

# IMPACT EVALUATION

## **Pause, Breathe, Smile school-based mindfulness programme: professional development for Canterbury teachers and classroom implementation**

Report prepared by the Mindfulness Education Group

---

### **Executive Summary**

*Pause, Breathe, Smile* (PBS) is New Zealand's only locally developed and researched school-based mindfulness programme. It aligns with the New Zealand Education Curriculum and incorporates Te Whare Tapa Whā as a key element of the programme. It was designed and developed by the Mental Health Foundation of New Zealand (MHF) and is operationally delivered by the Mindfulness Education Group (MEG). MEG was established with the MHF's support to further the roll-out of PBS within New Zealand school communities.

In 2017, the Mental Health Foundation received a grant from the Rata Foundation to further the reach of this valuable and unique programme within Canterbury schools.

#### **Rata Foundation funding enabled the Mental Health Foundation to contract the Mindfulness Education Group to provide:**

- 20 scholarships for Canterbury based educators to complete the PBS Professional Development pathway
- This evaluation report on the impacts of those educators implementing PBS in the classroom
- 25 additional personal wellbeing scholarships to teachers within Canterbury to participate in MEG's 'Breathe' online mindfulness only, which is not the subject of this report.

#### **This report evaluates the impact of the Rata Foundation funding in three areas**

1. The wellbeing impact for children and young people resulting from PBS being implemented in classrooms by the newly trained educators
2. The personal wellbeing impact for the educators who participated in PBS training
3. How well the intended outcomes of PBS were met.

#### **Key findings of this report – wellbeing impacts for children and young people**

The evaluation presented within this report reinforces previously published research of PBS.<sup>1,2,3</sup> Four main themes emerged in this evaluation from analysis of PBS delivery in Canterbury classrooms:

- I. Increased calm
- II. Improvements in empathy, kindness and respect
- III. Enhanced emotion regulation, resilience and self-regulation

#### IV. Greater engagement in learning with improved focused and attention

In addition, benefits were observed for students at home, during play, and in class time outside of the eight one-hour sessions when PBS was formally implemented.

#### **Key findings of this report – wellbeing impacts for teachers**

All but one Teacher experienced a meaningful improvement in personal wellbeing following completion of the 'Breathe' online mindfulness course. As a result of implementing PBS in the classroom, a range of personal and professional benefits were also reported. These included feeling calmer, increased self-awareness, feeling more engaged with the class and improvements in collaborative teaching.

This report outlines these key findings in detail and recommends next steps for rolling out PBS in the Canterbury region. The MHF and MEG thanks the Rata Foundation for the generosity that has enabled the implementation of this project. As this report details, the impact on children, young people, and their teachers in Canterbury has had substantial positive impact, thus contributing to the MHF's vision of 'creating a society where all people flourish.'

## Contents

<b>Executive Summary.....</b>	<b>1</b>
<b>1. The Need – boosting wellbeing and reducing mental distress for children and young people.....</b>	<b>4</b>
1.2 A Special Focus on Post-Earthquake Canterbury.....	4
<b>2. Evidence shows PBS boosts wellbeing .....</b>	<b>5</b>
<b>3. Professional development for educators in PBS.....</b>	<b>6</b>
3.1 Rata Foundation professional development scholarship recipients .....	6
<b>4. The wellbeing impact for children and young people.....</b>	<b>7</b>
4.1 Method .....	7
4.2 Data Analysis .....	7
4.3 Themes identified pre-programme implementation.....	7
4.4 Themes identified post-programme implementation .....	8
I. Increased calm .....	8
II. Improvements in empathy, kindness and respect.....	9
III. Enhanced emotion regulation, resilience and self-regulation.....	9
IV. Greater engagement in learning with improved focus and attention.....	10
4.5 Benefits moving beyond the classroom.....	10
4.6 Benefits for children identified as having high needs.....	11
<b>5. Wellbeing impact for teachers .....</b>	<b>11</b>
5.1 Evaluation of teacher’s participation in the ‘Breathe’ online mindfulness course.....	11
5.1.1 Method .....	11
5.1.2 Results .....	11
5.2 Evaluation of teacher’s experiences of implementing PBS in the classroom .....	12
5.2.1 Method .....	12
5.2.2 Results.....	12
<b>6. Teacher assessment of programme content, resources and implementation.....</b>	<b>13</b>
6.1 Strengths and weaknesses of programme content and resources .....	13
6.2 Assessment of the effect of how the programme is implemented and by whom .....	13
<b>7. Meeting the Intended Outcomes of PBS in the Classroom .....</b>	<b>14</b>
7.1 Method .....	14
7.2 Results.....	14
<b>Conclusion and Next Steps .....</b>	<b>18</b>

## 1. The Need – boosting wellbeing and reducing mental distress for children and young people

Latest data shows New Zealand ranking near the bottom (34<sup>th</sup> out of 41 countries) regarding overall childhood wellbeing and our adolescent suicide rate is the highest among developed nations.<sup>4</sup>

Antidepressant medication being prescribed to children under 13 years in New Zealand, has increased 79.4 per cent since 2006. This increase may in part be due to population growth and greater awareness and acceptance of mental health issues, leading to increased willingness to seek help.<sup>5</sup> However, these figures follow worldwide trends as well as anecdotal feedback received from schools who note that prevalence rates of anxiety and behavioural problems encountered daily have been increasing over the past decade.

Recent analysis has shown that increased smartphone and tablet usage corresponds with increased feelings of loneliness, decreasing levels of sleep and decreased social interactions among young people, leading some experts to comment that we are on the brink of a major mental health crisis among children and young people.<sup>6</sup>

There is increasing worldwide recognition that a focus on the promotion of mental healthiness and wellbeing is important in its own right – a sentiment perhaps best captured in the World Health Organisation’s definition of health as “...a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”<sup>7</sup>

Evidence shows significant links between high levels of wellbeing and reductions in mortality<sup>8</sup> as well as decreases in a wide range of morbidity factors.<sup>9</sup> Although wellbeing is a relatively broad concept, with regard to psychological health it is generally agreed that wellbeing involves two dimensions described in a straight forward manner as 1) feeling good and 2) functioning well.<sup>10</sup> More specifically, feeling good denotes a state of emotional health and happiness, and functioning well is used to describe the integration of attributes important to psychological health including:

- Autonomy
- Personal growth
- Self-acceptance
- Purpose in life
- Environmental mastery
- Positive relations with others

Summarising this, Huppert and So have described a state of optimal wellbeing, or flourishing, as “the experience of life going well ... a combination of feeling good and functioning effectively”<sup>11</sup>

In Aotearoa-New Zealand it is important to highlight and draw upon indigenous concepts of health, which include the central importance of focusing on spiritual wellbeing alongside mental, physical and social dimensions. Failure to do so, risks alienating indigenous world views and may increase rather than reduce inequalities in health.

