# THE WELLBEING PROTOCOL - EFFECTS ON TEACHER STRESS, BURNOUT, AND WELLBEING DURING THE COVID-19 OUTBREAK

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# ABSTRACT

The COVID-19 pandemic had a negative impact on employee mental wellbeing giving rise to increased stress and burnout symptoms. Teachers were particularly impacted by mandatory self-isolation measures as they were required to change their mode of tuition and to create new materials, adapted for the online environment, in a very short amount of time. The present thesis explored the impact of a workplace wellness programme, The Wellbeing Protocol, delivered online during the first four months of the pandemic outbreak in New Zealand in 2020. The Wellbeing Protocol was a mindfulness-based programme underpinned by elements of cognitive behavioural and positive psychology strategies, delivered in 12 synchronous online sessions. Participants were 32 primary and secondary school teachers. Their self-reported levels of stress, burnout, mental wellbeing, and mindfulness were measured before the programme, immediately after, and three months later. Participant experience of the Wellbeing Protocol was also captured through qualitative methods such as open-ended survey questions and focus group interviews. Both quantitative and qualitative data indicated that The Wellbeing Protocol had a positive effect on participants. Results showed statistically significant reductions in stress and emotional exhaustion following the programme with large effect sizes. Similarly, mental wellbeing and mindfulness scores revealed statically significant improvements with large effect sizes. Non-statistically significant changes in depersonalization and personal accomplishment dimensions of burnout were present. The thematic analysis of the qualitative data indicated (1) self-awareness and non-reactivity may facilitate a reduction in stress levels; (2) the purposeful cultivation of self-care and positive emotions may be a precursor to enhanced wellbeing; and (3) positive relationships with others and evidence of effectiveness at work may mitigate burnout symptoms. Overall, findings suggested that the Wellbeing Protocol might be a promising option to improve employee wellbeing and reduce stress and burnout rates.

# DEDICATION

To those who feel stressed and burned out, know that there is an easier way.

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# CHAPTER ONE: INTRODUCTION AND OVERVIEW

Finding ways to reduce stress and improve wellbeing have arguably been lifelong human pursuits. The recent coronavirus outbreak has brought to the forefront the importance of mental wellbeing and stress reduction more acutely than in previous years. In the workplace, COVID-19 negatively impacted virtually all occupations and caused dramatic increases in stress and burnout symptoms, precipitating a stringent need to find ways to mitigate the overall state of employee mental distress (Giorgi et al., 2020; Lund et al., 2021). In several studies, wellness programmes that have involved resilience-building, stress reduction, and mindfulness have shown promising results in supporting employee wellbeing (Bartlett et al., 2019; Dane & Brummel, 2014; Gabriel & Aguinis, 2021; Karlin, 2018). The present thesis followed this line of enquiry and explored a workplace wellness programme called *The Wellbeing Protocol*.

The Wellbeing Protocol was an evidence-based workplace training programme that comprised mindfulness tools, and cognitive behavioural and positive psychology strategies. Its aim was to support employees to reduce stress and burnout. The programme was created by the researcher who was an experienced meditator and mindfulness practitioner. The creation of the Wellbeing Protocol was prompted by the researcher's own experience of burnout and depression in the period 2014-2017. The Wellbeing Protocol was initially a self-help endeavour, that subsequently evolved into a step-by-step programme employed to support professionals from different fields. In the current study, the target population were New Zealand teachers. They were recruited and partook in the programme during the first four months of the COVID-19 national outbreak in 2020. The researcher was the programme facilitator.

This chapter provides a general introduction to the thesis. It begins by presenting the research context in which the study took place, the gaps in the literature the study aimed to

address, and its research aims. Ethical implications are then discussed. The chapter ends with an outline of the thesis and a brief preview of what each chapter will cover.

### 1.1. Research Context

The World Health Organisation (WHO) declared COVID-19 a global pandemic on 11 March 2020 (World Health Organization, 2020). Since its onset in December 2019, COVID-19 has caused millions of deaths as well as significant mental distress (Tucker & Czapla, 2021). By 2021, reports across different countries and occupation sectors indicated a rise in stress, burnout symptoms, and poor mental health (Alexander et al., 2021; Giorgi et al., 2020; Tucker & Czapla, 2021). Research has indicated that almost half the workforce across the US, Australia, Asia, Europe, and Latin America were burned out (Alexander et al., 2021). A review of Australian and New Zealand workplaces revealed that in 2020, almost 1 in 10 employees had experienced burnout at least once in the past (Asana & Sapio Research, 2021).

Existing data on teacher mental wellbeing pre- and post-pandemic suggested that COVID-19 caused significant increases in burnout and mental distress. Pressley (2021) found increases in stress for US teachers and Sokal et al. (2020b) showed increases in stress and burnout dimensions of emotional exhaustion and cynicism in Canadian teachers. Ozamiz-Etxebarria et al. (2021) found increased rates of stress, anxiety, and depression for Spanish teachers in 2020. Similarly, Vargas Rubilar and Oros (2021) found high levels of stress, professional burnout and psychophysical indicators of discomfort for Argentinian teachers caused by COVID-related changes to modes of working.

The New Zealand Education Review Office (2021) surveyed half the country's principals and more than 400 teachers and found that the pandemic was placing an increasingly heavy toll on the teaching workforce. Student behaviour was reported to have worsened compared to pre-pandemic standards, the number of teachers dissatisfied with their job had increased, and so did the number of respondents who reported unmanageable

workloads and felt unsupported by their school leaders (Education Review Office, 2021). There is a significant body of literature suggesting that higher job demands, lower resources, and lower organisational support are precursors to burnout (Alarcon, 2011; Hobfoll, 2002; Maslach et al., 2001). In a meta-analysis on factors contributing to burnout, Alarcon (2011) found that job demands, organisational attitudes, and resources were significantly related to all three dimensions of burnout. High job demands had the strongest relation to exhaustion (Alarcon, 2011) in line with Hobfoll's (2002) conservation of resources (COR) theory. COR theory posits that high demands at work have a greater impact on exhaustion and stress than the experience of insufficient resources (Alarcon, 2011).

Although the Education Review Office (2021) did not capture measures of stress and burnout, a national survey conducted by The New Zealand Educational Institute and Deakin University (2020) showed that in 2019 teacher rates of burnout and stress were twice as high as those of the general population. We could infer therefore, based on the data previously presented, that these rates worsened post-pandemic. Media reports were consistent with this claim and depicted an over-worked, stressed, and burned-out New Zealand teaching workforce (n.a., 2021).

Calls to support teacher wellbeing appeared in both media and research (Education Review Office, 2021; n.a., 2021; Pressley, 2021; Sokal et al., 2020b). Giorgi et al. (2020) recommended the implementation of anti-contagion measures and of wellbeing and resilience training. Similarly, Gabriel and Aguinis (2021) suggested that wellness programmes, especially mindfulness or cognitive behavioural interventions, could promote reductions in burnout and stress symptoms. Current research findings on mindfulness-based training in the workplace suggested that such training could lead to improved productivity and reduced procrastination (Karlin, 2018), improved job performance and employee engagement (Dane & Brummel, 2014), reduced workplace incivility (Hülsheger et al., 2021), and enhanced

decision-making (Hafenbrack et al., 2014). In their respective reviews, Baicker et al. (2010) and Carolan et al. (2017) suggested that these promising findings should be further investigated and called for more research to be done in this space.

The current study aimed to fill this gap in the literature. Additionally, the present study was the first to our knowledge to measure the impact of a workplace wellness programme on New Zealand teachers employing a mixed-method design. Bernay (2014) conducted a hermeneutic phenomenological study of five New Zealand teachers who were introduced to mindfulness during their teacher education programme and who were monitored during their first year of teaching. Participants completed fortnightly journal entries for the duration of the study and were interviewed at three time points: after the first five journal entries, after the following five journal entries, and at the end of the first term of their second year of teaching. Results showed teachers' wellbeing and ability to focus were enhanced, their stress was reduced, and they were better able to respond rather than react emotionally to student needs (Bernay, 2014). Bernay's (2014) was the only study to explore mindfulness-based interventions for New Zealand teachers to date, that I was able to locate. Although the findings from Bernay's (2014) study were promising, the sample size comprised only 5 teachers and the study did not involve a more comprehensive programme that went beyond instruction in mindfulness practices.

There have also been very few studies that have investigated burnout and mental wellbeing among New Zealand (NZ) educators and none were very recent. Milfont et al. (2008) investigated the reliability of the Copenhagen Burnout Inventory among New Zealand secondary school teachers and found above average scores of burnout and a negative correlation with wellbeing measures. Whitehead et al. (2000) examined a sample of primary school teachers and principals in Auckland and discovered above average burnout scores compared to a normative sample of US teachers. Bianchi et al. (2016) surveyed a sample of

184 NZ school teachers and found that 8% of respondents had burnout symptoms at high frequency. These respondents were also identified as clinically depressed based on the Patient Health Questionnaire (Bianchi et al., 2016). In their study, Bianchi et al. (2016) aimed to demonstrate that burnout is a depressive symptom, rather than to investigate the state of the NZ teaching workforce. Thus, the latest studies that seek to understand the level of burnout in NZ educators were conducted over a decade ago. The current study hopes to fill this gap in literature though the discussion of baseline scores, which captured NZ primary and secondary school teachers' stress, burnout, mental wellbeing, and mindfulness in March 2020, at the onset of the COVID-19 pandemic.

The literature on teacher mental wellbeing during the coronavirus pandemic outbreak was limited at the date of publication of this study, undoubtedly due to the unprecedented nature of this event. There were nonetheless studies dedicated to US (Pressley, 2021), Canadian (Sokal et al., 2020b), Spanish (Ozamiz-Etxebarria et al., 2021), and Argentinian teachers (Vargas Rubilar & Oros, 2021). The current study contributed to this emerging body of research by adding data related to New Zealand educators.

The final point of differentiation from prior research related to the content of the wellness programme employed, The Wellbeing Protocol (WP), which had not been previously investigated. WP was a mindfulness-based programme delivered entirely online which made it highly versatile and easily adopted during national quarantine measures. WP was an evidence-based programme, whose features are described in detail in the following chapter.

The first COVID-19 case in New Zealand was reported in February 2020. Almost a month later, the government declared a State of National Emergency and a mandatory national lockdown (New Zealand Government, 2021). Schools were tasked to begin online instruction in the following two weeks. For many teachers this meant having to get

acquainted with online tools for teaching for the first time. In many instances, teachers were also required to create online teaching materials and to train their students on how to use the new digital tools. A lot of teachers were parents themselves which meant that at the same time they had to home-school their own children.

For the research team the national lockdown caused a narrowing in the scope of the study. In the initial stages, the study was designed to comprise both teachers and secondary school students, aged 16 and above. The aim was to observe changes in both populations and to measure the feasibility of the programme at a school level. Unfortunately, the abrupt pandemic onset affected the recruitment of students, resulting in the research team making the decision to eliminate this dimension of the study and focus entirely on teachers. Previously established relations with schools were put on hold and the research team had to find alternative means to recruit participants. Teachers were thus recruited through Facebook advertisements during the first two weeks of lockdown and the programme was delivered immediately after. Further the initial study design included a waitlist control group, which was made untenable due to the small sample size and the expressed wish of participants to be part of the programme immediately due to high levels of stress.

Data were collected before, after, and three months following completion of the programme. Quantitative data consisted of self-report measures of stress through The Perceived Stress Scale (S. Cohen, 1986), burnout through the Maslach Burnout Inventory - Educator Survey (Maslach & Jackson, 1981), mental wellbeing through the Warwick-Edinburgh Mental Wellbeing Scale (Stewart-Brown et al., 2009), and mindfulness through the Five-Facet Mindfulness Questionnaire (Baer et al., 2006, 2012). Qualitative data consisted of open-ended questions at all three time points (See Appendix 1) and focus group interviews following programme completion (See Appendix 2). Of the 56 teachers who expressed a desire to be part of the research, only 32 completed the self-reported surveys at

all time points. Therefore, it was only these data that were included in the present study. Of the 32 teachers, 14 participated in the focus group interviews.

The research questions guiding the study were:

1. Does the Wellbeing Protocol have an impact on stress, burnout, mental wellbeing, or mindfulness?

2. What are the underlying mechanisms by which the Wellbeing Protocol impacts (or not) the above aspects?

3. What is the subjective experience of participants in the Wellbeing Protocol?

### 1.2. Ethical Considerations

The study was approved by the University of Auckland Human Participants Ethics Committee. Ethical issues were considered at all stages of the research from planning, to conducting the research, and reporting of results. Drew et al. (2008) pointed out that the three primary responsibilities of researchers regarding participants were obtaining consent, protecting from harm, and ensuring privacy.

#### *Informed Consent*

Consent was obtained from all participants prior to intervention commencement. Participants responded to advertisements and agreed to partake in the intervention, to complete all questionnaires, and to respect the privacy of the other participants. They were sent the consent forms electronically. Each consent form was accompanied by an information sheet explaining the intervention, the research methods to be employed, any potential risks involved, the obligations of the research team, conflict of interest, and the proposed use of the research data (See Appendix 3). Participation was completely voluntary, with no form of compensation being offered. At the end of the intervention, participants were invited to attend one of four focus groups to discuss their experience of the programme. Participants were given the option to withdraw from the study at any time without giving any reasons.

### *Protecting from Harm*

The nature of the intervention and data collection methods (online questionnaires and focus groups) were not likely to cause any physical harm. The researcher was careful to ensure no psychological stress was caused to participants, endeavouring to plan and conduct the study with minimal possibility of harm to participants. The researcher provided all participants with phone numbers of free hotlines for depression, mental health support, and suicide prevention.

### *Privacy and Confidentiality*

Given the nature of the intervention, that is, a group programme, and of the data collection method, that is, focus groups, it was not possible to ensure participants participated anonymously. Every effort was made, however, to protect participant privacy. All real names and identifying information were removed from the data collected and replaced by codes. These codes were used both in the data analysis stage and in reporting of results. Further, all collected data were kept in a private and secure location. There were no hard-copy documents associated with the research. All electronic data were safely stored on the researcher's password-protected work computer. Access to this data was restricted to the researcher and the two supervisors. The data will be kept for six years and will then be destroyed.

### *Use of Research Results*

The results of this research will be used for academic purposes only. The main use included completion of the researcher's thesis in fulfilment of the requirements of a doctoral degree at the University of Auckland. Data have also been used for relevant academic publications and conference presentations. Participants were made aware of these dissemination methods in the consent form and information sheet.

### *Potential Conflict of Interest*

The researcher was also the Wellbeing Protocol creator and intervention facilitator. In order to avoid any potential conflict of interest, the data collection and coding was managed by a research assistant who provided the researcher with de-identified data. The researcher acted with integrity with respect to data analysis procedures and worked closely with supervisors to ensure objectivity was retained at all times. Neither the main supervisor or co-supervisor had any association with potential pools of participants that could be considered a conflict of interest or perception of coercion.

## 1.3. Thesis Format and Outline

The present thesis includes a literature review and three studies which have been converted into three articles for publication in accordance with the University of Auckland Revised 2016 PhD Statute and Guidelines. Chapters 3, 4, and 5 have been submitted for publication to the *Journal of Occupational Health*, *Journal of Workplace Behavioural Health*, and *Journal of Workplace Learning*, respectively. The thesis ends with a general discussion and concluding remarks. Having a few repetitive elements across the chapters was inevitable given the nature of a thesis with publication. Great care was incorporated, however, to minimise such instances where possible. A brief overview of each chapter is presented below.

Chapter 2 introduces the theoretical background of the present study. It discusses the key concepts employed, their definition, and relevant current literature on each. The concepts are: stress, burnout, wellbeing, and mindfulness. The chapter also presents an overview of mindfulness-based interventions, their origins and development, as well as interventions created specifically for teachers.

Chapter 3 presents the first study which investigates the relations between WP, stress, and burnout. It was a quantitative study employing the Perceived Stress Scale (S. Cohen,

1986) and Maslach's Burnout Inventory for Teachers (Maslach & Jackson, 1981). The results suggested that WP was a promising option to reduce teacher stress and burnout.

Chapter 4 includes the second study which explored WP's impact on wellbeing and mindfulness. It is a quantitative review of data from the Warwick-Edinburg Mental Wellbeing Scale (Tennant et al., 2007a) and the Five Facets Mindfulness Questionnaire (Baer et al., 2006, 2012) administered before, immediately after, and 3 months after programme completion. Findings suggested significant improvement in mental wellbeing and mindfulness.

Chapter 5 presents the third study which aimed to convey and analyse participants' personal experience of WP. A thematic analysis of the qualitative data revealed the main themes that emerged and pointed to the potential underlying mechanisms by which WP impacted stress, burnout, and wellbeing.

Chapter 6, the final chapter, includes a general discussion of key findings pertaining to the three studies. It also highlights the contribution the present research has made, its practical implications, and limitations. The chapter ends with an overview of potential avenues for future research and some concluding thoughts.

# CHAPTER TWO: THEORETICAL BACKGROUND

This chapter starts by discussing the key concepts that inform the current study and their theoretical underpinnings. These concepts are: stress, burnout, wellbeing, and mindfulness. A definition as well as current research findings will be presented for each. An overview of existing knowledge on mindfulness-based interventions (MBIs) will follow, with a separate section dedicated to MBIs designed specifically for teachers. The chapter will end with a description of the Wellbeing Protocol.

## 2.1. Stress

Stress can generally be defined as the experience of anticipating or encountering adversity in one's goal-related efforts (Carver & Connor-Smith, 2010), a view adopted by the present study as well. Stress elicits the following physiological reactions: activation of the sympathetic nervous system, increased activity of the hypothalamic-pituitary-adrenal axis, and parasympathetic withdrawal. These reactions are grouped under the umbrella term 'the stress response' (Kunz-Ebrecht et al., 2003). Sapolsky (1996) highlights the role of the stress response, from an evolutionary perspective, in improving mental and physiological functioning to meet imminent demands and permit survival. In other words, when the stress response is activated, attention is narrowed and physiological arousal is raised, so that the focus is placed entirely on dealing with the task at hand.

Activation of a stress response could result in an occurrence of either good stress or chronic stress. Good stress, also referred to as *eustress,* was defined as an occurrence where stress yields a benefit (Le Fevre et al., 2003). For example, Fay and Sonnentag (2002) showed that work stress can lead to initiative-taking in the form of acquiring skills employees need in order to meet job demands. Conversely, chronic stress represented a prolonged activation of the stress response. It is widely agreed in the literature that chronic stress responses are crucial causal factors leading to various illnesses such as autoimmune disorders

(Buske-Kirschbaum et al., 2002), psychiatric diseases (Zorn et al., 2017), and somatic illnesses (Strahler et al., 2017). Stress-related mental illnesses have become so prevalent that the World Health Organisation predicted them to be the second leading cause of disabilities by 2020 (Murray et al., 1996). This prediction did not foresee the outbreak of a global pandemic in 2020. National surveys and research studies showed however that COVID-19 led to a significant increase in stress-related mental illness (Alexander et al., 2021; Tucker & Czapla, 2021).

The most widely used explanatory model for understanding stress at work was the Conservation of Resources (COR) theory (Hobfoll, 1989, 2002). COR stated that people are motivated to obtain, foster, retain, and protect those things they value. Hobfoll (1989, 2002) hypothesised that workplace stress occurred in three instances: when there was a loss of resources, the threat of a loss, or a lack of gain after investing resources. Resources comprised personal characteristics, such as emotional stability, conditions, such as social support, and objects, such as tools or money. The loss, threat of loss, or lack of gain were conceptualised as demands. According to COR, the higher the demands and fewer the resources someone had at their disposal, the higher the likelihood of maladaptive coping. This maladaptive coping was shown to lead to increased burnout (Alarcon, 2011).

Stress had been identified as a risk factor in the teaching profession long before the pandemic (Blase, 1986; Kyriacou, 1987). Epidemiological evidence showed that teachers experienced mental health problems at a significantly higher rate than other occupations, including both mental disorders, such as depression, and psychological symptoms, such as depressed mood (Schonfeld et al., 2017). Both quantitative and qualitative research has identified a variety of stressors that have affected teachers, including: student disruptive behaviours, overly prescriptive supervisors, or unsupportive administrators (Schonfeld et al., 2017). High rates of prolonged workplace stress have been shown to cause burnout and the

teaching profession was recognised as being at significant risk (Abenavoli et al., 2013; Jennings & Greenberg, 2009).

### 2.2. Burnout

The concept of burnout was first proposed over three decades ago to define depletion of physical energy among human service professionals such as health-care workers, teachers, or social workers (Freudenberger, 1989; Maslach & Jackson, 1981). Maslach and Jackson (1981) developed the concept to comprise a reaction to chronic workplace interpersonal stressors resulting in emotional exhaustion, cynicism, and a lack of personal accomplishment. Emotional exhaustion represented the core stress-related component of burnout. It denoted feelings of emotional and physical depletion due to over-extension. Cynicism or depersonalisation referred to negative feelings and attitudes towards recipients of service, such as patients or students, and a negative or excessively detached response to various aspects of work. The last dimension of burnout was related to self-evaluation, specifically a negative appraisal of one's efficacy, and included feelings of incompetence, low productivity, and lack of achievement at work (Maslach et al., 2001).

Several theories about the development of burnout were presented in the 1980s; however, the one best supported by research findings over time was the notion that burnout was a response to prolonged chronic job stressors. This prompted the World Health Organisation (2019) to declare burnout an occupational hazard arising from chronic workplace stress unsuccessfully managed.

The evolution of burnout research was intertwined with the development of the Conservation of Resources (COR) theory. COR theory contributed significantly to the current conceptualisation of burnout, and the latter represented the theory's initial base in the workplace and organisational behaviour literature (Westman et al., 2004). According to COR, chronic exposure to high demands and low resources at work was a precursor to burnout

(Alarcon, 2011). COR theory also held that increased demands and resource loss had a stronger effect in high demand situations. Prolonged exposure to such contexts led to a depletion of resources such as energy (Hobfoll et al., 1990). This pointed to the burnout dimension of emotional exhaustion. According to COR, emotional exhaustion was likely to occur first, followed by cynicism, which was seen as a maladaptive coping mechanism. This maladaptive coping style would then engender a lack of personal efficacy and accomplishment. Hence, the burnout process encompassed a downward spiral of resource loss (Alarcon, 2011).

