

Wellbeing for Schoolteachers

February 2024



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The **Wellbeing Research Centre** at the University of Oxford is an interdisciplinary research group that leads globally on the empirical science of wellbeing. The Centre explores wellbeing across the lifespan, via four main research streams: measurement, cause and effect, policy and interventions, and the future of wellbeing.

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Jan co-authored the first major textbook on wellbeing science with Richard Layard in 2023 (Cambridge University Press) and his book with George Ward summarising their research on wellbeing in the workplace is forthcoming with Harvard Business Press.

His research and commentary regularly feature in the media, including in *The Economist*, the *Financial Times*, the *Harvard Business Review*, and on the BBC. He is a frequent speaker at academic and non-academic conferences, including at PopTech and TED.

Alongside his role at Saïd Business School, Jan is the KSI Fellow and Vice-Principal of Harris Manchester College at the University of Oxford.

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Executive Summary



This scoping report was conducted by the Wellbeing Research Centre at the University of Oxford in collaboration with the International Baccalaureate Organization (IBO).

The aim of this stream of work was to investigate how wellbeing could be programmed across the International Baccalaureate curricula with a view to a new approach to wellbeing across the IBO by 2030.

The IBO has an opportunity to be a pioneer in this area of education.

The key findings and recommendations highlighted in this report aim to provide IBO stakeholders with evidence-based insights and blue-sky thinking on the definitions of, drivers of, and interventions for, teacher wellbeing and its related concepts in education.

We hope that readers may use this report as a resource to inform how wellbeing strategies can best be implemented in accordance with the leading scientific literature.

The Literature Review

The literature review provides an overview of the research into teacher wellbeing and, more broadly, occupational wellbeing for adults. The focus is subjective wellbeing (how people feel about their own lives but due to the limited nature of the literature, this report also includes research on teacher wellbeing more broadly.

This report is intended to give the IBO, policymakers, and educational leaders an understanding of the definitions of adult wellbeing, what influences teacher wellbeing, and what evidence-based interventions might be used to improve teacher wellbeing.

Why Enhance Teacher Wellbeing in Schools?

The widespread issue of low teacher wellbeing and mental health globally is having detrimental effects on schools (Thapa et al., 2013; Toropova et al., 2021).

This not only exacerbates the shortages of teachers, but it also negatively impacts teachers' effectiveness in their roles as educators, and on the students they teach (Dudenhöffer et al., 2017; Herman et al., 2018; Maxwell et al., 2017).

Therefore, **improving teacher wellbeing is an important task for schools and policymakers globally**, especially given the increased wellbeing issues during the COVID-19 pandemic, which could potentially further impact teaching efficacy and exacerbate teacher shortages.

Indeed, teachers are "the builders of prosperous and successful societies" (Li, 2021, p. 5). From a global perspective, extreme high levels of teacher stress, depression, anxiety, and burnout has been observed in teaching professions (e.g., Corrente et al., 2022; Hall-Kenyon et al., 2014).

However, research into teacher wellbeing is still largely focused on, and conducted in, Western, wealthy, nations and is missing key insights from under-researched populations such as the global South and developing countries.

"Teachers are [...]the builders of prosperous and successful societies."

Definitions of Wellbeing

This report focuses on subjective wellbeing, which means how people feel about their lives.

Academics tend to primarily focus on subjective wellbeing because **it is the ultimate way of assessing how an individual feels about their life.**

If you measure wellbeing objectively, using questions that form an index around things that are known to have an effect on wellbeing, statistically you would have to use a complicated weighting system to determine how much of an effect each of these things has on individuals, and this weighting system might need to change by population.

Whereas if you ask questions directly about wellbeing to young people, you get to the core of that individual's experience of their own lives.

The definitions we recommend in this report remove the drivers of wellbeing (like resilience, mental health, family, peers, teachers, etc.) from the definition and **focus on the three key areas of subjective wellbeing:**

- LIFE SATISFACTION
- AFFECT
- EUDAIMONIA

“Subjective wellbeing is the ultimate way of assessing how an individual feels about their life.”

Key Findings in Teacher Wellbeing

- 1 Across countries and school grade levels, high levels of teacher stress, depression, anxiety, and poor physical health have been observed.

Research also shows that teachers report one of the highest levels of occupational stress and burnout on the job, compared with other professions.

Workload is one of the most prominent factors leading teachers to leave the profession.
- 2 The physical, organisational, and social aspects of the workplace are important for staff wellbeing.

When teachers feel positive about the school in which they work, research has found they suffer from less burnout, establish stronger parent-school bonds, and have lower rates of attrition.

Teachers' negative perceptions of schools have been tied to lower rates of teacher job satisfaction and working efficacy.

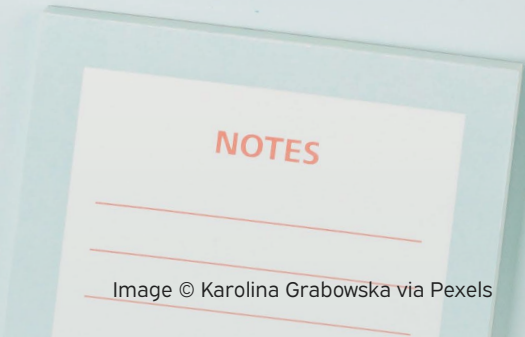
- 3 Subjective wellbeing (SWB) within workplaces is cyclical in nature, with organisations influencing the wellbeing- and performance-related outcomes of their employees, who in turn affect the performance and effective running of organisations in which they work.

Teacher wellbeing is also an important element for schools to consider as **this highly relates to the performance of schools.**
- 4 An increasing body of research evidence indicates that teacher-related factors are the most essential elements impacting learning in schools.

Importantly, teacher wellbeing has a significant impact on the wellbeing and academic success of students.

Teachers have been shown to have “the largest impact on student learning out of all school reform initiatives”.

Teachers not only have an effect on their pupils' test scores and academic achievement, but also on their non-cognitive skills which further impact students' higher education attendance, employment, and earnings.



5 The stress felt by teachers, particularly in relation to high workloads and feeling unable to cope with disruptive students, has been **negatively associated with teaching efficacy such as classroom and pupil management and productive teaching methods.**

High rates of stress and other mental health issues reported by teachers, as a consequence of the demands of their professional role, prevent them from engaging adequately in their work or with their students.

This, in turn, has been found to have a negative impact on pupils' feelings of belongingness and connectedness to their school, their wellbeing, and the quality of education received.

6 Workload is a crucial element of teacher wellbeing and should be explored as a factor for improvement.

When teachers do not have sufficient resources to meet the demands of the job, exhaustion and high levels of stress result, potentially leading to negative emotions and ill-health.

These resources include 'personal' ones relating to motivation and self-efficacy, 'contextual' ones relating to supportive relationships between colleagues, students, and leadership, and 'strategies' relating to problem-solving abilities, continuous learning and development opportunities, and work-life balance.

7 School climate is important for teacher wellbeing.

In some research focusing on teacher wellbeing, it has been divided into the following areas:

- a) participation in school decision making and work autonomy;
- b) good teacher-student relationships;
- c) feelings of belonging and affiliation with the school;
- d) how open the school is to change, development and innovation;
- e) and having sufficient resources to carry out teaching duties.

All of these aspects interact to support teachers in carrying out their role sufficiently, and in so doing, have been found to lead to enhanced teacher wellbeing.

8 Emotional intelligence, emotional regulation, self-efficacy, and resilience, have all been associated with higher teacher wellbeing.

School stakeholders should consider exploring these drivers with their school staff as they could be effective pathways to impact for improving teacher wellbeing.

9 Research has found that leaders create a positive environment through aspects such as:

- prioritising wellbeing policies;
- encouraging positive relationships amongst pupils and staff;
- applying discipline fairly and consistently;
- implementing school safety measures;
- and taking active steps to involve parents and the larger community.

These factors have pronounced effects on students' and teachers' wellbeing, work achievements, and behaviour.

10 Employee voice is an important aspect of employee wellbeing.

Involving employees in the decision-making process regarding their work environment and how their work is performed in terms of their wellbeing, job satisfaction, and work performance, has been shown to have positive outcomes.

Research has found that these types of interventions can be counterproductive when governed solely by top-down leadership, eliminating employee voice and control in their jobs.

11 Any interventions which focus on employee performance should be conducted through a supportive wellbeing lens; focusing on increasing self-efficacy and self-empowerment.

However, this is an under-researched area and there is a lack of strong research evidence on improvements in wellbeing for this type of workplace wellbeing intervention.

12 Research shows that relationships and feeling socially supported are the most important drivers of workplace wellbeing and job satisfaction.

Workplaces that instil health behaviour norms and a positive workplace culture that has a sense of support, common purpose, and trust have been found to be especially important for mental wellbeing at work through influencing employees' feelings of belonging and meaning, although more evidence from high quality research is needed.

13 Research has found that strategies to ensure clear understanding of, and adherence to, intervention guidelines, ensuring adequate funds and resources before commencing the intervention, making enough room for the intervention so that it does not compete with employees' work priorities (such as time pressures and workload), garnering employee participation and support, and providing leaders with support in implementing the intervention are **all powerful methods for ensuring intervention effectiveness.**

Recommendations for Teacher Wellbeing

1 Explore your school definitions of **teacher wellbeing** and ensure that drivers (like workload, autonomy, class size, etc.) which could cause changes in teacher wellbeing, but are not an essential part of it, are removed from the definition, where possible.

2 The IBO and school stakeholders should **consider the changing landscape of teaching**, particularly with the advancement of new technologies, not only for their impact on attainment and learning but also the impact they can have on the wellbeing of teachers and pupils.

3 There may be positive elements for teachers and pupils which arose out of the **COVID-19 pandemic**, and these should be considered within specific cultural contexts, to enhance the wellbeing of teachers and pupils.

4 The research highlights the importance of investing in teacher wellbeing not only for the sake of the teachers themselves but also for the benefit of students and the education system.

Schools should consider the impact that low teacher wellbeing has on not only teaching and pupils, but also the cost of attrition, recruitment, and absenteeism.

Improvement in teacher wellbeing could free up vital resources which could then be spent on the core business of schools: teaching and learning.

5 Teachers should be supported further with rapid advances in technology.

Research shows that this lack of training and low confidence can have negative impacts on wellbeing-related factors such as workload and stress.

6 The wellbeing of teachers should not be overlooked or underestimated; it can have wide ranging impact, for example on pupil wellbeing, pupil sense of belonging, pupil academic attainment, pupil non-cognitive skills, teacher absenteeism, teacher presenteeism, teacher productivity, teacher recruitment, and teacher retention, amongst others.

Teacher wellbeing not only influences the core business of schools but also other factors which drive it.

7 It could be argued that the impact of teacher wellbeing is so important to the functioning of a school that it should be **one of the first factors that is considered when looking at improving wellbeing across the school community.**

8 Recognising the importance of salary satisfaction, job security, and workload management is crucial for enhancing teacher wellbeing.

These work-related variables are important for school stakeholders to consider and staff voice should be considered to determine how important each of these are in each school context.

9 Individual-level factors, such as gender and age, should not be considered as sole determinants of teacher wellbeing, and tailored support can benefit teachers at various career stages with different levels of experience.

School stakeholders should look beyond these individual factors and use staff voice to identify areas that could be considered for impact, for example an individual-level factor may be relevant in a particular setting where a school ethos or policy makes it a relevant wellbeing indicator.

10 Fostering positive relationships among colleagues, students, parents, and leadership, cultivating a positive school climate, and providing effective leadership support are key factors that contribute to teacher wellbeing.

Prioritising continuous professional development, social recognition, promoting physical activity, and nurturing emotional intelligence and resilience are also essential.

As each school is a unique ecosystem, some of these variables may have more impact than others and school stakeholders should hold discussions with relevant stakeholders to determine which are most important and also decide where easy and impactful interventions can be made (see below for more details on interventions and implementation).