### 1.2 A Special Focus on Post-Earthquake Canterbury

In Canterbury, scores on the Behaviour Problem Index collected from groups of children born 2001-2002 and those born 2007-2009 have allowed researchers to compare results between a pre-earthquake and a post-earthquake group of children. Results found significantly higher rates of behaviour problems and post-traumatic stress among members of the post-earthquake group of

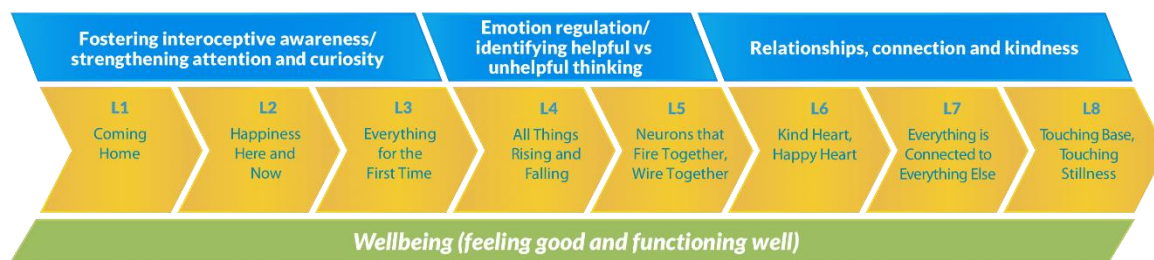
children.<sup>12</sup> Along with these findings, the researchers report that the rates of teacher reported behaviour problems have more than doubled since the Christchurch earthquakes.<sup>13</sup> Recent reports suggest that children who started school in the years following the earthquakes were five times more likely to exhibit symptoms of Post-Traumatic Stress Disorder than other New Zealand children nationally, and that as many as four out of five children who form the post-EQ group exhibit symptoms of Post-Traumatic Stress Disorder.<sup>14</sup>

## 2. Evidence shows PBS boosts wellbeing

To date most research investigating the effects of mindfulness, have focused on the potential for reducing multiple forms of psychological distress.<sup>15</sup> The studies of PBS are among the few that have focused on investigating boosts to positive states of wellbeing to show that mindfulness has the potential to go beyond mitigating mental distress, thus helping our children to thrive and not just survive.

Studies of PBS have showed statistically significant increases in wellbeing – related to statistically significant increases in mindfulness – following participation in the programme, with the most recently published study finding evidence of sustainability of these results 12 weeks after completion of the programme.<sup>16</sup>

Thus, PBS not only addresses many of the key problems faced by our children and young people today, it also provides a coherent pathway to skill development that will support children to flourish now and in the future.



**Figure 1. PBS provides a coherent pathway of skills development that supports children to flourish now and in the future.**

Fostering awareness in the body establishes the foundation for effective attention regulation and emotion regulation skills. This in turn lays the foundation for understanding how to settle scattered thoughts and discern the difference between helpful and unhelpful thinking. In the final three lessons, the focus shifts from self-development to interpersonal development and understanding how all things are interconnected. Research shows that both wellbeing and mindfulness significantly increases as a result of these eight PBS lessons.

### 3. Professional development for educators in PBS

The Mindfulness Education Group's professional development pathway for education and health professionals to implement PBS with children and young people is delivered in three parts. This ensures a standard of training that is high-quality and consistent, while being achievable in terms of cost and time commitment.

#### Part 1. Breathe: Online Mindfulness Course

This expertly taught eight-session online course (50-75 minutes per session), is self-paced and available 24/7. Additional instruction and practice videos are included. Designed to help reduce participant stress and burn-out and boost overall wellbeing.

This prerequisite training provides skilful and practical instruction on the key concepts of mindfulness before participants implement the PBS programme with children and young people.

#### Part 2. Training Workshop

Participants receive a copy of the PBS Educator's handbook of lesson plans and are taken through the programme by expert trainers in mindfulness.

This thorough and well-structured resource includes each lesson's purpose, learning intentions, alignment to the New Zealand Curriculum, overview of the science and evidence behind each topic, sample scripts and activities.

#### Part 3. Accompanying Tutorial Videos

Following the workshop, a suite of training videos completes the training pathway:

- The PBS tutorial videos, providing practical instruction for implementing the programme
- Additional video content explaining the science of wellbeing and the research underpinning PBS

#### 3.1 Rata Foundation professional development scholarship recipients

Thanks to the generosity of the Rata Foundation, scholarships were awarded to 20 educators in Canterbury and all 20 of these recipients have been trained in the three-part pathway outlined above to ensure their readiness to deliver PBS in their respective schools.

The distribution of the scholarships:

- Burnham School x 1
- Burnside High School x 1
- Christchurch Rudolf Steiner School x 1
- Haeata Community Campus x 2
- Hurunui College x 1
- Linwood North School x 4
- Avonside Girl's High School x 3
- Rolleston College x 1
- Sumner School x 2
- West Melton School x 2
- Amberly School x 1
- Independent facilitator (working in Tai Tapu School) x 1



Figure 2. Rata Foundation funded scholarship recipients

Most of these schools are centred in earthquake affected areas of Christchurch, with two from earthquake affected areas of North Canterbury.