Most occupations included a variety of responsibilities and requirements which could be perceived at one time or another as stressors. In both COR theory and burnout research these stressors were classified as demands (Alarcon, 2011). Current literature has highlighted that the most common types of demands that led to employee stress were role ambiguity, high workload, and role conflict (Landy & Conte, 2013). Role ambiguity involved lack of clarity regarding job responsibilities or job-related information (Fried et al., 2013). High workload represented an overload of demands (Maslach et al., 2001) and role conflict referred to the experience of conflicting demands at work (Fried et al., 2013). Prolonged exposure to these types of demands was integral to the burnout process and resulted in increased strain (Alarcon, 2011; Bakker & Demerouti, 2007).

Available resources played an equally significant role in predicting workplace stress (Bakker & Demerouti, 2007). Job control in particular was identified as a resource aid in the prevention of burnout (Alarcon, 2011). Job control was defined as the extent to which a worker had decision-making power between several options (Spector, 1998). It was said to include constructs such as participation in the decision-making process or autonomy. Autonomy comprised the decision latitude a worker had over immediate tasks and time constraints (Spector, 1998). High decision latitude and perceived control at work were

positively related to lower strain (Henry, 2005; Maslach et al., 2001) and negatively related to burnout symptoms (Alarcon, 2011).

Burnout has been linked to a variety of negative outcomes for both workplaces and individuals. For example, burnout has been associated with absenteeism and intention to leave (Alarcon, 2011; Daniels, 2004; H. Kim & Kao, 2014), lower productivity and effectiveness at work (Jun et al., 2021; Ruotsalainen et al., 2014), and job dissatisfaction (Aiken et al., 2002). It has also been shown to cause a higher incidence of workplace conflict given that those who experience burnout could have a negative impact on colleagues (Maslach et al., 2001). Maslach et al. (2001) pointed out that burnout could be "contagious" meaning that it could perpetuate itself through negative workplace interactions, and further, Burke and Greenglass (2001) found evidence that it could permeate workers' home lives.

In terms of health-related outcomes, the emotional exhaustion dimension of burnout has been shown to be predictive of stress-related illnesses (Maslach et al., 2001). In a study of 3,368 Finnish employees, Honkonen et al. (2006) found that physical illness was more prevalent in burned out individuals and it increased with the severity of burnout. The authors found statistically significant correlations between burnout and musculoskeletal disorders for women and cardiovascular disease for men (Honkonen et al., 2006). Burnout may also precipitate the onset of mental health illnesses. Koutsimani et al. (2019), for example, found a significant association between burnout and depression, and burnout and anxiety.

Teachers have recorded high rates of burnout compared to the general population from the earliest burnout research onwards (Cunningham, 1983). Empirical studies have shown that burnout negatively influences teacher efficacy (Lizano & Mor Barak, 2015; Pines, 2002). Chronically stressed and burned out teachers have been shown to have lower job performance and often miss more days of work, which disrupted the instruction flow for their students (Zee & Koomen, 2016). A synthesis of 40 years of teacher efficacy research (Zee &

Koomen, 2016) found that high rates of burnout were consistently corelated to reduced teacher efficacy, or teachers' perceptions of their inability to produce desired classroom outcomes. Jennings and Greenberg (2009) hypothesized that teachers experiencing burnout may lack sufficient energy resources to plan adequately or instruct high quality lessons. In fact, both Wong et al. (2017) and Cook et al. (2017) found inverse correlations between burnout and teaching quality. Spilt et al. (2011) found that teacher burnout was also associated with poor interpersonal relationships with students, colleagues, and parents. Burnout has been identified as a precursor to poor relationship quality and teacher wellbeing in a series of subsequent studies as well (Abenavoli et al., 2013; Wink et al., 2021).

Jennings et al. (2019) identified organisational structures such as resources available and job demands, together with teachers' individual skills and coping mechanisms as being primary workplace stressors. Jennings and Greenberg (2009) suggested that in the absence of adequate skills or support to alleviate these stressors, the likely result was a "burnout cascade" whereby teachers' maladaptive behaviours engendered a vicious cycle of classroom disruption and escalating teacher distress. Despite the many calls to action to mitigate this burnout cascade over the last three decades, burnout has continued to be a significant issue for teachers, arguably worsened by the COVID-19 pandemic (Education Review Office, 2021; Ozamiz-Etxebarria et al., 2021; Pressley, 2021; Sokal et al., 2020b).

### 2.3. Wellbeing

The concept of wellbeing has its roots in ancient Greek philosophy, particularly the works of Plato, Aristotle, Socrates, and Epicurus. The modern understanding of the term originated in 1961 with the chief of the US National Office of Vital Statistics, Halbert L. Dunn, who was searching for a term to convey positive aspects of health that could be achieved through intentional pursuit beyond mere disease avoidance goals (Scaria et al., 2020). This view of wellbeing gained momentum in both media and research over the

following three decades marking a shift in focus from amelioration of psychological or physical pathology towards prevention (Ryan & Deci, 2001). Interestingly, Ryan and Deci (2001) noted that wellbeing received the most attention in the US during the 1960s human potential movement and the 2000s positive psychology movement, both of which coincided with periods of relative affluence. The authors speculated that the surge in interest in wellbeing might have been catalysed by the realisation of the economically affluent that material goods or luxury failed to secure happiness (Ryan & Deci, 2001).

Two schools of thought emerged in ancient times and have continued to influence the modern usage and definition of the concept: hedonistic and eudaimonistic (Deci & Ryan, 2008; Ryan & Deci, 2001). The hedonistic view argued that wellbeing meant experiencing a high level of positive affect and satisfaction with one's life, and low levels of negative affect (Deci & Ryan, 2008). In this view, wellbeing was synonymous with happiness (Deci & Ryan, 2008). The eudaimonic perspective, however, argued that subjective reports of being happy or satisfied were not necessarily indicative of psychological wellbeing. This perspective held that wellbeing was a process rather than a state or outcome: the process of realising one's true nature or daimon, or, in other words, the process of fulfilling one's potential (Deci & Ryan, 2008).

These two different approaches to wellbeing inevitably gave rise to a period of debate regarding the nature of positive mental health and wellbeing, with a consensus finally reached regarding the term's definition. Wellbeing thus referred to optimal psychological functioning and experience (Ryan & Deci, 2001) and encompassed two main aspects: (1) a hedonic aspect that referred to life satisfaction and the subjective experience of happiness; and (2) a eudaimonic aspect that encompassed positive psychological functioning, self-development, self-realisation, self-acceptance, autonomy, and positive relationships with others (Clarke et al., 2011; Hunter et al., 2015; Tennant et al., 2007a).

Greater wellbeing has been shown to represent a significant protective factor against mental health conditions, including depression (Gargiulo & Stokes, 2009). It has also contributed significantly to health, psychological functioning, and social relationships (Huppert & Whittington, 2003; Stewart-Brown et al., 2009). The term wellbeing or mental wellbeing came to be synonymous with positive mental health, as it had been shown that in order to be considered mentally healthy there was a requirement for both the eudaimonic and the hedonic aspects to be expressed, alongside the absence of mental illness (Hunter et al., 2015; Huppert, 2009; Keyes, 2007). The approach to mental wellbeing gradually transitioned from disorder treatment and prevention to positive mental health promotion both in healthcare, as well as research, and policy development (Hue & Lau, 2015; Huppert, 2009).

A growing body of evidence has suggested that improvements in teachers' mental wellbeing is positively correlated with reductions in stress and burnout symptoms, particularly after participation in a mindfulness-based programme (Beshai et al., 2016; Carroll et al., 2021; Flook et al., 2013; Franco et al., 2010; Frank et al., 2015; Gold et al., 2010; Hwang et al., 2017, 2019; Jennings et al., 2013; Kemeny et al., 2012; Roeser et al., 2013; Taylor et al., 2016). For example, Beshai et al. (2016) found that mindfulness training reduced teacher stress and improved wellbeing in a sample of 89 secondary school teachers. Flook et al. (2013) had similar results in their randomised control trial in which 18 primary school teachers showed decreased burnout and psychological symptoms following a mindfulness course. Franco et al. (2010) found mindfulness training resulted in a reduction in psychological distress in a sample of 68 Spanish secondary school teachers and Jennings et al. (2013) recorded an improvement in wellbeing and efficacy in 50 teachers enrolled in the mindfulness-based programme Cultivating Awareness and Resilience in Education.

## 2.4. Mindfulness

Based in Buddhist traditions, mindfulness is a contemplative practice that was first introduced into western psychotherapy in the 1950s, then applied as a clinical intervention in the 1970s (Birchinall et al., 2019). The 1980s saw the emergence of secular mindfulness-based interventions in the fields of medicine and psychology (Birchinall et al., 2019). The seminal definition of mindfulness most frequently employed in current literature pertained to Jon Kabat-Zinn, founder of the Stress Reduction Clinic at the University of Massachusetts Medical School, according to which mindfulness is an intentional and non-judgemental present moment awareness (Kabat-Zinn, 2013, 2016).

Baer et al. (2006) identified five facets pertaining to western secular mindfulness practice: *observing* (i.e., the ability to notice thoughts, emotions, sensations, or sounds), *describing* (i.e., the ability to ascribe labels to these stimuli), *acting with awareness* (i.e., being intentional with one's actions as opposed to functioning on automatic pilot), *non-judging of inner experience* (i.e., refraining from judging one's emotions or cognitions), and *non-reactivity to inner experience* (i.e., refraining from identifying with and impulsively acting on emotions or cognitions).

The practice of mindfulness included daily meditation with the aim of bringing attentional awareness to the present moment and enabling non-identification with one's stream of thoughts (Kabat-Zinn, 2005; Stahl & Goldstein, 2010). This non-identification aimed to facilitate a reduction in rumination and worry and a consequent decrease in stress (Gunaratana, 2011). Mindfulness practice has been shown in a variety of studies with clinical and non-clinical populations to facilitate stress and burnout reduction (Anastasiades et al., 2017; Baer et al., 2012; Roeser et al., 2013), promote wellbeing (Birchinall et al., 2019), improve immune function (Davidson et al., 2003), support greater emotional regulation (Carroll et al., 2021), and improve emotional and cognitive functioning (Jha et al., 2010).

Qualitative data has captured participants' personal experiences of mindfulness programmes and shown that they believed the practice was beneficial, they experienced less stress as a result of it, they were better able to regulate their emotions, and to access strategies to calm themselves down in conflict situations (Biegel et al., 2009a; Broderick & Metz, 2009; Emerson et al., 2017; Hue & Lau, 2015).

### 2.5. Mindfulness-Based Interventions (MBIs)

Due to its positive impact on human functioning and wellbeing (Brown et al., 2007), mindfulness was adapted to western secular contexts from clinical settings to workplaces. In what follows, a brief overview of MBIs will be given. The last section will focus on MBIs for teachers specifically.

The most seminal MBI, and also one of the first to be developed in the west, is Jon Kabat-Zinn's Mindfulness-Based Stress Reduction (MBSR) programme. Kabat-Zinn (2016) recontextualized mindfulness in a secular context and taught it in a group-based, educational setting in the form of 26 hours of live content supplemented by daily 45-minutes of home practice over 8 weeks. MBSR comprised traditional mindfulness meditation practices and models of stress from mind-body medicine. It addressed topics such as dealing with thoughts, responding versus reacting, or dealing with difficult emotions and physical pain (Crane, 2009).

With its first iteration in 1979, MBSR is currently one of the most well-researched MBIs with over 1,000 publications on it recorded in the Web of Science to date. MBSR has been shown to have a positive impact on various markers such as stress (Gold et al., 2010), burnout (Carroll et al., 2021), and immune function (Davidson et al., 2003). Two systematic reviews of MBSR interventions delivered in the workplace recorded reductions in psychological distress, anxiety, depression, stress, and emotional exhaustion (Bartlett et al., 2019; Janssen et al., 2018). Additionally, improvements in job performance, sleep quality,

relaxation, and self-compassion have also been found (Bartlett et al., 2019; Janssen et al., 2018).

There are very few studies that have explored the impact of an unmodified MBSR intervention on teachers, as the majority employ modified MBSR versions or other MBIs (Hwang et al., 2017; Lomas et al., 2017). Gold et al. (2010) found that MBSR supported primary school teachers in reducing stress, anxiety, and depression. Gouda et al. (2016) conducted a pilot study to explore the effect of offering MBSR training to students and teachers in the same school setting and found that relative to the control group students who participated in the programme showed significant improvements in self-regulation, stress, and interpersonal problems. Similarly, teachers in the intervention group reported higher emotion regulation, decreased anxiety, and reduced interpersonal problems (Gouda et al., 2016). Carroll et al. (2021) explored the effectiveness of MBSR compared to a health enhancement programme in a population of Australian teachers and found that both programmes supported participants in improving self-reported stress, wellbeing, and intention to leave the profession. MBSR, however, had greater impact on sustained attention and neural reactivity to negative emotional stimuli (Carroll et al., 2021).

MBSR was adapted by Segal et al. (2018) to suit the specific needs of clinical populations suffering from depression and came to be known as Mindfulness-Based Cognitive Therapy (MBCT). As its name suggested, MBCT employed strategies from cognitive behavioural therapy, such as identification of negative cognitive patterns, alongside mindfulness practice to increase patients' awareness of present moment experience and prevent depression relapse (Segal et al., 2018). MBCT was shown to be effective in preventing depression relapses (Segal et al., 2018), reducing anxiety and global distress symptoms in acute mental health populations (McCay et al., 2016), and improving sleep, relaxation, and energy in patients with a cancer diagnosis (Bartley, 2012). MBCT was

primarily used with clinical populations with no studies to my knowledge exploring the impact of MBCT on teachers.

### *MBIs for Teachers*

The role of the teacher has changed over the decades, from focusing primarily on the cognitive development of students to catering to their emotional challenges appropriately and effectively (Jennings & Greenberg, 2009). Increases in students' attention deficit hyperactivity disorder (ADHD), stress, anxiety, and depression has placed considerable demands on teachers' knowledge and skills, and resulted in higher teacher stress, lower wellbeing, and satisfaction (Napoli, 2004). Teacher stress and decreased wellbeing have been shown to contribute negatively to classroom quality (Carson et al., 2010; Jennings, 2015a; Jennings et al., 2019). A significant body of literature has shown that when teachers struggled to meet competing demands, they were unable to manage successfully the social and emotional dynamics of the classroom environment to the detriment of student behaviour and academic achievement (Carson et al., 2010; Gerber et al., 2007; Gilliam & Shahar, 2006; Hamre et al., 2008; Jennings et al., 2019; Sutton & Wheatley, 2003). Carson et al. (2010), Montgomery and Rupp (2005), and Sutton and Wheatley (2003), for example, showed that teacher emotional reactivity in response to student disruptive behaviours negatively influenced teacher cognitive functioning, self-efficacy, and motivation. Further, Gilliam and Shahar (2006) found a correlation between teacher distress in response to disruptive student behaviours and the growing rate of pre-school expulsions. Similarly, Osher et al. (2008) showed that high levels of teacher emotional distress were correlated with decreased teacher performance and increased negative student behaviour. Finally, Hamre et al. (2008) and Gerber et al. (2007) discovered a correlation between higher burnout and depressive symptoms and decreased teacher efficacy and ability to connect to students positively.

However, all these studies were conducted in the US and it is unknown whether or not the results would be applicable in a different context.

Jennings and Greenberg (2009) acknowledged this predicament and contended that as classroom interactions deteriorated and conflicts escalated, the demands on teachers increased and their mental wellbeing decreased. The authors noted that in the face of challenging classroom conditions, teachers might feel compelled to enact unnecessary punitive measures or to respond with hostility which might engender a self-sustaining cycle of classroom disruption by way of eliciting antagonism from students or by demotivating them (Jennings et al., 2013; Jennings & Greenberg, 2009). Research has shown that high levels of classroom distress may lead to teacher burnout (Tsouloupas et al., 2010) and to declining student achievement and teacher performance (Osher et al., 2008).

Teachers with high levels of burnout have been shown to be at increased risk of mental and physical illness (Schonfeld, 2001; Schonfeld et al., 2017); they were often in an irritable mood, and their performance quality was lower (Huberman et al., 1993). Teacher mood was positively linked with student achievement and classroom quality. De Schipper et al. (2008), for example, reported that teacher positive mood was related to high quality caregiving in early education settings. On the other hand, depressive symptomatology has been found to negatively impact classroom climate and teachers' ability to provide emotional and instructional support for their students (Jennings et al., 2013; Jennings & Greenberg, 2009; Schonfeld et al., 2017). The link between stress, high rates of teacher burnout (Jennings et al., 2013; Johnson et al., 2012), and low overall quality of classroom instruction has been well documented in the literature, with most studies highlighting the need to address these issues (Ancona & Mendelson, 2014; Franco et al., 2010; Gold et al., 2010; Gouda et al., 2016; Meiklejohn et al., 2012; Schonfeld, 2001; Schonfeld et al., 2017).

Given these promising research findings, MBIs were seen as potential protective or remedial factors against burnout and chronic stress. This has resulted in the creation of a handful of MBIs specifically targeting teachers, most of which originated and were investigated in the US and Canada (Hwang et al., 2017; Lomas et al., 2017). Of all the existing MBIs, three programmes have had a larger presence in schools and in the literature: Mindfulness-Based Wellness Education (MBWE), Cultivating Awareness and Resilience in Education (CARE), and Stress Management and Relaxation Techniques (SMART) in Education.

MBWE was created at the University of Toronto in 2005 in response to increasing rates of teacher burnout and stress. Inspired by the success of mindfulness interventions for clinical populations, Poulin created a mindfulness programme for human service professionals, specifically teachers-in-training (Poulin et al., 2008). MBWE was an 8-week health promotion intervention designed to promote adoption of mindfulness skills and exploration of seven dimensions of wellbeing: social, emotional, mental, physical, spiritual, ecological, and vocational. MBWE was modelled on MBSR, employing similar practices, with a notable difference in its focus on health and wellness promotion. MBWE participants received 36 hours of instruction and were encouraged to practise five days per week for an average of 15 to 20 minutes (Poulin et al., 2008). Poulin et al.'s (2008) first randomised control trial showed increases in mindfulness and teacher self-efficacy among MBWE participants compared to a control group. Additionally, they established a positive correlation between improvements in mindfulness practice and improvements in teacher self-efficacy and physical wellbeing ratings immediately following the intervention (Poulin et al., 2008).

The CARE programme was based on Jennings and Greenberg's model of the prosocial classroom (2009) and aimed to support teachers in developing social-emotional competency and improve their wellbeing (Jennings, 2016). CARE was presented in five

daylong consecutive sessions, four of which were spread out over 4 or 5 weeks, with the fifth session being offered several months later, for a total of 36 hours. Trained facilitators coached participating teachers by email and phone between sessions to support teachers' practical application of the programme to their classrooms. CARE utilises three main instructional components: (1) emotion skills instruction, (2) stress reduction and mindfulness practices, and (3) compassion and listening exercises (Jennings, 2016). CARE was shown to improve teachers' levels of mindfulness, wellbeing, and ability to implement a more autonomy-supportive motivational orientation in their classrooms (Jennings et al., 2013).

The SMART in Education programme was designed by the Impact Foundation in 2007 and was modelled on MBSR (Roeser et al., 2012). It was an 8-week programme that included 34.5 hours of instruction and daily home practice of approximately 15 minutes per day. SMART in Education included didactic presentations, group discussions, dyadic exercises, and mindfulness practices such as breath awareness meditation, progressive body scans, and mindful movement (Roeser et al., 2012). The programme aimed to promote regulation of attention and emotion, mindfulness, and self-compassion as tools to counter teacher stress and to enhance emotional resilience (Roeser et al., 2012). Two randomised control trials of the programme revealed that teachers in the SMART intervention group reported higher levels of mindfulness, focused attention, and self-compassion, as well as lower levels of occupational stress and burnout (Roeser et al., 2013).

In their review of MBIs for teachers, Emerson et al. (2017) stated that the interventions employed in the studies reviewed showed improvement in participants' awareness, reduced reactivity to emotional situations, and increased confidence in managing negative emotions. Similarly, Hwang et al. (2017) reviewed 16 studies and found that MBIs helped teachers cope with stress, better manage conflict and difficult emotions, and develop an increased awareness of their physical and mental experience. Additionally, their review

outlined positive effects of mindfulness on classroom organisation and improved student behaviour. Hwang et al.'s (2017) review revealed that there was a lack in mindfulness research of sufficient studies using multiple sources of qualitative data and of studies that assessed the sustainability of training effects with follow-up assessments over time. The current project design addressed this gap by collecting qualitative data through open ended survey questions from all participants and through focus group interviews from a representative participant sample. Additionally, the present study included a three-month follow-up assessment point. On another note, both reviews mentioned above (Emerson et al., 2017; Hwang et al., 2017) covered studies conducted and developed mostly in the US. It was therefore unknown whether or not their results would be applicable in a different context. The present project aimed to contribute to this emerging field of research by providing insights about the New Zealand teaching workforce.

Studies that have captured qualitative data have been instrumental in highlighting teachers' experience of mindfulness training, as well as the mechanisms underpinning its positive impact. In their mixed methods study on elementary school teachers, Akhavan et al. (2021) found positive change to teacher-student interaction to be one of the emerging themes. Of the 25 participants, 24 noted they were able to reframe from reacting to student disruptive behaviour. Further, 21 of them indicated that they intentionally showed they valued and appreciated their students on a more frequent basis following the programme. The other emerging themes discussed in the study were that teachers began daily practices of being present and that they felt mindfulness practice helped them reduce stress (Akhavan et al., 2021). One of the biggest limitations of Akhavan et al.'s (2021) study was their sample, one rural school district in California, US, which opened the question whether these results applied to the New Zealand context, especially given its bicultural underpinnings and strong Māori influence, especially in education.