11

It is suggested that strong conclusions regarding workplace wellbeing and interventions should be withheld at this point and **schools should consider each intervention's potential within their own settings, policies, and communities.**

As schools are unique ecosystems **there is no single intervention that will be effective in all school settings.**

12

When considering interventions to enhance teacher wellbeing, it is advantageous to employ a combination of universal and targeted strategies.

For instance, implementing mindfulness-based interventions universally for all teachers, while selectively applying Cognitive Behavioral Therapy (CBT) to specific teacher groups, could be an effective approach.

However, **it is crucial to exercise caution to avoid overburdening participants**, as those who are motivated tend to achieve better results.

13

Care should be taken when offering interventions to individuals who may be experiencing mental or physical illness.

14

Successful implementation relies on several key factors, including the provision of clear guidelines, adequate resources, active employee participation, and robust leadership support.

Ensuring that teachers have a voice and can actively participate in decision-making processes is paramount.

Additionally, adapting interventions to the unique context of each school, addressing both individual and structural aspects, and prioritising evidence-based practices are all essential steps in the pursuit of promoting teacher wellbeing.

Again, **it is essential to acknowledge that there is no one-size-fits-all solution, and schools should tailor their interventions to align with their specific needs and circumstances.**

15

Schools should explore staff wellbeing measures with a lens on what would be appropriate to measure in their setting (in line with their own policies and practices).

School stakeholders should consider using staff voice as a way of highlighting key areas to focus on as part of their wellbeing journey.

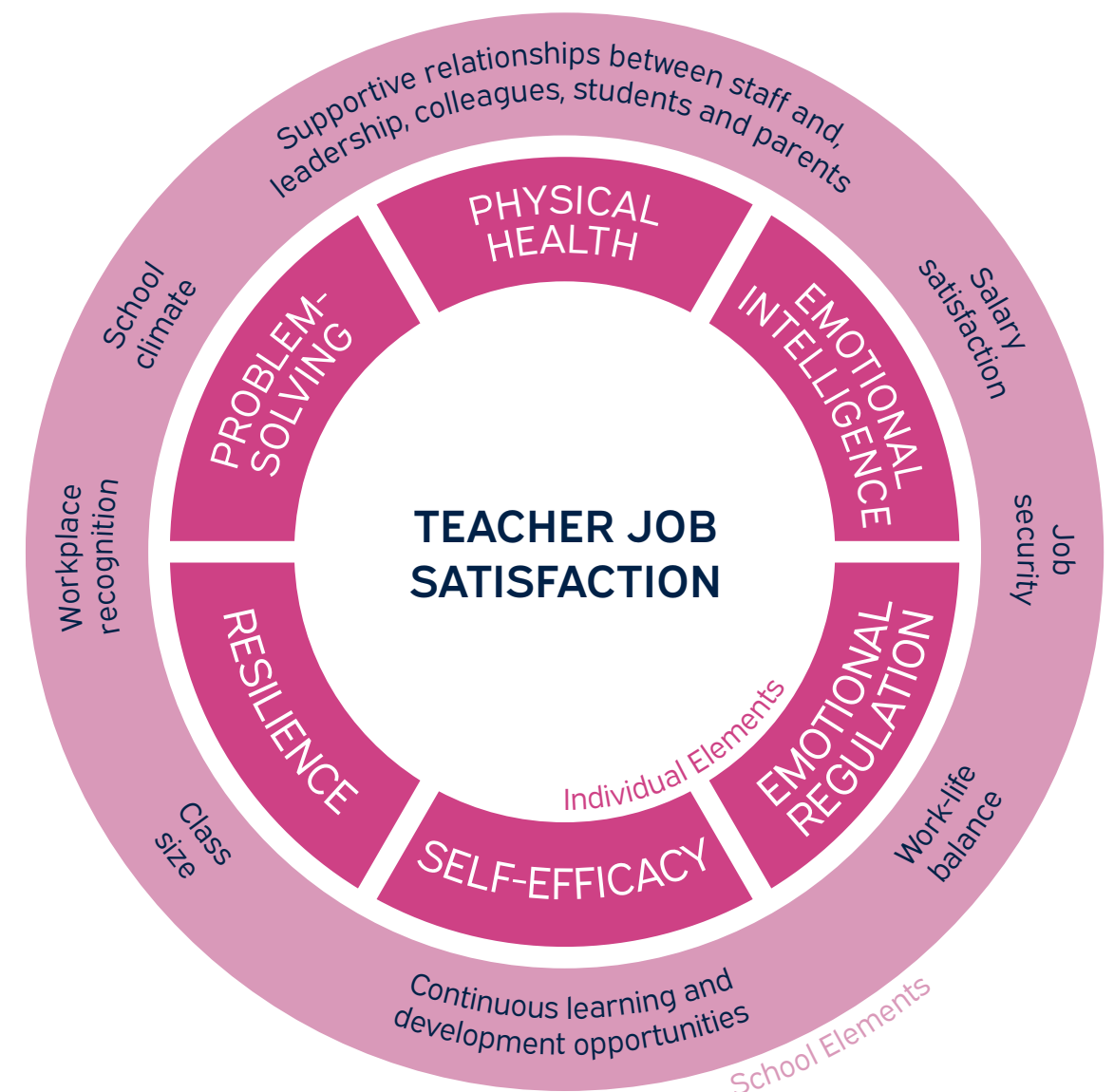
Teacher Wellbeing Framework

This Teacher Wellbeing Framework shows the areas that show promise for being drivers of teacher wellbeing.

The framework is not definitive and should be used primarily as a discussion point amongst school stakeholders and its contents will change over time as the literature progresses.

Each school is a unique ecosystem and some of the drives will be more relevant to your context than others.

It is important to use staff voice to identify drivers of wellbeing in your setting and to take measurements that can give school stakeholders further insights into what factors are important in their context.



Summary

While the field of teacher wellbeing may not have received the same depth of exploration as adolescent wellbeing, a consensus among researchers underscores its paramount importance for schools.

The unequivocal impact of teacher wellbeing on both their professional performance and the wellbeing of students highlights an area that demands closer attention.

Despite being a less studied aspect, the findings presented here offer valuable insights for schools aiming to enhance their understanding of wellbeing within their educational ecosystems.

The implications drawn from these findings provide practical avenues for schools to develop targeted initiatives that not only support teacher wellbeing but also contribute to a positive and thriving learning environment for students.

In this landscape, the IBO stands at a unique vantage point.

With the opportunity to delve into the forefront of wellbeing in educational settings, the IBO has the potential to emerge as a thought leader in the field.

By championing and fostering initiatives that prioritise and support teacher wellbeing, **the IBO can play a pivotal role in shaping the future landscape of education, enriching the lives of both educators and students alike.**

“The unequivocal
impact of teacher
wellbeing [...]
demands closer
attention.”





REPORT NO. 2

Wellbeing for Schoolteachers

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and Jan-Emmanuel De Neve

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Overview

0

0 Overview

This scoping report will inform and make recommendations for improvements to how wellbeing is 'programmed' within and across the International Baccalaureate (IB) programs and schools. The focus of the report is wellbeing for schoolteachers. This report is a companion report to our pupil wellbeing report 'Wellbeing in Education in Childhood and Adolescence'. This report touches upon the wellbeing of schoolteachers and its importance for the individuals, pupils, and the school community. This report takes a deeper dive into teacher wellbeing; the definitions, the evolution of teaching, the global state of teacher wellbeing, why schools should enhance teacher wellbeing, the determinants of teacher wellbeing, interventions for teacher wellbeing, and how to measure teacher wellbeing are explored. Although the report focuses on teacher wellbeing, where possible, the wellbeing of any adults working within the school; teachers, administration staff, supply staff, extra-curricular staff (e.g., sports coaches), and other within-school stakeholders are considered. There is much less scientific research in the field of teacher wellbeing than pupil wellbeing, therefore research on non-teaching-specific general occupational wellbeing has also been included. This report aims to provide International Baccalaureate Organization (IBO) stakeholders with evidence-based insights and blue-sky thinking on the definitions of, drivers of, and interventions for, teacher wellbeing, and its related concepts, in education, and make recommendations about how wellbeing strategies can best be implemented in accordance with the leading scientific literature.

0.1 Key Questions

What do we mean by teacher wellbeing and how do we define it?

What is the global state of wellbeing for schoolteachers?

What is the rationale for enhancing teacher wellbeing?

What are the determinants of teacher wellbeing within schools?

What interventions enhance teacher wellbeing and by how much?

What are the most effective ways to measure teacher wellbeing?

What insights can be taken forward?

0.2 Aims

The aim of this report is to give IBO stakeholders an understanding of the latest research into teacher wellbeing and some of the factors that might facilitate or act as barriers to improving teacher wellbeing. The ultimate aim of this stream of work, beyond the scope of this report, is for the findings from these reports to become part of a digital, evidence-based repository which schools can use to measure, monitor, and support, the wellbeing of young people and those who interact with them.

Wellbeing Definitions

1.1

1 Literature Review

This literature review is intended to give an overview of the research into teacher wellbeing and, more broadly, occupational wellbeing for adults. Our focus is teacher subjective wellbeing (how people feel about their own lives) but due to the limited nature of the literature, this report also includes research on teacher wellbeing more broadly. Reviews in seven scientific English-language databases (Appendix 1; Chapter 4.1) were searched to gather the literature, focusing on schoolteachers in school settings, rather than other teachers, such as university lecturers, or other settings, such as clubs outside schools. This report is intended to give the International Baccalaureate Organisation (IBO), policymakers, and educational leaders an understanding of the definitions of adult wellbeing, what influences teacher wellbeing, and what evidence-based interventions might be used to improve teacher wellbeing. It's crucial to understand that there is no one-size-fits-all strategy for promoting teacher wellbeing because every educational system and cultural setting may call for a different set of strategies and interventions. As indicated above, this report is a companion report to the 'Wellbeing in Education in Childhood and Adolescence' report, and for maximum clarity on wellbeing in schools, both student and teacher wellbeing should be explored.

1.1 Wellbeing Definitions

The human fascination with what it means to 'live a good life' is found throughout historical texts dating back to at least Ancient Greece, with its foundations in the work of Aristotle and Plato. Recent wellbeing interest surged in the middle of the last century with the publication of the World Health Organisation (WHO) constitution of 1948, which states that "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". This shift to focus on wellbeing, was bolstered in 1974 by Richard Easterlin's research into wellbeing and Gross Domestic Product (GDP), which demonstrated that above a certain level, gains in GDP (in basic terms, the value added to a nation through the production of goods and services) are not associated with increased happiness of citizens. This was ground-breaking research which disrupted the traditional thinking that increasing the wealth of a nation would make citizens happier. Since the 1970s, the empirical science of wellbeing has grown into a vast research area, incorporating insights from the related disciplines of psychology, economics, cognitive, neuroscience, medicine, social policy, philosophy, and more.

Outside of empirical research, wellbeing is often used as an umbrella term which includes a variety of different definitions. It is often confused with concepts like

happiness or mental health. Below some key terms, such as wellbeing and mental health, which are foundational to this report (in part reproduced from our 'Wellbeing in Education in Childhood and Adolescence' report) have been defined.

1.1.1 Key Terms

Adult is a term related to biological age or stage of development. Within the context of this report, the term 'adult' reflects the legal definition of adulthood which usually commences at age 18. However, it should be noted that there are cross-cultural differences in the legal definition, and developmentally it could be argued that adolescence continues until around 24 years of age (Nelson et al., 2016). We use the legal definition as this is commonly used as the beginning of adulthood in the academic literature which we will be referring to.

Wellbeing is a broad and multidimensional concept which encompasses objective and subjective measurements of how an individual's life is overall, including, for example, their psychological functioning, emotional health, purpose in life, and satisfaction with their life. Below are some definitions from academics and international organizations to highlight and explore the variety of working definitions (see Section 1.1.2). When the term wellbeing used in this report, it is referring to subjective wellbeing, unless otherwise stated.

