state that they found themselves in afterwards, with typical responses including:

I thought that mindfulness was a great idea, as it made[me] feel more relaxed. (I liked every part of it). (Participant 1)

I liked it when we were able to relax by concentrating on our breathing. (Participant 3)

I think that today's session helped me calm down more and helped me enjoy the time. I liked how everything was silent and it helped me concentrated. (Participant 8)

[I liked] that we got to take time to breathe which was the part that I started to get more relaxed and peaceful. (Participant 9)

The participants reported feeling a sense of relaxation focus and peace, similar to the elicitation of the body's Relaxation Response as defined by Benson (1975). Slow, rhythmic breathing and focusing on the present moment, concentrating the mind on the body, a sound, or a repeated word, allowed the participants to relax.

The participants also found the sound effects of the program to be appealing. Two participants describing how they "liked the bell sound", which was used to conclude the sessions. For example, illustrated when Participant 4 said, "The parts that were interesting is when the bell rang". The bell sound chimed for around five seconds and participants could open their eyes once they could no longer hear the sound. It is presumed that the participants enjoyed this aspect as it was a slow and gentle way to bring them out of this relaxed state, rather than abruptly ending the session.

3.1.2 Aspects of the session considered as being less enjoyable.

Four out of nine participants cited elements of Mindfulness that they did not enjoy. These characteristics included:
- Experiencing no physical change in feelings of relaxation after the session compared to before the session;
- The physical requirements for taking part, such as the continuous shutting of eyes and sitting on the ground for the duration of the whole session;
- The timing allocated for each activity in the session;
- The session was considered to be too short.

3.1.3 Perceived impact of the session on subjective mood.

Following participation in Mindfulness, the main feelings experienced after the class compared with beforehand tended to represent feelings of greater relaxation. One participant stated that they felt "more focused" and another felt "happier" after participating in the Mindfulness session.

Of the nine participants taking part in the session, six reported experiencing a positive change in how they were feeling after the session compared with beforehand, including feeling calmer. Typical responses to illustrate this phenomenon included:

At the begining [sic] of the session I felt very calm and a little stressed, but now I feel more relaxed. (Participant 1)

Before the session I was feeling a bit relaxed and calm but after the session I felt way calmer and more focused. (Participant 2)

I felt, at the start, very excited and happy, and now, I feal [sic] very relaxed. (Participant 4)

Before the session I felt normal but after I felt more calm. (Participant 5)

I felt okay. I was happy, but afterwards I felt a lot more clam [sic] than I did before. (Participant 9)

Experiencing a sense of calm could allude to feelings of transcendence reported in previous studies as able to be experienced during Mindfulness (Kabat–Zinn, 2003; Lazaridou & Pentaris, 2016). The major emphasis in Mindfulness of breathing and focusing on the moment could explain this phenomenon (Kabat–Zinn, 2003; Benson, 1974).

Two participants experienced no change in feelings or mood being experienced after the session compared with before, and one claimed to feel no different. It was noted in the observations that one of these participants was easily distracted, not putting in a 100% effort and was constantly attempting to make eye contact during the Mindfulness session with another participant from across the room. The reasoning behind not feeling a change before and after the session could be due to a lack of full participation or concentration.

3.1.4 Perceived impact of the mindfulness session on swim training performance.

Participants were asked about their perceptions of any effects of the Mindfulness class on their subsequent performance in swimming training conducted afterwards. Five participants believed Mindfulness did have a positive impact on their swimming performance during their training sessions. However, four participants believed it had no effect. Those that did believe the Mindfulness session had a positive impact on their performance reported reasons such as their heightened ability to concentrate, their relaxed state, and their awareness of their body, for example:

It helped me concentrate more. (Participant 3)

I feel relaxed and focest [sic] in my training session. (Participant 7)

Yes. I improved my strokes in Freestyle, Backstroke and Breaststroke, and I was more focused on the position of my body when doing the strokes. (Participant 9)

3.1.5 'Take away' individual living skills acquired from Mindfulness classes.