## 4. The wellbeing impact for children and young people

### 4.1 Method

Effectiveness of PBS within school classrooms is measured using a teacher observation journal containing five prompts:

1. The children's engagement with the mindfulness activities presented
2. Your own personal engagement with the mindfulness activities presented
3. The children's social interactions
4. Classroom behaviour including attention/focus, participation and engagement in class
5. Anything else that you wish to comment on

The observation journal was completed by the trained PBS Educator, who was not always the classroom teacher. One entry was made before the implementation of PBS to establish a baseline, followed by fortnightly entries, throughout delivery of the eight-week PBS programme. This method provides rich qualitative data from which common themes can emerge. This observation journal replicates the qualitative methodology employed by Rix and Bernay during the initial PBS pilot programme in 2014.<sup>17</sup>

### 4.2 Data Analysis

Based on previous research<sup>18</sup>, a thematic analysis was completed to identify the most common themes to report. Following procedures stipulated by Braun and Clarke 2006, initial patterns were noted followed by a second review to identify broader themes.<sup>19</sup> The identified themes were then cross-checked and chosen following a discussion among the authors of this report.

The themes identified prior to programme implementation, provided a working baseline to compare against when identifying post-programme implementation themes. For example, a theme of 'disengagement with learning' was identified prior to programme implementation, whereas a theme of 'engagement in learning and improved focus and attention' was observed post-programme implementation.

### 4.3 Themes identified pre-programme implementation

Themes observed before PBS programme implementation identified several challenges the schools were facing. Respondent's provided feedback that learner's displayed:

- Disengagement with learning
- A lack of goal setting and problem-solving skills
- Disinterest in self and others
- A lack of focus and were easily distracted
- Disruptive, challenging behaviours
- A lack of respect for others and for school property



- Low levels of empathy
- Low levels of trust and poor social interactions
- Limited emotion regulation and self-regulation
- Elevated levels of anxiety

This feedback highlights key pre-programme themes of:

- **Poor executive functioning** e.g. a lack of focus, goal setting and problem-solving skills
- **Low social and emotional wellbeing** e.g. disinterest in self and others; low levels of empathy and trust; poor social interactions; lack of respect for others; limited levels of emotion-regulation
- **Behavioural problems** e.g. disruptive, challenging behaviours; lack of respect for others and school property
- **Anxiety** e.g. elevated levels of anxiety.

These four themes provided a useful baseline to compare against when analysing the main themes emerging post-programme implementation.

#### 4.4 Themes identified post-programme implementation

Four main themes emerged:

- I. Increased calm
- II. Improvements in empathy, kindness and respect
- III. Enhanced emotion regulation, resilience and self-regulation
- IV. Greater engagement in learning with improved focus and attention

In addition, benefits were observed for students beyond the 8-week PBS programme in the classroom; and for teachers both professionally and personally.

##### I. Increased calm

As expected, noticeable improvements in calm emerged as a key theme observed by most respondents. A selection of quotes is provided here, but in general, increased calm was identified as an overarching theme, and features in many of the respondent's comments in subsequent themes outlined below.

Teachers reported that their classes were settled and relaxed, and this led to improvements in learner's abilities to interact more calmly and positively with each other. The increased calmness observed, correlated with feedback that learners were feeling less stressed and anxious following programme implementation.

*"We are happy with the calmness in the class and feel that our students are becoming more thoughtful about their learning."*

- Teacher's observations



## II. Improvements in empathy, kindness and respect

Overall a strong theme of greater classroom empathy emerged. Teachers reported that through PBS their classes were settled and relaxed, and this led to improvements in learner's ability to interact more calmly and positively with each other. This included increased kindness, more inclusive play and more effective pack-up, and greater respect towards each other and school property.

Students particularly enjoyed learning and sharing about kindness. They were able to grasp clearly the idea that being kind to others increased their abilities to experience kindness to a greater degree. Observations for lesson six: "Kind Heart, Happy Heart" included student expressions of joy, wonder, and awe. Many students said that it made them feel amazing and warm and so happy – they loved the idea of being able to spread the joy.

By the end of the eight lessons students were connecting well with each other, with greater confidence to share feelings, ideas and opinions, and to listen mindfully. There was an improvement in the ability of very different groups to work together effectively.

Teachers noted that by the conclusion of PBS, less restorative chats were needed following play and lunchtimes, with very few unfavourable interactions occurring. An example of greater classroom empathy was a new understanding among the learners of the issues that children with challenging behaviours are facing and knowing how to respond in a way that is helpful rather than unhelpful.

*"I really think that they seem to be interacting more positively with each other and adults around the school. They appear calmer and more easily engaged with what is happening around them. Of course, there is the odd flair up for some of the more challenging students – but it is easier to bring them back by doing mindful breathing with them".*

- Teacher's observation

## III. Enhanced emotion regulation, resilience and self-regulation

On the whole, after the PBS programme, students were less stressed and anxious. Teachers noted an enhanced ability for students to self-regulate; both emotionally and behaviourally. As learners became more relaxed and quiet they understood that they could stop themselves getting into heightened states of emotional distress by using mindful breathing.

Most teachers noted that students were engaged with learning about emotion regulation. They observed their students developing capacity to link their learning to real world situations, and learning about emotion regulation allowed many students to understand and experience real world benefits of mindfulness practice.

Teachers noted increasing levels of self-awareness and self-control. Students with anger or behavioural issues were more aware of the emotions they were feeling, and could employ PBS mindfulness strategies that enabled them to calm themselves more effectively and quickly.

Feedback the learners gave about the mindfulness practices was increasingly positive as the lessons progressed. Improvements in emotional literacy were observed as they became more confident and better able to elaborate on their feelings and the benefits they notice when being mindful.

*"The students really seemed to be understanding that by noticing what was happening in their bodies and feelings they could positively influence their experience by mindful breathing."*

*“The children can still be reactive with each other but now there is a structure for them to follow to calm themselves and understand that they have control of their emotions and feelings.”*

- Teacher's observations

#### **IV. Greater engagement in learning with improved focus and attention**

For most schools PBS resulted in students feeling more rested, aware of what is happening, working with more focus, increased engagement and keener interest in their learning. One teacher observed a positive movement in children's learning over several core areas.

PBS resulted in students became more attentive and curious, including students who were usually disengaged becoming increasingly interested. Those who could not keep still were engaging with activities easier by the end of the eight lessons.

On the whole, teachers expressed happiness that after PBS the classes were more settled, with improved listening to both the teacher and their peers. Activities and instructions were well received, and students engaged with activities more easily and readily.

A benefit for teachers was noticing that during the PBS lessons children became quieter, listened better and were more engaged. As the programme progressed, students improved in their ability to focus and freely share their experiences, ideas and thinking about lesson content, rather than just engaging in random chatter.