Subjective wellbeing is a relatively new term (Diener & Suh, 1998), defined as "people's evaluations of their lives – the degree to which their thoughtful appraisals and affective reactions indicate that their lives are desirable and proceeding well" (Diener et al., 2015, p.234). Subjective wellbeing, crucially, involves the individual's assessment and perceptions of their own life.

Psychological wellbeing refers to the state in which an individual's life is not only marked by experiencing positive emotions and feeling content but also by the ability to function effectively in various aspects of life (Huppert, 2009; Ryff, 1989).

Hedonic and eudaimonic wellbeing come with their distinct conceptions of what constitutes a well-lived life (Ryan & Deci, 2000). In hedonistic happiness studies, researchers are primarily concerned with subjective wellbeing, evaluating whether individuals are content with their lives and experience more positive emotions than negative ones. Conversely, eudaimonic researchers place their focus on self-realization, personal growth, the pursuit of goals, and development, often employing psychological wellbeing scales for measurement (Ryan & Deci, 2000).

Life satisfaction is a term that is often used interchangeably with wellbeing and subjective wellbeing but is actually one component of both (life evaluation). Most one-item measures of wellbeing are measures of life satisfaction (e.g., the Cantril Ladder; Cantril, 1965).

Mental health is a term is used in a variety of different ways depending on the context. Some sources use mental health as the opposite of clinical mental illness, while others, such as the World Health Organization (WHO; see below), use mental health as a broader overarching term comparable with wellbeing. Those wishing to explore the relationship between mental health and wellbeing must give attention to which definition is presented in the literature they read. If mental health is determined to be the opposite of mental illness, then it is not strongly related to wellbeing (Flèche & Layard, 2017), whereas if taking Keyes' (2005) view that, "mental health and mental illness are not opposite ends of a single continuum; rather, they constitute distinct but correlated axes" (p. 546), then mental health becomes a much broader term more related to overall wellbeing. However, the distinction between the two is still unclear in the literature, and in some research mental health is proposed as a component of wellbeing, and in others, vice versa (e.g., Huppert & So, 2013; WHO, 2001). In the current scoping report, where clinical mental illness and its symptoms are discussed, we describe this as 'mental ill health', and use 'mental health' as a broader overarching term.

Mental illness (or 'mental ill health') is where an individual has a clinically diagnosed mental health condition as diagnosed by the Diagnostic and Statistical Manual of Mental Disorders (DSM; American Psychiatric Association, 2013) or International Classification of Diseases (ICD; World Health Organization, 2019), or pre-diagnosed symptoms. In adulthood, these are commonly mental health conditions related to mood, anxiety, or substance use disorders, such as depression, generalised anxiety disorder, schizophrenia, or eating disorders (Steel et al., 2014).

Quality of life is an overarching term for the quality of the experience (both objective and subjective) of an individual during their life, which is commonly used by the medical profession (Cella, 1994). It is used sparingly in this report as medical quality of life is not the focus. Wellbeing can be viewed as one element of quality of life related to personal satisfaction (Ventegodt et al., 2003).

Emotions are short-term affective states that come and go quickly (happiness, sadness, anger, etc...; Gross & Barrett, 2011).

Mood is a longer-term state of mind or persistent feeling. Moods are less intense than emotions and can come and go without any apparent reason (see Alpert & Rosen, 1990).

Affect is a general term for any type of feeling an individual can experience which can be positive or negative (Barrett et al., 2007). Unlike emotions and moods, affect does not include the duration or intensity of the feeling (Barrett & Bliss-Moreau, 2009). Happiness, joy, and contentment are examples of positive affect (and can also be moods or emotions depending on their intensity or duration), and depression, anxiety, and fear, are types of negative affect (which, equivalently, can all also be moods or emotions).

Happiness is a feeling and a type of positive affect (and can be a mood or emotion). Happiness is one part of overall wellbeing (within the affective dimension) and is not interchangeable with the term wellbeing.

Flourishing refers to excelling or growing in any field. The concept of flourishing has a long philosophical history typically centred around describing individuals or communities reaching their full potential (Keyes, 2002). In psychology, flourishing has been proposed as a multidimensional construct that encompasses positive emotions, relationships, meaning, and accomplishment (Seligman, 2011). The conceptualisation of flourishing as a component of wellbeing originated in the field of positive psychology (Seligman & Csikszentmihalyi, 2000).

Workplace is the location that a person works and can also be colloquially used to describe the organisation, culture, or ethos within a company. For example, the statement 'this workplace is toxic' does not usually refer to the physical space or environment, but rather the interpersonal or organisational aspects.

Job satisfaction is how satisfied overall an individual is with their employment and their experiences within the workplace.

1.1.2 Definitions of Wellbeing in Adulthood

While wellbeing research covers a broad range of scientific perspectives, this report focuses on subjective wellbeing, by which means how people feel about their lives. Below some academic and organisational definitions of wellbeing which cover both objective and subjective elements of wellbeing are given. The purpose of these tables is to give the reader an understanding of the range of definitions that exist. At the end of this chapter, the definition of subjective wellbeing that academic researchers are converging on will be highlighted. As academics we primarily focus on subjective wellbeing because it is the ultimate way of assessing how an individual feels about their life. If you measure wellbeing objectively, using questions that form an index around things that are known to have an effect on wellbeing (such as housing, employment, social interactions), statistically you would have to use a complicated weighting system to determine how much of an effect each of these things has on individuals, and this weighting system might need to

change by population (what makes young children happy, may not make teenagers happy). Whereas if you ask questions directly about wellbeing to young people, you get to the core of that individual's experience of their own lives. This will be discussed further later in this chapter, along with the elements that are essential components of wellbeing.

1.1.2.1 Academic Definitions of Wellbeing

Below are some academic definitions of wellbeing that can be found in the adult wellbeing literature. Readers will spot some similarities amongst the definitions which are discussed below.

TABLE 1: ACADEMIC DEFINITIONS OF WELLBEING

Author(s)	Definition
Rogers, 1961	Discussed wellbeing in terms of "the good life" (p. 186). He believed that each individual strives towards becoming a "fully functioning person" who is open to experience, is trusting in his/her own organism, and leads an increasingly existential life (p.187-189).
Bradburn, 1969	"An individual will be high in psychological well-being in the degree to which he has an excess of positive over negative affect and will be low in well-being in the degree to which negative affect predominates over positive" (p.9).
Shin and Johnson, 1978	"A global assessment of a person's quality of life according to his own chosen criteria" (p.478).
Diener and Suh, 1998	"Subjective well-being consists of three interrelated components: life satisfaction, pleasant affect, and unpleasant affect. Affect refers to pleasant and unpleasant moods and emotions, whereas life satisfaction refers to a cognitive sense of satisfaction with life" (p.200).
Marks and Shah, 2004	Considered wellbeing to be: "more than just happiness. As well as feeling satisfied and happy, well-being means developing as a person, being fulfilled, and making a contribution to the community" (p.2).
Ryff and Singer, 2009	"Well-being, construed as growth and human fulfilment, is profoundly influenced by the surrounding contexts of people's lives, and as such, that the opportunities for self-realization are not equally distributed" (p.14).
Dodge et al., 2012	"Stable wellbeing is when individuals have the psychological, social and physical resources they need to meet a particular psychological, social and/or physical challenge. When individuals have more challenges than resources, the see-saw dips, along with their wellbeing, and vice-versa" (p.230).
Fletcher, 2016	"What is distinctive about the philosophy of well-being is its focus on the question of which things in and of themselves make someone's life go better or worse for them. It thus seeks an account of what is fundamentally, or non-instrumentally, good or bad for us and why" (p.33).
Tov, 2018	"The term <i>well-being</i> encompasses all the ways in which people experience and evaluate their lives positively" (p.1).

Based on the academic definitions of wellbeing provided in the table above, it is clear that researchers working across the field demonstrate diverse viewpoints on the concept of wellbeing. These definitions range from the 1960s when academics were becoming more interested in wellbeing and surrounding cognitive health areas, to

the present day. The definitions largely focus on how an individual experiences their life and some definitions include the types of feelings they have (such as positive feelings). Researchers now have modern statistical techniques to explore what elements are integral to wellbeing, and a more thorough exploration of the

definition of subjective wellbeing that scientists have converged on is presented in Section 1.1.2.3.

1.1.2.2 Organisation Definitions of Wellbeing

The table below presents how different renowned

international organisations define wellbeing, which provides valuable insights into the multifaceted nature of wellbeing and underscore the significance of contextual considerations.

TABLE 2: ORGANISATION DEFINITIONS OF WELLBEING

Organisation	Definition
World Health Organization (WHO)	“...mental health, which is conceptualized as a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community. With respect to children, an emphasis is placed on the developmental aspects, for instance, having a positive sense of identity, the ability to manage thoughts, emotions, as well as to build social relationships, and the aptitude to learn and to acquire an education, ultimately enabling their full active participation in society.” (WHO, 2022, p. 1)
Organisation for Economic Co-operation and Development (OECD)	“This definition of subjective well-being hence encompasses three elements: • <i>Life evaluation</i> – a reflective assessment on a person’s life or some specific aspect of it. • <i>Affect</i> – a person’s feelings or emotional states, typically measured with reference to a particular point in time. • <i>Eudaimonia</i> – a sense of meaning and purpose in life, or good psychological functioning.” (OECD, 2013, p.10)
Gallup	“Based on a Gallup study of more than 150 countries representing 98 percent of the world’s population, Rath and Harter have identified five essential elements of life that transcend countries, faiths and cultures: • <i>Career Wellbeing</i>: How you occupy your time/liking what you do each day • <i>Social Wellbeing</i>: Relationships and love in your life • <i>Financial Wellbeing</i>: Managing your economic life to reduce stress and increase security • <i>Physical Wellbeing</i>: Good health and enough energy to get things done on a daily basis • <i>Community Wellbeing</i>: Engagement and involvement in the area where you live” (Rath & Harter, 2010, p. 2).

Many organisational definitions of wellbeing draw upon research findings in the field, demonstrating the intricate nature of this concept across different domains. However, it is important to note that while these definitions often describe various aspects of wellbeing, they may not provide a clear and concise definition. As highlighted by Dodge et al. (2012), these definitions tend

to encompass elements which are actually drivers of wellbeing, rather than definitive components. A driver of wellbeing is anything which can have an effect on a person’s wellbeing but is not an essential component of it. For example, someone may live in unsuitable housing, this could have an effect on their wellbeing, but it is not an integral part of it, many people across the world live in

unsuitable housing but some of these people still report high wellbeing. Therefore, housing or living conditions are a driver that may have an influence on wellbeing. If one takes something like positive emotion, this is an integral part of what wellbeing is, and cannot be disentangled from it. However positive emotion (or 'affect' as scientists would term it) is only one element, and this will be discussed in more detail in Section 1.1.2.4 below. In Chapter 1.5, a more comprehensive and detailed explanation of the drivers of wellbeing and their relationship to the overall concept of wellbeing will be presented.

1.1.2.3 Academic Frameworks

Below some of the most prominent frameworks of wellbeing are explored in the adult literature to highlight the issue of disentangling drivers and essential components of wellbeing. As you can see below, Diener's (1984) framework is solely focused on the elements of wellbeing, how people feel and how satisfied they are with their lives, whereas the OECD's (Exton & Fleischer, 2020) includes drivers of wellbeing such as safe and healthy living and work environments.