Five participants believed they gained practical skills from participating in the Mindfulness program. This included improved ability for utilizing meditative skills in different situations:

When I'm nervous that thinking about something else gets my mind off swimming or the thing I'm nervous about. (Participant 1)

I have learned that a way to calm down and relax is to sit down and focus on your breathing. (Participant 3)

It has torght [sic] me to meditate and to find another place and relax. (Participant 7)

Slow, deep breathing and when I'm sad I can always come back to the Wishing Tree and make a wish. (Participant 9)

These participants reported that these new skills could be utilized in their daily life. For example, participants stated they learned to focus on breathing in order to relax or calm a nervous feeling before swimming. Three participants reported learning meditative skills such as breathing exercises. Unfortunately, five participants did not report learning any new skills during the Mindfulness program.

3.1.6 Recommendation of the mindfulness program to others.

Eight out of nine participants indicated that following their experience in this program, they would recommend Mindfulness to a friend. Asking this question helps to gauge customer satisfaction, and indicates a reasonably high level of acceptability of Mindfulness among the participants. Of those eight participants who would recommend Mindfulness to a friend, the main theme to emerge from the data as to why they would do so was due to the relaxing effect able to be felt from the session. Illustrating this point, Participant 8 said they would recommend it:

Because some of my friends get really stressed out from school and it will help them calm down. (Participant 8)

Participant 4 explained how she also felt it would help calm her friend's nerves; "My friend gets very nervous and it would take her mind of what she is nervous about and make her relaxed." Children often lead busy lifestyles with numerous extra–curricular activities following a fast–paced school day (Hansen, Larson, & Dworkin, 2003; LaRocca, 2018; Wheeler & Green ,2018). The students may have felt Mindfulness would be of benefit in helping their friends relax.

The only participant who was unsure of whether or not they would recommend Mindfulness to others stated:

Maybe because some of them would just make fun of everything and some wouldn't. (Participant 5)

It could be assumed that Participant 5 felt it was inappropriate to recommend Mindfulness due to a heightened consciousness of the potential opinions of his peers. At the adolescent stage of development, students become more peer–aware and want to 'fit in' (Albert, Chein, & Steinberg, 2013). It may also be perceived by adolescents as 'cool' to appear 'uninvolved' or make fun of mandatory activities, possibly stemming from a fear of failure, stigma or lack of social acceptance. Perhaps Participant 5 may have wanted to distance themselves or was wary of the younger ages of children also taking part in the class, or thought if they became too enthusiastic or involved, they would be labelled as 'uncool' by their peers. Participant 5 was 13 years old and the eldest of the participants. His response indicates that older children participating in Mindfulness may not find the program or child Apps to be acceptable, or at worse, present a possibly stigmatized view of Mindfulness due to feeling uninterested or considering it as too childish for their age group. This may result in lack of participation or concentration in future sessions. Older students in the primary school setting may be 'forced' into Mindfulness classes that they do not truly enjoy, rendering the sessions ineffective. It should also be noted that this participant was one of two participants not totally engaged in the whole Mindfulness class by making eye contact with each other and not focusing during the session.

From the feedback we obtained, the current 10-12 years program in the Smiling Mind Mindfulness App could be considered as being less suitable for children nearing 13 years of age. Maturity levels of children within the 11-13-year-old age bracket will always differ. A one–size–fits–all approach will not always suit the needs of all children that fit within this age bracket. Participant 5 may have appreciated Smiling Mind's 13-15 years program more.

3.2 Feedback on the Practical Implementation of the Mindfulness Program

The process evaluation also gauged the participants' opinions on the practical implementation aspects of the program. When conducting a process evaluation, it is crucial to determine whether or not participants were comfortable participating in the program, both physically and mentally.