One teacher noted that where previously the students would call out over each other, now they would sit calmly talking to their teacher. Students started working better together, with less distracting and attention seeking behaviours by most children. Target children (with specific learning needs) showed improvement both in attitude and achievement.

*“The class are definitely more focussed and productive – kids listening to teaching and putting it into action.”*

*“The children's ability to focus on the learning curriculum was greatly enhanced by the skills learnt through PBS.”*

*“Academically students are engaged in their learning and stretching themselves by taking risks and learning from others.”*

- Teacher's observations

-

#### **4.5 Benefits moving beyond the classroom**

Overall, students saw the relevance of mindfulness to their lives outside of school. Many students continued with some elements of PBS in their own time and frequently reported how easy they found it to use mindfulness in their daily lives. Mindful breathing was the most regularly used strategy in and out of class, with students referring to PBS in daily school and home life interactions.

Examples of benefits that children and young people observed include:

- Calming busy minds and settling unhelpful thoughts
- Responding better to pain
- Coping with stress
- Calming test anxiety

- Helping to sleep
- Emotion regulation (self-calming) on the sports field, in the playground and at home – particularly in relation to siblings
- Increased feelings of happiness at home and with friends

*“The ruminating concept was powerful for some children who easily get themselves into a cycle of negative thinking. A parent texted me to tell me that they had been taught the concept by their 8-year-old that evening after the mindfulness session that day!”*

- Teacher’s observations

#### **4.6 Benefits for children identified as having high needs**

Prior to PBS programme implementation, one teacher specifically identified a small number of children with mental health and abuse issues. It was observed that these students regularly interrupt class and need to learn how to be more socially accepted. Development needs recognised for these children included the need for greater self-awareness, self-control and emotion regulation, as well strategies for and calming and relaxing.

In concluding her observation journal, this teacher noted that PBS had been of great benefit for these students. They now had very few upsets and outbursts, had shown substantial positive change and can use PBS strategies when they feel overwhelmed.

## **5. Wellbeing impact for teachers**

### **5.1 Evaluation of teacher’s participation in the ‘Breathe’ online mindfulness course**

#### **5.1.1 Method**

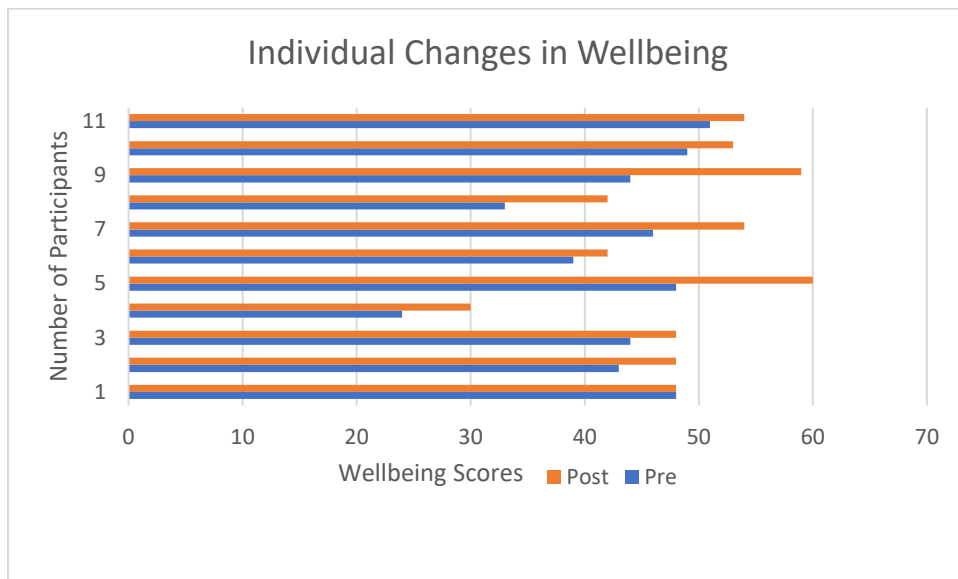
The Warwick Edinburgh Mental Wellbeing Scale (WEMWBS) is a tool for monitoring mental wellbeing in the general population and the evaluation of projects, programmes and policies that aim to improve mental wellbeing.<sup>20</sup>

MEG has integrated the WEMWBS into its website to capture pre- and post- mental wellbeing data from all participants in the Breathe Online Mindfulness course (part one of the PBS educator training pathway, outlined above).

12 of the 20 scholarship recipients have completed the Breathe Online Mindfulness Course with a further seven progressing through the course at the time of writing. One participant is yet to start. Of the 12 completed surveys, one was discounted due to failure to properly complete the final survey, leaving a total of 11 respondents results eligible for inclusion in this report.

#### **5.1.2 Results**

10 respondents had a meaningful increase in wellbeing. An increase of 3 or more points between the pre- and post- score is regarded as a ‘meaningful’ increase in individual wellbeing according to the WEMWBS user guide.<sup>21</sup> No change was observed for one respondent.



**Figure 3.** Individual changes in wellbeing as measured by the WEMWBS. Scores indicate a meaningful increase in overall wellbeing for 10 of 11 respondents.

## 5.2 Evaluation of teacher's experiences of implementing PBS in the classroom

### 5.2.1 Method

Themes from the teacher's observation journals were analysed to evaluate the teacher's experiences, both personally and professionally. One prompt in the observation journal asked about "your own personal engagement with the mindfulness activities presented." Responses to this prompt form the main analysis for this section of the report. In addition, relevant teacher's comments made throughout the journals, across the entire intervention period, were also included in this analysis.

### 5.2.2 Results

All but two respondents enjoyed teaching PBS and found it personally and professionally very useful and positive. Following on from delivering PBS lessons, teachers indicated an increase in personal self-awareness increased, by noting that they now had the skills to usefully implement mindfulness strategies and therefore to experience greater calm and wellbeing.

Teachers reported feeling calmer in their teaching because of implementing PBS. They felt more relaxed and able to employ PBS approaches both seriously and humorously during stressful work periods. This was a shift from pre-implementation with some teachers reporting feeling overwhelmed, rushed, distracted and anxious.

Teachers noticed an increased ability to engage with their students in ways that were more curious, caring and empathetic. They found the interest, excitement and positive response to PBS from the students personally inspiring.