TABLE 3: ACADEMIC FRAMEWORKS OF WELLBEING

Framework	Components
OECD Wellbeing Framework (Exton & Fleischer, 2020)	Comprises 11 dimensions: • Considering quality of life aspects such as how well people feel (Health and Subjective Wellbeing) • Knowledge, skills, and capabilities (Knowledge and Skills), • How safe and healthy their living and working environments are (Environment Quality) • How connected and engaged they feel in life and in their relationships (Civic Engagement, Social Connections and Work-Life Balance)
Diener's subjective wellbeing model (1984)	Contains three elements: • Life satisfaction • Positive affect • Negative affect
Ryff's psychological wellbeing model (1989)	Contains six elements: • Self-acceptance • Personal growth • Purpose in life • Environmental mastery • Autonomy • Positive relations with others
Flourishing (Diener, Wirtz, et al., 2010)	Contains eight elements: • Relationships • Self-esteem: being respected • Purpose • Optimism • Competence • Engagement • Being a good person • Contribution to others
Eudaimonic Well-Being (Waterman et al., 2010)	Contains six elements: • Self-discovery • Development of best potentials • Purpose and meaning in life • Pursuing excellence • Involvement in activities • Activities as personally expressive

Wellbeing Model (Knight & McNaught, 2011; reproduced in La Placa et al., 2013)

Contains four domains:

- Individual wellbeing
- Family wellbeing
- Community wellbeing
- Societal wellbeing

Seligman's PERMA framework (2018)

Contains five elements:

- Positive emotions
- Engagement
- Relationships
- Meaning
- Accomplishments

These sets of three tables (above) highlight the difficulty over the past 30 years of defining something so essential to the human experience as wellbeing. Fortunately, with extensive scientific research there is a convergence forming around the elements that are essential components of human subjective wellbeing. These are discussed in Section 1.1.2.4 below.

1.1.2.4 Three Dimensions of Subjective Wellbeing

FIGURE 1: COMPONENTS OF WELLBEING

LIFE SATISFACTION

This element captures people's satisfaction with their lives, their perception, and experience.

AFFECT

The feelings, emotions, and states of a person at a particular timepoint, including both positive affect (e.g., joy, happiness, pride) and negative affect (e.g., sadness, depression, anxiety).

EUDAIMONIA

Whether people feel their life is worthwhile or has purpose and meaning (this can include autonomy, capabilities, competencies, and other areas of psychological functioning).

As shown in the figure above, wellbeing has three components: life satisfaction, affect, and eudaimonia. These three elements are key components of how an individual assesses their own level of wellbeing (i.e., their subjective wellbeing). Definitions of the three areas are included below:

Based on the figure above a school-level definition of wellbeing could be:

"This school promotes the wellbeing of the members of our school community. We define wellbeing as our community members being satisfied with their school lives, having positive experiences at, and feelings about, school, and believing that what they do at school gives them some purpose and meaning."

A school-specific definition of teacher wellbeing could be:

"This school promotes the wellbeing of our staff. We define wellbeing as our staff being satisfied with their school lives, having positive experiences at, and feelings about, school, and believing that what they do at school gives them some purpose and meaning."

Schools should also feel empowered to include drivers in their definitions, with the caveat that when wellbeing or teacher wellbeing is measured, the drivers are not included as essential components of wellbeing. For more on measuring pupil wellbeing, please see our previous companion report, 'Wellbeing in Education in Childhood and Adolescence', and for a more detailed discussion of teacher wellbeing measurement, please refer to Chapter 1.7 below.

It must be noted that, although there is a growing consensus around this definition of subjective wellbeing, the research is largely conducted by Western academics, using Western samples, and therefore the research has a Western bias. Therefore, as research progresses, this definition should adapt to encompass global perspectives. However, this definition which focuses on the components of wellbeing, and not its drivers, is more culturally relevant because the three areas of wellbeing can encompass different cultural perspectives and norms. For example, balance and harmony are more frequently noted elements of life in Eastern cultures (Lomas, 2021) and, while not often asked about in western-developed questionnaires, they can form part of an individual's assessment of their life satisfaction. Ongoing and future research aims to disentangle the complex nature of cross-cultural definitions and drivers of wellbeing, which can then be incorporated into the flexible frameworks for teachers and pupils.

1.1.3 Summary

Wellbeing has been explored as a concept for thousands of years, more recently researchers are converging on a definition of subjective wellbeing that includes affect, life satisfaction and eudaimonia. Schools can use these components to create their own definition of teacher wellbeing which is specific to their school community. Things which may affect wellbeing, such as burnout, mental ill health, resilience, etc, should be disentangled from the definition, and instead seen as drivers of wellbeing.

1.1.4 Key Findings and Recommendations

KF1: Subjective wellbeing has three components: life satisfaction, affect, and eudaimonia.

RI: Explore your school definitions of teacher wellbeing and ensure that drivers (like workload, autonomy, class size, etc...) which could cause changes in teacher wellbeing, but are not an essential part of it, are removed from the definition, where possible. If they are included, ensure that this doesn't cause confusion for any wellbeing assessments that are conducted.

Evolution of Teaching 1.2

1.2 Evolution of Teaching

1.2.1 Teaching and Education

Traditionally, teaching, in the many forms it can take, can be understood as an evolutionary tool through which new knowledge and skills are transferred to learners, and this is a process which can be observed across animal behaviour (Thornton & Raihani, 2008). Csibra and Gergely (2006) hypothesise that pedagogy, the study of teaching methods, evolved within the human population as a consequence of two functions. The first is that humans have a communal goal of understanding their environment and communicating such an understanding with one another. The second function specific to human pedagogy is the attitudinal disposition of teachers to want to share knowledge, and to be able to help improve the understanding of others. The more recent teaching and learning approaches have focused more on students' social and thinking skills rather than just delivering and passing down knowledge. For example, social learning theory, which proposes that new behaviors can be acquired by observing and imitating others (Bandura & Walters, 1977), broadens the learning context to places outside of schools. The understanding of teaching has gradually changed, with practitioners now placing more emphasis on addressing the needs of students.

Education as a structural, institutional, phenomenon can be divided into two roles: the 'learner' and the 'teacher', though these are not distinct categories. To understand and appreciate the role of the teacher, one must consider the ontology of formal education systems. That is, the histories and trajectories of education in order to reflect on how the role of the teacher has changed, and continues to change, across a wide variety of contexts. Formal education, and thus the role of the teacher, can be understood as the aspiration to achieve the following four outcomes, which are well cited in the academic literature on education (Van de Werfhorst & Mijs, 2010): 1) Promotion of equal opportunity; 2) Categorisation and identification of strengths of individuals; 3) Preparation for employment; 4) Preparation for active citizenship.

Within each of these goals of formal education, there are many opportunities for diversity in what these outcomes would look like between different historical, cultural, and economic contexts. It is thus vital that schools and researchers recognise education systems as unique ecosystems, with many factors contributing to how each system is shaped. For example, what 'equal opportunity' and 'active citizenship' might look like in a given system will differ depending on factors, such as the prominent political ideologies, economic security, and the overall performance of the nation at that time. Again, it must be reinforced that the nature of a formal education system is contextual, and as a consequence, the role that a teacher plays within an education system will also be consequential to the factors at play within a specific context.

1.2.2 Structural Differences in Education Systems

In exploring the experiences of teachers, it is vital to understand and acknowledge many structural differences within any given education system, which might influence the experiences of said teachers. For example, teaching primary school (elementary) students or secondary (high) school students changes the expectations placed on a teacher, and consequently changes their experiences of teaching (Kongcharoen et al., 2018; Liddicoat et al., 2018; Walker et al., 2019). The training and professional development opportunities available for teachers at different levels of schooling also differs, which can in turn influence teacher experiences (Kavak et al., 2012). Also, within the understanding that teachers at different levels of schooling will have differing experiences, comes the recognition that different countries have different structures to their education systems (Popov, 2012). Thus, we all must remain vigilant to the fact that cultural context again influences education system characteristics.

Another systemic characteristic which can influence the expectations and experiences of teachers is the governance of the school itself, as this will influence the funding available to the school, as well as who the teachers are held accountable to. For example, differences can be found in the stress and expectations placed on teachers in state-funded schools, in comparison to teachers in independently-funded schools, and this is a trend which has been observed in multiple cultural contexts (Anastasiou & Garametsi, 2020; Brady et al., 2022; Mendoza, 2019).

Education and society are intricately and bidirectionally, linked. The characteristics of a society are both products of, and contributors to, the characteristics of its education system. This report frames the exploration of how education has changed through the identification of radical changes to society, particularly those which have developed within the last 20-50 years: digital developments; increased globalisation; the COVID-19 global pandemic; and many other societal changes. Each of these developments has been transformative, both intentionally and unintentionally, in pedagogy and teaching (Balistreri et al., 2012; Igarashi & Saito, 2014; Raja & Nagasubramani, 2018).

1.2.3 Digital Developments in Education Practice

Modern society has become increasingly technologically advanced, and digital devices now play a significant role in many aspects of our lives. As outlined by Raja and Nagasubramani (2018), technological advancements have had significant impacts on how education can be delivered, with both positive and negative consequences. Using the Van de Werfhorst and Mijs (2010) goals of education, one can also recognise that the digital society in which we live has transformed the workforce and the types of employment now available. New and advancing technologies have brought with them a multitude of job

opportunities in the field of technology, thus increasing the demand for individuals with technological skills (Kärkkäinen & Vincent-Lancrin, 2013). With each of these developments comes a call for teachers who can teach such skills as well as teachers who can engage with the available technology to ensure that students get the most out of their learning (Kärkkäinen & Vincent-Lancrin, 2013; Raja & Nagasubramani, 2018). For the learner, digital developments have also provided new opportunities for collaboration and engagement with learning resources, which has allowed them to become more active in their own learning. Internet applications and platforms such as YouTube, Wikipedia, and TikTok, are examples of sources of teaching and learning for students around the world. The recent development of ChatGPT, an artificial intelligence chatbot, has generated much academic and public discussion regarding the potential effects it could have on education (Lund & Brady, 2023). The rapid changes to the digital landscape, as exemplified in the development of ChatGPT, further emphasises the need for continual critical examination of the role that technology can play in the lives of educators, as well as learners. It is important to recognise that these digital developments have had an asymmetrical impact on education around the world. Disparities in access to and quality of digital resources are evident, with a broad divide between the Global North and the Global South, and have multiple consequences for education, physical health, wellbeing, and other aspects of society (Robinson et al., 2015).

1.2.4 Globalised Perspectives in Education Practice

Another result of the technological advances of the last century is the increasing globalisation of society. The internet has allowed for ease of communication and collaboration across national borders, and this globalisation has permeated across different domains of society, from economic markets to cultural exchanges and multiculturalism (Bloom, 2004; Petrovski et al., 2011). Education has also become increasingly globalised, and as a result, teaching has changed to meet the demands of an ever increasingly globalised society (Balistreri et al., 2012; Igarashi & Saito, 2014). A key element of modern education is preparing students for a globalised world by teaching them to understand, communicate, and collaborate with, people from different cultures and backgrounds.

In a review of teaching and teacher education, Adamson (2012) found that there was empirical evidence to describe many facets of differences in education systems across different cultures. For example, cultural differences can be found in structural forms within education such as the length of the school day, as well as the organisation of school governance. Comparative differences also exist in teaching styles and methods through which students are taught different subject domains, as well as the extent to which the teacher plays a pastoral role in the lives of the students (Adamson, 2012). From the perspective of the

student themselves, the experience of learning in these different education systems is also evident (Crehan, 2016).

Global differences in education are not, however, always a celebration of diversity. There are distinct differences between different global regions with regards to quality of education, as well as equity of education (Pfeffer, 2015). Taking literacy rates, for example, there is considerable disparity in national and regional averages, despite considerable improvements within the last century (Roser & Ortiz-Ospina, 2018). UNESCO have also found that there are global differences in the proportion of children and adolescents who have not achieved minimum proficiency levels in reading and mathematics, with the highest proportions seen in Sub-Saharan Africa, Central Asia and Southern Asia, and the lowest proportions in Oceania and Northern America and Europe (UNESCO, 2016). Such disparities are recognised and being targeted, as shown in the UN Sustainable Development Goals, with 'Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' being the fourth goal outlined for 2030.