3.2.1 Level of comfort experienced during the session.

Six out of nine participants stated that they felt comfortable taking part in Mindfulness. The reasons provided included:

- Due to the relaxed state they found themselves in,
- The fact that they could focus on the present moment, and

● Able to rest.

However, one of the nine participants indicated experiencing discomfort during the sessions due to Mindfulness being a new skill which this participant had not partaken in before. They stated, "I felt a little uncomfortable because im [sic] not used to it" (Participant 2).

This response holds some indication that further practice of Mindfulness could help the participant "get used to" Mindfulness and in future feel more comfortable. For some, a feeling of discomfort is unavoidable when trying new activities and skills, so it can be assumed that whenever a new program is launched, a certain number of participants will feel discomfort because of the 'unknown' (Versfeld, 2018). This was not perceived as a negative opinion or a fault of the actual program itself. Some children will feel anxious or cautious when participating in new tasks, which can often lead to internal negative symptoms as well as physical symptoms of stress; the opposite of the feelings which should be elicited during Mindfulness practice (Versfeld ,2018). Explanation of the task at hand and the process can help sensitive or anxious children to be less cautious when entering a new program (Versfeld, 2018).

Another participant stated that the repetition of content contained in the App made them experience some discomfort. Each session starts with the same introduction, instructing participants to shut their eyes and to lie or sit on the floor, which takes up approximately 30 seconds of the beginning of the session. The actual content of each session is different, so it can be assumed that this discomfort stems from the repetition of the introductory instructions. In future programs, maybe this section of audio can be skipped for those that are familiar with these instructions.

3.2.2 Opinions on the location of the program.

Participants were asked for their opinions of the setting where the program was carried out. Just over half or five of participants suggested that improvements could be made to the location of the program. Two participants reported that the location was too noisy and distracting to be able to fully participate in Mindfulness. Another reported that the room that the program was held in was too small. One participant felt that the windows between the pool area and the program room hindered privacy and focus as "People outside can see what you are doing making it harder to focus" (Participant 9). Another participant found that a flickering light in this room was unsatisfactory.

Reasons given by the other four participants for being satisfied with the location of the program included that it was a convenient location, close to the pool deck, and that the audible water noises of the pool nearby were relaxing. From the opinions gathered, in future it may be more appropriate to have the program run in a room which is still in the aquatic center, but with curtains or a one–way window to aid privacy, better quality doors which block out sound, and perhaps checking and replacing any light globes to ensure no flickering to distract participants. Whilst it might be difficult to offer a custom–built space in all sport and recreation venues, general consideration of what creates a calm and relaxing space could be considered. Perhaps the room could be multi–functional and then adjusted slightly when Mindfulness practice is held, or teachers can create calm spaces within their classrooms.

Franco (2016) discussed elements to be considered when designing a yoga studio, which theoretically would require similar elements to a space for Mindfulness as it is a space for relaxation and calmness. Franco (2016) suggests that the room does not need to be silent, but ambient noise can be let in through windows leading onto a courtyard or garden which attracts birds or includes moving water. Franco also discusses utilizing natural lighting, which would eradicate the need to be constantly checking light bulbs for flickering.

3.2.3 Practicality of mindfulness sessions held before–swim training.

The participants were asked about their opinions on the suitability of this program being conducted as a before–swim training activity. There was a range of responses provided, ranging from it being a very suitable activity, to not suitable at all. Six out of nine participants deemed it as a suitable program to hold before a swimming training session because liked how they felt so relaxed, happy and focused after the session. One participant believed it had a positive effect on their body as, "I feel more ready [for swimming] because of my clam [sic] and pleased body" (Participant 4).

Two participants deemed Mindfulness as an unsuitable activity to complete before a swimming training session. One participant reported that because of the breathing exercises, they felt "breathless" and it was not desirable to feel this way before swim training. However, conversely, this participant also stated at the same time that they enjoyed coming to the session before swimming as they felt relaxed and enjoyed the breathing exercises.