Ancona and Mendelson (2014) conducted a pilot randomised control trial on the impact of a yoga and mindfulness programme for teachers and also found that participants reported a reduction in stress. The programme consisted of six sessions, each 45 minutes, delivered on school premises after instruction hours. It included breath awareness techniques and yoga poses, with a focus on six main themes: breath, stress, anger, energy, thoughts, and love (Ancona & Mendelson, 2014). One participant comment, in particular, offered an insight into how certain mindfulness techniques allowed teachers to recognise stress and diffuse it before it escalated:

> I knew I was stressed but felt like it was just a part of the job. I learned that I can keep myself from getting too stressed by listening to my body and taking time to breathe deeply and calm down before continuing with my day. (Ancona & Mendelson, 2014, p. 163)

Although Ancona and Mendelson's (2014) findings contributed to giving us an emerging picture of the underlying mechanisms by which mindfulness might impact stress, their study did not include follow-up measures and their sample size was small, including only US teachers from an urban school in a low-income neighbourhood.

Other studies who employed qualitative data were Hue and Lau (2015) and Schussler et al. (2016). Teachers in Hue and Lau's (2015) study associated their perceived reduction in stress with their increased ability to identify the origin of stress in their mind and body (Hue & Lau, 2015). This was also true for participants in a CARE programme who discussed being more aware of how they were holding stress in their bodies and how they were reacting to feeling stressed (Schussler et al., 2016). Participants in CARE additionally noted that they became much less reactive to situations that would have triggered them in the past which resulted in improved relationships with their students. A teacher's comment was particularly illustrative of how non-reactivity functioned in practice:

> It's not taking it personally when somebody gets you mad. It allows me to get my emotions out of the way so that I can help them [students] and I'm not worried about how I'm reacting to them being in that place (Schussler et al., 2016, p. 137).

The two studies above contained several limitations. In the case of Hue and Lau (2015) their sample size was small and they had no follow-up data. Further, their sample was entirely Chinese. In Schussler et al. (2016) the sample was US-based, with the added limitation that their only data collection means was focus groups. Although focus groups represented an efficient avenue for information collection, they might also have resulted in group think whereby one person's comment became the whole group's opinion. The present project aimed to fill these gaps in research by employing two avenues for qualitative data collection, a three-month follow-up design, and a teacher sample based in a culture sparsely represented in research studies.

A final insight offered by qualitative analyses of mindfulness-based interventions revolved around the impact of mindfulness on conflict resolution. Schussler et al. (2016) pointed out that mindfulness led to improved relationships by increasing teacher emotional regulation and compassion, and Burrows (2015) found that teachers' practice of mindfulness helped them solve relational dilemmas with students. Their studies lacked however follow-up assessments and were based in US and Australian contexts, respectively, which questioned their applicability to New Zealand educators.

To conclude, the current review of research on MBIs for teachers encompassed both quantitative and qualitative findings, both of which suggested mindfulness training could have positive outcomes for educators, supporting them to reduce stress, burnout and psychological distress, and improve their wellbeing. Most of the studies cited included calls for more research to be done in this emerging field. The current thesis aimed to contribute to this body of knowledge by investigating the impact of a mindfulness-based programme hitherto unexplored, The Wellbeing Protocol. It also aimed to address existing gaps in the

literature by including multiple ways to collect quantitative data, follow-up assessments, and an under-researched cultural context, namely New Zealand.

### 2.6. The Wellbeing Protocol

The Wellbeing Protocol (WP) was a mindfulness-based wellness programme dedicated to reducing stress and burnout and improving employee wellbeing. WP was comprised of an adaptation of mindfulness training, cognitive behavioural therapy for non-clinical populations, and positive psychology. The mindfulness tools and techniques included were secular and similar to those employed in Mindfulness-Based Stress Reduction (Stahl & Goldstein, 2010) or Mindfulness-Based Cognitive Therapy (Crane, 2009). The cognitive behavioural aspect drew from the work of Burns (2012, 2020) and involved techniques such as cognitive distortions, awareness raising, or the use of thought journals. Cognitive distortions were defined as automatic thought patterns that subconsciously influenced perception in negative ways leading to anxiety and depression (Burns, 2012). Positive psychology represented the third theoretical pillar of WP and drew on the work of Fredrickson (2009, 2014; 2008) on positive emotions, the positivity ratio, and negative bias. Additional WP research underpinnings came from the work of Seth (2015, 2016) on the neuroscience of consciousness, Barrett (2017) and Barrett et al. (2009; 2015) on the neuro-physiology of emotions, Brewer et al. (2011, 2013) on mindfulness and the brain's default mode network, Porges (2017) and the polyvagal theory of autonomic nervous system activation, Brosschot et al. (2017) on the theory of stress as an automatic response to perceptions of generalised unsafety, and Crum (2011) and Crum et al. (2017; 2014) on stress mindset.

The Wellbeing Protocol was a group-based training programme designed to be delivered online in 12 one-hour sessions over three months. It covered topics related to the stress response, stress mindset, negative thought patterns conducive to anxiety and

depression, the cultivation of positive emotions, and dealing with negative or uncomfortable emotions (See Table 1.1 for an overview).

The Wellbeing Protocol differed from other mindfulness-based interventions in several ways. It was the first programme, to my knowledge, to employ cognitive-behavioural strategies outside of clinical contexts. Secondly, its educational content encompassed a great variety of sources, including neuroscientific studies, the latest research on stress mindsets, and positive psychology strategies. Finally, the Wellbeing Protocol was designed to suit busy work schedules in terms of short duration (12 hours) and flexibility of online delivery.

**Table 1.1**

*The Wellbeing Protocol Sessions by Curriculum Objective*

| Session (60 min) | Curriculum Objectives |
|---|---|
| 1 | • Get to know each other<br>• Create our rules of engagement<br>• Get an understanding of wellbeing<br>• Set your wellbeing goal |
| 2 | • What is stress?<br>• What is my stress mindset?<br>• What is a mindset and how does it work?<br>• How do stress mindsets influence our stress responses?<br>• How can I re-design my stress response? |
| 3 | • What is mindfulness?<br>• What is meditation?<br>• How does mindfulness work?<br>• What does brain science tell us about the effects of mindfulness?<br>• How can I practice mindfulness easily and effectively? |
| 4 | • How do we construct reality?<br>• What influences our perception?<br>• What are cognitive distortions?<br>• How can I become more effective and stop self-sabotage? |

| | |
|---|---|
| 5 | • How can I change my stress mindset?<br>• How can I re-design my stress response? |
| 6 | • What are emotions?<br>• What is the secret life of our brain?<br>• What is a wellbeing mindset? |
| 7 | • What are positive emotions?<br>• What is our negativity bias?<br>• What is the positivity ratio?<br>• What are simple ways to change our negativity bias? |
| 8 | • What are some simple techniques to create a wellbeing mindset? |
| 9 | • What is love?<br>• How can I say 'no' effectively and guilt-free?<br>• What does positivity really mean? |
| 10 | • What are simple mindfulness mindset techniques?<br>• How can I find time when I'm very busy?<br>• How can I deal with negative emotions and discomfort?<br>• How can I deal with intense emotions and/or high stress situations? |
| 11 | • How can I change the way my body responds to stress?<br>• How can values help me stress less?<br>• What is the link between needs and stress?<br>• How can I express my needs effectively? |
| 12 | • How can I recharge effectively?<br>• What is important for me now?<br>• How can I set a wellbeing goal that I will actually implement? |

From a methodological perspective, each session followed a similar structure: (1) discussion of relevant concepts and their research underpinnings; (2) self-reflection prompts; (3) demonstration of techniques; (4) practice of techniques; (5) questions and answers. Participants were asked to practise the techniques between the sessions. The time to employ the techniques was usually very short, lasting from 10 seconds to three minutes. Some weeks,

participants were encouraged to engage in a daily mindfulness practice. They were provided with several audio recordings of guided meditations lasting from 2 minutes to 15 minutes. The content of the meditations included topics such as body scan, autogenic relaxation, brain rest guidance, energy replenishment through visualisations, and progressive muscle relaxation. Participants were also provided with visual prompts that served as memory aids for different techniques and as practice reminders.

Participants had the opportunity to ask questions both during the sessions and privately via email. Additionally, each session started with a discussion about the insights gained through the weekly practice, as well as any difficulties that might have arisen.

This chapter has provided an overview of the key concepts employed in the current thesis and a description of the mindfulness-based programme employed. The implications of all four concepts related to teachers were discussed, with a focus on mindfulness-based interventions for educators. The following chapter will discuss the impact of the Wellbeing Protocol on teacher stress and burnout.

# CHAPTER THREE: DECREASING STRESS AND BURNOUT DURING THE COVID-19 PANDEMIC: A QUANTITATIVE ANALYSIS

The previous two chapters have together provided a comprehensive review of the study objectives, the context of the research, the definition of the concepts employed in this study, and the gaps in the literature the current project aimed to address. The current chapter (Chapter 3), together with the two following chapters (Chapter 4 and 5), present the three empirical studies which investigate the impact of the Wellbeing Protocol. This chapter contains the first empirical study, dedicated to exploring the impact of WP on teacher stress and burnout. The chapter has been submitted to the *Journal of Occupational Health.* The proposed citation is: Toma, G. F., Rubie-Davies, C. M., & Le Fevre, D. Decreasing stress and burnout during the COVID-19 pandemic: A quantitative analysis. *The Journal of Occupational Health*. Manuscript submitted for publication.

**Abstract**

**Objectives** – This field study explored the impact of a mindfulness-based wellness programme called the Wellbeing Protocol on stress and burnout experienced by New Zealand school teachers during the COVID-19 pandemic outbreak.

**Methods** – The mindfulness-based programme was delivered online to 32 teachers during the first four months of the 2020 pandemic outbreak in New Zealand. Participant levels of stress and burnout were measured before, immediately after, and three months following the intervention. Data were analysed using repeated measures ANOVAs and Pearson correlation coefficients.

**Results** – Results indicated statistically significant effects over time. There was a statistically significant self-reported reduction in stress post intervention ($p < .05$) and at three-months follow ($p < .05$), with large effect size. There was a statistically significant reduction in emotional exhaustion post-program ($p < .01$) and at three-months follow-up ($p < .01$). The depersonalization and personal accomplishment scales showed moderate and low improvements respectively, without reaching statistical significance. However, baseline levels of depersonalization were low and personal accomplishment were high which may have resulted in floor and ceiling effects respectively.

**Conclusion** - The study suggests that the mindfulness-based program was a promising option to support teacher wellbeing and fill an important professional learning and development gap that has been long unaddressed. The program may also represent a suitable option for workplaces in other domains looking to reduce employee stress and support the development of protective mechanisms against burnout for staff.

**Keywords** – burnout, stress, workplace wellness program, teachers, mindfulness-based program

### 3.1. Introduction

The COVID-19 pandemic has had a significant impact on employee wellbeing causing a rise in stress, burnout, and mental health conditions across all occupation sectors (Giorgi et al., 2020). In 2021, 49% of employees across the US, Latin America, Australia, Asia, and Europe reported experiencing burnout symptoms (Alexander et al., 2021). The rise in employee stress and burnout seemed to have continued in the post-pandemic economy due to the changing nature of work arrangements, increased difficulty in disconnecting from work, overwork, and ongoing risk of virus exposure (Yousef, 2021).

Teachers have been particularly impacted by the mental health issues associated with the pandemic, given that the profession was already experiencing high rates of stress and burnout before the pandemic (Pressley, 2021; Sokal et al., 2020a). Further, COVID-19 protective measures such as social distancing policies, mandatory lockdowns, and isolation periods, required educators to rapidly adapt to significant work changes such as online instruction, usage of new technologies and increased workload (Pressley, 2021; Sokal et al., 2020a). Although the full impact these challenges had on educator stress and burnout remains to be fully examined, studies on organizational change show that change is correlated with increases in stress and uncertainty (Rafferty & Griffin, 2006). Heightened uncertainty is linked to a lessened sense of control over events, and with psychological discomfort, both of which exacerbate stress and burnout symptoms (Rafferty & Griffin, 2006). In 2020, work-related uncertainty, stress, and lack of control were likely augmented by the fear of virus exposure, the increasing number of casualties, and the unpredictable evolution of the pandemic. A review of existing literature on COVID-19-related mental health effects in the workplace highlighted a general increase in emotional distress, anxiety, and post-traumatic stress symptoms (Giorgi et al., 2020).

The teaching profession likely experienced similar, if not more acute, symptoms. This claim was supported by two recent studies which reported increases in burnout symptoms in US and Canadian teachers in 2020 (Pressley, 2021; Sokal et al., 2020a). Analysing a sample of 1626 Canadian teachers, Sokal et al. (2020a) observed a steady increase in exhaustion and cynicism during the first three months of the pandemic. Although they noticed increased efficacy in classroom management and sense of accomplishment, the authors reported that as the pandemic progressed, teachers' cognitive and emotional attitudes towards change became more negative, making them more susceptible to chronic stress and burnout (Sokal et al., 2020a). Similar findings appear in Pressley's (2021) survey of US teachers, highlighting that COVID-19 led to increased teacher anxiety, stress, and burnout symptoms. There was no similar data focused on New Zealand educators. In fact, a literature review yielded only three studies exploring teacher wellbeing and burnout in New Zealand, none of which was very recent (Bianchi et al., 2016; Milfont et al., 2008; Whitehead et al., 2000). A study conducted in 2000 revealed that New Zealand primary school teachers had above average scores on Maslach's Burnout Inventory – Educators Survey (Whitehead et al., 2000). A 2008 study investigating the reliability of the Copenhagen Burnout Inventory revealed that New Zealand secondary school teachers had above average scores of burnout (Milfont et al., 2008). A 2016 survey of 186 New Zealand teachers found that 25% of respondents were in the high burnout-depression group and 45% in the medium burnout-depression group, employing the Shirom-Melamed Burnout Measure and the Patient Health Questionnaire-9 (Bianchi et al., 2016).

To mitigate the impact of the pandemic on workers' mental health, Giorgi and colleagues (2020) recommended the adoption of shared anti-contagion measures and the implementation of workplace resilience training programmes (Giorgi et al., 2020). Similarly, Gabriel and Aguinis (2021) recommended stress management interventions involving cognitive behavioural therapy or mindfulness meditation in order to support employee

wellbeing and resilience. These recommendations were congruent with global employee surveys according to which employees' fourth most desired workplace change for 2021 was a greater focus on their wellbeing (Alexander et al., 2021).

Workplace wellness programmes, particularly those encompassing stress reduction, mindfulness, and resilience training, have received increased research attention recently. Current literature has shown such programmes have a positive impact on employee mental health, wellbeing, productivity, and retention (Baicker et al., 2010; Carolan et al., 2017).

The present study aimed to increase the sparse body of research on New Zealand (NZ) teachers by exploring the effectiveness of a mindfulness-based resilience program called The Wellbeing Protocol on NZ teachers' stress and burnout at the onset of the COVID-19 pandemic.

### 3.2. Theoretical Context

#### *Stress and Burnout*

The term stress encompasses two main components: stressors and distress. Stressors, or stressful experiences, are circumstances perceived to threaten a major goal, such as the maintenance of one's physical health and integrity, known as physical stressors, or one's psychological wellbeing, known as psychological stressors (Kemeny et al., 2012). Distress represents a negative psychological response to such threats and includes a variety of cognitive and affective states, such as frustration, feeling overwhelmed, anxiety, helplessness, or sadness (Kemeny et al., 2012). When stress becomes chronic, it may have effects on cognitive functioning and lead to burnout or psychiatric conditions such as anxiety and depression (Golkar et al., 2014).

The World Health Organisation defines burnout as an occupational hazard resulting from chronic workplace stress unsuccessfully managed (World Health Organisation, 2019). Burnout is characterised by feelings of emotional and physical exhaustion, negativity towards

work or cynicism, and lack of personal accomplishment (Maslach & Jackson, 1986). The negative consequences of burnout extend beyond workers' personal experience (Gabriel & Aguinis, 2021) and can result in reduced individual, team, and organisational performance, and higher absenteeism and turnover (Bakker et al., 2014).

Research has consistently demonstrated that teaching is a stressful profession long before the pandemic (Skaalvik & Skaalvik, 2015) and outlined that chronic workplace stress was a precursor to low teacher wellbeing and health, lower quality instruction, and eventually burnout and attrition (Harmsen et al., 2018).

Applying a systems approach to understanding teacher workplace stress, Jennings, Minnici, and Yoder (2019) identified two main types of triggers. The first involved organizational structures, for example job demands and resources available. The second related to individual skills and competencies such as teachers' ability to successfully manage stressors and regulate their emotions.

Jennings and Greenberg (2009) have demonstrated that in the absence of skills or tools to combat stress and burnout, the result may be a "burnout cascade" (2009, p. 492), meaning teachers employ maladaptive coping strategies which exacerbate existing problematic conditions. When teachers lack the emotional regulation skills and resources to effectively manage their response to stressors, they often default to reactive behaviours that foster a vicious cycle of classroom disruption (Jennings et al., 2019). This intensifies teacher frustration and exhaustion and impacts work performance and the quality of teacher interaction with students, colleagues, and school leaders (Schussler et al., 2016).

These reactive cycles can nonetheless be altered. Current literature posits that having highly-developed abilities to understand and to effectively manage one's thoughts, emotions, and behaviours allows teachers to reduce their reactivity (Abenavoli et al., 2013), to

empathise with others, and to make considerate and constructive choices about personal behaviour and social interactions (Hwang et al., 2017).

### *Workplace Wellness Programs for Teachers*

Many countries provide professional development programmes for teachers with the aim of improving instructional quality, student academic outcomes, and teacher retention. Very few of these programmes, however, successfully address the need for specific skill development in the areas of stress reduction or social-emotional competencies. Social-emotional competencies are a set of skills that include the ability to understand one's own and others' emotions and thoughts, to establish and cultivate healthy relationships, and to make thoughtful and constructive choices regarding personal behaviour and social interactions in a variety of contexts (CASEL, 2021). Possessing social-emotional competencies has been shown to improve teacher effectiveness and student academic outcomes (Abenavoli et al., 2013).

There are very few professional development programmes to date that target the enhancement of such competencies. There is nonetheless a growing body of literature supporting the beneficial impact of mindfulness-based programmes on improving teachers' social-emotional competencies, and reducing their stress and burnout symptoms (Beshai et al., 2016; Hwang et al., 2017).

Mindfulness is the awareness that arises from bringing one's full attention to the present moment with an attitude of non-judgement (Williams & Kabat-Zinn, 2011). Mindfulness-based programmes for both general and clinical populations have been shown to increase wellbeing, immunity, and stress resilience (Ditrich et al., 2017). Educator-specific studies have found that following mindfulness-based programmes, teachers report reduced depression and anxiety (Jennings et al., 2019), improved engagement, and improved job control and efficacy (Domitrovich et al., 2016). Mindfulness-based programmes have also

been shown to strengthen resilience and self-regulation, including aspects such as emotional regulation and expression in both general and teacher populations (Abenavoli et al., 2013; Creswell, 2017). In his review of mindfulness-based interventions, Creswell (2017) highlighted the need for more research in this area, particularly studies that examined programme effects at follow-up time points.

The programme employed in the current study, The Wellbeing Protocol, was research-based and encompassed methodologies pertaining to secular mindfulness, cognitive behavioural training, and positive psychology. The programme had a strong focus on skill development in the areas of self-awareness, stress reduction, resilience, and effective management of thoughts, emotions, and behaviours to achieve positive outcomes. The techniques taught were short, lasting between 10 seconds to 3 minutes. Participants were encouraged to practise the techniques between sessions. Participants were also provided with two additional resources: a repository of audio guided meditations and a bank of visual prompts to support their practice between sessions.

### 3.3. Methodology

#### *Participants*

Participants included teachers from public and private schools in New Zealand ($N$ = 32). Participants volunteered and gave active consent to participate in the study in accordance with ethical research guidelines. Participants received no compensation or incentives to be part of the intervention or to complete the data collection. Table 1 provides demographic information for the sample. Overall, the results were not disaggregated by age, gender, or instructional context due to the small sample size.

**Table 1**

*Demographic data*

| Demographic variables | | | | | |
|---|---|---|---|---|---|
| Age | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 |
| | 3% | 16% | 31% | 47% | 3% |
| Gender | Female | Male | | | |
| | 97% | 3% | | | |

***Procedure***

Approval for ethical research was obtained prior to participant selection. Participants were recruited through Facebook advertisements in the first month of the pandemic outbreak in New Zealand, namely March 2020. The Wellbeing Protocol (WP) consisted of 12 weekly sessions delivered synchronously online.

***Data Collection***

Data were collected before and after the programme and at 3 months follow-up. The self-reported stress and burnout measures used were combined into a single online survey. Participants received the survey link by email and were asked to complete it in within 4 days.

***Measures***

**Stress.**

Stress levels were assessed using the 10-item Perceived Stress Scale (PSS; S. Cohen et al., 1983). The PSS assesses the extent to which situations in one's life are perceived as stressful, unpredictable (e.g., 'In the last month, how often have you been upset because of something that happened unexpectedly?'), or uncontrollable (e.g., 'In the last month, how often have you felt that you were unable to control the important things in your life?'). Higher scores indicate higher levels of stress. The PSS was scored on a 7-point scale ('never'

to ‘every time’, 1-7, with four items reverse scored). This scale has demonstrated good reliability and validity (Beshai et al., 2016; Hewitt et al., 1992). In the current study, internal consistency for the baseline scores was α = .88.

**Burnout.**

Burnout was measured using the 22-item Maslach Burnout Inventory – Educators Survey (MBI-ES; Maslach & Jackson, 1986). The scale is comprised of three subscales measuring different aspects of burnout including emotional exhaustion, depersonalisation, and a sense of personal accomplishment. Emotional exhaustion is characterised by feeling fatigued and emotionally over-extended by one’s work (e.g., ‘I feel emotionally drained from my work.’). Depersonalisation involves unfeeling and impersonal responses towards students (e.g., ‘I don’t really care what happens to some students.’). Personal accomplishment entails feelings of productivity and competence at work (e.g., ‘I have accomplished many worthwhile things in this job.’). Higher scores of emotional exhaustion and depersonalization and lower scores of personal accomplishment indicate higher levels of burnout. The MBI-ES was scored on a 7-point scale (‘never’ to ‘every time’, 1-7). A total burnout score was not computed following MBI-ES scoring guidelines. Instead, total scores were calculated for the three subscales using means. The MBI-ES has demonstrated good reliability and validity (Aboagye et al., 2018). In the current study, internal consistency for the baseline scores was: emotional exhaustion α = .91, depersonalisation α = .77, and personal accomplishment α = .69. Although the baseline score reliability for personal accomplishment was below 70, the reliability of post-programme scores was α = .82 and for the 3-month follow up scores was α = .83. We, therefore, included the personal accomplishment scale in our analyses.