Improvements in collaborative teaching were also noted: *"As a team we use the mindful concepts in our day to day collaborative interactions. We are very aware of each other's mental wellbeing and work hard to be mindful in our interactions with each other. As a team we pride ourselves on being sensitive and flexible, and I feel this is partly due to our acceptance of the principles of mindfulness."*

Teachers found many opportunities to reflect themes of PBS lessons back to the class during the week. Teachers enjoyed learning more about their students and this resulted in many interesting

discussions, for example: *“The opportunity to discuss science of interconnection of all life was powerful and inspiring”.*

Teachers reported rewarding and humbling engagement from their classes, which was professionally very satisfying, observing that: *“Some learners that we expected to struggle did very well”*; and *“The students tried really hard with this lesson. I noticed that there were children who really tried to have a go at shutting their eyes. This is very tricky for some of our students as they can be hypervigilant due to the ongoing effects of the earthquake and the challenging behaviour of students over the years.”*

## 6. Teacher assessment of programme content, resources and implementation

### 6.1 Strengths and weaknesses of programme content and resources

Most respondents found the resources provided to be helpful and valuable. Teachers commented that they enjoyed the range of activities on offer and found the sample scripts very useful. General appreciation and enjoyment in teaching the science underpinning PBS was often noted in the journals. The structure of the programme was considered excellent by most teachers.

It was clear that two respondents working within a high school setting with vertical form classes ranging from year 9-13 who do not normally participate in learning together found the resources, lessons and structure of PBS inadequate and too simple for this age range. This is not surprising as the programme has not been designed or intended to be delivered in this way. These PBS Educators are not the student’s regular teachers, which impacted on the ability to maintain daily practice and reinforcing of lesson content.

Balancing the observations of these comments was feedback from two teachers also working in high schools, but who implemented PBS in classrooms of the same year level. These teachers found the programme to be successful. A possible conclusion to draw from this feedback is that when PBS is delivered in high school settings it may be better for the teacher to focus on students of the same year level within the same class, rather than vertically stacked classes consisting of students of different ages. Further research and evaluation is needed to draw more robust conclusions.

### 6.2 Assessment of the effect of how the programme is implemented and by whom

It was observed in one journal that when PBS was implemented by someone other than the classroom teacher (and therefore they have not had the benefit of the PBS educator training), they can be less engaged with the programme. This negatively affected the implementation and reinforcement of mindfulness throughout the week in this example. However, in another case where the trained PBS Educator was not the classroom teacher, comments showed that the reverse was true. In this instance, the classroom teachers gained personal benefit from learning mindfulness alongside the children.

It was noted by more than one scholarship recipient that regular daily mindfulness practice in the classroom is needed to consolidate the lessons. Over time this resulted in mindfulness becoming a

normal and habitual response. The importance of frequent repetition to sufficiently learn this new life skill is already emphasised in the PBS Educator training.

Although we did not test specifically for the level of scholarship recipient buy-in to PBS and the level of personal mindfulness practice that they were engaging in as part of this evaluation, based on international best practice guidelines and our previous experience, we can assume that there is a correlation between the PBS educator's personal understanding and practice of mindfulness, and the success of the programme within classrooms.

## 7. Meeting the Intended Outcomes of PBS in the Classroom

### 7.1 Method

After implementing PBS, educators completed a survey to rate how well they thought the five intended outcomes of PBS had been met. A five-point Likert scale, ranging from (1) "intended outcome not met at all" to (5) "intended outcome very well met" was used.

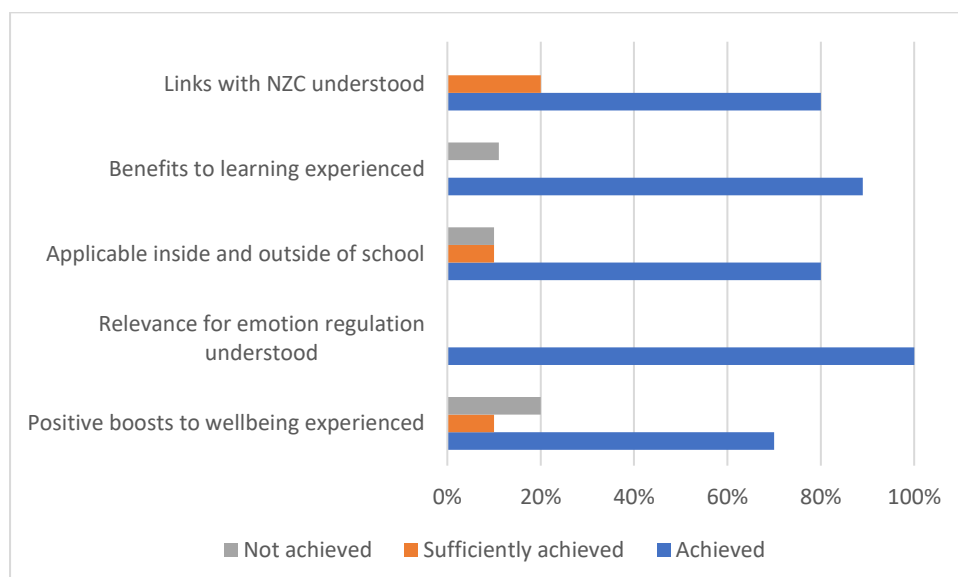
The top-two box method of scoring combines the top-two boxes of a Likert scale into one score to show the overall percentage of respondents who were in general agreement that with the statement asked. Likewise, the bottom-two boxes are combined to show the overall percentage of respondents who were in general disagreement with the statement.

Using the top-two box method, the five Likert scale items were summarised into three categories: Intended outcome 1) achieved; 2) sufficiently achieved; 3) not achieved.