The other participant said they did not always enjoy coming to the Mindfulness session before their swimming session because it made them feel fidgety and tired. A solution to this issue could be running the program at an earlier time, which would allow some participants time to ready themselves for their swim training session rather than moving straight from Mindfulness to swimming, or providing a longer break period during the transition from Mindfulness to swimming. The final participant was neutral in stating that they did not have a preference in practising Mindfulness before their swimming session or just attending their swimming training session alone.

3.2.4 Feedback on the App.

Participants reported on finding aspects of the App interesting. They liked the style of content and delivery of its instructions. The language was considered as easy to comprehend for children to follow and used engaging imagery. The sound effects and other imagery were perceived as desirable. The use of imagination and making wishes were the two elements that stood out to participants in illustrating this theme:

[I liked] Making wishes and having an imaginary world. (Participant 2)

[It was interesting] When we got to imagine different scenes. (Participant 3)

[It was interesting] when the man on the tape said to imagine things. (Participant 7)

[I liked] the 'wish granting bird'. (Participant 1)

[It was interesting] When we got to make a wish after sitting under The Wishing Tree. (Participant 9)

3.2.5 Practical program elements considered as being more difficult or challenging.

The main practical aspects of the program that participants reported as being difficult included:

- Being able to effectively focus
- Beginning a Mindfulness program for the first time
- Following instructions
- Maintaining concentration
- Keeping eyes closed
- Being able to focus on breathing without the aid of their hands being placed on their stomach as a tool to focus on breath control.

The most challenging elements of the program were explained by these three participants:

[It was difficult] keeping my eyes closed. (Participant 5)

[It was difficult] Consentrating [sic]. (Participant 6)

[It was difficult] Focusing on your breathing without your hands. (Participant 3)

In future, perhaps the instructor of the program could reassure participants more. For example, participants could be reassured prior to the session, that they may find focusing difficult when starting the program, but it will become easier with more practice. If they find a particular action or command difficult or uncomfortable, they could be guided to instead complete an alternative action, such as being permitted to open their eyes, place their hands on their stomach, or being allowed to lie down. Adjustments to the delivery of the program to allow for greater individual comfort should be made.

3.2.6 Opinions on the age–appropriateness of the program.

When asked if the program was run in a way that was appropriate for their age group, over half of participants deemed Mindfulness to be suitable for children. Children are those who attend primary school and are generally aged between 5 and 12 years of age. Some upper primary students may be 13 years of age or approaching adolescence. Seven out of nine participants believed Mindfulness was suitable because of its use of age appropriate and understandable language, as well as containing age–appropriate exercises. Three participants indicated that they felt the calming outcome of the program made it suitable for children. Another believed that it would help children in general to relax, but it did not personally help them.

However, perhaps reflective of being the older members of the group, at age 12 years, two participants reported that Mindfulness might not be deemed 'cool' enough by them, nor their friends, to warrant any future participation:

Some kids would find it suiting but some others might not scince [sic] they might think it is a waste of time. (Participant 5)

Well mabye [sic] because some just act cool infront [sic] of their friends and roll their eyes. Its [sic] just not very interesting to some. (Participant 6)

The negative responses of the older children suggesting that the program may be viewed as too childish; "It's just not interesting to some" (Participant 6), reveal how not all health and recreation programs naturally appeal to all children's tastes and preferences in similar ways. However, the findings suggest that Mindfulness had less appeal for the older participants, even if they do fit within the program's 10-12 age bracket. They had a heightened awareness of their peers around them, and believed the program wouldn't appeal to other children.

The current 10-12 years Smiling Mind program offering may need to be adjusted. Our findings tend to illustrate that a new App developed for 11-13-year-old primary children would be preferable. The current 10-12 year product could instead be pitched towards those aged 8-10 years, potentially increasing the level of acceptability and comfort experienced among participants.