***Data Analysis***

The quantitative data from PSS and MBI-ES were entered into and analysed using a statistical software package (IBM SPSS Statistics v.27). One-way repeated measures

Analyses of Variance (ANOVA) with time as the within-subjects factor were conducted to evaluate changes in participants' self-reported levels of stress, emotional exhaustion, depersonalisation, and personal achievement at the three assessment points: T1 (prior to the programme), T2 (immediately after the programme), and T3 (at 3-months follow-up). In order to correct for a potential Type I error, Bonferroni corrections were performed for post-hoc pairwise comparisons. The corresponding effect size is reported as partial eta squared ($\eta_p^2$). In addition, Pearson correlation coefficients were used to explore the relations- between changes in stress and changes in the three dimensions of burnout.

### 3.4. Results

#### *Stress*

A one-way repeated measures ANOVA was conducted to evaluate the effect of the Wellbeing Protocol on participants' self-reported stress over the study period. Results showed a statistically significant time effect for mean stress ratings, $F(2, 62) = 4.33$, $p = .001$, $\eta_p^2 = .12$, a large effect size (Cohen, 1992). Post hoc Bonferroni-corrected pairwise comparisons showed a statistically significant reduction in perceived stress from baseline to post programme ($p < .05$) and at three-month follow up ($p < .05$), suggesting that the reduction in perceived stress was maintained (Table 2).

**Table 2**

*Estimated Marginal Mean, Standard Deviation and Reliability for PSS*

| Measure | Mean T1 (*SD*) | Mean T2 (*SD*) | Mean T3 (*SD*) | Reliability ($\alpha$) |
|---|---|---|---|---|
| PSS | 35.18 (8.41) | 30.71 (7.66)* | 30.81 (10.05)* | .88 |

Notes: PSS = Perceived Stress Scale; PSS scores range from 1 to 7. *SD* = standard deviation.
*Statistically significant change from T1.

***Burnout***

A one-way repeated measures ANOVA was conducted to evaluate the effect of the Wellbeing Protocol on participants' self-reported levels of emotional exhaustion, depersonalisation, and personal achievement over the study period (See Table 3).

Results showed a statistically significant effect of time for emotional exhaustion ratings, $F(2, 62) = 6.71$, $p = .002$, $\eta_p^2 = .17$, a large effect size. Post hoc Bonferroni-corrected pairwise comparisons showed a statistically significant reduction in perceived emotional exhaustion from baseline to post programme ($p < .01$) and from baseline to three-month follow up ($p < .01$). Hence, teacher emotional exhaustion ratings continued to decline even after the wellness programme had been completed. The depersonalisation and personal achievement scales showed moderate improvements that were not statistically significant: depersonalisation $F(2, 62)=2.17$, $p = .123$, $\eta_p^2 = .06$ and personal accomplishment $F(2, 62)=1.85$, $p = .165$, $\eta_p^2 = .05$. The effect sizes were moderate and small respectively.

**Table 3**

*Estimated Marginal Means, Standard Deviations and Reliabilities for MBI-ES Subscales*

| **Measure** | **Mean T1 (*SD*)** | **Mean T2 (*SD*)** | **Mean T3 (*SD*)** | **Reliability (*α*)** |
|---|---|---|---|---|
| MBI-ES EE | 36.90 (11.64) | 32.12 (11.66)* | 30.78 (12.42)* | .91 |
| MBI-ES D | 9.03 (4.57) | 8.53 (4.05) | 7.93 (2.91) | .77 |
| MBI-ES PA | 47.06 (5.10) | 48.65 (5.66) | 47.93 (6.39) | .69 |

Notes: MBI-ES = Maslach's Burnout Inventory – Educator Survey; MBI-ES scores range from 1 to 7. The MBI-ES comprises the subscales EE (emotional exhaustion), D (depersonalization), and PA (personal achievement). SD = standard deviation. *Statistically significant change from T1.

### *Relationships Between Changes in Stress and Subscales of Burnout*

To examine the relations between changes in stress and changes in the subscales of burnout, Pearson correlation coefficients were calculated using change scores (PSS and subscales of MBI-ES) from T1 to T2 (i.e., pre- to post-programme). Changes in stress were significantly positively related to changes in emotional exhaustion ($r = .48$, $p < .001$) and negatively related to personal accomplishment ($r = -.62$, $p < .001$), meaning participants who showed a decrease in stress were also more likely to see a decrease in emotional exhaustion and an increase in personal accomplishment following the programme.

## 3.5. Discussion

The results reported here suggested that the mindfulness-based wellness programme had significant positive effects on teachers' wellbeing. With regard to measures of stress, participants showed statistically significant improvements both immediately following the programme and at follow-up assessment, with the eta squared showing a large effect size over time. This is consistent with similar findings that link mindfulness-based interventions with reductions in stress following a mindfulness-based intervention (Biegel et al., 2009b). Chronic stress can negatively impact physical health (McEwen, 2004) and the post-programme statistically significant reduction suggests that the programme might help reduce stress, supporting teachers' resilience and protecting them against stress-related illnesses. Future research with a larger sample would provide an opportunity to test whether the programme's effects on stress and physical symptoms are mediated by improvements on other variables such as measures of stress hormones cortisol or dehydroepiandrosterone (DHEA).

With regards to burnout, statistically significant intervention effects were found on the emotional exhaustion scale both immediately after the programme and three months later. This suggests the programme may help reduce fatigue in teachers by fostering the

development of inner resources to meet work demands effectively and engage with students and colleagues successfully. Emotional exhaustion is considered the core dimension of burnout (Maslach et al., 2001). It is conceptualised as feeling overextended and depleted of one's physical and emotional resources (Maslach et al., 2001). This absence of resources is a determining factor to burnout development according to the conservation of resources (CORs) theory (Hobfoll, 2002). COR posits that strain develops due to a perceived threat to individual physical or psychological resources, or an actual loss of these resources resulting in an imbalance between job demands and resource availability (Hobfoll, 2002). Hobfoll (2002) argued that burnout develops particularly when there is an imbalance between resource investment and lack of appropriate resource replenishment. As a consequence, individuals are reluctant to invest in their job either physically or emotionally, they develop negative affective states and attitudes towards students or colleagues, and are overall less effective. Consequently, their job performance suffers (Hultell et al., 2013). The mindfulness-based wellness programme may be particularly suited to address emotional exhaustion as it specifically targets the development of mental and emotional resources through mindset training and regular self-care routines. It is notable that the intervention did not demonstrate statistically significant effects on the depersonalisation or personal accomplishment scales. It is worth noting that baseline levels on the depersonalisation scale were relatively low and the personal accomplishment scores were high possibly resulting in floor and ceiling effects (see Table 3).

Overall, the quantitative findings provide preliminary support for the mindfulness-based programme as a potential resource to improve teacher wellbeing.

### 3.6. Limitations and Suggestions for Future Research

Limitations of this study design include the small sample size and the lack of a control group, which restricts our ability to rule out the influence of confounding variables on the

results. A control group was not used because all the teachers who volunteered expressed a desire to receive the intervention as soon as possible due to high levels of stress caused by the COVID-19 pandemic unfolding. Given the small numbers of volunteers it was decided to assign all teachers to receive the programme. Considering that research on stress, burnout, and mental health of teachers during the 2020 COVID-19 outbreak showed an increase in stress and burnout (Giorgi et al., 2020; Pressley, 2021; Sokal et al., 2020a), we can infer that the decrease in symptoms presented in this study can be attributed to the mindfulness-wellness programme. In the future, it would be of interest to explore the impact of the mindfulness-wellness programme on larger samples, with randomised controlled trials and in different workplace contexts.

This study relied on the use of self-report measures for data gathering. These measures are by nature subjective and may be influenced by response shift bias (Howard & Dailey, 1979). Both the PSS and MBI-ES, however, are widely-used instruments in research on teachers as well as other populations and they have been shown to be reliable in studies that combined self-report measures with observations or physiological markers such as cortisol levels (Biegel et al., 2009b; Golkar et al., 2014). In future studies, objective measures such as salivary cortisol, dehydroepiandrosterone or heart rate variability could address threats to validity raised by the use of self-report measures. Longer trials and longitudinal studies would also enable conclusions to be drawn about the effectiveness of the programme in reducing stress and burnout over time.

### 3.7. Conclusion

Addressing teacher stress and burnout is becoming a priority as awareness grows that teachers who are stressed, burned out, and over-worked lack the resources to create thriving classroom environments and engaging learning opportunities (Beshai et al., 2016; Hwang et al., 2017). The present study, which measured levels of teacher stress and burnout during

COVID-19, adds to the growing body of literature that suggests that mindfulness-based wellness programmes could be used effectively to support the development of stress management and resilience skills in teachers and buffer against future burnout or mental illness. It is important, however, to highlight the fact that mindfulness-based programmes are not a panacea and need to be implemented alongside organisational processes that foster healthy workplaces.

The study suggests that the Wellbeing Protocol is a promising option to support teacher wellbeing and fills an important professional development gap that has been long unaddressed. The programme may also represent a suitable option for workplaces in other domains looking to reduce employee stress and support their staff development of protective mechanisms against burnout.

# CHAPTER FOUR: A WORKPLACE WELLNESS PROGRAM PROTECTS AGAINST COVID-19 EFFECTS ON MENTAL WELLBEING

The previous chapter discussed the impact of the Wellbeing Protocol on teacher stress and burnout. It contained the methodology and findings of our first empirical study. The current chapter features our second empirical study which addressed the impact of the Wellbeing Protocol on teacher mental wellbeing and mindfulness levels. The chapter has been submitted to the *Journal of Workplace Behavioural Health.* The proposed citation is: Toma, G. F., Rubie-Davies, C. M., & Le Fevre, D. Decreasing stress and burnout during the COVID-19 pandemic: A quantitative analysis. *Journal of Workplace Behavioural Health*. Manuscript submitted for publication.

**Abstract**

The outbreak of the COVID-19 pandemic had deleterious effects on workers' mental wellbeing. The current study investigated the impact of an online workplace wellness programme on teacher mental wellbeing and mindfulness during the first four months of a nation-wide quarantine in New Zealand. Longitudinal data at three time points were examined: baseline, end of programme, and 3 months post-programme. Tests of paired data of baseline versus the later time points found statistically significant improvements in mental wellbeing (Warwick-Edinburg Mental Wellbeing Scale) and mindfulness (The Five Facets Mindfulness Questionnaire) with large effect sizes. Mindfulness scores were higher at 3 months follow up compared to end-of-programme suggesting teachers' mindfulness ratings continued to improve after programme completion. Implications for research and workplace training are discussed.

*Keywords*: mindfulness; wellbeing; intervention; teachers; COVID-19; mindfulness-based intervention

## 4.1. Introduction

COVID-19 was officially declared a pandemic on 11 March 2020 by the World Health Organisation (World Health Organisation, 2020). The infection initially reported in December 2019, reached New Zealand on 28 February 2020 causing the New Zealand Government to institute nation-wide self-isolation and a State of National Emergency on 25 March 2020 (New Zealand Government, 2021). Teachers were among the occupations significantly impacted by work-from-home policies as they were required to change their instructional practice from face-to-face to online in a very short period of time. The onus placed on teachers was significant as they grappled with developing online teaching material, becoming familiarised with digital platforms while training their students how to use them, ensuring they delivered the required curriculum, and performing all due assessments. For many teachers, these work obligations were exacerbated by their caring duties either for their own children who required home-schooling, or for elderly parents and/or relatives. Global surveys across different professions found that mandatory lockdowns, social distancing, home-schooling, and other COVID-related changes to one's work, caused a rise in stress, burnout symptoms, and mental distress (Giorgi et al., 2020; Lund et al., 2021; Tucker & Czapla, 2021). Although there are no New Zealand surveys dedicated specifically to educators, it can be inferred teachers experienced similar, if not more acute symptoms given that stress and burnout had already been prevalent in the profession (Aluja et al., 2005; Collie, 2021; Hultell et al., 2013; Sokal et al., 2020a). Two recent studies dedicated to exploring the mental wellbeing of US (Pressley, 2021) and Canadian teachers (Sokal et al., 2020a) during the COVID-19 pandemic support this claim. Pressley (2021) found higher rates of burnout for US teachers, with the highest stressors being virus exposure anxiety, teaching demands, and parent communication. Similarly, Sokal et al. (2020a) found an increase in emotional exhaustion and cynicism, two of the three dimensions of burnout

(Maslach et al., 2001), in Canadian teachers during the first three months of the COVID-19 pandemic outbreak.

Both Pressley (2021) and Sokal et al. (2020a) called for schools to support teachers in managing stress and burnout symptoms, although they did not provide specific examples of how that could be achieved. In their review of pandemic effects on worker wellbeing, Giorgi et al. (2020) recommended the organisational implementation of anti-contagion measures and of resilience and wellbeing programmes. Gabriel and Aguinis (2021) also highlighted that wellbeing interventions, particularly those underpinned by cognitive behavioural therapy or mindfulness, can be effective in reducing stress and burnout symptoms. Indeed, existing literature on the impact of mindfulness and wellness workplace training showed promising results and called for more research to be done in this space (Baicker et al., 2010; Carolan et al., 2017).

To date there were no intervention studies examining the impact of a mindfulness-based programme on teacher wellbeing in New Zealand (NZ), or elsewhere, during the COVID-19 pandemic. In fact, NZ teacher wellbeing and mindfulness had been under-researched. Most previous studies focused on burnout (Bianchi et al., 2016; Milfont et al., 2008; Whitehead et al., 2000), with the exception of Bernay (2014) who investigated the impact of mindfulness practices for first-year teachers. Considering the impact of COVID-19 on teacher wellbeing (Education Review Office, 2021) and the promising results mindfulness-based interventions had yielded in teacher populations elsewhere (For a review see Emerson et al., 2017; Hwang et al., 2017), it was imperative to investigate the acceptability and effectiveness of a mindfulness-based intervention on NZ teacher mental wellbeing.

The wellness programme employed was called “The Wellbeing Protocol” (WP) and included mindfulness, meditation, and cognitive behavioural techniques to improve

participants' mental wellbeing. WP was based on the core mindfulness principles of Mindfulness-Based Stress Reduction (MBSR; Stahl & Goldstein, 2010; Williams & Penman, 2011) and Mindfulness-Based Cognitive Therapy (MBCT; Crane, 2009) adapted for non-clinical populations and designed to offer practical, accessible, and relevant training to adults in a workplace context. Like MBSR and MBCT, WP was a group-based intervention designed to be delivered by an experienced mindfulness trainer. Unlike the other two MBIs however, WP was adapted to fit into a workplace context in several ways: (1) the mode of delivery was online to minimise disruption to work schedules and allow participants who could not attend the live sessions to watch replays; (2) the number of hours compared to MBSR (26 hours session time) was reduced to 12 hours; (3) team challenges were run throughout the duration of the programme to foster the creation of a community of practice in the workplace; (4) the practical application of the principles discussed referred to workplace contexts such as deadlines, having difficult conversations, or keeping calm under pressure.

## 4.2. Theoretical Context

### *Mental Wellbeing and Mindfulness*

Positive mental wellbeing represented an important protective factor against mental health issues (Gargiulo & Stokes, 2009). It has been shown to be a significant contributor to psychological functioning, as well as to health and social outcomes (Stewart-Brown et al., 2009). The term has been used in both academic literature and policy interchangeably with positive mental health (Hunter et al., 2015). Following a period of disagreement on its definition, the concept was accepted to cover two main aspects of wellbeing: eudaimonic, meaning positive functioning, and hedonic, meaning subjective wellbeing and happiness (Clarke et al., 2011; Hunter et al., 2015; Tennant et al., 2007a). Keyes (2007) argued that it took a combination of these two aspects for a person to be considered mentally healthy, and not merely the absence of mental illness. This was reflected in the last decade by the gradual

shift from assessing mental health almost exclusively by measures of psychological distress or mental illness, to inclusion of instruments that capture the eudaimonic and hedonic dimensions and their inherent protective factors such as feelings of joy and contentment, positive relations with others, autonomy, and sense of purpose in life (Hunter et al., 2015; Ng Fat et al., 2017). There are few studies that have explored the relations between these aspects of mental wellbeing and mindfulness (See Beshai et al., 2016 and Lomas et al., 2017 for two exceptions) and none that we could locate that investigated this relation in the context of a wellness programme delivered during the COVID-19 pandemic.

The most widely used definition of mindfulness in the current literature came from Kabat-Zinn (2013, p. 4): "Paying attention in a particular way: on purpose, in the present moment, and non-judgementally". Originally stemming from Buddhist meditation practice, mindfulness in the West retained the core tenet of this tradition, namely that the state of present moment, non-judgemental awareness could be cultivated through the intentional and regular practice of meditation (Bennett & Dorjee, 2016; Chaskalson, 2011). Mindfulness practice touched upon different aspects, and although the number and definition of these facets varied in the literature, the most commonly cited ones, which the present study also adhered to, stemmed from the work of Baer et al. (2006) and they included: *observing* (i.e., noticing external and internal stimuli, such as emotions, sensations, thoughts, sounds), *describing* (i.e., mentally labelling these stimuli), *acting with awareness* (i.e., being present and intentional with one's action as opposed to acting on automatic pilot or absent-mindedly), *non-judging of inner experience* (i.e., not evaluating one's emotions or cognitions), and *non-reactivity to inner experience* (i.e., not reacting to, impulsively acting on or allowing attention to become identified with emotions or cognitions). A growing body of research has associated mindfulness with beneficial effects such as improved emotional and cognitive

functioning (Jha et al., 2010), reduced stress (Anastasiades et al., 2017; Bennett & Dorjee, 2016), and improved immune function (Davidson et al., 2003).

### *Mindfulness-Based Interventions and Wellness Programmes in the Workplace*

Mindfulness-based interventions (MBIs) have recently been integrated into workplaces with positive results on a variety of markers such as reduced stress and burnout, improved performance, workplace relationships, and motivation (Aikens et al., 2014; Good et al., 2016). Given its positive outcomes, mindfulness training was made available to teachers in order to enhance their wellbeing and health (Ancona & Mendelson, 2014; Felver & Jennings, 2016; Flook et al., 2010, 2013). MBIs for teachers have been shown to support reductions in stress and burnout symptoms, and increases in emotional regulation (Flook et al., 2013; Hue & Lau, 2015; Jennings, 2011; Molloy Elreda et al., 2019). Bernay (2014), Roeser (2014), and Roeser et al. (2013) each recommended the inclusion of mindfulness training in teacher development programmes given its positive impact on emotion regulation and stress reduction.

Reviews of existing literature suggested that MBIs led to significant improvements in wellbeing, although most studies used measures of mental distress to ascertain this (Grégoire et al., 2015). In their review of mindfulness studies, Goyal et al. (2014) observed that few studies included wellbeing indicators and recommended further research to be undertaken in order to investigate the relationship between MBIs and eudaimonic and hedonic aspects of wellbeing. Additionally, the effect of MBIs over time needed to be further explored. In a meta-analysis of the impact of MBIs on employee psychological distress, Virgili (2015) concluded that follow-up times were short in most cases (an average of 8.3 weeks) and further studies should explore more the effectiveness of mindfulness training over time. Carmody and Baer (2008) pointed out that there was a need to investigate the mechanisms by which mindfulness training exerted positive effects, particularly assessing whether

participants in an MBI actually became more mindful over time, and if so, whether this increase was correlated with mental wellbeing outcomes.

The present study set out to examine these questions in relation to a mindfulness-based wellness programme, The Wellbeing Protocol (WP), which was delivered online to New Zealand teachers in the first four months of the COVID-19 pandemic outbreak. The programme consisted of 12 sessions on topics such as stress reduction techniques, managing emotions, mindfulness, and cognitive patterns that cause anxiety. Participants engaged in individual practice in between sessions. The practice changed weekly, and it typically involved the technique presented in the live session and an accompanying guided audio meditation. Participants were provided with several guided audio meditations to choose from and, also, with Wellbeing Cards, a series of visual prompts that aimed to foster adoption of positive habits of mind.

### 4.3. Methodology

#### *Participants*

Participants were selected from a sample of New Zealand teachers who responded to Facebook advertisements. The only selection criterion was to be actively employed. Participants volunteered and gave active consent to participate in the study in accordance with ethical research guidelines. Participants received no compensation or incentives to be part of the intervention or to complete the data collection. Table 1 provides demographic information for the sample. Overall, the results were not disaggregated by age, gender, or instructional context due to the small sample size ($N$ = 32).

**Table 1**

*Demographic Data*

| Demographic variables | | | | | |
|---|---|---|---|---|---|
| Age | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 |
| | 3% | 16% | 31% | 47% | 3% |
| Gender | Female | Male | | | |
| | 97% | 3% | | | |

### *Data Collection*

Data were collected before, immediately after, and 3 months following programme completion. The self-reported mindfulness and wellbeing measures used were combined into a single online survey, which was emailed to participants at the three collection times above.

### *Measures*

#### Mindfulness.

Mindfulness was measured using a short form of the Five-Facet Mindfulness Questionnaire (FFMQ-15; Baer et al., 2006, 2012). The scale was comprised of 15 items and measured five aspects of mindfulness: observing (e.g., "I watch my feelings without getting lost in them"), describing (e.g., "My natural tendency is to put my experiences into words"), acting with awareness (e.g., "When I do things, my mind wanders off and I'm easily distracted"; reverse coded), non-judging of inner experience (e.g., "I think some of my emotions are bad or inappropriate and I shouldn't feel them"; reverse coded), and non-reactivity to inner experience (e.g., "When I have distressing thoughts or images, I feel calm soon after"). The FFMQ-15 was scored on a 7-point scale ('never' to 'every time', 1-7), with 7 items reverse scored. This scale has demonstrated good reliability and validity (Baer et al., 2006, 2012; Gu et al., 2016). Gu et al. (2016) recommended the exclusion of the observing

facet from comparisons of total or subscale scores before and after mindfulness interventions. The present study followed this recommendation and a total mindfulness score was not computed. Instead, total scores were calculated for the remaining four dimensions of mindfulness. In the current study, internal consistency for the baseline scores was: describing $\alpha = .78$, acting with awareness $\alpha = .60$, non-judging of inner experience $\alpha = .77$, and non-reactivity to inner experience $\alpha = .85$. Although the baseline score reliability for acting with awareness was below 70, the reliability of post-programme scores was $\alpha = .82$. We therefore included the sub-scale in our analyses.