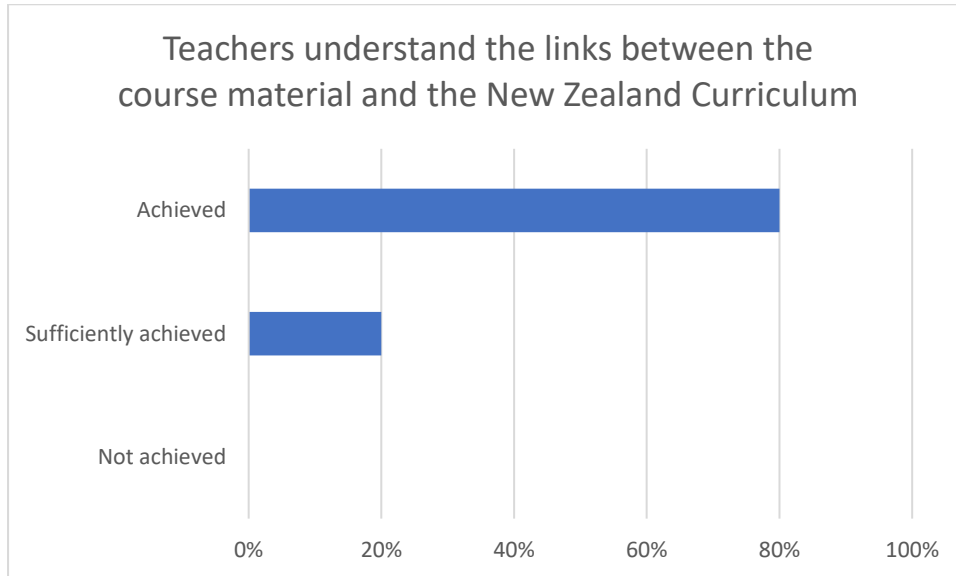
Respondents were also asked to elaborate on their responses to the Likert scale by providing comments in relation to each intended outcome. Two sample comments are given for each outcome.

### 7.2 Results

10 respondents ( $n=10$ ) completed the survey. Using the top-two box method of scoring to summarise the data, figure 4 shows that the intended outcomes were well achieved across the sample of respondents.



**Figure 4.** Summary of scores showing the comparison between respondents who felt the intended outcomes were achieved, those who felt they were sufficiently achieved, and those who felt they were not achieved.



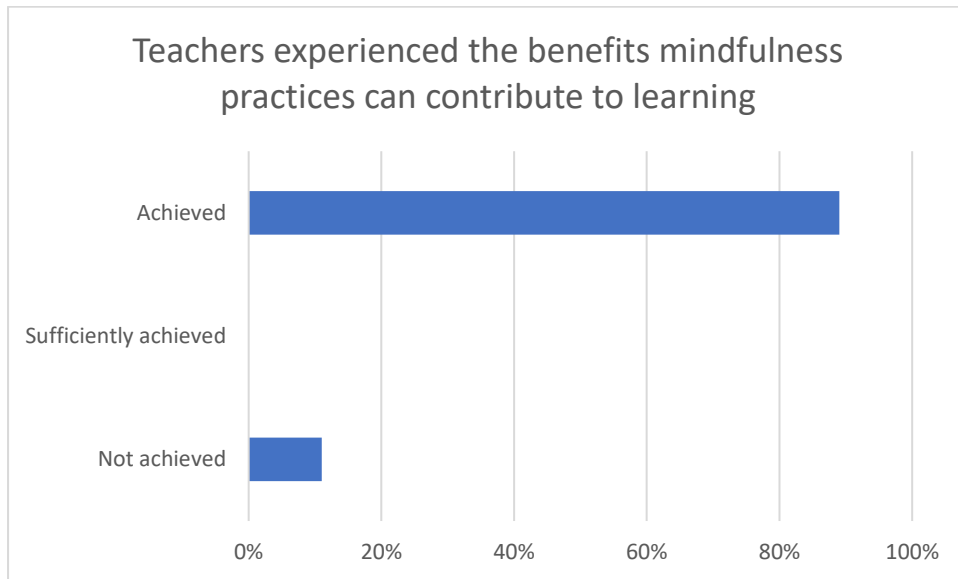
**Figure 5:** Percentage scores for how well intended outcome one was met

Sample comments:

*“Clear link to key competencies and vision of education but worry that the actual activities are not suitable for secondary students as they are, and more work is needed to ensure the activities are more engaging. The topics are OK, but more resources are necessary to meet the needs of individual students.”*

*“The connections to the NZC within the PBS Educator Handbook are straightforward and make it easier for connections to other learning areas. As hauora is a big focus at our College, PBS fits seamlessly into our Ako programme.”*



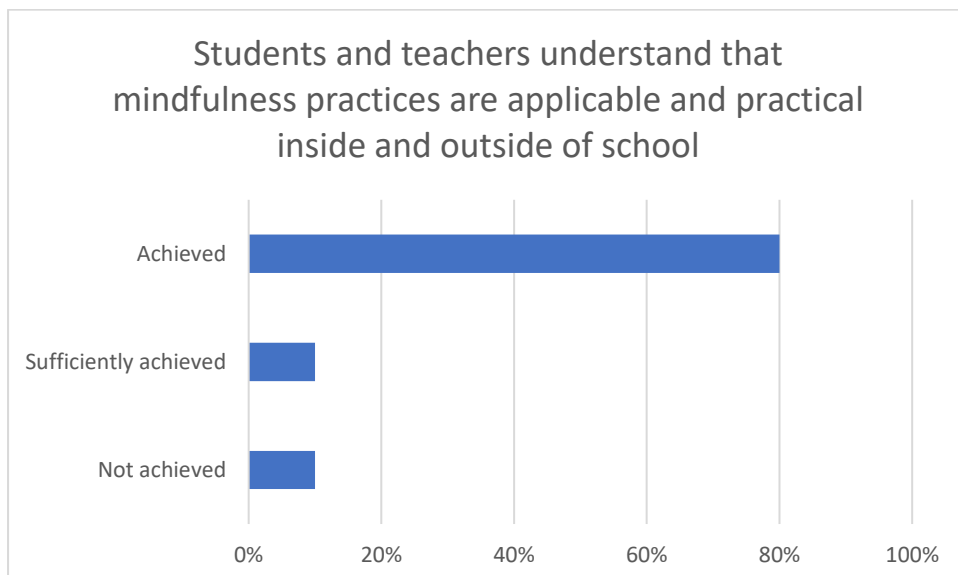


**Figure 6:** Percentage scores for how well intended outcome two was met

Sample comments:

*"We recognise that learning can only take place when the brain is calm, and we now understand when and how our learners are not calm. Teaching approaches adjusted to maximise learner's abilities to regulate their own emotions (working environment, reducing stress and panic, kindness, curiosity etc.)."*