1.2.5 The Impact of COVID-19 on Education

The COVID-19 global pandemic brought about a dramatic change into society, with both long-term and short-term consequences. As a global society, at the time of publication, people are still adjusting to the effects of multiple lockdown periods, which varied in intensity depending on national context. It was found that COVID-19 had affected over 90% of the global student population (United Nations International Children's Emergency Fund, 2021), which was an unprecedented scale and speed of educational disruption. Schools and teachers had to adapt to virtual classrooms, disrupted teaching schedules, as well as the socio-emotional stresses of living through a global pandemic (Chan et al., 2021; Mseleku, 2020; Pressley et al., 2021). Education systems had to change to account for these challenges, and rapid advancements were made (Lestiyawati & Widyantoro, 2020; Montejo et al., 2022). Zhao and Watterson (2021) identified three pivotal changes to global education systems as a direct consequence of COVID-19: a) the further development of personalised curriculums, b) a student-centred pedagogy, and c) the development of flexible teaching methods.

Though the generalised observation can be made that COVID-19 had a considerable impact on education for students around the globe, it must again be recognised that different nations were affected in different ways (Reimers, 2022). Even within nations, disparities in the effects of COVID-19 on education varied (Allen et al., 2020). This can be attributed to variances in pre-pandemic education systems, variation in regional and national responses to the pandemic, as well as the quality and quantity of resources available to help cope with the limitations imposed on education systems (Reimers, 2022).

Education systems are still adjusting as a consequence of the COVID-19 pandemic, but arguably the largest impact is the movement towards asynchronous learning (Zheng et al., 2021) – learning which can be achieved independently without simultaneous teaching (e.g., virtual teaching, where students can engage with educational material and teaching in their own time). As the world continues into a “post-COVID” society, it will be of great interest to examine how education systems and practices will develop and be reflexive in light of new, unexpected challenges.

and these should be considered within specific cultural contexts, to enhance the wellbeing of teachers and pupils.

1.2.6 Summary

Society and education are integrally linked, and different cultural contexts can give rise to different societal and institutional conditions. Researchers and educators must consider education systems in a culturally nuanced way, and such a sentiment will be carried throughout this report. The intricacies of exploring the development of educational systems are made more complex with the exploration of temporal effects on education and society, as well as how rates and scale of change will differ between historical periods. The socio-geographical and temporal influences on education are factors to keep in mind whilst endeavouring to understand any education system, or elements within an education system, such as teacher wellbeing.

1.2.7 Key Findings and Recommendations

KF2: Technological advancements have had significant impacts on how education can be delivered, with both positive and negative consequences. The rapid changes to the digital landscape, as exemplified in the development of technologies such as ChatGPT, further emphasises the need for continual critical examination of the role that technology can play in the lives of educators, as well as learners, particularly regarding how they impact the wellbeing of these groups.

KF3: Education systems had to change to account for the challenges of the COVID-19 pandemic, and rapid advancements were made. These included the further development of personalised curriculums, a student-centred pedagogy, and the development of flexible teaching methods.

R2: The IBO and school stakeholders should consider the changing landscape of teaching, particularly with the advancement of new technologies, not only for their impact on attainment and learning but also the impact they can have on the wellbeing of teachers and pupils.

R3: There may be positive elements for teachers and pupils which arose out of the COVID-19 pandemic,

Global State of Teacher Wellbeing

1.3

1.3 Global State of Teacher Wellbeing

Education has progressed but also faces new challenges as a result of the changes in teaching that have taken place over the past 20 years. Although teachers have played a major role in bringing about and encouraging many of these developments, the increased pace of changes and ambitions for better education have meant that education systems have often overlooked the needs of their teachers and their skill-building. As discussed below, this has resulted in greater stress among teachers in many settings, significantly harming their wellbeing and performance. Thus, this section moves on to discuss more contemporary issues facing teaching professions, such as staff shortage, rapid information and communication technology (ICT) advancements, and the impacts of the recent COVID-19 pandemic. These are important aspects to consider in setting a solid background in understanding how various factors may influence teachers' wellbeing, teaching efficacy, and whole-school outcomes.

Working adults make up a majority of the adult population, with global rates of employment ranging from 40%-80% across countries (OECD, 2022). There is a large body of evidence to suggest that workers often face work-related stress, which can manifest in psychosomatic symptoms, affecting the mental, physical, health and wellbeing of employees (Guglielmi & Tatrow, 1998; Hulls et al., 2020; Israel, et al, 1996; Jackson, & Frame, 2018).

Across countries and school grade levels, high levels of teacher stress, depression, anxiety, and poor physical health have been observed (Gray et al., 2017; Hall-Kenyon et al., 2014; MacBeath & Galton, 2008; Molero et al., 2019; Redín & Erro-Garcés, 2020; Scheuch et al., 2015). Research also shows that teachers report one of the highest levels of occupational stress and burnout on the job (Corrente et al., 2022; Hakanen et al., 2006; Stoeber & Rennert, 2008). For example, according to the Labour Force Survey (LFS), the prevalence of work-related stress, depression, or anxiety, is significantly higher in the education industry category (2.7%) than in overall industry (2%) in the United Kingdom (Health and Safety Executive, 2022). Similarly, Gallup found that 44% of K-12 workers (from kindergarten to 12th grade) in the United States reported they "always" or "very often" feel burned out at work, which is higher than all other industries nationally. Across K-12 employees, teachers have the highest rate of burnout at 52% (Marken & Agrawal, 2022). An in-depth qualitative report by the UK Department for Education (DfE) into teacher retention, showed that workload is one of the most prominent factors leading teachers to leave the profession (CooperGibson, 2019).

Work-related stress has been found to negatively affect the personal relationships of teachers, as well as their mental and physical health (Romano & Wahlstrom,

2000; Skaalvik & Skaalvik, 2010). For instance, difficulty managing high workloads at school has been linked to greater emotional exhaustion and teacher work-family conflicts (De Carlo et al., 2019; Ilies et al., 2015). Research focusing on occupational stress has established consistent relationships between workplace stress and numerous negative health outcomes, particularly related to cardiovascular health, gastronomic disease, pulmonary disease, and substance abuse (Guglielmi & Tatrow, 1998; Howard & Howard, 2020; Israel et al., 1996; Jackson & Frame, 2018). Other research has demonstrated how work-related stress is linked to negative psychological issues, low job satisfaction, absenteeism, and intention to quit (Corrente et al., 2022).

1.3.1 Staff Shortages and Workload

In 2016, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics (UIS) estimated that an additional 68.8 million teachers would be needed to provide primary and secondary education to every child in the world (UNESCO, 2016). While teachers are often in low demand in high-income countries due to achieving universal primary and secondary education and slow population growth, more recently, there have been reports of teacher shortages in several high-income countries since returning to in-person teaching following COVID-19 closures (Schmitt & deCourcy, 2022). The following table contains data from a large US sample reflecting the high and rising vacancies in education in high-income countries. Additionally, in low-income and some middle-income countries with high birth rates, the demand for teachers is rapidly increasing which places necessary demands on education budgets. Thus, as of 2022, persistent challenges in teacher shortages are still reported in UNESCO's (2022) report.

FIGURE 2: JOB OPENING RATE IN EDUCATION AND HEALTH SERVICE (USA), 2013-2023



Note: Data include all education-related jobs at all levels of education in the USA.

Source: Public data series accessed through the JOLTS databases (Bureau of Labor Statistics (BLS), Job Openings and Labor Turnover Survey (JOLTS), 2023).

Recently, the teaching profession is characterised by high teacher shortages, high attrition rates, and difficulties in recruiting new candidates (OECD, 2014). Researchers believe that these characteristics, as well as annual increases in psychiatric-related absenteeism, are highly influenced by low teacher wellbeing in schools (e.g., Benevene et al., 2020). A recent Australian survey on teachers in the first 10 years of their teaching careers found that one third of teachers reported they were planning to leave their profession (Bowles & Arnup, 2016). Worryingly, other studies have found up to 40% of teachers leave their role within the first five years of teaching and an even greater percentage convey wanting to leave their teaching role at some point in their career (Acton & Glasgow, 2015; Corbett et al., 2022). This not only has consequences for the schools who employ teachers, but for the whole communities, as public budgets are affected by the high rates of teacher absenteeism and turnover (Howard & Howard, 2020; Naghieh et al., 2015). These results underscore the importance of investing in teacher wellbeing not only for the sake of the teachers themselves but also for the benefit of students and the education system.

Based on research from the OECD (2023), the prevalence of women in teaching at secondary level is 63.4%, and 82.6% at the primary level. The same prevalence level is also found in UNESCO's report (2022). During the

COVID-19 pandemic, many employees were also faced with compulsory "work from home (WFH)" status which involved "telecommuting" or using digital technologies to enable working away from the boundaries of the office or a formal working space (Kniffin et al., 2021). Several studies have found that increased stress at home, along with the difficulties of carrying out professional tasks, caused many people to feel less productive and have low wellbeing at work (Carli, 2020; Elbaz et al., 2022). Female workers were particularly affected by these changes, as studies showed they had more domestic work and childcare responsibilities than men (Carli, 2020; del Boca et al., 2020; Herzberg-Druker et al., 2022). One small study conducted with a sample of 336 Chilean teachers found that female teachers scored significantly worse on survey items related to physical function, bodily pain, vitality, and mental health compared to male teachers (Lizana & Vega-Fernandez, 2021). Further, other studies have found female teachers to have significantly more stress and anxiety as a result of the pandemic compared to males (Klapproth et al., 2020; Oducado et al., 2021). This may reflect the extra burden of domestic or home-centred responsibilities that women tend to take on in addition to their professional duties (Klapproth et al., 2020). This, to some extent, explains the previous research which has shown that K-12 professionals, especially teachers, have high rates of burnout, and this epidemic has made the gap between K-12 employees and those in other industries

even bigger (LFS, Health and Safety Executive, 2022; Marken & Agrawal, 2022).

Nevertheless, other studies on teachers have not found a significant difference in wellbeing measures in terms of gender (Billett et al., 2022; Chan et al., 2021; Cheng & Lam, 2021). And one study by Alves, Lopes and Precioso (2021) conducted with a sample of Portuguese teachers found women to be more satisfied with their teaching role compared to men. Thus, although the unequal distribution of gender among teachers merits the attention of policymakers, many other factors also contribute to teacher wellbeing, ranging from individual differences to organisational factors.

1.3.2 The Use of Information and Communication Technology

The advancement of technology has created the possibility of a shift toward flexible work schedules and remote work, which appears to be the future direction of work arrangements (OECD, 2019). In the global context of teaching, the use of ICT has become a prevalent theme of focus in responding to previously mentioned developments in education. It is envisaged that ICT will provide students with effective learning and instruction, catering to the special needs and interests of modern learners (OECD, 2019). Despite its extensive use in classrooms, teachers, according to the Teaching and Learning International Survey (TALIS) 2018 data, feel ill-equipped and untrained in the use of ICT. According to the research, just 56% of teachers in the OECD have received formal education or training in the use of ICT for teaching. Furthermore, a significant disparity in ICT training was found across nations, with the lowest rates in Sweden (37%) and Spain (38%) and the highest rates in Chile and Mexico (both 77%; OECD, 2019).

Inadequate competency and training in the use of ICT contribute to increased teacher workload and work-related stress. Rannastu-Avalos and Siiman (2020) found that science teachers spend a significant amount of time preparing for online learning compared to offline learning, resulting in an increase in workload due to an increase in learning materials. In addition, the study indicated that a lack of motivation and insufficient time management skills compound the difficulties experienced by online educators. Two studies conducted on elementary teachers in the United States both reported elevated levels of emotional exhaustion and stress due to increased workload, job ambiguity, and virtual teaching (Chan et al., 2021; Pressley et al., 2021). A study examining the experiences of Chilean teachers revealed that 78.7% reported an increase in work hours as a result of teleworking and 86% reported negative impacts on their work-family balance (Lizana & Vega-Fernandez, 2021).