Six participants agreed that they would download the Smiling Mind App in their own time on their own devices to continue independent Mindfulness practice at home. Reasons given for ongoing home use of the application were to de–stress, manage anger, achieve relaxation, calming effect, and to use the App to reflect on their feelings. Two of the nine participants were unsure whether or not they would use the App at home in future. One participant said this was because, "it only helps a little bit" (Participant 6). It is assumed that the participant is referring to "helping' them to relax or become mindful, and that they expected more help from the Mindfulness program in being able to achieve this. Paradoxically, further practice of Mindfulness could aid them in achieving these expectations.

3.2.7 Willingness to individually sustain ongoing Mindfulness practice.

Of the nine participants, seven reported a desire to continue on after the program with their own regular Mindfulness practice as a part of daily lifestyles. Two participants concluded they would not continue practising Mindfulness. One participant was ambivalent, stating that they "don't mind" whether or not they continue with Mindfulness practice.

A strong indicator of whether Mindfulness practice is acceptable to primary–age students is their desire to continue the practice after the completion of this program. While there were a variety of reasons given for wanting to continue, the large number of participants indicating that they would keenly continue Mindfulness practice. One participant stated that:

Meditating doesn't need to have an app to meditate you just have to sit down and meditate. (Participant 7).

Three participants stated that they would not continue to practise Mindfulness without Smiling Mind being available. Two were unsure, and one did not respond. It was not discovered whether they did not feel supported enough without the application being available, however it is assumed that these responses reflect that lack of interest in Mindfulness shown by the two older participants.

4. Discussion

Mindfulness was highly acceptable to the participants, but mainly to the younger children in the group, aged 8-10 years. All but two participants found Mindfulness to be acceptable. The two relatively older participants aged 11 and 12 years old held the more negative impressions. To best cater for older children or adolescents in the upper primary school, it is recommended an App suitable for 11-13-year-old children be offered. It is recommended that the current age groupings or content of the Smiling Mind Apps be adjusted. Our findings tend to illustrate that a new App developed for 11-13-year-old primary children would be preferable. The current 10-12 year product could instead be pitched towards those aged 8-10 years, potentially increasing the level of acceptability and comfort experienced among participants. However, with eight out of nine participants in this pilot study stating that they would recommend the Mindfulness sessions to a friend, it can be assumed that a reasonable spread of positive information could occur, potentially influencing greater acceptability.

Participants reported calmness and relaxation as being the most commonly reported feelings experienced from taking part in the Mindfulness session. They are also typical relaxation responses to slow and rhythmic breathing exercises and focused thought (Benson, 1975). These benefits would also be of immense value for children in the primary school setting (Mindfulness In Schools 2018b), as learning these skills would provide an avenue for stress management, skills in self–regulation of emotions, and an increased awareness of individual thoughts, reactions and behavior in the present moment (Kaunhoven & Dorjee, 2017; Mindfulness In Schools, 2018b; Weare, 2012). For example, if a child is faced with a stressful or negative situation, they can use the skills learned through Mindfulness to recognize the situation and react in a calm manner.

'Increased focus' was also a positive feature to emerge from the findings. Increased concentration and attention levels as a result of Mindfulness (Weare, 2012) can aid children in a number of aspects of their lives. Focusing on the present moment in the classroom context can lead to increased classroom productivity and learner engagement meaning teachers can spend more time on implementing learning experiences rather than attempting to refocus the class' attention or on behavior management.

Five participants in the pilot study or approximately half stated that they did notice a positive difference in their performance at swim training after the class. They noted positive changes in concentration and focus, and said they felt more relaxed. Through being more aware of their body, or having increased kinesthetic awareness, they felt capable of taking on coaching corrections and adapting their swimming style accordingly. Interestingly, Swimming Australia is now incorporating Mindfulness into the training of elite Olympic athletes, believing it to increase athlete's mental clarity, resilience and calmness in high–pressure competition situations (Berry, 2017).