*"It has been very helpful to find opportunities for using the mindful activities during the week, and it has definitely promoted a calmer and kinder environment".*

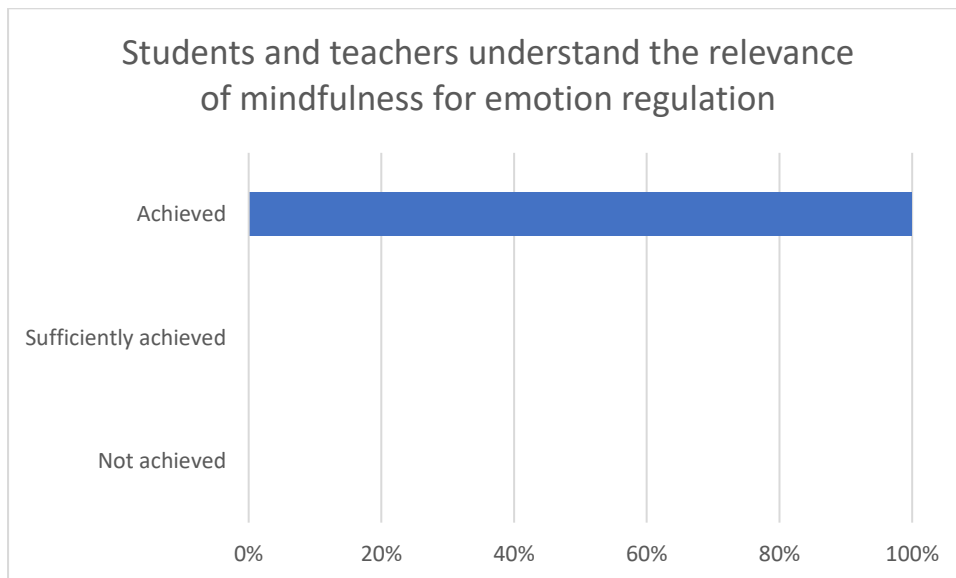


**Figure 7:** Percentage scores for how well intended outcome three was met

Sample comments:

*“Our students have given examples in their weekly diaries of how they are using the mindfulness practice at home, in sports, in stressful activities. They also speak very positively at home and we have parents commenting on the value of the programme.”*

*“They understood but couldn’t apply outside the room. Perhaps we needed to talk through actual practical ways of doing it in the ‘real world.’ E.g. when your boyfriend has upset you and is saying horrible things on Facebook, what would a mindfulness practice look like? How would you do it?”*

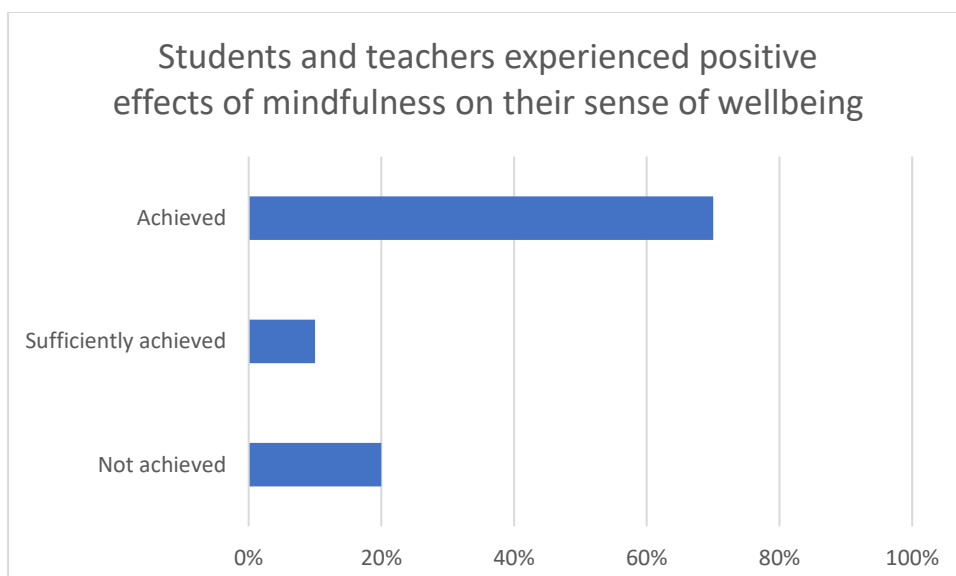


**Figure 8:** Percentage scores for how well intended outcome four was met

Sample comments:

*“Students and teachers noticed how they could change the way they were feeling during and after a PBS session.”*

*“The lesson ‘All Things Rising and Falling’ was the key lesson where students really connected with how they could have some control over managing their emotions.”*



**Figure 9:** Percentage scores for how well intended outcome five was met

Sample comments:

*“About 70% of the students reported that they felt a lot happier, peaceful, they were sleeping better, calmer and had an overall better sense of wellbeing.”*

*“Everyone experienced a sense of emotional calm and learnt strategies to support themselves and others when things are challenging.”*

## Conclusion and Next Steps

Overall PBS was viewed as very worthwhile, resulting in classrooms that are kinder, more connected and empathetic. Teachers noted a continued improvement of focus, attention and engagement in learning with calmer interactions. Students experienced improved self-awareness and emotion regulation.

After implementing PBS, the four pre-programme themes of poor executive functioning, low social and emotional wellbeing, behavioural problems and anxiety had all been positively addressed.

Except for two vertical form classes in a high school, PBS was very popular and enjoyable. It was implemented enthusiastically, with the programme benefitting almost everyone. Most students indicated enjoyment of PBS and are keen to participate and engage with it further.

Students and teachers particularly liked the scientific explanations around brain functions. Many schools reported that students enjoyed sharing their experiences and their learning around neuroscience with each other and at home.

Even though some learners found it difficult to be still, on the whole students liked the opportunity to be still and pause and breathe – most have not experienced this before and valued the process.

There were repeated observations that learners were amazed and astounded at the impact of mindfulness, fascinated with learning this new skill, and had personal inspiring ‘light-bulb’ moments. Teachers and students were grateful for the programme and the opportunity to learn these new skills, and most intend to continue with the practices in the interests of ongoing culture change.