Anderson, Imdieke, and Standerford (2011) highlighted the challenge for teachers in adapting to an online teaching approach, as it requires a different set of skills

and instructional considerations. As Lestiyawati and Widiantoro (2020) make clear, “It takes creativity and also a mature instructional consideration of the teacher” (p. 72). Moreover, maintaining student engagement and interaction can also be difficult in an online format, and there are challenges in ensuring student engagement and the effectiveness of assessment methods. The lack of clear guidelines and institutional expectations for teachers, as well as the lack of evaluation to ensure student engagement, further exacerbates these difficulties (Anderson et al., 2011).

1.3.3 The Impact of COVID-19 on Teachers

Whilst these facts and figures thus far portray a largely negative view of the COVID-19 pandemic for education worldwide, a valid cautionary point, suggested in the World Happiness Report by Cotofan et al. (2021), is how challenging it ultimately is to determine the global impacts of the pandemic on employees’ psychological wellbeing owing to the variations in COVID-19 outbreaks across different areas and consequent country-led responses, cultural differences, and varying measures used to assess psychological outcomes. The COVID-19 pandemic had significant impacts on individuals’ personal and professional lives worldwide, bringing increased worries about infection and large-scale virus control measures like social distancing and lockdowns (International Monetary Fund, 2020). According to several studies (Jiskrova, 2022; OECD, 2022; Tenaglia, 2023), individuals in frontline or essential jobs, such as teachers and health care professionals, had a higher risk of contracting the virus and had to do more work due to a lack of employees and increased demands at work. This resulted in increased anxiety, stress, depression, and a decreased sense of wellbeing.

For example, a study conducted in Australia in June and July 2020, involving 534 teachers, found that although the majority of participants reported not feeling anxious in their teaching role using online platforms, they experienced elevated levels of stress and low levels of positive emotions such as joy and satisfaction, which significantly impacted their wellbeing and sense of self-efficacy (Billett et al., 2022). Another study conducted by the Canadian Teachers’ Federation in 2020 revealed that 44% of surveyed teachers expressed concern about their wellbeing and/or mental health in June 2020, and this figure rose to 69% in October of the same year, representing a 25% increase over a four-month period. A recent analysis indicates that the current rate of stress, anxiety, and depression among UK teachers exceeds the levels reported prior to the pandemic in the 2018–2019 period (Health Safety Executive, 2022). A report on US teachers also revealed that the burnout difference between K-12 employees and all other workers had almost doubled due to the pandemic. At the beginning of 2020 before the effects of the pandemic were felt, the difference was 8% higher for K-12 employees than for all

other workers; it has now increased to 14% (Marken & Agrawal, 2022). A recent review by Agyapong et al. (2021) reported that before the COVID-19 pandemic (up until 2019) the median teacher burnout prevalence was 25% (with a range of 2.8% and 63.43%) whilst during the effects of the COVID-19 pandemic the median teacher burnout prevalence rate was 27.6% (with a range of 3.1% to 70.9%).

In the OECD and partner countries, online platforms were widely used during school closures, however, the transition was not seamless, with many countries and schools lacking preparation (Schleicher & Reimers, 2020). The difficulties faced by teachers in this transition included limited access to the internet, inadequate technological tools and devices, connectivity issues, and insufficient teaching and learning resources (Allen et al., 2020; Mseleku, 2020; OECD, 2019; Shirmohammadi et al., 2022; Zhang et al., 2021). The disparity of different countries was also revealed in the research. For example, in rural Colombia, only 17% of teachers reported having the necessary equipment for online teaching (Montejo et al., 2022) and in Indonesia, 30% of the teachers surveyed reported difficulties with technology (Lestiyawati & Widyantoro, 2020). An OECD report found that prior to the pandemic, 2% of school principals in Singapore reported concerns of inadequate digital learning tools, whereas in France, 30% of school principals reported the concern (OECD, 2019).

Some research suggests that individuals in differing roles within the teaching profession were differentially affected by the pandemic. For instance, a study by Jerrim et al. (2021) on approximately 8000 teachers in England found that headteachers were the most affected by the pandemic, compared to other educators. In June 2020, 21% of headteachers reported that they wanted to leave the profession compared to 9% of classroom teachers and middle leaders. Headteachers were tasked with new managerial roles and increased levels of required care responsibilities toward pupils, parents, and staff, all factors which might have driven increased levels of work-related stress (Jerrim et al., 2021). However, another study conducted on a sample of Australian teachers did not find a significant difference between the wellbeing of principals, headteachers, and classroom teachers during the pandemic (Billett et al., 2022). In addition, a study conducted in the UK found that teachers at different levels suffer in different ways, with over 50% of teachers in leadership positions suffered from emotional exhaustion burnout, compared to 42% of other teaching staff (Sundaram et al., 2022). In that study, teaching staff reported higher burnout in terms of personal accomplishment (15%), compared to leaders (6%) (Sundaram et al., 2022). Other groups that have experienced particularly adverse wellbeing outcomes include younger individuals, owing to factors such as loneliness, financial worry and distress, and concern over future job prospects (Cotofan et al., 2021; Ozamiz-Etxebarria et al., 2020; Shukla & Singh, 2021; Ueda et al.,

2022; Varma et al., 2021), as well as those with underlying health issues, mostly based on the fear of severe negative health outcomes which could arise from contracting the COVID-19 virus (Aknin et al., 2022; Sayeed et al., 2020; Wańkiewicz, et al., 2021).

1.3.4 Summary

The widespread issue of low teacher wellbeing and mental health globally is having detrimental effects on schools (Thapa et al., 2013; Toropova et al., 2021). This not only exacerbates the shortages of teachers, but it also negatively impacts teachers' effectiveness in their roles as educators, and on the students they teach (Dudenhöffer et al., 2017; Herman et al., 2018; Maxwell et al., 2017). Therefore, improving teacher wellbeing is an important task for schools and policymakers globally, especially given the increased wellbeing issues during the COVID-19 pandemic, which could potentially further impact teaching efficacy and exacerbate teacher shortages. Indeed, teachers are "the builders of prosperous and successful societies" (Li, 2021, p. 5). From a global perspective, extreme high levels of teacher stress, depression, anxiety, and burnout has been observed in teaching professions (e.g., Corrente et al., 2022; Hall-Kenyon et al., 2014). However, research into teacher wellbeing is still largely focused on, and conducted in, Western, wealthy, nations and is missing key insights from under-researched populations such as the global South and developing countries.

1.3.5 Key Findings and Recommendations

KF4: Across countries and school grade levels, high levels of teacher stress, depression, anxiety, and poor physical health have been observed. Research also shows that teachers report one of the highest levels of occupational stress and burnout on the job, compared with other professions. Workload is one of the most prominent factors leading teachers to leave the profession.

KF5: Recently, the teaching profession is characterised by high teacher shortages, high attrition rates, and difficulties in recruiting new candidates. Researchers believe that these characteristics, as well as annual increases in psychiatric-related absenteeism, are highly influenced by low teacher wellbeing in schools.

KF6: Despite its extensive use in classrooms, teachers feel ill-equipped and untrained in the use of ICT. Just 56% of teachers in the OECD have received formal education or training in the use of ICT for teaching. Furthermore, a significant disparity in ICT training was found across nations. Inadequate competency and training in the use of ICT contribute to increased teacher workload and work-related stress.

R4: The research highlights the importance of investing in teacher wellbeing not only for the sake of the teachers themselves but also for the benefit of students and the education system. Schools should consider the impact that low teacher wellbeing has on not only teaching and pupils, but also the cost of attrition, recruitment, and absenteeism. Improvement in teacher wellbeing could free up vital resources which could then be spent on the core business of schools: teaching and learning.

R5: Teachers should be supported further with rapid advances in technology, research shows that this lack of training and low confidence can have negative impacts on wellbeing-related factors such as workload and stress.

Why Should Schools Enhance Teachers' Wellbeing?

1.4

1.4 Why Should Schools Enhance Teachers' Wellbeing?

1.4.1 Why Focus on Schools?

Schools are not solely places of academic instruction and learning but have a wider impact on both pupils and staff. Research exploring the effects of the working environment on staff wellbeing demonstrates that the physical, organisational, and social aspects of the workplace are important for staff wellbeing (Kazlauskaitė et al., 2022). When workplaces promote healthy environments that employees desire to be a part of, they tend to have higher levels of job satisfaction and wellbeing, resulting in greater engagement and dedication to their professional roles (Carnevale & Hatak, 2020; Kossek et al., 2012). Numerous studies have emphasised the important role schools play in teachers' wellbeing, work output, and overall job satisfaction (e.g., Maxwell et al., 2017; OECD, 2014; Toropova et al., 2021;). This is a noteworthy point considering that the majority of teachers spend their weekday time in schools. For instance, the average OECD total statutory working hours for primary, lower secondary, and upper secondary teachers are 1585, 1609, and 1588 hours, respectively, with an additional requirement of 1178, 1160, and 1115 hours to be worked at schools (OECD, 2016, table 4.1).

When teachers feel positive about the school in which they work, research has found they suffer from less burnout, establish stronger parent-school bonds, and have lower rates of attrition (Lester & Cross, 2015; Thapa et al., 2013). Further, teachers' negative perceptions of schools have been tied to lower rates of teacher job satisfaction and working efficacy (Collie et al., 2012; Ma & MacMillan, 1999). Thus, schools are an important setting for maintaining, or improving, teachers' wellbeing.

1.4.2 The Importance of Teacher Wellbeing

When employees have high subjective wellbeing (SWB), this leads to better individual-level outcomes such as better health, emotional regulation, and heightened creativity, as well as better organisational-level outcomes such as lower levels of absenteeism and turnover, and higher ability to attract and retain talent. Both these individual- and organisational-level factors tied to SWB are related to the overall productivity and profitability of organisations (Tenney et al., 2016; Layard & De Neve, 2023). Thus, the nature of SWB within workplaces is cyclic in nature, with organisations influencing the wellbeing- and performance-related outcomes of their employees, who in turn affect the performance and effective running of the organisations in which they work. Thus, teacher wellbeing is an important element for schools to consider as it highly relates to the performance of schools.

1.4.2.1 Teacher Wellbeing and Performance

An increasing body of research evidence indicates that

teacher-related factors are the most essential elements impacting learning in schools (Maxwell et al., 2017; OECD, 2014). Owing to high rates of teacher stress, which have been documented extensively in the literature (Collie et al., 2012; García-Carmona et al., 2019; Von der Embse et al., 2019), this has been tied to teacher absences and attrition, which is important as teacher shortages are a major problem for schools around the world (Corbett et al., 2022; Corrente et al., 2022; Toropova et al., 2021). Moreover, lower levels of teacher wellbeing have been connected to another issue faced by schools - presenteeism, where teachers come to work when they shouldn't (i.e., due to mental or physical ill-health). Presenteeism occurs when teachers fear the negative consequences of being away from work (such as not being able to get all their work done on time; Panari & Simbula, 2016). A study conducted with German teachers found that 57% of those surveyed reported sickness-related presenteeism (Dudenhöffer et al., 2017). The factors most associated with presenteeism in the study included: exhaustion, lack of support, administration burden, inappropriate performance recognition, and reduced cooperation with colleagues. Another study with teachers in New York found that only 40% of teachers took a sick day owing to work-related stress, even though 80% wanted to do so (Green, 2014). Worryingly, high rates of teacher presenteeism are found throughout the education sector, regardless of workplace factors or teaching experience (Corrente et al., 2022).