**Wellbeing.**

Wellbeing was measured using the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS; Stewart-Brown et al., 2009). The scale captured a broad representation of wellbeing including psychological functioning (e.g., "I've been thinking clearly"), cognitive-evaluative dimensions (e.g., "I've been dealing with problems well"), and affective-emotional aspects (e.g., "I've been feeling cheerful"). The scale consisted of 14 positively-phrased items that asked participants to rate their experience over the previous two weeks. The WEMWBS was scored on a 7-point scale ('never' to 'every time', 1-7) and the items were summed into a total wellbeing score (range 14-98). This scale previously demonstrated good reliability and validity (Stewart-Brown et al., 2009; Tennant et al., 2007a). In the current study, internal consistency for the baseline scores was $\alpha = .96$.

***Data Analysis***

The quantitative data from FFMQ-15 and WEMWBS were entered into and analysed using a statistical software package (IBM SPSS Statistics v.27). One-way repeated measures Analyses of Variance (ANOVA) with time as the within-subjects factor were conducted to evaluate changes in participants' self-reported levels of describing, acting with awareness, non-judging of inner experience, non-reactivity to inner experience, and wellbeing at the

three assessment points: T1 (prior to the programme), T2 (immediately after the programme), and T3 (at 3-months follow-up). In order to correct for a potential Type I error, Bonferroni corrections were performed for post-hoc pairwise comparisons. The corresponding effect size was reported as partial eta squared ($\eta_p^2$). In addition, Pearson correlation coefficients were used to explore the relations between changes in wellbeing and changes in the four dimensions of mindfulness.

### 4.4. Results

#### *Mindfulness*

A one-way repeated measures ANOVA was conducted to evaluate the effect of the programme, over the study period, on participants' self-reported levels of describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience.

Results showed a statistically significant effect by time for all four mindfulness facets: describing $F(2, 62) = 6.73$, $p = .002$, $\eta_p^2 = .17$, acting with awareness $F(2, 62) = 7.50$, $p = .001$, $\eta_p^2 = .19$, non-judging of inner experience $F(2, 62) = 8.90$, $p = .001$, $\eta_p^2 = .22$, and non-reactivity to inner experience $F(2, 62) = 8.30$, $p = .001$, $\eta_p^2 = .21$, all with large effect sizes (Table 2). Post hoc Bonferroni-corrected pairwise comparisons showed a marginally significant reduction in all four facets from baseline to post programme ($p < .01$) and a statistically significant reduction from baseline to three-month follow up ($p < .01$). Hence, teacher mindfulness ratings continued to improve after the Wellbeing Protocol had been completed.

**Table 2**

*Estimated Marginal Means, Standard Errors, Time Effect Size, and Reliabilities For FFMQ-15*

| Measure | Mean T1 (SE) | Mean T2 (SE) | Mean T3 (SE) | Reliability (α) |
|---|---|---|---|---|
| FFMQ-D | 13.38 (.61) | 14.69 (.56)* | 14.91 (.51)* | .78 |
| FFMQ-AA | 13.13 (.50) | 14.31 (.47)* | 14.78 (.30)* | .60 |
| FFMQ-NJ | 14.63 (.49) | 15.97 (.45)* | 16.63 (.44)* | .77 |
| FFMQ-NR | 11.75 (.66) | 13.50 (.48)* | 13.59 (.61)* | .85 |

Notes: FFMQ = Five-Facet Mindfulness Questionnaire; FFMQ scores range from 1 to 7. The FFMQ comprises the subscales D (describing), AA (acting with awareness), NJ (non-judging of inner experience), and NR (non-reactivity to inner experience). SE = standard error. *Statistically significant change from T1.

***Wellbeing***

A one-way repeated measures ANOVA was conducted to evaluate the effect of WP on participants' self-reported wellbeing over the study period. Results showed a statistically significant effect for time for mean wellbeing ratings, $F(2, 62) = 4.41$, $p = .016$, $\eta_p^2 = .12$, a large effect size. Post hoc Bonferroni-corrected pairwise comparisons showed a statistically significant increase in wellbeing from baseline to post programme ($p < .05$) and a non-statistically significant reduction at three-month follow up. T2 and T3 means are, however, higher than T1, suggesting that the improvement in wellbeing was maintained at three-month follow-up (Table 3).

**Table 3**

*Estimated Marginal Means, Standard Errors, and Reliabilities for WEMWBS*

| Measure | Mean T1 (SE) | Mean T2 (SE) | Mean T3 (SE) | Reliability (α) |
|---|---|---|---|---|
| WEMWBS | 62.12 (2.29) | 69.68 (2.18)* | 65.53 (2.68) | .96 |

Notes: WEMWBS = Warwick-Edinburg Mental Wellbeing Scale; WEMWBS scores range from 1 to 7. SE = standard error. *Statistically significant change from T1.

***Relations Between Changes in Wellbeing and the Four Mindfulness Facets***

To examine the relations between changes in wellbeing and changes in the subscales of mindfulness, Pearson correlation coefficients were calculated using change scores (WEMWBS and subscales of FFMQ) from T1 to T2 (i.e., pre- to post-programme). Changes in wellbeing were statistically significantly positively related to changes in describing $r(30) = .42$, $p = 0.015$, acting with awareness $r(30) = .41$, $p = .020$, and non-reactivity to inner experience $r(30) = .47$, $p = .006$, meaning participants who showed an increase in mindfulness facets describing, acting with awareness, and non-reactivity to inner experience were also more likely to see an increase in mental wellbeing following the programme. There were no statistically significant correlations between wellbeing and non-judging of inner experience (Table 4).

**Table 4.**

*Pearson Correlations Between Mindfulness Facets and Wellbeing*

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. WEMWBS | - | | | | |
| 2. FFMQ-D | .42* | - | | | |
| 3. FFMQ-AA | .41* | .40* | - | | |
| 4. FFMQ-NJ | .21 | .35* | .43* | - | |
| 5. FFMQ-NR | .47** | .31 | .21 | .37* | - |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

### 4.5. Discussion

The present study explored the impact of a mindfulness-based wellness programme (WP) on teachers during the first months of a national lockdown in New Zealand due to COVID-19. The results suggested that WP had statistically significant positive effects on teachers' wellbeing. The post programme scores showed statistically significant improvements in mental wellbeing and although the three months follow-up results did not reach statistical significance, the eta squared showed that the effect size over time was large. This is consistent with emerging evidence regarding the effectiveness of mindfulness-based interventions in improving components of wellbeing such as positivity or coping (Beshai et al., 2016; Flook et al., 2013). Given the high levels of stress and burnout reported by teachers and captured in the emerging COVID-19 literature, the findings of this study point to a promising workplace intervention that may be capable of supporting teachers.

Additionally, the results showed statistically significant increases in all four dimensions of mindfulness analysed, with large effect sizes that continued at three-months

follow up. This suggests WP supported participants in developing the ability to put their experience into words; to be in the present moment and act with awareness; to recognise their thoughts, emotions, and states; and accept them with equanimity and non-reactivity. These findings are consistent with literature on MBIs' impact on teacher stress (Roeser et al., 2013), burnout (Flook et al., 2013), and wellbeing (Beshai et al., 2016), pointing to MBIs beneficial effects even during a global pandemic, which had not previously been investigated.

Furthermore, the scores on all four mindfulness facets increased at three months' follow-up, suggesting that WP had long-lasting effects on teachers and the mindfulness skills they acquired continued to develop after programme completion. This is highly significant given that in order to combat the habitual patterns of thinking and reacting that cause chronic stress, consistency in practice is required. The current findings show WP may be suitable to support teachers in developing that consistency. Meiklejohn et al. (2012) suggested that teachers who have an established mindfulness practice might be better equipped to teach their students. Similarly, Bernay (2014) and Jennings (2011, 2015a, 2015b) advocated that mindfulness skills can support teachers in creating supportive and effective learning environments for their students. Therefore, WP might be a suitable intervention to be included in school professional development programmes.

### 4.6. Strengths and Limitations

This study possessed a number of strengths. First, as mentioned above, there are to date no other studies that explore the impact on an MBI on teachers during a global pandemic outbreak in New Zealand or elsewhere, so this study addresses a gap in the literature. Second, there are very few studies investigating modified MBIs in the workplace and this study examined the impact of a short MBI adapted to fit into a busy teacher schedule. Third, the promising positive impact as evidenced by the large effect sizes on both measures point to a firm basis for further research. A final strength worth mentioning is the content of the

intervention, which was informed by mindfulness-based stress reduction (Stahl & Goldstein, 2010), cognitive therapy (Crane, 2009), and mainstream adaptations (M. Williams & Penman, 2011).

There were also several limitations. The sample was small and relatively homogenous (mostly female), suggesting the need to investigate in larger samples representative of the teacher population. Additionally, the lack of a control group restricted our ability to rule out the influence of confounding variables on the results. A control group was not used due to the small volunteer pool and their expressed desire to receive the intervention immediately to help cope with the stress and anxiety caused by the pandemic outbreak. Further, the study relied on self-report measures, which are subjective and open to influence by response bias (Howard & Dailey, 1979). Future research could employ a greater variety of methods to assess wellbeing and stress, such as adrenal hormone dehydroepiandrosterone (DHEA), heart rate variability, or salivary cortisol.

### 4.7. Conclusion

Addressing teacher stress is becoming a priority especially in the post-pandemic workplace. As awareness that teachers with poor mental wellbeing are unable to create engaging learning environments grows (Beshai et al., 2016; Hwang et al., 2019), the need to provide suitable teacher training to promote wellbeing becomes all the more acute. The findings of the current study suggest that the Wellbeing Protocol might be a promising option.

# CHAPTER FIVE: THE WELLBEING PROTOCOL MITIGATES THE EFFECTS OF COVID-19 ON STRESS AND BURNOUT. A QUALITATIVE ANALYSIS OF THE UNDERLYING MECHANISMS

The previous two chapters (Chapters 3 and 4) presented the quantitative findings related to the impact of the Wellbeing Protocol on teacher stress, burnout, mental wellbeing, and mindfulness. The current chapter (Chapter 5) introduces the final empirical study in our project. This study draws on qualitative data to capture participants' personal experience of the Wellbeing Protocol and the underlying mechanisms by which the programme impacted the above-mentioned dimensions. The chapter has been submitted to the *Journal of Workplace Learning.* The proposed citation is: Toma, G. F., Rubie-Davies, C. M., & Le Fevre, D. Decreasing stress and burnout during the COVID-19 pandemic: A quantitative analysis. *Journal of Workplace Learning*. Manuscript submitted for publication.

**Abstract**

**Purpose** – This paper aims to convey and analyse participants' experience of a workplace wellness programme during the COVID-19 pandemic outbreak, with the aim of understanding the underlying mechanisms of how the programme impacted stress, burnout, and mental wellbeing.

**Design/methodology/approach** – Teachers participated in an online mindfulness-based wellness programme in 2020. Participants' experience was captured via focus groups and open-ended survey questions collected before, immediately after, and 3-months following the intervention. The data were analysed using thematic analysis.

**Findings** – Three themes emerged: self-awareness and non-reactivity may facilitate a reduction in stress levels, the purposeful cultivation of self-care and positive emotions may be a precursor to enhanced wellbeing, positive relationships with others and evidence of effectiveness at work may mitigate burnout symptoms. Findings depicted effective strategies to improve wellbeing as well as promising areas for further research.

**Originality** – This study shows promising results given the current rather limited research on mindfulness-based workplace wellness interventions. This study advances this area of research and provides insights into what seems to be effective.

**Practical implications** – A useful programme to improve employee wellbeing and reduce stress and burnout symptoms is identified.

**Keywords** – workplace wellness, workplace learning, stress, burnout, wellbeing, intervention

## 5.1. Introduction

The COVID-19 outbreak had a significant impact on employee wellbeing. High stress levels were reported across all occupation sectors (Lund et al., 2021). A McKinsey Global Institute survey showed that in January 2021, 49% of employees across the US, Latin America, Europe, Australia, and Asia were experiencing burnout symptoms, which, the authors suggested, might be an underestimate given that burned out employees are less likely to respond to survey requests (Alexander et al., 2021). The rise in employee stress and burnout seems to have continued in the post-pandemic economy and is likely to do so at least for the foreseeable future, primarily due to the changing nature of work arrangements and risk of virus exposure for those in high physical proximity jobs (Lund et al., 2021).

Teachers have been particularly impacted given that they work in a high physical proximity occupation. Further, the measures taken to reduce the spread of the SARS-CoV-2 virus in 2020, namely social distancing and home isolation, required educators to rapidly adapt to many changes such as online modes of instruction, using new technologies and increasing workloads (Pressley, 2021; Sokal et al., 2020a). The full impact that these changes had on educator wellbeing remains to be fully examined. Studies on the impact of organisational change on employee wellbeing show that change is correlated with increases in stress and uncertainty (Guidetti et al., 2018). In 2020, these were likely augmented by the unpredictable evolution of the global pandemic and the increasing number of casualties. Current literature indicates that heightened uncertainty leads to a lessened sense of control over events, which creates psychological discomfort and, in turn, exacerbates stress and burnout symptoms (Rafferty & Griffin, 2006).

Given the above considerations, it seems imperative for workplaces to cater to employee wellbeing and to provide effective support. In fact, increased focus on wellbeing at work was employees' fourth most desired workplace change in 2021 (Alexander et al., 2021).

Although there is a lack of global survey data dedicated specifically to educators, we can infer based on existing facts and research that the need to enhance their wellbeing is similar, if not more acute than the need within the general population. This claim is supported by two recent studies which showed increases in burnout symptoms in Canadian and US teachers due to COVID-19 (Pressley, 2021; Sokal et al., 2020a). Workplace wellness programmes represent an option to address this need. Several studies have shown such programmes have a positive impact on employee health outcomes, as well as on productivity and employee retention (Baicker et al., 2010; Carolan et al., 2017).

The present paper explored the effectiveness of a mindfulness-based workplace wellness programme provided online to 32 teachers during the 2020 pandemic outbreak. The wellness programme is called *The Wellbeing Protocol* and it has a strong focus on skill development in the areas of self-awareness, stress reduction, and effective management of thoughts, emotions, and behaviours to achieve positive outcomes. Participant levels of stress, burnout and wellbeing were measured before, immediately after, and three months following programme completion through standard quantitative instruments. The quantitative data (Toma et al., under reviewb, under reviewa) showed significant improvements on all three scales and the current paper aims to explore the mechanisms underpinning these results through the lens of participants' voice as captured in focus groups and open-ended survey questions.

## 5.2. Theoretical Context

### *Stress and Burnout*

Stress and burnout had been intrinsic to the teaching profession long before the pandemic, being a major cause of employee attrition (Schussler et al., 2016). In the United States for example, 50% of teachers leave the profession in the first 5 years (Schussler et al.,

2016). In New Zealand, 37% of teachers resign by the end of their third year (Bernay, 2014). Many who remain in the profession experience high stress and burnout symptoms.

Applying a systems approach to teacher workplace stress, Jennings et al. (2019) identified two main categories of triggers. The first relates to organisational structures, for example, job demands and resources available. The second involves individual skills and competencies, such as teachers' skill in managing stressors and regulating their emotions.

Jennings and Greenberg (2009) have shown that in the absence of tools or support to combat stress and burnout symptoms, the results may be a "burnout cascade" (2009, p. 492), meaning teachers resort to maladaptive coping strategies which further intensify existing problematic conditions. When teachers lack the emotional regulation resources to effectively manage their response to stressors, they are likely to default to reactive behaviours that engender a vicious cycle of classroom disruption (Jennings et al., 2019). This results in increased frustration and exhaustion for the teacher, which impacts work performance and the quality of interactions with students, colleagues, and school leaders (Schussler et al., 2016). Breaking these reactive cycles requires highly-developed abilities to understand and to manage one's thoughts, emotions, and behaviours effectively; to empathise with others; and to make considerate and constructive choices about personal behaviour and social interactions (Abenavoli et al., 2013; Jennings et al., 2013).

### *Wellbeing*

The concept of wellbeing is complex and for a long time it eluded researcher's attempts to define it (Dodge et al., 2012). In their work, Dodge and colleagues (2012) identified three key aspects required for a comprehensive definition of wellbeing: (1) the idea of a set point for wellbeing; (2) the individual's need for equilibrium/the inevitability of homeostasis; and (3) the intrinsic fluctuating relationship between challenges and resources. They therefore defined wellbeing as "the balance point between an individual's resource pool

and the challenges faced" (Dodge et al., 2012, p. 230). They showed that the nature of wellbeing was not static, but rather continuously changing so as to reach a stable point where the individual acquired the psychological, social, and physical resources needed to meet specific challenges.

In their analysis of 99 self-report measures for wellbeing, Linton and colleagues (2016) identified five recurrent themes embedded in the concept: mental wellbeing, social wellbeing, activities and functioning, physical wellbeing, spiritual wellbeing, and personal circumstances. The present study focuses on mental wellbeing. Although in the past there has been disagreement about the relationship between positive mental health and mental wellbeing, recently a reasonable level of consensus has been established. Thus, mental wellbeing is now largely seen as covering two aspects: (1) the subjective experience of happiness and life satisfaction, also known as the hedonic perspective; and (2) positive psychological functioning, good relationships with others and self-realisation, also known as the eudaimonic perspective (Tennant et al., 2007b). This perspective also includes aspects such as autonomy, self-acceptance, competence, and the capacity for self-development (Dodge et al., 2012; Ng Fat et al., 2017).

### *Workplace Learning and Wellness Programs for Teachers*

Many countries provide workplace learning opportunities for teachers with the aim of improving teaching quality, student academic outcomes, and teacher retention (Philipsen et al., 2019; Postholm, 2012). Very few professional development programmes, however, address the need for specific instruction in the areas of stress reduction skills or social-emotional competencies to meet the demands of the profession effectively. Social-emotional competencies refer to a set of skills that include the ability to understand one's own emotions and thoughts and those of others, to establish and maintain healthy relationships and to make considerate and constructive choices about personal behaviour and social interactions across

a variety of contexts (CASEL, 2021). Possessing such competencies has been shown to improve teacher effectiveness and student academic outcomes (Abenavoli et al., 2013). Yet, there is a scarcity of programmes that support the development of these skills.

There is a growing body of research showing that mindfulness-based workplace wellness programmes can improve teachers' social-emotional competencies and their ability to manage stress, while reducing burnout symptoms (Beshai et al., 2016; Hwang et al., 2017; Jennings, 2015b). In addition, some studies have found that following such programmes, teachers report reduced anxiety and depression (Jennings et al., 2019), improved engagement (Castillo-Gualda et al., 2019), perceived job control, and efficacy (Domitrovich et al., 2016).

This promising initial research needs to be further expanded in order to clearly understand the underlying mechanisms of how mindfulness-based wellness programmes impact stress, burnout, and wellbeing.

### 5.3. Research Questions

The current study focuses on understanding the role of the mindfulness-based wellness programme *The Wellbeing Protocol* in influencing teacher levels of wellbeing, stress, and burnout. We used a qualitative explanatory design (McMillan, 2004), expanding on the quantitative results of the trial (Toma et al., under reviewb, under reviewa) to explore participants' beliefs about how aspects of the programme related to outcomes. Our specific research questions were:

1. Does the *Wellbeing Protocol* affect teachers' stress levels and if so, how?
2. Does the *Wellbeing Protocol* affect teachers' burnout levels and if so, how?
3. Does the *Wellbeing Protocol* affect teachers' wellbeing levels and if so, how?

## 5.4. Methodology

### *Participants*

Participants included teachers and paraprofessionals from public and private schools in New Zealand ($N$ = 32). Participants volunteered and gave active consent to participate in the study in accordance with ethical research guidelines. Participants received no compensation or incentives to be part of the intervention nor to complete the data collection. Table 1 provides demographic information for the sample.

**Table 1**

*Demographic Data*

| Demographic variables | | | | | |
|---|---|---|---|---|---|
| Age | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 |
| | 3% | 16% | 31% | 47% | 3% |
| Gender | Female | Male | | | |
| | 97% | 3% | | | |

### *Data Collection*

Qualitative data consisted of transcripts from four focus groups comprising a total of 14 participants and open-ended survey questions collected before and after the intervention and at 3-months follow-up. Focus groups were conducted after the intervention and the quantitative data collection ended. Their purpose was to solicit in-depth information from the teachers' perspectives as to if, how, and why certain outcomes showed effects. They were semi-structured and lasted approximately 1 hour each. They took place online via Zoom, after work, on days that participants agreed was convenient to their schedules, within two weeks of programme completion.

The focus group protocol was developed according to Krueger and Casey (2015) guidelines and consisted of questions related to what went well in the programme, what needed improvement, if anything was different in their life because of the programme and if they noticed any change in their stress and wellbeing level. Participants were encouraged to elaborate on their responses and to engage in dialogue with each other if they felt the need.

Open-ended survey questions were administered before and after the programme and at 3 months follow-up using online survey software. Participants received the survey link by email and were asked to complete it within a 4-day window.

***Data Analysis***

The data from the focus groups transcriptions and the survey questions were analysed using thematic analysis, by identifying, analysing, and reporting themes from the data-set (Braun & Clarke, 2006). An inductive rather than a theoretical approach was selected in order to allow for the content of participants' responses to generate categories and themes that were not necessarily dictated by the questions employed (Braun & Clarke, 2006).

The qualitative data-set was analysed following the process outlined by Braun and Clarke (2006) according to which the focus group transcriptions and survey responses were first closely read and re-read to get an overall picture of the material collected and to generate initial codes. The initial codes were then reviewed for consistency, and several were merged to avoid repetition and overlap. Codes were then grouped into potential categories that were checked to ensure correspondence with the coded extracts and with the whole data-set. The next step was to identify the underlying meaning and relation between categories and to generate themes related to the research questions. Finally, relevant quotes were selected.