*“The final weeks of term involved our whole school production, which was a busy and sometimes stressful time for the students and the teachers. We were able to use the language and practise of mindfulness regularly during this process to focus and calm the students. Throughout the process the learners were calm, compassionate to others and willing to take risks and have fun. They exceeded our expectations. Our PBS mindfulness training and approach helped towards this success.”*

*“All children had something to share for our final lesson. Across the class they covered almost all the content from our WALTs in their sharing. Their learning journals also show a good understanding of each week’s content. Some students display excellent understanding of the interconnected relationships explored in the programme.”*

- Teacher’s observations

The success of this initiative highlights the key role PBS can play in supporting the wellbeing of children, young people, and their teachers in earthquake affected areas of Canterbury. Moving forward, the MHF and MEG are committed to working together to build on this success and support more Canterbury schools to undertake PBS training. Our shared objectives include:

- Providing more scholarships for teachers in the Canterbury region to undertake PBS training
- Consolidating the relationship with the schools featured in this report to ensure continued success of PBS through the provision of continued professional learning and development
- Adopting a focus on North Canterbury schools to support their wellbeing following the most recent earthquakes
- Working with local researchers on an expanded research programme in the Canterbury region exploring the potential PBS has for boosting resilience and wellbeing in a post-natural disaster environment

Further funding will enable the MHF and MEG to meet these objectives in 2018. We look forward to discussing the possibility of continued Rata Foundation support in due course. Meanwhile, the MHF and MEG once again express our gratitude to the Rata Foundation for making this project and evaluation possible. This support is a tangible contribution to the MHF vision of creating a society where all people flourish.

## References

- <sup>1</sup> Rix G and Bernay R (2014) A study of the effects of mindfulness in five primary schools in New Zealand. *New Zealand Journal of Teachers' Work*, Volume 11, Issue 2, 201-220.
- <sup>2</sup> Bernay R, Esther Graham, Daniel A. Devcich, Grant Rix & Christine M. Rubie-Davies (2016): Pause, breathe, smile: a mixed-methods study of student wellbeing following participation in an eight-week, locally developed mindfulness program in three New Zealand schools, *Advances in School Mental Health Promotion*, DOI:10.1080/1754730X.2016.1154474.
- <sup>3</sup> Devcich D A, Rix G, Bernay R & Graham E (2017). Effectiveness of a mindfulness-based program on school children's self-reported well-being: A pilot study comparing effects with an emotional literacy program. *Journal of Applied School Psychology*, <http://dx.doi.org/10.1080/15377903.2017.1316333>
- <sup>4</sup> UNICEF (2017). Building the Future - Children and the Sustainable Development Goals in Rich Countries. UNICEF Office of Research – Innocenti. Florence, Italy.
- <sup>5</sup> Wiggins, Amy. Number of children and teens on anti-depressants doubles. *New Zealand Herald*. 7 June 2017: [http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=11870484](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11870484)
- <sup>6</sup> Twenge, Jean M. Have Smartphones Destroyed a Generation? *The Atlantic*. September 2017: <https://www.theatlantic.com/magazine/archive/2017/09/has-the-smartphone-destroyed-a-generation/534198/>
- <sup>7</sup> World Health Organisation website – definition of health Online FAQ 21 November 2017 <http://www.who.int/suggestions/faq/en/>
- <sup>8</sup> Chida, Y., & Steptoe, A. (2008). Positive psychological well-being and mortality: A quantitative review of prospective observational studies. *Psychosomatic Medicine*, 70, 741–756. <https://doi.org/10.1097/PSY.0b013e31818105ba>
- <sup>9</sup> Huppert, F. A. (2009). Psychological well-being: Evidence regarding its causes and consequences. *Applied Psychology: Health and Well-Being*, 1, 137–164. <https://doi.org/10.1111/j.1758-0854.2009.01008.x>
- <sup>10</sup> Huppert, F. A., & So, T. T. C. (2013). Flourishing across Europe: Application of a new conceptual framework for defining well-being. *Social Indicators Research*, 110, 837–861. <https://doi.org/10.1007/s11205-011-9966-7>
- <sup>11</sup> Ibid.
- <sup>12</sup> Liberty, K., Tarren-Sweeney, M., Macfarlane, S., Basu, A., & Reid, J. (2016). Behavior Problems and Post-traumatic Stress Symptoms in Children Beginning School: A Comparison of Pre- and Post-Earthquake Groups. *PLoS Currents*, 8, ecurrents.dis.2821c82fbc27d0c2aa9e00cff532b402. <http://doi.org/10.1371/currents.dis.2821c82fbc27d0c2aa9e00cff532b402>
- <sup>13</sup> Ibid.
- <sup>14</sup> Redmond, Adele. Four in five Christchurch primary schoolers exhibit PTSD symptoms, study finds. *Stuff.co.nz*. 29 August 2017: <http://www.stuff.co.nz/national/education/96211829/Four-in-five-Christchurch-primary-schoolers-exhibit-PTSD-symptoms-study-finds?cid=app-android>
- <sup>15</sup> Schonert-Reichl, K. A., Oberle, E., Lawlor, M. S., Abbott, D., Thomson, K., Oberlander, T. F., & Diamond, A. (2015). Enhancing cognitive and social-emotional development through a simple-to-administer mindfulness-based school program for elementary school children: A randomized controlled trial. *Developmental Psychology*, 51, 52–66. <https://doi.org/10.1037/a0038454>
- <sup>16</sup> Devcich, *op. cit.*
- <sup>17</sup> Rix, *op. cit.*
- <sup>18</sup> Rix, *op. cit.*
- <sup>19</sup> Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101. doi:10.1191/1478088706qp063oa
- <sup>20</sup> Warwick Medical School (University of Warwick). Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS). Retrieved 7 December 2017 from: <https://warwick.ac.uk/fac/med/research/platform/wemwbs/>
- <sup>21</sup> Putz R, O'Hara K, Taggart F and Stewart-Brown S (2012). Using WEMWBS to measure the impact of your work on mental wellbeing: A practise-based user guide. Retrieved 27 November 2017: [https://warwick.ac.uk/fac/med/research/platform/wemwbs/researchers/userguide/wemwbs\\_practice\\_based\\_user\\_guide.pdf](https://warwick.ac.uk/fac/med/research/platform/wemwbs/researchers/userguide/wemwbs_practice_based_user_guide.pdf)