It is now well-established that wellbeing is significantly related to job performance, including aspects such as customer satisfaction, productivity, problem solving, profitability and staff turnover (Edmans, 2012; Isen et al., 1987; Krekel et al., 2019). Whilst most of these studies are correlational, similar patterns have been found for causal methodologies (such as longitudinal panel data, experience sampling, and laboratory studies; Bryson & MacKerron, 2017; Riketta, 2008; Tenney et al., 2016). For instance, Amabile et al. (2005) found that being in a positive mood up to two days before a task could predict increases in creativity. Moreover, an experimental study by Oswald et al. (2015) found that inducing a positive mood could predict increases in the productivity of moderately complex tasks by 12%. Whilst there are numerous studies employing different methodologies and measures, overall, the findings suggest that wellbeing is related to improved work performance. Finally, Bellet et al. (2023) gives the first causal field evidence for the link between wellbeing and individual performance. The impact of wellbeing on performance is particularly large when it pertains to tasks requiring high levels of emotional and social intelligence such as teaching a class and behaviour management.

The importance and value of SWB is found not just at the individual/employee level but at the organisation level too. As highlighted by Layard and De Neve (2023),

SWB (driven by aspects such as job satisfaction, engagement, and positive affect) impact the productivity and profitability of organisations through aspects such as better health, emotional regulation, and heightened creativity at the individual level, lower levels of absenteeism and turnover, and higher ability to attract and retain talent at the organisation level.

1.4.2.2 Teacher Wellbeing, Student Wellbeing, and Academic Attainment

Importantly, teacher wellbeing has a significant impact on the wellbeing and academic success of students. Teachers have been shown to have “the largest impact on student learning out of all school reform initiatives” (Maxwell et al., 2017, p. 3). For instance, a large study on a sample of 246 primary schools, found a statistically significant percentage (8%) of the variance in academic outcomes on SAT scores was accounted for by teacher wellbeing (Briner & Dewberry, 2007), whilst another study found that teachers with high stress/low coping profiles were associated with the worst student academic and behavioural outcomes (Herman et al., 2018). Moreover, research looking at a large longitudinal birth cohort study in the UK- the Avon Longitudinal Study of Parents and Children (ALSPAC), highlighted the effects teachers have not only on their pupils’ test scores and academic achievement, but also on their non-cognitive skills. Furthermore, the study also revealed that teachers’ effects on students’ non-cognitive skills further impact students’ higher education attendance, employment, and earnings (Flech   & Layard, 2017).

Presenteeism is an issue for schools that has been linked to reduced teaching capacity which has significant associations with lower student wellbeing and learning outcomes (Glazzard & Rose, 2020). When teachers function at a reduced capacity (owing to presenteeism) this can lead to underperformance in their teaching roles and less positive classroom engagement, contributing to lower student wellbeing (Harding et al., 2019). The stress felt by teachers, particularly due to high workloads and feeling unable to cope with disruptive students, has been negatively associated with teaching efficacy such as classroom and pupil management and productive teaching methods (Collie et al., 2012). Further, teachers who are emotionally exhausted and burnt out whilst at school can create overly rigid and hostile environments for pupils, leading to lower pupil wellbeing and academic outcomes (Jennings & Greenberg, 2009; Klusmann et al., 2016). Overall, teacher presenteeism has been found to impact teachers in the entirety of the duties carried out in their professional role (Glazzard & Rose, 2019).

On the other hand, teachers who have high wellbeing and engage in their jobs create strong relationships with their students and encourage engagement and learning of the curricula content, leading to increases in student wellbeing and academic success (Li, 2021; Roorda et

al., 2011; Spilt et al., 2011). Student-teacher relationships have been found to be important for beneficial pupil outcomes such as tempering substance abuse and conduct problems, increasing academic success, and generally creating healthy, positive school environments (Aldridge et al., 2016; Hughes & Kwok, 2007; Jamal et al., 2013; Plenty et al., 2014; Wang & Degol, 2016). However, the high rates of stress and other mental health issues reported by teachers as a consequence of the demands of their professional role prevent them from engaging adequately in their work or with their students (Gray et al., 2017; Herman et al., 2018; Katz et al., 2016; Molero et al., 2019). This, in turn, has been found to have a negative impact on pupils’ feelings of belongingness and connectedness to their school, their wellbeing, and the quality of education received (Gibbs & Miller, 2014; Harding et al., 2019).

The importance of strong student-teacher relationships seems to be especially important for those with lower socio-economic status and minority groups, where such relationships are often reported to be insufficient or adverse (Hughes & Kwok, 2007; Jamal et al., 2014). This is important as student-teacher relationships for these groups are especially influential in their wellbeing, academic achievement, and reduction in risky health behaviours (Hughes & Kwok, 2007; Jamal et al., 2014). Furthermore, increased school investment, increased student engagement, and consequent academic achievement, has been found to be related to positive and supportive parent-teacher relationships. These relationships are important in fostering strong bonds between home and school (Hughes & Kwok, 2007).

1.4.3 Summary

These results underscore the importance of investing in teacher wellbeing not only for the sake of the teachers themselves but also for the benefit of students and the education system. The school environment and culture affect other members of school staff as well as parents and the wider community in which the school resides (Aldridge et al., 2016). It is thus vital schools offer a safe and supportive environment where professional, academic, and wellbeing outcomes, can best be promoted. Thus, schools are valuable places for enhancing teacher wellbeing and leading to their flourishing in these areas, whilst also positively impacting the wellbeing and academic achievement of pupils within the school (Blum et al., 2004; Chen et al., 2023; Lester & Cross, 2015; Thapa et al., 2013; Wang & Degol, 2016).

1.4.4 Key Findings and Recommendations

KF7: The physical, organisational, and social aspects of the workplace are important for staff wellbeing. When teachers feel positive about the school in which they work, research has found they suffer from

less burnout, establish stronger parent-school bonds, and have lower rates of attrition. Teachers' negative perceptions of schools have been tied to lower rates of teacher job satisfaction and working efficacy.

KF8: The nature of subjective wellbeing (SWB) within workplaces is cyclic in nature, with organisations influencing the wellbeing- and performance-related outcomes of their employees, who in turn affect the performance and effective running of organisations in which they work. SWB (driven by aspects such as job satisfaction, engagement, and positive affect) impact the productivity and profitability of organisations through aspects such as better health, emotional regulation, and heightened creativity at the individual level, and lower levels of absenteeism and turnover, and higher ability to attract and retain talent at the organisation level. Thus, teacher wellbeing is also an important element for schools to consider as this highly relates to the performance of schools.

KF9: An increasing body of research evidence indicates that teacher-related factors are the most essential elements impacting learning in schools.

KF10: Importantly, teacher wellbeing has a significant impact on the wellbeing and academic success of students. Teachers have been shown to have "the largest impact on student learning out of all school reform initiatives".

KF11: Teachers not only have an effect on their pupils' test scores and academic achievement, but also on their non-cognitive skills which further impact students' higher education attendance, employment, and earnings.

KF12: The stress felt by teachers, particularly in relation to high workloads and feeling unable to cope with disruptive students, has been negatively associated with teaching efficacy such as classroom and pupil management and productive teaching methods. Teachers who are emotionally exhausted and burnt out whilst at school can create overly rigid and hostile environments for pupils, leading to lower pupil wellbeing and academic outcomes. High rates of stress and other mental health issues reported by teachers, as a consequence of the demands of their professional role, prevent them from engaging adequately in their work or with their students. This, in turn, has been found to have a negative impact on pupils' feelings of belongingness and connectedness to their school, their wellbeing, and the quality of education received.

KF13: Teacher presenteeism has been found to

impact teachers in the entirety of the duties carried out in their professional role.

KF14: Teachers who have high wellbeing and engage in their jobs create strong relationships with their students and encourage engagement and learning of the curricula content, leading to increases in student wellbeing and academic success. Student-teacher relationships have been found to be important for beneficial pupil outcomes such as tempering substance abuse and conduct problems, increasing academic success, and generally creating healthy, positive school environments.

R6: The wellbeing of teachers should not be overlooked or underestimated, it can have wide ranging impact, for example on pupil wellbeing, pupil sense of belonging, pupil academic attainment, pupil non-cognitive skills, teacher absenteeism, teacher presenteeism, teacher productivity, teacher recruitment, and teacher retention, amongst others. Teacher wellbeing not only influences the core business of schools but also other factors which drive it.

R7: It could be argued that the impact of teacher wellbeing is so important to the functioning of a school that it should be one of the first factors that is considered when looking at improving wellbeing across the school community.

Determinants of Teacher Wellbeing

1.5



1.5 Determinants of Teacher Wellbeing

1.5.1 Models of Wellbeing

In this section, three different types of wellbeing models are presented: general models of adult wellbeing; specific models of workplace wellbeing; and specific models of teacher wellbeing. For each type of model, examples are given, the intention of these examples is not to be exhaustive but rather to give school stakeholders a basic understanding of the differences between these three areas and what elements are contained within them. They are intended to be used as discussion points for a school's wellbeing journey and lay the foundations for the teacher wellbeing model presented in this report in Chapter 2.

1.5.1.1 General Models of Adult Wellbeing

This section touches upon general models of adult wellbeing. While the literature on teacher wellbeing is more limited, the general adult wellbeing literature is a rich source for overall context before moving onto the specifics of employee and teacher wellbeing.

Below are three examples of models which provide valuable insights into understanding general adult wellbeing from different perspectives. It is important for school stakeholders to explore different models of adult wellbeing, as it will allow them to better understand and contextualise teacher wellbeing within the existing body of adult wellbeing literature. Each of these models has strengths and weaknesses and exploring them will allow school stakeholders to understand the elements that can be considered as part of any wellbeing model and reflect upon what might be useful in their school context.

Adult Wellbeing Example Model 1: The Psychological Well-being Model

The Psychological Well-being model (Ryff, 1989) focuses on different drivers and elements of wellbeing, encompassing 6 fundamental themes: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Ryff suggests that these factors collectively contribute to an individual's psychological wellbeing, with higher scores in these 6 areas indicating a higher level of overall wellbeing. Some of these such as 'purpose in life' are

an essential part of wellbeing, whereas others, such as 'autonomy', are drivers of wellbeing which might improve it, but are not essential.

Autonomy represents independence and the ability to act in accordance with one's own values rather than societal pressures.

Environmental mastery reflects effective management of one's surroundings.

Personal growth entails a willingness to embrace new experiences and engage in self-improvement.

Positive relations with others involve meaningful and empathetic connections.