**5.5. Findings**

Three main themes emerged (Table 2): self-awareness and non-reactivity may facilitate a reduction in stress levels, the purposeful cultivation of self-care and positive

emotions may be a precursor to enhanced wellbeing, positive relationships with others, and evidence of effectiveness at work may mitigate burnout symptoms.

**Table 2**

*Themes, Categories and Codes Illuminating Participants' Experience of The Wellbeing Protocol.*

| Codes | *Categories* | **Themes** |
|---|---|---|
| Better able to perceive own's thoughts, emotions and physical sensations | *Increased awareness of mental, emotional, and physical experience* | **Self-awareness and non-reactivity may facilitate a reduction in stress levels** |
| Better able to name or describe emotions, physical sensations or thoughts | | |
| Being more in the present moment | | |
| Being able to not react to triggers | *Increased ability to manage thoughts, emotions, and reactions* | |
| Being able to let go of negative thoughts or emotions | | |
| Being able to let go of attachment to one's own opinions or feelings | | |
| Stress is now seen as positive | *Reduced stress impact* | |
| Feeling more in control | | |
| Feeling calmer, more relaxed, less stressed | | |
| Feeling more energy | | |
| Increased understanding of what self-care and wellbeing is | *Increased self-care practice* | **The purposeful cultivation of self-care and positive emotions may be a** |
| Increased practice of self-care actions/routines | | |

| | | |
|---|---|---|
| Being less hard on oneself | *Feeling more positive towards self and others* | **precursor to enhanced wellbeing** |
| Feeling more positive emotions towards others at work or at home | | |
| Feeling more positive feelings towards life/experience in general | | |
| Better ability to understand students or colleagues' perspectives | *Improved relationships with others* | **Positive relationships with others and evidence of effectiveness at work may mitigate burnout symptoms.** |
| Received feedback from team, colleagues or students about positive changes | | |
| Improved relationships at work or home | | |
| Reduction in workplace conflict | | |
| Connecting with other educators in the programme was positive and helpful | | |
| Dealt with a work crisis in a better way than before | *Improved effectiveness at work* | |
| Teaching practice improved | | |
| Better able to prioritise at work | | |
| Not taking on others' responsibilities | | |
| Better able to recognise warning signs before limits are reached | | |

### *1. Self-Awareness and Non-Reactivity May Facilitate a Reduction in Stress Levels*

The main underlying mechanisms underpinning the reduction in stress experienced by most participants were: increased awareness of experience; increased ability to manage

unhelpful thoughts, emotions, or reactions; and a shift in mindset regarding stress and control. They will each be described in more detail below.

### 1.1. Increased Awareness of Mental, Emotional and Physical Experience.

Participants reported an increase in their ability to notice their thoughts, emotions, and physical sensations and to describe, identify or categorise them. Being exposed to examples of physical manifestations of stress enabled participants to identify their own physical symptoms and to better categorise sensations they were hitherto unsure of:

> I now notice physical things like heart palpitations, whereas before, I probably wouldn't have really noticed. I mean, I might have noticed it, but I wouldn't have thought to slow down my breathing to assist that to drop. I would have just, oh God, I'm stressed and then worry about it later. But now that I learnt those techniques, I put those into place straight away. So that it doesn't escalate. (Participant 29)

Similarly, the exercises meant to expand participants' emotion vocabulary, enabled them to better understand the nuances of their emotions and to more adequately describe them.

> It's given me a language for how I'm feeling. (Participant 10)

Present moment awareness was one of the most reported consequences of the mindfulness training, meaning participants were able to become aware of thoughts and emotions not related to what was present in their current circumstances, let go of them, and return their attention to what was at hand.

### 1.2 Increased Ability to Manage Thoughts, Emotions, and Reactions.

Being able to notice and categorise their thoughts allowed participants to recognise negative thoughts and interrupt automatic thought processes. Negative thoughts were primarily related to perceived judgements from others and worrying about future outcomes or imagined worst-case scenarios. Participants reported being able to stop rumination or

worrying by applying techniques learnt in the programme and by bringing their attention to the present moment.

> Tomorrow I've got the dentist and it's almost an emergency run on my tooth. And normally, I would be besides myself, but I've been pushing it out of my brain and just going: “That'll happen when I get there,” so I've been able to move it out of my brain. Free my brain. (Participant 31)

Participants mentioned being able to stop negative self-talk by employing skills acquired in the programme. Most of them described their negative self-talk as harsh self-judgement related to their performance in different contexts.

> For example, after this programme I came to know that it is natural to have negative judging thoughts towards myself and I learnt to disengage from those thoughts which saved my energy for more important things. (Participant 7)

All participants mentioned decreased reactivity to external and internal stimuli, and an improvement in their ability to pause before responding. This was mostly credited to their increased skills of not identifying with, and letting go of, unhelpful emotions and thoughts.

**1.3 Reduced Stress Impact.**

Realising that stress can be seen as a positive was reported by all participants to be a significant source of comfort and a very effective tool to reduce stress. This mindset change was linked to positive outcomes such as feeling calmer, more relaxed, and more energised.

> I am just a lot calmer and in control. (Participant 30)
> Yes, I feel calmer, I'm able to slow down and relax myself [sic] when I feel I'm becoming stressed. (Participant 20)

A significant outcome of the training highlighted by participants was an increased sense of control and agency. They credited this to their improved ability to let go of their negative thoughts and emotions, and to their heightened confidence in their capability to manage any unpredictable challenges. This led them to feel less stressed and more in control.

> I feel more prepared, for what I couldn't tell you. Maybe that makes me more able to cope with life. (Participant 11)
> Taking back some of the control and being present in life, makes me a better teacher and a far more relaxed member of our family. (Participant 28)

### *2. The Purposeful Cultivation of Self-Care and Positive Emotions May Be a Precursor to Enhanced Wellbeing*

Most participants noticed improvements in their mental wellbeing and attributed them to an increased understanding of what self-care entails followed by more frequent practice of self-care actions and feeling more positive towards self and others.

#### 2.1 Increased Self-Care Practice.

After programme completion, participants reported a greater understanding of what wellbeing was, what constituted self-care, and why both were important. For example, many reported feeling less guilty about attending to their wellbeing. As a result, there was an increase in reported self-care practices and routines.

> I put myself first sometimes now and I know it helps my other relationships if I'm happy. (Participant 13)

#### 2.2 Feeling More Positive Towards Self and Others.

Many participants reported that having an increased ability to name their emotions and a better understanding of the general human experience of emotions and thoughts, allowed them to be less hard on themselves. Additionally, being able to recognise, name and let go of self-judgements related to their inner critic, allowed participants to be more understanding and more sympathetic towards themselves. For some, this led to an increase in energy resources, and for others to improvements in overall mood.

> I keep a bullet journal where I track my mood and overall, since doing the course, it has been much more positive, and more consistently positive as well. (Participant 14)

A significant change recorded by most participants was a rise in positive feelings towards others both in their personal and professional lives. This was attributed in part to the fact that they no longer assumed others were negatively judging them. Another antecedent to

this was the purposeful cultivation of gratitude and kindness. Participants described feeling more positive towards self and others after engaging in random acts of kindness or after writing things they were grateful for. These practices were also linked to reports of feeling more positive towards life and present moment experience in general.

> Yeah, I think I'm much kinder, and I can see when people are kind. Before I never saw, I always saw the negative things but never really saw the positive things in people. Now, I'm more alert for positive things. (Participant 15)

### *3. Positive Relationships with Others and Evidence of Effectiveness at Work May Mitigate Burnout Symptoms.*

Feeling more positive emotions towards others, being less reactive and stressed were identified in participants' reports as precursors to improved relationships at work and at home. These positive relationships together with specific examples of improved effectiveness at work are likely protective factors against job burnout.

#### 3.1 Improved Relationships with Others.

Participants described having an improved ability to understand others' perspectives. Some credited this to being less attached to their own opinions, thoughts, and emotions, and to being less defensive. Many reported having received positive feedback in the workplace or at home about being less reactive, not taking things personally, and being generally calmer.

> I feel like I can understand other people better and don't judge straight away. (Participant 15)
> I have even had comments from my team leader at work and my family about being far less defensive and reactive, not taking things so personally. I see the things that people say to me differently now and understand their comments are more about themselves than myself. (Participant 23)

As a result, participants described an improvement in their relationships with colleagues, students, and family members. They also expressed gratitude and joy for having had the opportunity to connect with like-minded educators in the course. For many, listening

to others' experiences and noticing similarities with theirs, led to a sense of belonging and to greater self-acceptance.

Many participants gave examples of workplace conflicts that were handled better or precluded from escalating as they might have prior to the programme. They attributed this to their reduced reactivity, increased ability to empathise with others, and reduced attachment to their own opinions.

### 3.2 Improved Effectiveness at Work.

Participants reported noticing an improvement in their teaching practice, credited primarily to them being perceived by students as calmer and being able to instill a sense of calm in the classroom. Many taught some of the practices related to stress reduction and mindful present moment awareness to students, with the result of improved classroom climate.

Participants noticed increased effectiveness at work and gave as examples improved ability to deal with crises, to prioritise tasks, and to reduce procrastination.

> I have stressed far less and continue to only concentrate on which [sic] I have control of. Recently while dealing with a chronically suicidal student, I have found that under this extremely stressful circumstance I handled things far better than I ever would have a year ago. I kept healthy boundaries and once I established safety for the student I handed over and went into self-care mode. I have felt the work we have done in the course has held me in far better stead over the lockdown period and also supporting others. I definitely feel more resilient. (Participant 23)

Participants also described being better able to say "no" when appropriate, not taking on others' responsibilities and recognising the warning signs of becoming overwhelmed before limits were reached. The last point was linked to a decrease in stress as participants reported being able to use the techniques learnt to address symptoms before they escalated.

## 5.6. Discussion

The themes identified in this study, as well as the categories and codes that supported them, were consistent with findings from similar studies of mindfulness-based interventions

and workplace wellness programmes (Hwang et al., 2017). Some of the underlying mechanisms outlined in the present study, however, have received little to no attention in previous studies and they are presented as potential new avenues for research.

### *Self-Awareness and Non-Reactivity May Facilitate a Reduction in Stress Levels*

A common finding across studies is that mindfulness training may result in improved self-awareness, which can lead to improved emotional and physical wellbeing and reduced stress symptoms (Abenavoli et al., 2013; Hwang et al., 2017; Schussler et al., 2016). For example, Abenavoli and colleagues (2013) showed a reduction in reported daily physical symptoms and negative affect which mediated teachers' reports of perceived stress. Roeser and colleagues (2013) showed an improvement in teachers' attention and somatic awareness as well as a reduction in negative affect. These results are consistent with findings of mindfulness-based wellness programmes for non-teacher populations whereby the training increased participants' awareness of mental and physical phenomena and reduced their stress, anxiety, rumination, negative affect, and depressive symptoms (Cayoun et al., 2019; Townshend et al., 2016).

The present study confirms these findings and furthers this line of research by proposing that non-reactivity might be a foundational precursor to reduced stress. Non-reactivity is one of the five dimensions of mindfulness identified by Baer and colleagues (Baer et al., 2008) and is defined as the ability to not react automatically to internal or external stimuli. The majority of participants in the present study cited an increased ability to respond rather than react automatically and linked this to improvements in their stress levels and in their relationships with others. In a systematic review of mindfulness-based interventions for teachers, Hwang and colleagues (2017) found that not reacting automatically allowed teachers to experience being calmer, more centred, and relaxed.

Further investigation of the connection between non-reactivity and stress reduction might be a useful research endeavour.

### *The Purposeful Cultivation of Self-Care and Positive Emotions May Be a Precursor to Enhanced Wellbeing*

Self-care encompasses self-awareness, self-compassion, and the implementation of a variety of strategies across physical, emotional, mental, and social domains (Mills et al., 2020). But self-care is not always prioritised by teachers as they might feel selfish at the thought of attending to their own needs or may fear judgement from others. Current research does not address specifically the relationship between self-care and teacher wellbeing. Studies from the healthcare sector, however, have established a correlation between improved self-care and increases in wellbeing (Mills et al., 2020; Narasimhan et al., 2019). The present study highlights that enhancing teacher understanding of the importance of and practical application of self-care may lead to an increase in practice adoption and frequency, which in turn, may catalyse improvements in wellbeing. This finding would benefit from further research to explore further the link between the two.

A growing body of research has highlighted that the purposeful cultivation of positive emotions has a causal effect on wellbeing via biological and psychological pathways (Le Nguyen & Fredrickson, 2018). To date, the link between the two in the context of a workplace wellness intervention has not been explored, perhaps because not many workplace programmes include specific strategies on this topic. The findings of the current study suggested that including explicit strategies to cultivate positive emotions might facilitate an increase in participants' wellbeing levels. These promising results open up new avenues for research in the workplace learning and wellbeing domains.

***Positive Relationships with Others and Evidence of Effectiveness at Work May Mitigate Burnout Symptoms.***

Workplace burnout has been defined as a process in which the psychological resources of an employee are gradually depleted as a consequence of prolonged stress at work (Maslach et al., 2001). The most prevalent burnout symptoms in the workplace include: loss of motivation and sense of purpose; exhaustion even after resting, cynicism, or disconnectedness; and feelings of ineffectiveness even when the outcomes achieved are good (Ahola et al., 2014; Faraci, 2018; Maslach et al., 2001).

There is convincing evidence that social relationships at work have a significant impact on burnout (Anthony-McMann et al., 2017; Leiter et al., 2015). Greater social support and positive social interactions mitigate burnout symptoms and buffer the stressful impact of demands from others (Leiter et al., 2015). Little research has investigated teachers' workplace relationships and their correlation with burnout. In a recent study on teacher empathy, relationship with students, and burnout, the authors found that teachers higher in empathy had closer relationships with students, were better able to manage problematic behaviours and had lower levels of job burnout. Teachers who had poorer empathy skills showed largely the opposite findings, with greater relationship conflict, fewer problem-solving strategies, less competence, and higher job burnout (Wink et al., 2021).

Our study further advances this emerging area of research by proposing that positive relationships in the workplace and evidence of effectiveness at work might act as deterrents to teacher burnout. Participants in our research found that following the programme they experienced enhanced relationships at work and greater effectiveness in managing tasks and problematic situations. They gave examples of positive interactions with students and colleagues and receiving compliments for their relationship skills and ability to tackle workplace problems. These are arguably mitigating factors against the burnout symptoms of

disconnectedness and work ineffectiveness, although further research is needed to directly explore this correlation.

### 5.7. Concluding Remarks

Participants in the workplace wellness programme the Wellbeing Protocol seem to have gained increased self-awareness and ability to respond rather than react automatically. They also seemed, overall, to be more positive and more effective at work, as well as having improved relationships. They reported feeling less stressed, more relaxed, and more confident. The present study proposes several areas for further research that would advance our understanding of the underlying mechanisms of effective strategies to support employee wellbeing in the workplace. The implications for practice are that this program could be helpful in improving employee wellbeing and reducing stress and burnout.

# CHAPTER SIX: A GENERAL DISCUSSION

This doctoral project set out to examine the impact of a workplace wellness programme on New Zealand teachers' levels of stress, burnout, wellbeing, and mindfulness. The timing of data collection and of the intervention coincided with the unfolding of a global pandemic, making the project all the more poignant, timely, and important. In light of this new global development, the project's research questions took on a deeper significance and greater urgency as teachers' mental health and wellbeing were being significantly impacted by COVID-related factors such as anxiety about virus exposure and mandatory lockdowns.

The findings revealed that NZ educators experienced considerable stress, burnout, and mental distress at the onset of the COVID pandemic. This is hardly surprising given that teaching was already an occupation prone to these negative mental health indicators (Bernay, 2014; Jennings, 2015a) and COVID-19 exacerbated educator stress and burnout in many other countries (Ozamiz-Etxebarria et al., 2021; Pressley, 2021; Sokal et al., 2020b). The findings fill a gap in the literature, given that there were no specific surveys or research studies capturing data for NZ primary and secondary school teachers in the first four months of the 2020 pandemic outbreak.

The findings also pointed to a potential option to support teacher wellbeing in the form of the mindfulness-based resilience programme I investigated, The Wellbeing Protocol. This is congruent with existing literature on effective measures to support educators in dealing with COVID-related stress and occupational high demands, which identifies wellbeing and resilience training as an avenue to promote enhanced mental wellbeing and reduce burnout (Gabriel & Aguinis, 2021; Giorgi et al., 2020). The findings were similar to those of studies investigating different mindfulness-based interventions (MBIs) for teachers which also found positive effects on markers of stress, burnout, wellbeing, or efficacy (Bernay, 2014; Beshai et al., 2016; Felver & Jennings, 2016; Hwang et al., 2017). My project

fills a gap in the existing literature by being the first to investigate an MBI delivered to NZ teachers, as well as being the first to explore the impact of the Wellbeing Protocol (WP) among educators. WP seems to be a good fit for the teaching population and, although the design of the current study had to forgo having a waitlist control group, the study nonetheless managed to capture novel insights related to the suitability and effectiveness of WP in times of heightened stress and anxiety.

The initial broad questions that informed the direction of the research were as follows:

1. Does the Wellbeing Protocol affect teachers' stress levels and if so, how?

2. Does the Wellbeing Protocol affect teachers' burnout levels and if so, how?

3. Does the Wellbeing Protocol affect teachers' mental wellbeing levels and if so, how?

4. Does the Wellbeing Protocol affect teachers' mindfulness levels and if so, how?

This chapter will present an overview of the findings from the three empirical articles and discuss the implications of the current research for the broader teacher mindfulness and wellbeing literature and for educator professional development. The limitations of the research are then outlined, followed by possible avenues for future research and education policy. The chapter ends with some concluding thoughts.

### 6.1. Overall Summary of Key Findings

The first empirical study (Chapter 3) showed reductions in stress on conclusion of the WP intervention and at three months follow-up. The large effect size suggests that the reduction in perceived stress was maintained at follow up assessment. Of the three burnout dimensions, emotional exhaustion recorded a statistically significant decline both immediately after and three months following the programme. The large effect size at both time points suggested that teacher emotional exhaustion levels continued to decrease even after WP had been completed. The reduction in cynicism or depersonalisation had a moderate

effect size but did not reach statistical significance. Similarly, the appraisal of personal accomplishment showed a moderate improvement that was not statistically significant. It is worth noting the presence of floor effects in the cynicism dimension and ceiling effects in personal accomplishment at data collection Time 1 (before the intervention). Pearson correlation coefficients showed that participants who recorded a reduction in stress were more likely to see an improvement in personal accomplishment and a reduction in emotional exhaustion.

The second empirical study (Chapter 4) explored the relations between WP and teacher self-reported mental wellbeing and mindfulness levels. Results showed a statistically significant increase on all four mindfulness facets explored: describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. Similarly, to the findings related to stress and emotional exhaustion, the four mindfulness dimensions continued to improve three months following programme completion, reaching both statistical significance and large effect sizes. Participants registered increases in mental wellbeing both immediately after and three months following the programme. The scores obtained following completion of WP reached statistical significance with a large effect size, whereas at three months follow up they did not, although the large effect size suggested that enhancements in mental wellbeing were still maintained. Those who saw an improvement in mental wellbeing were also more likely to notice an increase in three of the four mindfulness facets, namely describing, acting with awareness, and non-reactivity to inner experience.

The third study included in this thesis (Chapter 5) explored the subjective experience of teachers undertaking the Wellbeing Protocol. Three main themes emerged, and they included: (1) self-awareness and non-reactivity may facilitate a reduction in stress levels; (2) the purposeful cultivation of self-care and positive emotions may be a precursor to enhanced wellbeing; and (3) positive relationships with others and evidence of effectiveness at work

may mitigate burnout symptoms. Participants reported being better able to perceive their own thoughts, to name and label emotions, to be in the present moment, to not react to triggers, to let go of attachment to their opinions, to let go of negative thoughts, and to adopt a positive stress mindset, all of which contributed to making them feel calmer, more relaxed, in control, and energised. Additionally, the participants novel understanding of what constituted self-care and wellbeing prompted them to engage in positive practices, which in turn supported enhanced wellbeing. Many participants noted that they were less hard on themselves, and they had more positive emotions towards others, both in the workplace and in their personal life, which led to improvements in their relationships with students, colleagues, and family members. This was noted by school leadership and by colleagues, with many participants describing having received positive feedback from their teams or supervisors and experiencing less conflict at work. Therefore, WP was seen as a useful resource that helped teachers improve their teaching practice and effectiveness at work. Participants commented that they were better able to prioritise work, to not take on others' responsibilities, to deal with work crises, and to recognise warning signs before their limits were reached as a result of participating in the programme.

## 6.2. Overall Discussion of Key Findings

Upon reflecting on the overall key findings from this doctoral project, two themes arise: (1) the state of New Zealand teacher burnout at the onset of COVID-19 and (2) the effectiveness of the Wellbeing Protocol. The overall key findings will be discussed around these themes in the following sections.

### *6.2.1. The State of New Zealand Teacher Burnout at The Onset of COVID-19*

Burnout in the New Zealand teaching workforce has only been sparsely investigated in the last decade and the measurement tools used have varied between studies (Bianchi et al., 2015; Milfont et al., 2008; New Zealand Educational Institute & Deakin University, 2020;

Whitehead et al., 2000). The only other study employing the MBI-ES was conducted by Whitehead et al. (2000) on a sample of 384 New Zealand (NZ) primary teachers. Their sample emotional exhaustion score (27.35) was lower than our sample's baseline scores (36.90), suggesting that the teachers in our sample were experiencing higher levels of energy depletion.

Whitehead et al. (2000) compared their results to a normative sample of US teachers reported in the MBI Manual and found that NZ teachers scored a significantly higher score (27.35) compared to their US counterparts (21.25) on the emotional exhaustion dimension. The authors proposed several reasons for this, one of them being high workload given that at the time of data collection there was a teacher shortage in New Zealand (Whitehead et al., 2000). The authors also referred to excessive demands placed on teachers who were required to teach many specialist subjects such as art, sport, music, or Māori language, in addition to the core curriculum. Additionally, educational reforms had placed increased onus on NZ schools to take full governance responsibility for all aspects of education, including setting their own objectives in accordance with community needs, managing their educational resources appropriately, and being regularly audited by the Education Review Office (Whitehead et al., 2000).