An important notion to arise from the findings was the need for careful selection of the Smiling Mind App program's recommended age for the intended target group. Unfortunately, the older children taking part in this pilot study revealed that the 10-12 year program was not mature enough and less appealing to them. They concluded that some of their peers might "roll their eyes" or "make fun of it". To best cater for older children or adolescents in the upper primary school, the 13-15 years App may be considered as being more suitable. Teachers can test out which program is most appealing or permit selection by the students. There will always be a range of maturity levels compared with biological age (Hazen, Schlozman, & Beresin 2008; Whitbourne, 2012).

Burnett (2011) recommended that to successfully include and enable the maximum inherent worth of the activity to adolescents, the context and purpose of the Mindfulness practice must be made clear. This can be done by outlining its functional, therapeutic and spiritual benefits that, when conveyed to teenagers, could be appealing to them. For example, Smiling Mind does highlight a range of wellbeing benefits for participants (Smiling Mind, 2018b). Unfortunately, due to our researcher role, we felt limited in our own study to remain as passive as possible, refraining from 'pitching' or articulating the program's potential benefits, as we wanted to allow participants to build their own opinions and speak out for themselves. A previous study reporting on a school–based Mindfulness program targeting adolescent depression, anxiety and eating disorders (Johnson, Burke, Brinkman, & Wade 2016), reported a high level of acceptability among its adolescent participants. Its authors concluded that when a Mindfulness program is properly targeted towards the adolescents' age bracket, they are more responsive to the program. Their study targeted 11-18-year-old individuals over nine lessons.

The younger children aged 8-10 years old participating in our pilot study appreciated the App content more than children aged towards 12 years old. The relative negative feedback we received from the older children is at odds with reviews of the Smiling Mind App conducted by (adult–aged) psychology professionals at Matte (2019), and Mani, Kavanagh, Hides and Stoyanov (2015). To achieve maximum 'customer satisfaction' amongst older primary–aged school children, Apps will need to be selected which lead to maximum appreciation and thus the greatest loyalty to the program (Hunter, 2018). The content of the App has to contain the right appeal and emotional connection with maturing participants. For instance, Matte (2019) describes how with Smiling Mind, "Tweens and teens will be engaged by things like music and food, as well as real–life situations most kids can relate to". However, she does not specify or delineate which App's age–grouping to select and simply says the product is suitable for "ages 5+". Like for the older student in our study for which the incorrectly targeted App didn't inspire or delight, participants or customers will usually leave or rate poorly a program that does not hold inherent benefits and appeal. Under the customer satisfaction theory of W. Edwards Dening, customer satisfaction is better than dissatisfaction, but it is still not enough. Providers have to hit the mark and exceed or delight customer expectations, or in this case the aspirations of students (Hunter, 2013).

5. Conclusion

The findings suggest that younger primary students more readily react to Mindfulness in a positive manner due to its perceived enjoyment, impact on calmness, relaxation and focus. However, older children in the primary school may not be as receptive if the App that has been chosen has not been tested and does not suit their maturity level. We therefore recommend careful selection of the age grouping of Apps used for Mindfulness classes.

The age bracket currently applied to the Smiling Mind's 10-12-year-old program could be re–adjusted downwards to 8-10 years, as the pilot showed it suited a slightly younger target audience. Having an App available with more mature or relatable content may suit children aged 11-13 years.

Mandatory implementation or roll–out of one single Mindfulness App age–grouping across the whole school may not be effective or acceptable to the majority of participants and should not be applied until further feasibility studies are carried out. Further research is warranted to evaluate the utilization and effects of Mindfulness within school, classroom, community and home settings. Efforts need to be specifically directed at evaluating the efficacy of programs, Apps, and towards understanding how children perceive mindfulness experiences. Thus, a greater understanding of, and in being able to deliver, to the needs of various socio–economic, age groupings and maturity levels of children should enhance future customer satisfaction and appreciation of Mindfulness. Further assessments of Mindfulness may also take place to evaluate its efficacy in assisting child athletes cope with various sports competition and other performance situations.

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