These constraints are still affecting NZ schools twenty years later and are arguably contributors to the high emotional exhaustion rates in our sample. At the time of our initial data collection (before the intervention), NZ schools were already having difficulty recruiting sufficient teachers. A report from the Education Review Office (2021) showed that COVID-19 exacerbated teacher shortages in 2020 leading to an increase in workload for in-service teachers. When the first NZ national lockdown was declared on 25 March 2020, students were given two weeks of holidays and teachers were instructed to begin online tuition thereafter. Many educators were tasked with the development of virtual teaching materials.

Additionally, they had to become familiar with online education platforms and to train their students to utilise them. As the pandemic unfolded and lockdowns were extended, educators were facing increasingly reduced resources and higher demands. They had to manage disruptions during online tuition, ineffective communication with parents, disjointed communication with students, increased onus to cater to students who had limited or no access to devices or internet at home, and, in many instances, lack of sufficient school support (Education Review Office, 2021). Thus, the first months of the pandemic outbreak caused a sharp rise in workload and job demands for NZ teachers. According to COR theory, high workload is a precursor to emotional exhaustion (Alarcon, 2011). In the case of our NZ sample, high workload, coupled with anxiety over virus exposure and uncertainty about the future, likely explain our high emotional exhaustion rates.

Additionally, for many teachers, home-schooling their own children or being carers for older relatives added an extra burden. This is especially true for female teachers who reported higher levels of stress and workload (Education Review Office, 2021). Our sample was almost entirely female, and although we did not capture data related to this, anecdotal evidence suggested that most of our participants had children. This could be another factor that contributed to the high baseline rates of stress and emotional exhaustion (EE) in our sample. Reports on the disproportionately negative effects of COVID on women support our claim (McKinsey & Company & Lean In, 2021; Stats NZ Tauranga Aotearoa, 2020; United Nations, 2020). Both globally (United Nations, 2020) and in New Zealand (Stats NZ Tauranga Aotearoa, 2020) women took on more carer roles than men, experienced higher levels of stress, and lost more jobs.

Interestingly, our EE baseline score was higher than a sample of Canadian (CA) teachers surveyed a month later, in April/May 2020 (Sokal et al., 2020a). The mean emotional exhaustion calculated as average for CA teachers was 3.49, whereas for our sample

it was 4.10. Our sample also scored higher rates of emotional exhaustion (36.90) compared to Argentinian teachers (23.86) surveyed between April – September 2020 (Vargas Rubilar & Oros, 2021). We cannot be sure why this is. Whereas both the Canadian and the Argentinian sample was larger and more heterogenous, the overall majority of respondents were nonetheless women, so gender differences might not be sufficient to account for the difference. A possible explanation is that NZ teachers had already a higher level of stress and emotional exhaustion pre-pandemic. This is supported by a 2019 report according to which NZ primary and area school teachers recorded significant job strain due to high workload, long work hours, and lack of support for students with additional learning and behavioural needs (New Zealand Educational Institute & Deakin University, 2020). NZ teachers scored significantly lower than the general population on all health and wellbeing measures of the Copenhagen Psychosocial Questionnaire. The findings revealed almost twice as high rates of burnout, stress, and cognitive stress symptoms in teachers as opposed to the general population. Further, teachers also had more depressive symptoms than the general public and more than double the incidences of sleep disturbances (New Zealand Educational Institute & Deakin University, 2020). These findings preceded the COVID-19 crisis having been captured in the period October–December 2019, three months before the pandemic outbreak. According to COR theory, increased demands and resource loss have a stronger effect in high demand situations (Alarcon, 2011). This aspect is of particular importance because it implies moderation effects of the environment and of pre-existing conditions on new demands and resource loss. In other words, we can speculate that NZ teachers were already experiencing resource depletion and exhaustion due to existing high demands even before the onset of the pandemic and therefore their emotional exhaustion scores were higher as a result of the added COVID-related demands and anxiety.

COR theory posits that high emotional exhaustion is a likely precursor to depersonalisation or cynicism, the latter being a maladaptive coping mechanism when there are excessive demands and a lack of resources. The depersonalisation score in our sample was 9.03, much higher than that of the NZ teacher sample in Whitehead et al.'s (2000) study who scored 6.31. Interestingly, Whitehead et al. (2000) noted that the depersonalisation mean score for New Zealand teachers was significantly lower (6.31) than for their US counterparts (11.00) even though their emotional exhaustion score was higher. The authors suggested that cultural differences might play a role in how respondents were likely to answer questions such as "I feel I treat some students as if they were impersonal objects" or "I don't care what happens to some students". The authors hypothesised that NZ teachers, even when depleted of emotional energy, might be less likely to respond negatively to students, or, alternatively, they might not want to be seen, even to themselves, as inhuman or callous and therefore were less inclined to admit to this in surveys (Whitehead et al., 2000). This might have been the case in our sample as well and might account for the floor effects in the current study. The high difference between the 2000 (6.31) and 2020 (9.03) depersonalisation mean scores suggests nonetheless that the level of stress and work demands experienced by NZ teachers at the onset of the COVID-19 pandemic were very high.

Our NZ sample scored higher on depersonalisation (1.80) compared to Sokal et al.'s (2020a) Canadian sample (1.45) in the period April/May 2020. This might further support our argument that NZ teachers might have entered the first months of the pandemic already severely strained from prolonged high job demands. Comparing our sample depersonalisation mean (9.03) with their Argentinian (Vargas Rubilar & Oros, 2021) counterparts (3.97), however, reveals an even greater contrast. We can look at these results as further evidence that NZ teachers had a baseline of higher chronic stress and burnout than their Canadian and Argentinian counterparts. On the other hand, such a big difference in scores might be

underpinned by cultural differences as well. To date there is scarce research exploring the cross-cultural validity of burnout as a concept (Schaufeli, 2017). A critique has emerged, however, regarding depersonalisation and personal achievement, according to which these dimensions represent Western ethnocentric concepts (Schaufeli, 2017). Depersonalisation was said to assume a Western personality concept, which distinguishes between "me" and "you", who enter, as separate entities into a personal relationship. Similarly, personal accomplishment was said to be underpinned by a Western view of achievement which links the latter to the self, achievement becoming thus personal achievement. These views are typical in Western or individualistic cultures and they differ from collectivistic cultures where achievement is considered to result from group efforts (Schaufeli, 2017). Individualistic versus collectivistic cultures are terms pertaining to Hofstede's (1984) dimensions of culture. Individualistic cultures are said to emphasise personal action and responsibility, whereas collectivistic cultures emphasise interpersonal relatedness and group action (Hofstede, 1984). On the Hofstede Insights country comparison tool (Hofstede Insights, 2022), Argentina's individualism score is 46, almost half that of New Zealand (79) and Canada (80). A score of 46 puts Argentina in the middle rankings, meaning that a series of collectivist traits prevail in spite of the individualist tendencies prevalent in that country, especially in large urban areas. Such collectivistic traits include the importance of obligations towards the extended family or the groups one belongs to. We speculate that the marked difference between our sample and the Argentinian sample scores on depersonalisation might have been impacted by this dimension. Having said that, we nonetheless suspect that Hofstede's cultural analysis of New Zealand (Hofstede, 1984; Hofstede Insights, 2022) might not have taken fully into account the country's bicultural element. Māori worldviews and cultural traits are very much collectivistic in nature and they are influential, particularly in education settings where strong emphasis is placed on the obligations and social responsibilities of schools to the community.

There is a lack of data to permit any firm conclusion on this point, other than that there is an apparent influence on culture over at least two of the burnout dimensions that warrants further investigation. It is worth noting here, that the core dimension of burnout, emotional exhaustion, was found to occur universally (Schaufeli, 2017). In his socio-cultural history of burnout, Schaufeli (2017) refers to research that identified emotional exhaustion in the Aymarai, Quechua, and Ladakh indigenous populations.

Our teacher sample reported very high personal achievement scores (a mean of 47.06 of a maximum 56), reflecting their positive self-appraisals of efficacy at work and potential ceiling effects in the sample. This score was also significantly higher than that of Whitehead et al.'s (2000) NZ teachers (37.12). It is intriguing to find that our sample was experiencing high rates of emotional exhaustion and simultaneously high rates of personal accomplishment. According to burnout theory, depletion of energy leads to maladaptive behaviours and feelings of inefficacy at work (Alarcon, 2011). Our findings however present a different picture. Whitehead et al.'s (2000) comparison with US normative data revealed the same scenario: despite having higher rates of emotional exhaustion, NZ teachers also had higher rates of personal accomplishment compared to their US counterparts. The authors were uncertain regarding the root causes of this phenomenon. They hypothesised that NZ teachers might feel apprehensive to admit failure to achieve a good standard or to meet work demands for fear of losing their job. Alternatively, the authors suggested that NZ teachers might continue to derive satisfaction from their interactions with students even when work demands were high (Whitehead et al., 2000). Interestingly, the same co-existence of high emotional exhaustion and high personal accomplishment were identified in Argentinian (Vargas Rubilar & Oros, 2021) and Canadian (Sokal et al., 2020a) teachers as well. There is a lack of sufficient data to fully understand this phenomenon. Cultural differences might play a role, as based on Whitehead et al.'s (2000) analysis, it was clear that the profile of NZ

teachers was significantly different from that of their US counterparts. It might also be that mastering online instruction as a new skill might have improved self-perceptions of efficacy for many teachers. It is also possible that during the global crisis, NZ teachers felt all the more compelled to take on a pastoral role that might have been positively received by their students who were looking for re-assurance and support. Thus, teachers might have experienced an enhanced sense of efficacy as pastors and counsellors.

To summarise, baseline scores in the current study suggested NZ teachers were experiencing high emotional exhaustion and high personal accomplishment rates. Although their depersonalisation or cynicism scores were lower than a normative US teacher sample included in Whitehead et al.'s study (2000), they were nonetheless much higher than NZ teachers' scores in 2000. Further, the fact that our sample's baseline scores of emotional exhaustion and cynicism were higher that their Canadian and Argentinian counterparts surveyed at similar points in time suggests that NZ teachers might have entered the pandemic with their resources already diminished by prolonged exposure to workplace psychosocial hazards such as high workload and high job demands.

### *6.2.2. The Effectiveness of the Wellbeing Protocol*

The findings included in the three studies presented in Chapters 3, 4, and 5 suggested that the Wellbeing Protocol (WP) might be a promising intervention to reduce symptoms of stress and burnout, and improve mental wellbeing. Immediately following the programme and at follow-up, teachers reported a statistically significant reduction in perceived stress. Qualitative data collected at the same time points revealed that participants had learnt how stress could be used positively, they felt calmer and more relaxed, and were aware of external factors causing them to stress unnecessarily. They reported using WP mindset and mindfulness techniques to reframe their appraisal of stressful situations and to replace automatic reactions with more considerate responses. For example, participants reported that

they were able to reframe stress from negative to positive and thus convert the physiological stress response into an energy source. Participants communicated that they used WP techniques to manage their thoughts and regulate their emotions both in their day-to-day life and in triggering circumstances. These techniques included mindful ways of thinking, meditation, affirmations, and reframing of inner talk. The latter one refers to paying attention to how one talks to oneself and reframing that to be more supportive, or, in the words of a participant, to give oneself the "grace to exist in stressful situations". Participants also noted that mindfulness practice, particularly the connection to breath at times of high emotional activation, allowed them to pause and replace automatic reactions with more considerate responses. This is a core component of socio-emotional competencies and it seems that WP offers participants the tools required to develop these competencies. Our findings are congruent in this respect with other research on MBIs for teachers which also show that mindfulness helps reduce stress and increase competence in socio-emotional skills (Bernay, 2014; Felver & Jennings, 2016; Hwang et al., 2017; Jennings, 2016). This finding is particularly relevant as we move into the third year of the pandemic and NZ teacher shortages are predicted to increase over the next years (Gerritsen, 2021a, 2021b). Finding easily accessible ways to support teachers in reducing stress and developing competencies to better engage with students has now become an even greater priority and our research project suggests that WP might be a useful option for schools to consider.

Participants also noted that WP mindfulness techniques and cognitive behavioural strategies allowed them to approach problems in a more effective way. They were able to notice instances where they had been avoiding problems subconsciously, choosing to ignore their existence and postponing an acknowledgement of their cognitive load and emotional toll. Through WP techniques, however, participants were able to bring problems to their awareness and to seek solutions from a place of resourcefulness and calm confidence. This

finding is important given that coping styles driven by avoidance have been linked to higher rates of burnout (Schaufeli, 2017). We speculate this might also be one of the underlying mechanisms by which mindfulness might impact burnout. Although previous studies on MBIs have shown a reduction in teacher burnout (For a review see Emerson et al., 2017; Hwang et al., 2017), the exact mechanisms by which this outcome came to be were not fully explored. Qualitative data in our study suggests that mindfulness practices such as becoming centred through the use of breathing techniques and complementary cognitive behavioural strategies, such as naming thoughts or becoming aware of distorted patterns of thinking, might allow individuals to overcome avoidance behaviours. In other words, when they employ mindfulness techniques they might be less identified with their emotions, which in turn might reduce the experience of discomfort and the need to avoid it. As a result, participants might gain access to a more resourceful state where they have greater clarity, greater ability to envision solutions, and greater capacity to effectively solve problems. This is likely to stop or reverse the burnout cascade and support teachers to feel in control of outcomes and satisfied with their performance.

Participant reports regarding the effectiveness of WP mindfulness tools are supported by the quantitative data which found statistically significant improvements with large effect sizes over time in all four mindfulness dimensions: describing, acting with awareness, non-judgement of inner experience, and non-reactivity to inner experience. Our findings are consistent with those of other studies which have also shown improvements in mindfulness following an MBI (Baer et al., 2012; Hwang et al., 2017). What is even more relevant is the fact that scores were higher at three months follow-up suggesting that mindfulness was becoming a way of being or a trait characteristic. This is an important outcome especially given that research suggests that trait mindfulness or the extent to which someone is mindful outside of pre-MBI-post-MBI contexts, has a direct impact on their levels of stress and

emotional exhaustion. In other words, teachers high in mindfulness experience less stress and lower emotional exhaustion (Abenavoli et al., 2013).

In our study, reductions in stress were correlated with decreased emotional exhaustion and improved personal accomplishment immediately following WP, suggesting that WP tools might be effective in supporting participants to identify and eliminate stress triggers that cause unnecessary resource depletion. Further, the mental wellbeing scores following WP completion were also higher, with large effect sizes over time, suggesting that WP might support participants not only to build resilience against adverse external circumstances, but also to actively replenish their personal reservoirs. Qualitative data suggests that one of the ways in which WP facilitated this change was by offering participants a new understanding of wellbeing based on relevant research evidence. Teachers reported that before WP their appraisal of wellbeing was "a fluffy buzzword that signalled you were happy". Following the evidence presented in the programme, they professed to having more in-depth knowledge about the six aspects of wellbeing, as discussed in Linton et al. (2016): mental wellbeing, social wellbeing, activities and functioning, physical wellbeing, spiritual wellbeing, and personal circumstances. Participants reported that this awareness led them to make positive changes in their lives towards rest, hobbies, healthy eating, exercise, and spiritual growth. They also pointed out that this knowledge allowed them to develop a more authentic personal understanding of their own wellbeing and freed them from feelings of guilt about taking time to recharge. Many participants confessed that in their professional environment there was great emphasis placed on student wellbeing, whereas teachers' wellbeing was not adequately discussed or catered to. This had led many educators to subconsciously feel their wellbeing did not really matter and to experience, thus, a reluctance to accept when they were not coping well or when they needed a break. Participants also acknowledged that before the programme they lacked sufficient information about ways to improve their mental health

apart from generic self-care advice such as going for a walk or listening to relaxing music. These findings further existing knowledge of the mechanisms by which an MBI impacts mental wellbeing and are quite novel in the literature, given that the majority of existing studies explore pre-intervention-post-intervention quantitative measures of mental wellbeing following an MBI (For a review see Emerson et al., 2017; Hwang et al., 2017).

Another aspect relevant to wellbeing relates to participants' increased awareness of the interconnectedness between their mind and physiology. In other words, participants became aware of how their thoughts influenced their emotions and their physical state. As a result, they became more deliberate about bringing a sense of calm and balance to their mental activity through daily use of WP mindfulness, cognitive behavioural, and mindset techniques. Indeed, WP techniques seemed to be supporting participants to change beliefs, habitual thinking patterns, and habitual modes of behaviour, and this would likely enable them to become more effective teachers. For example, participants described being able to reframe some of their job demands so that their response to them became more empowering. They managed to identify sources of chronic stress that were within their power to alter, and they did so, resulting in a decrease in experienced stress. Given that chronic stress is a precursor to emotional exhaustion (Collie, 2021), it is no wonder that as participants' experience of stress decreased, so did their levels of energy depletion.

The other two dimensions of burnout: depersonalisation and personal accomplishment recorded improvements as well. The qualitative data offered an insight into potential underlying mechanisms by which that was made possible. It seemed that several factors may have been at play. On one hand, increases in self-care practices seemed to result in teachers having more energy resources. Simultaneously, the use of WP cognitive-reframing and mindset techniques resulted in decreases in stress and reactivity. Combined, these factors seemed to allow teachers to be more relaxed, more open to engaging with others, less

judgemental, and less negative, all of which led to improved relationships with students and colleagues, and greater efficacy at work. These results are similar to Schussler et al.'s (2016) and Burrow's (2015) findings who also found that mindfulness training for teachers resulted in better relationships at work.

Participants further reported that WP mindset and cognitive behavioural techniques allowed them to calm themselves, slow down, and regulate their emotions when student disruptions would have otherwise triggered them. They reported that this increased ability to regulate their emotions allowed them to empathise with their students, be present, and support co-regulation. Additionally, participants reported that increased emotional regulation allowed them to become more effective at work. For example, a participant described the high stress caused by an upcoming visit from the Ministry of Education and how she employed WP techniques to reframe her thoughts, allowing her to calm herself and also to support her colleagues to decrease their stress response. Another participant referred to a situation when she had to manage a chronically suicidal student and found that because of WP, she handled the situation much better than in the past. She was able to establish safety for the student, keep healthy boundaries, and implement self-care techniques once she had handed over the student. These findings might explain how mindfulness impacts the burnout dimensions of depersonalisation and low personal achievement. Other studies have measured quantitative impacts of mindfulness training in teacher populations in other countries (See for example Beshai et al., 2016; Carroll et al., 2021; Flook et al., 2010; Jennings, 2015b; Roeser, 2014), however, it is still not sufficiently clear how exactly mindfulness promotes these changes. Our findings offer several explanations and examples of how mindfulness can promote change in these dimensions.

The positive effects reported by our teacher sample continued at three months follow-up in all areas. The four dimensions of mindfulness scores were higher than the post

programme scores suggesting that participants' mindfulness levels continued to improve after WP completion. Mindfulness is a skill that requires time to perfect, therefore our findings suggest that WP might be a good introduction to the secular practice of mindfulness, allowing participants to master simple techniques and experience their benefits in a short period of time, thus enhancing their motivation to practise regularly.

The statistically significant reduction in emotional exhaustion at three months follow up with a large effect size suggested that teachers benefitted from improved energy resources even after programme completion. This is a hopeful finding given the current reports regarding the high burnout and poor wellbeing rates among New Zealand educators (Education Review Office, 2021; n.a., 2021) and the Ministry of Education's forecast of teacher shortages in the next few years (Gerritsen, 2021b). It is also worth noting that the emotional exhaustion scores in our study decreased over time (from 4.10 in March to 3.56 in July), whereas scores captured by Sokal et al.(2020a) in Canadian teachers at the same time points as ours showcased a significant increase (from 3.49 in April to 4.56 in June). Although we do not have similar data on NZ teachers to compare our results against, we can draw on the results of the New Zealand Education Review (2021) survey of NZ teachers in 2020, as well as on media reports from the same period (n.a., 2021) to assume that the overall NZ teaching workforce experienced similar depletion of resources and exhaustion as their Canadian counterparts. This would further support our findings that the Wellbeing Protocol might be an effective solution in mitigating stress and burnout symptoms.

Regarding the acceptability and feasibility of the Wellbeing Protocol delivery format, participant reports revealed that they enjoyed the online format. Some confessed that meeting online rather than face-to-face had given them more courage to be honest and open in the group. The most often cited strengths of the content revolved around the interesting scientific

evidence, the ease of use of the techniques, and the supplementary resources that complemented the practice well.

### 6.3. Theoretical Contributions and Practical Implications

The current project has made several theoretical contributions to the literature. Firstly, it has added to the body of research on teacher stress and burnout in New Zealand. With only four other studies investigating these dimensions and none very recent, there was a gap in the literature regarding NZ educators (Bernay, 2014; Bianchi et al., 2016; Milfont et al., 2008; Whitehead et al., 2000). Our study revealed the state of burnout, stress, and mental wellbeing in NZ teachers at the onset of the COVID-19 pandemic. Our findings complement Whitehead et al.'s (2000) results of higher emotional exhaustion, lower depersonalisation, and higher personal achievement scores for NZ teachers and point future researchers in the direction of further analysis.

This project was the first one in New Zealand to explore a mindfulness-based wellness programme, delivered online, to in-service teachers. Bernay (2014) did explore the impact of mindfulness for teachers, but the training was incorporated into a teacher education degree programme. Other than his study there was no other, to my knowledge, exploring mindfulness for NZ teachers. Most of the literature concerning MBIs for teachers revolves around programmes developed in the US or Canada (Jennings, 2016; Roeser, 2014). Our study adds to this body of research a different national dimension and also a different MBI, WP.

WP represents thus another theoretical contribution as the programme had not hitherto been investigated. With its compact and flexible format compared to other MBIs, WP is particularly suitable to fit into busy workplace or school schedules. Our findings suggest it is a promising programme that can support employee wellbeing. This claim is further strengthened by the fact that our study coincided with a global pandemic which placed a

burden on mental wellbeing for teachers and other occupations alike, which made the WP post-programme and 3-month follow-up scores all the more poignant.

There are several implications for practice that arise from the current study. Firstly, our findings support Bernay's (2014) conclusion that mindfulness might be a potential valuable component of teacher education programmes. The NZ Education Review (2021) survey showed that the teachers most impacted by stress and burnout during the pandemic were 1st and 2nd year teachers. In view of this, it becomes all the more important to equip beginning teachers with the tools and skills required to regulate their emotions, manage their stress, and improve their resilience.

Secondly, our research is relevant for school leaders dealing with teaching staff who are burned out. WP might be a suitable professional development option to support their staff's wellbeing and resilience. The online medium of instruction, in particular, allows for high numbers of staff to attend the sessions synchronously or watch the recorded material at a time that suits them.

Thirdly, our study is relevant for individual teachers seeking to cope with workplace stress or burnout symptoms. Our findings suggest that there are simple ways to mitigate the impact of high work demands and to replenish one's resources. Starting a personal mindfulness practice or participating in a WP programme might be useful in promoting greater mental wellbeing and efficacy.

Finally, my research project has implications for policy makers. Our findings suggest that the NZ teaching workforce is operating under conditions of chronic stress, burnout, high job demands, and inadequate resources. There is a need to create mechanisms by which the wellbeing of educators is regularly monitored. More specifically, I recommend the creation of a national instrument to monitor psychosocial hazards such as workload, job demands, autonomy, and teacher support in schools, so that both school leadership and policy makers

can make appropriate changes to ensure a mentally healthy work environment for teachers. I also recommend the inclusion of mindfulness-based resilience programmes, such as WP, on a national level so that teachers have access to professional development that allows them to improve their mental health outcomes. Whereas implementing these measures on a school or district level can certainly help, a systemic approach is better suited to address NZ teacher poor mental wellbeing, especially given that this problem has been ongoing for so long and is likely to continue based on the Ministry of Education's forecast of teacher shortages in the foreseeable future.

### 6.4. Limitations and Future Research Directions

Chapters Three, Four, and Five discussed the limitations of the individual studies included in this thesis. The following section will cover the limitations of the research project as a whole. Suggestions for future research directions will be introduced in the last part of this section.

There are four main limitations of the current research project. The first revolves around the fact that I was one of the researchers, the intervention facilitator, and programme creator. In order to minimise any bias, several measures were put into place: data was de-identified so I did not know who it belonged to, a research assistant conducted the focus groups, participants were informed of the situation in their Participant Information Sheet (See Appendix 3), I acted with integrity in all aspects of the research, I worked closely with my supervisors at all stages of the project, and neither of my supervisors had any association with potential pools of participants that could be considered a conflict of interest or perception of coercion. There are two potential benefits of me being the programme creator and intervention facilitator, namely that it brought with it an assurance of the high-fidelity of WP instruction and that I had sufficient mindfulness practice experience to answer participant

questions or support them through any challenges related to it, given that my personal practice dates back almost a decade.

The second limitation revolves around the sample size being small. As discussed in the introduction, recruitment of participants coincided with the onset of the COVID-19 pandemic outbreak in New Zealand which affected existing relationships with schools and forced the research team to seek other means of participant recruitment. The resulting sample was thus small and rather homogenous from a gender perspective (although there are far more females than males in the teaching profession). The size of the sample did not support disaggregation of data on demographic dimensions such as ethnicity or years of professional experience.

The third limitation of the study relates to the absence of a control group. The initial research design included a waitlist control group who were going to receive the intervention after the intervention group. Due to the small sample size and participants' expressed desire to receive the programme immediately, the control waitlist design was abandoned. For this reason, I was unable to exclude the influence of confounding variables on my findings. Randomly allocating participants to treatment or waitlist groups would have allowed me to establish in a more compelling way that the intervention caused the findings in my project.

The fourth limitation of my research design includes the exclusive use of self-report measures. Howard and Dailey (1979) argued that such measures may be confounded by response-shift bias, an instrumentation effect which occurs when participants' internal frame of reference of the construct being measured changes between the pre-test and the post-test due to my project are, however, widely used in mindfulness research, including in studies where measures such as cortisol levels (Biegel et al., 2009b) or brain imaging (Davidson et al., 2003) have been employed, and which yielded similar findings to ours. Some studies have suggested that in instances where participants might have been exposed to a concept without

fully understanding its meaning, participants may overestimate their ability at the commencement of the programme (Bernay et al., 2016; Drennan & Hyde, 2008). For example, Bernay et al. (2016) found that students might be overestimating their level of mindfulness due to a lack of sufficient knowledge about mindfulness prior to the programme. Similar results were found by Drennan and Hyde (2008) in relation to concepts such as critical thinking and research ability. According to this, response-shift bias might have influenced my respondents to overestimate their level of mindfulness or wellbeing initially. Indeed, participant responses seemed to indicate that both concepts were considered "buzzwords" prior to the programme and that their understanding was deepened thanks to WP. This might suggest that increases in mental wellbeing and mindfulness might have been higher than what our pre-test-post-test measurements showed.

There are several future directions for research that the current project gave rise to. Some are related to the limitations of the current study, whereas some have emerged through incidental findings. The first direction for further investigation relates to the burnout profile of New Zealand (NZ) teachers. As discussed above, our findings and those of Whitehead et al. (2000) found that NZ teachers have a distinct burnout profile on the MBI-ES compared to their US counterparts. Further studies can expand this line of enquiry by investigating the correlation of cultural components with MBI-ES scores.

Given that burnout is an occupational hazard, it would be useful to explore the presence and prevalence of psychosocial hazards in the workplace and their correlation to workers' burnout rates. Psychosocial hazards include job demands, availability of resources, incivility at work, bullying, or job autonomy (LaMontagne et al., 2014). Therefore, it would be useful to investigate teacher burnout rates and psychosocial hazards at a school level in order to capture a more accurate picture of what causes burnout, so that potential workplace factors such as high workload or low resources are mitigated.

The same line of inquiry can be expanded to organisational research, especially given that the rates of burnout among various professions is on the rise (Asana & Sapio Research, 2021). Of particular interest would be the application of WP in hospital settings among the nurse population. Nurses, as well as other frontline medical professionals, have been severely impacted by the pandemic with burnout rates escalating to worrying proportions (Jun et al., 2021). Within the NZ context, research examining workplace stress and burnout in nurses highlights ongoing issues for the last two decades (Tabakakis et al., 2020). A 2001 study that explored burnout in NZ nurses found that 32.9% of them were in the advanced stages of burnout (Hall, 2001), while a 2007 survey of NZ and Australian nurses found that stress was on the rise and the researchers forecasted poorer mental and physical health for nurses in years to come (Chang et al., 2007). Moloney et al. (2018) explored the relationship between burnout and NZ nurses' intention to leave the profession and concluded that workload and job emotional demands had the largest effects on burnout being a significant predictor of nurse intention to leave the profession. Tabakakis et al. (2020) explored burnout in NZ registered nurses and concluded that the practice environment, specifically exposure to negative acts such as bullying, was associated with burnout. They further noted the toll of the emotional labour involved in the profession and the fact that emotional intelligence which is essential to nurses fulfilling their role, was not taught well (Tabakakis et al., 2020). Considering these findings, and the reality of the growing nurse shortage (Tabakakis et al., 2020), reducing sources of workplace stress and burnout in nurses and equipping them with the personal resources to manage the emotional demands of their job needs to be a leading priority for healthcare providers in NZ. MBIs have been shown to be successful in reducing nurse stress and burnout and improving nurses' resilience in other countries (Aryankhesal et al., 2019; Guillaumie et al., 2017; Zhang et al., 2020). To date there has been no study

exploring the effect of mindfulness training on NZ nurses, which would make investigating a WP intervention in this context all the more important.

Related to further research on the Wellbeing Protocol in general, a few different avenues are worth exploring. Studies with larger participant samples and randomised control designs would be compelling in establishing that the programme definitely contributes to positive outcomes. Further, given that WP has specifically been developed as a workplace resilience intervention, it would be recommended to measure its impact in organisational contexts, such as large or medium-sized private enterprises.

We would also recommend testing the Wellbeing Protocol's impact on anxiety and depression. The latter has been shown to be correlated with burnout and low mental wellbeing (Bianchi et al., 2016; Birchinall et al., 2019; Maslach et al., 2001) and both conditions have been predicted by the World Health Organisation to become significantly higher in the next decade (Murray et al., 1996). Depression is already a leading cause of absenteeism and lost productivity at work, costing the US economy $44 billion per year (Stewart, 2003). Anxiety disorders have increased incidence in the adult population, with one in five adults in the US, for example, experiencing it (Kessler et al., 2005). Therefore, it would be useful to assess if the Wellbeing Protocol has an impact or not on these types of disorders.

To address the response-shift bias inherent in self-report measures (Howard & Dailey, 1979), future research could explore incorporating a retrospective pre-test design or physiological measures. The retrospective pre-test method differs from pre-test-post-test methods in that both post-test and pre-test measures are collected at the same time (Drennan & Hyde, 2008). This method is not a replacement for pre-test-post-test measures but rather a complementary tool that has been shown to be useful in identifying respondent overestimations in their initial self-appraisals (Drennan & Hyde, 2008). Regarding

physiological markers of change in stress, measures of the hormones cortisol or dehydroepiandrosterone could be utilised. Heart rate variability is another significant measure that could be employed, as it points to the connection between neural and physical default stress responses (Brosschot et al., 2017; Thayer et al., 2012).

To further expand the research of WP on educators, I recommend longitudinal studies which monitor the impact of the programme at a school level. Impact on student motivation and achievement would also contribute a valuable dimension, as previous research has shown that teacher mental distress was correlated to negative outcomes for students (Abenavoli et al., 2013; Jennings & Greenberg, 2009). Thus, if WP has a positive impact on teachers and their ability to relate to and support students, it would be valuable to capture students' perspective on their teacher, as well as their learning outcomes.

### 6.5. Concluding Thoughts

The COVID-19 pandemic introduced new stressors to most life domains, such as longer work hours, employment shortages, supply chain disruption, and increased demands at home, to name just a few. As we head into the third year of the pandemic, these stressors have become indefinite, causing many to feel overwhelmed and heightening everyone's risk of burning out. The American Psychological Association (APA) surveyed 1,501 US adult workers in 2021 and found that 79% of respondents reported job-related stress in the month before the survey, 32% experienced emotional exhaustion, and 44% were physically fatigued, a significant 38% increase compared to 2019 (Abramson, 2022). These findings are replicated in research by the McKinsey Institute which showed that across different nations from the Americas, to Europe, and Asia-Pacific, rates of burnout have almost doubled post COVID-19 (Alexander et al., 2021). Organisations worldwide are becoming more aware that employee wellbeing is a key factor affecting retention, productivity, and engagement. The

current study could provide valuable guidance for those organisations considering the contribution of the Wellbeing Protocol to employee wellbeing and resilience.

Burnout and mental distress among teachers are also at an all-time high. According to the US National Education Association, one in three teachers reported that COVID-19 had made them more likely to resign or retire early (Flannery, 2020). The American Psychological Association highlighted that educators are at a higher risk of burnout especially given that the public continues to resist COVID-19 prevention measures (Abramson, 2022). In New Zealand, the Education Review Office (2021) found that post COVID-19, teachers and principals are exhausted, less satisfied with their job, and disappointed with the level of support available. Considering that the pandemic is ongoing at the time of this writing, it is imperative for schools to implement measures to support teacher wellbeing. This research project provides guidance for school leaders and teachers who are seeking to implement mindfulness-based programmes to reduce burnout and stress symptoms.

To conclude, the Wellbeing Protocol may be a promising programme to improve wellbeing, even under conditions of crisis and intense stress. Its compact format and flexible mode of delivery make it a suitable intervention for workplaces and school settings. Participant reports as well as the measures employed point to positive outcomes both immediately following programme participation and at three months follow-up. This suggests that the Wellbeing Protocol might be useful in alleviating employee stress and burnout and in promoting greater resilience and mental wellbeing.

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# APPENDICES

## Appendix 1. Open Ended Survey Questions at All Data Collection Times

### *Time 1. Before the Intervention*

1. What do you find most challenging in your life now? Please explain/give examples.

2. How do you try to solve your problems generally? Please explain/give examples.

3. How satisfied are you with your life now? Please explain/give examples.

4. Is there anything else you'd like to share?

### *Time 2. Immediately After the Intervention*

1. Has the mindfulness programme had any effect on your life at work or at home? Please explain/give examples.

2. Has the mindfulness programme had any effect on the challenges you had in your life? Please explain/give examples.

3. How satisfied are you with your life now? Please explain/give examples.

4. Is there anything else you'd like to share?

### *Time 3. Three Months After the Intervention*

1. Do you still practice any technique learnt in the mindfulness programme? If yes, please explain/give examples.

2. Has the mindfulness programme had any effect on your life at work or at home? Please explain/give examples.

3. How satisfied are you with your life now? Please explain/give examples.

4. Is there anything else you'd like to share?

## Appendix 2. Focus Group Questions

1. Think back at the entire programme. What went particularly well?

2. What needs improvement?

3. What is different in your life, if anything, as a result of this programme?

4. What words or feelings come to mind when you think about this programme?

5. If you were inviting a friend to participate in this programme, what would you say in the invitation?

6. Think back before the course. Has your understanding of mindfulness changed since then? If yes, how? And why do you think this might be the case?

7. Think back before the course. Has your understanding of wellbeing changed since then? If yes, how? And why do you think this might be the case?

8. Think back before the course. Has your understanding of stress changed since then? If yes, how? And why do you think this might be the case?

9. Is there anything we should have talked about but didn't?

***Probing questions/statements to be used if needed (Krueger & Casey, 2015)***

- Would you explain further?
- Would you give me an example of what you mean?
- Would you say more?
- Is there anything else?
- I don't understand.

## Appendix 3. Participant Information Sheet and Consent Form

School of Learning Development and Professional Practice
Faculty of Education
The University of Auckland
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74 Epsom Avenue, Epsom
Auckland 1023, New Zealand

### *Participant Information Sheet*

| | |
|---|---|
| **Project Title:** | The Wellbeing Protocol - Effects on Teacher Stress, Burnout, And Wellbeing During the Covid-19 Outbreak |
| **Principal Investigator:** | Prof. Christine Rubie-Davies |
| **Co-investigator**: | Prof. Deidre Le Fevre |
| **Student researcher**: | Georgi Toma |

**Researcher introduction**

My name is Georgi Toma and I am a PhD student in the School of Learning Development and Professional Practice, in the Faculty of Education and Social Work at The University of Auckland.

**Project description and invitation**

I would like to invite you to take part in a research study on the impact of a mindfulness-based resilience programme on your stress levels, wellbeing, and burnout. Mindfulness is a way of paying attention to the present moment and the programme I am offering might help you manage the stress inherent to your profession, feel calmer and happier, and better understand your thought processes and emotional reaction patterns. Mindfulness has been shown to help decrease stress and increase positive feelings of wellbeing. It has also been shown to help people experience less burnout symptoms. With this study, I aim to see if that is true for you and in your experience. Your participation in this study is completely voluntary. Teachers from all subject areas are welcome to volunteer. There are no specific requirements to be part of this study.

**Project Procedures**

Starting in April 2020, I will be delivering The Wellbeing Protocol**,** a mindfulness-based programme created to reduce stress and burnout. The techniques you will learn in the programme are simple and effective and also fun. The main focus of each session is how the concepts and techniques discussed can be applied to your daily life. That means that every session is very interactive and there is plenty of space for you to express your ideas. We will be exploring stress mechanisms and how to minimise their impact, learn techniques to disengage our automatic thought processes and emotional reaction patterns, and to cultivate a sense of calm and balance in our minds and bodies. The programme will last for 12 sessions, with one session per week. The sessions will take place online. As part of the programme, you will have the option to do some mindfulness activities in your free time. There will be many options to choose from on the course website. These activities are optional and they all take less than 10-15 minutes to complete. You will be asked to complete an online questionnaire three times: before the programme starts, immediately after the programme finishes and three months after programme completion. This questionnaire will take approximately 30 minutes and it will be done online. You can also take part in a focus group at the end of the programme if you wish to. The focus group is an online video session where you, together with other 5 to 10 participants, will share your opinion about the programme. This session will last around 30 minutes and it will be led by a research assistant. It will be audio recorded and it won't be possible for the recorder to be switched off. However, you can choose not to answer a specific question and you can just stay silent. Also, everything discussed in the focus group should be kept confidential so you will be asked not to share that information with anyone. The audio recording of the focus group will be transcribed by a research assistant. All the participants will be de-

identified during transcription and no names will be used in any reports. Here are the questions used in the focus group:

1. Think back at the entire programme. What went particularly well?

2. What needs improvement?

3. What is different in your life, if anything, as a result of this programme?

4. What words or feelings come to mind when you think about this programme?

5. If you were inviting a friend to participate in this programme, what would you say in the invitation?

6. Think back before the course. Has your understanding of mindfulness changed since then? If yes, how? And why do you think this might be the case?

7. Think back before the course. Has your understanding of wellbeing changed since then? If yes, how? And why do you think this might be the case?

8. Think back before the course. Has your understanding of stress changed since then? If yes, how? And why do you think this might be the case?

9. Is there anything we should have talked about but didn't?

If at any point during the programme you feel stressed, you can always talk to me or to a counsellor whose contact details will be made available to you at the beginning of the programme. You can also withdraw from the programme at any time without having to give any reasons.

Please note I am the researcher, the intervention facilitator and mindfulness programme creator. In order to avoid any potential conflict of interest, the data collection and coding will be managed by a research assistant who will provide me with de-identified data. I will act with integrity with respect to data analysis procedures and will work closely with my supervisors to ensure objectivity is retained at all times. Neither of my supervisors have any

association/relationship with potential pools of participants that could be considered a conflict of interest or perception of coercion.

**Data storage/retention/destruction/future use**

The research assistant will store the participant list on a password-protected computer and will delete it permanently once all the data have been entered and the database is complete. The research assistant will lead and record the focus groups and will transcribe the audio recording de-identifying all participants. She/he will send the researcher de-identified transcripts. All the de-identified data will be backed up on University of Auckland server and deleted six years after PhD completion. Hardcopies of the consent forms will be stored in a locked cabinet at the University for six years and then destroyed. Electronic copies of the consent forms will be stored on a password protected computer and permanently deleted after six years.

The final report will be submitted for assessment for a Doctor of Philosophy degree from The University of Auckland and a copy of the thesis will be accessible at The University of Auckland library and online. Findings may also be used for academic publications and conference presentations. Once the study is complete, I will provide you with a summary report if you wish so.

**Right to withdraw from participation**

You can withdraw from the programme at any time without giving any reasons. You can also ask me to take your questionnaire data out of the study up until two weeks after you have completed it.

Participants who volunteer to be part of the focus groups may refuse to answer any questions and are free to leave the group discussion without having to give a reason. However, because of the nature of the group situation, the recording device cannot be turned

off during the discussion and, if they withdraw from the research, information they have contributed up to that point cannot be withdrawn.

**Anonymity and Confidentiality**

A research assistant will de-identify the data before sending it to me so I won't know what your answers to the questions were. No reference will be made to any persons connected to the research in any publications that result from this study. The research assistant has signed a confidentiality agreement so she/he will not share any information about the study with anyone. However, confidentiality cannot be fully guaranteed as it is possible that participants may speak to others about the research study.

**Contact details**

If you agree to participate, please complete, sign and return the attached consent form by email to g.toma@auckland.ac.nz. Thank you for reading this information sheet.

Warm regards,
Georgi Toma, PhD Student

School of Learning, Development and
Professional Practice Faculty of Education &
Social Work
The University of Auckland
Email: g.toma@auckland.ac.nz
Phone: [a pre-paid phone number will be purchased by the researcher to be used for the study; the number will be inserted here]

**University of Auckland contacts:**

| **Supervisor** | **Co-Supervisor** | **Head of School** |
|---|---|---|
| Professor Christine Rubie-Davies | Professor Deidre Le Fevre | Associate Professor Richard Hamilton |
| School of Learning, Development and Professional Practice, Faculty of Education & Social Work, The University of Auckland | School of Learning, Development and Professional Practice, Faculty of Education & Social Work, The University of Auckland | School of Learning, Development and Professional Practice, Faculty of Education & Social Work, The University of Auckland |
| c.rubie@auckland.ac.nz | d.lefevre@auckland.ac.nz | rj.hamilton@auckland.ac.nz |

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, Office of Research Strategy and Integrity, The University of Auckland, Private Bag 92019, Auckland 1142. Telephone 09 373- 7599 extn. 83711. Email: humanethics@auckland.ac.nz.

School of Learning Development and Professional Practice
Faculty of Education
The University of Auckland
H Block, Gate 3
74 Epsom Avenue, Epsom
Auckland 1023, New Zealand

**Consent Form**
***This Consent Form will be held for a period of six years***

| | |
|---|---|
| **Project Title:** | The Wellbeing Protocol - Effects on Teacher Stress, Burnout, And Wellbeing During the Covid-19 Outbreak |
| **Principal Investigator:** | Prof. Christine Rubie-Davies |
| **Co-investigator**: | Prof. Deidre Le Fevre |
| **Student researcher**: | Georgi Toma |

I have read the Participant Information Sheet, have understood the nature of the research and why I have been selected. I have had the opportunity to ask questions and have had them answered to my satisfaction.

- I agree to take part in this research.
- I understand that I am free to withdraw my participation at any time, and to withdraw any data traceable to me up to two weeks following completion of the questionnaire.
- If I volunteer for the focus group, I understand that I will be recorded. I may refuse to answer any questions and am free to leave the group discussion without having to give a reason. However, the recording device cannot be turned off during the discussion and, if I withdraw from the research, information I have contributed up to that point cannot be withdrawn.
- If I volunteer for the focus group, I agree that everything discussed is confidential and I will not share that information with anyone.
- I understand that a research assistant who has signed a confidentiality agreement will code the online questionnaires and the focus group.

- I understand that participants will not be identified in any written report or oral presentation arising from this research; however, I also understand that complete confidentiality cannot be guaranteed.
- I understand that the questionnaire data and consent forms related to this study will be kept in a locked cabinet at the University of Auckland or a password protected computer and will be destroyed after six years.
- I ○ **wish** / ○ **do not wish** to receive a summary of findings, which can be emailed to me at this email address: ……..

☐ I consent. Begin the research

☐ I do not consent.

**Name**: ☐ **Date:** ☐