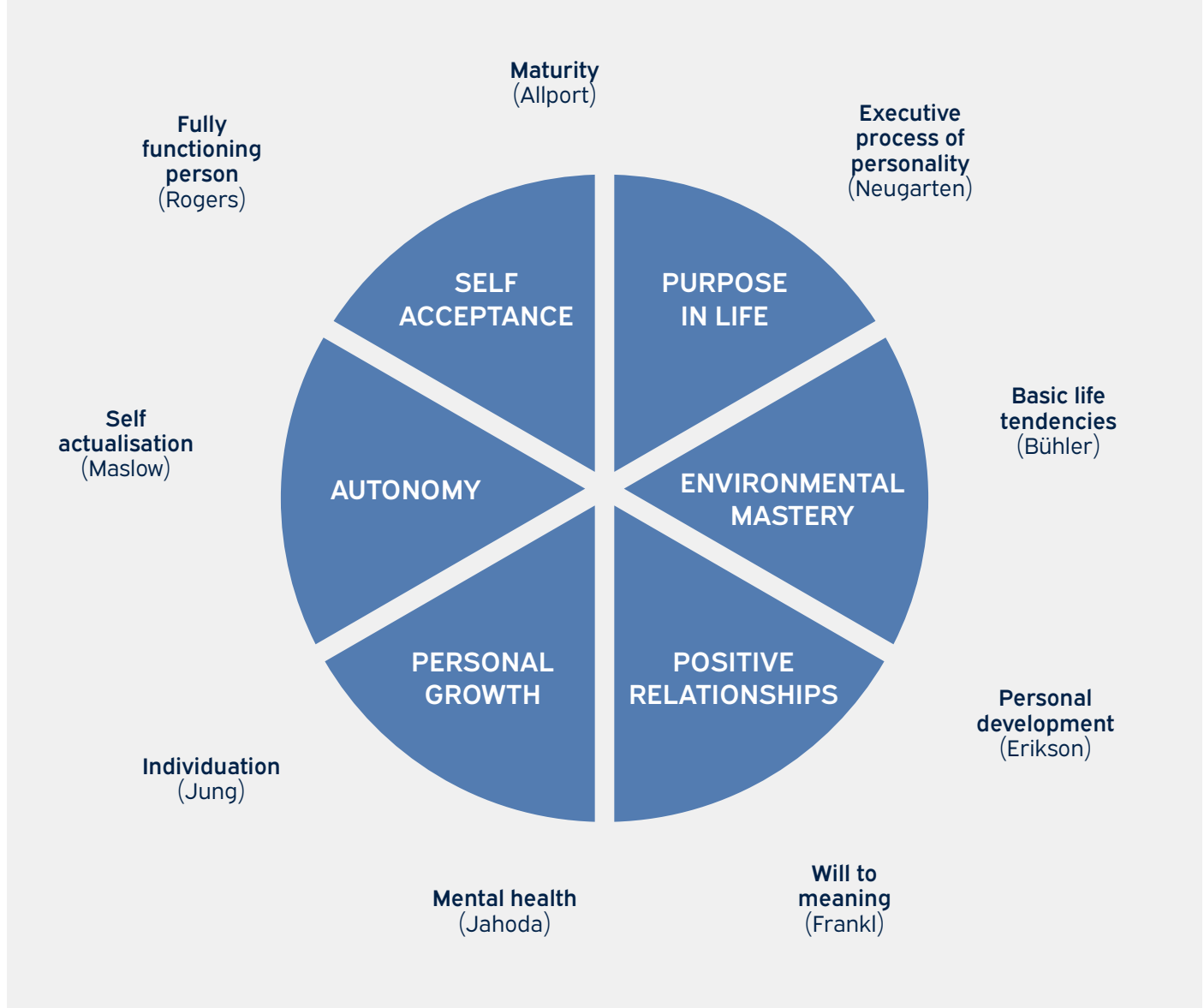
Purpose in life signifies a sense of direction and meaning.

Self-acceptance reflects a positive attitude towards oneself.

The accompanying figure (below; Ryff, 2014), illustrates the psychological theoretical underpinning for each of these drivers. By considering these dimensions, researchers can gain valuable insights into psychological wellbeing and individuals' overall mental health.

There are challenges when including drivers and essential components of wellbeing within a model, when, as above, the elements are not clearly defined as determinates or outcomes but grouped together as though they are the same. 'Autonomy', for an example is not an essential part of wellbeing, it is a driver of wellbeing. This means that, just like having access to safe and appropriate housing, it is likely to improve wellbeing, but it is not an integral part of it. There will be some people who have no or very low autonomy who still have high wellbeing. Whereas something like 'purpose in life', is an essential part of wellbeing, which cannot be disentangled from it. It is essential that models of wellbeing are clear about drivers and outcomes to allow for clear measurement and impact. It is useful for school stakeholders to explore these models to gain a deeper understanding of the complexities of wellbeing measurement.

FIGURE 3: CORE DIMENSIONS OF PSYCHOLOGICAL WELLBEING AND THEIR THEORETICAL FOUNDATIONS



Adult Wellbeing Example Model 2: The OECD Wellbeing Framework

The OECD Wellbeing Framework, as outlined by van Zanden et al. (2020), is a subjective and objective model of wellbeing which provides a comprehensive perspective on wellbeing at both individual and societal levels, recognising the interrelated relationship between these two domains. The framework consists of 11 dimensions that encompass various aspects of quality of life. These dimensions encompass factors such as individuals' subjective wellbeing and health, their knowledge and skills, the quality of their living and working environments, as well as their sense of civic engagement, social connections, and work-life balance. Additionally, the framework considers economic factors such as income, wealth, and job quality. A distinctive feature of the OECD Wellbeing Framework, in line with the World Happiness Report (Cotofan et al., 2021), is its consideration of the potential long-term impact of current

wellbeing initiatives on future levels of wellbeing. This forward-looking perspective aligns with the sustainable approach that educational institutions should consider adopting when integrating wellbeing components into their frameworks, recognising the need for ongoing and future-oriented strategies to promote wellbeing within the school setting.

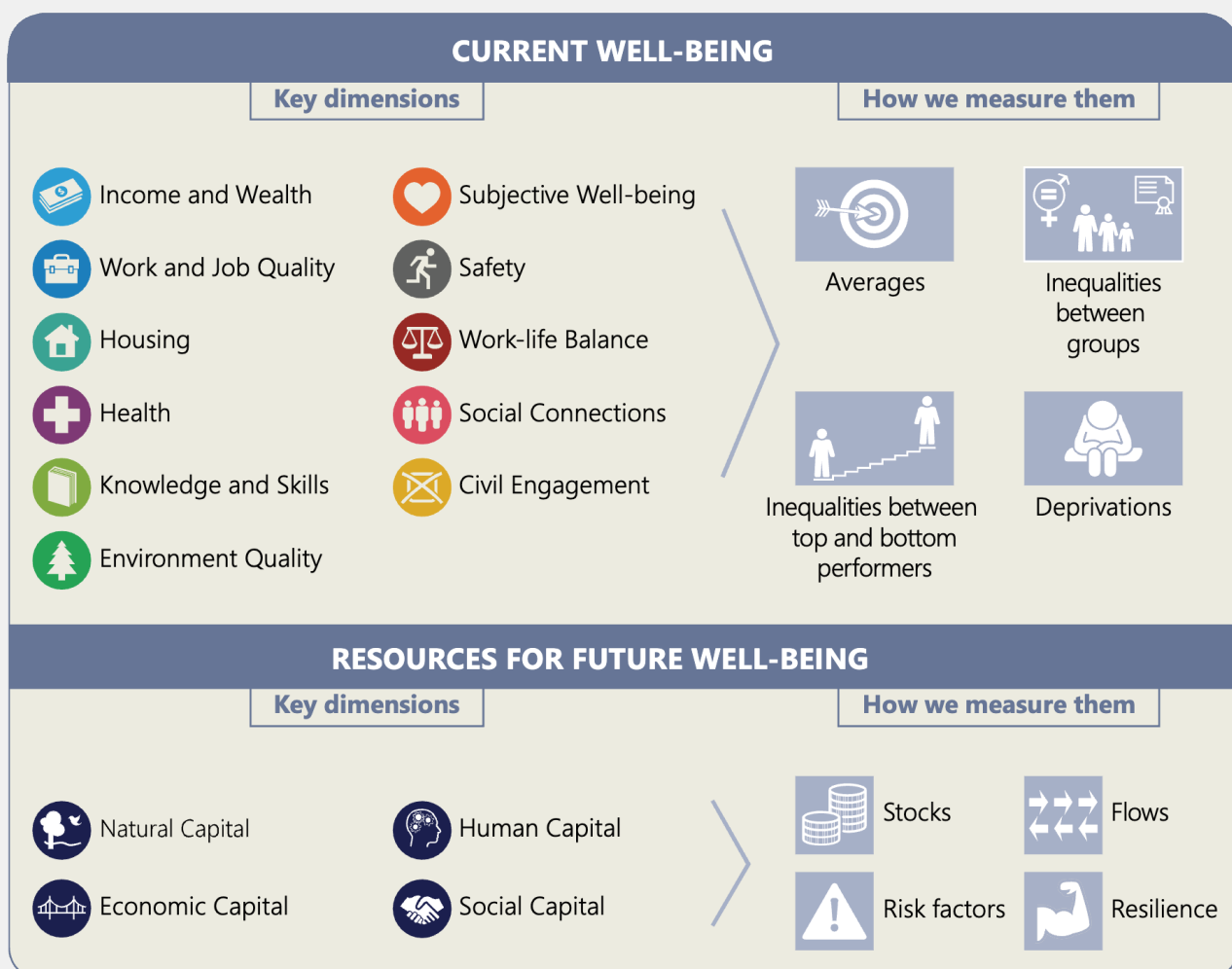
The OECD's model is highly evidence-based and comprehensive; however, it suffers from the same challenges as the Psychological Well-being model in that it includes a mixture of drivers and essential components of wellbeing and treats them all as key dimensions, rather than separating drivers and outcome variables, making measurement and analysis challenging. From a school perspective, stakeholders are unlikely to be conducting complex statistical analyses, but it is still recommended to remove the drivers of wellbeing from the outcome to make any intervention and measurement work easier.

In addition, as science progresses, and we understand more about different drivers of wellbeing for different populations, we don't have to update our core outcome measurements (which form our definition of wellbeing), making the school's approach more flexible and future-proof.

The OECD's model is still highly useful for school stakeholders because it highlights some of the key drivers of wellbeing that schools may wish to consider improving to have an impact on teacher wellbeing. For example, if your school is in a neighbourhood where safety is a challenge, or the school itself has issues with staff safety, stakeholders could consider this as an area for intervention as it is likely that improving it will have an impact on wellbeing.

There is one area within the OECD's framework that is the core of well-being and should be separated as the outcome from the drivers presented: "subjective wellbeing". Subjective wellbeing is an individual's own assessment of their life, and it is argued that this should be the key outcome variable. One way to think about the importance of subjective wellbeing as an outcome variable is to consider a person whose life objectively (from outside assessment) is going very well, then they should have high wellbeing, but if they, at the same time, report (subjectively) that they are miserable, then this is highly important, and is the true essence of their wellbeing. A person's life may be going objectively well but it is their own subjective experience that matters most. One cannot disentangle an individual's wellbeing from their subjective experience.

FIGURE 4: THE OECD WELL-BEING FRAMEWORK



Source: OECD (2020, p.21)
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Adult Wellbeing Example Model 3: The Tripartite Model of Subjective Wellbeing

Finally, the Tripartite Model of Subjective Wellbeing (SWB; Diener, 1984), is presented below. Unlike the previous two models presented, this model focuses purely on subjective wellbeing.

This model encompasses three key components:

Life satisfaction (LS), which Diener argues involves assessing the balance between positive and negative affect in one's life and how well it aligns with personal aspirations and goals.

Positive affect (PA), representing pleasurable or positive feelings and experiences.

Negative affect (NA), painful or negative feelings and experiences.

Diener also defines SWB as “a person feeling and thinking his or her life is desirable regardless of how others see it.” (Diener, 2009). Thereby focussing purely on an individual's perception of their own life and removing any divers or objective assessments as part of the core definition. While Diener's and other SWB models typically exclude objective conditions like material wealth or health, it is important to acknowledge that these factors can still have an impact on SWB ratings (see Section 1.5 for a discussion of these factors and their impact).

Familiarisation with these three diverse models of adult wellbeing allows schools stakeholders to enhance their understanding of the multifaceted nature of wellbeing. Stakeholders can gain valuable insights into the different components that contribute to overall wellbeing and identify areas of focus for promoting a positive and supportive learning environment.

Each wellbeing model presented here includes different characteristics of wellbeing, and these different facets of wellbeing might help frame different approaches schools might take in order to improve wellbeing. Furthermore, outlining these different models of wellbeing can help school stakeholders begin to make reflections on what wellbeing might mean or look like in relation to the unique goals, needs, and characteristics of their own school ecosystems. Taking a tailored approach to wellbeing ensures that interventions and strategies effectively meet the specific requirements of the educational setting, supporting the holistic wellbeing of both students and teachers.

As was highlighted at the beginning of the report, the definition of wellbeing that is recommend (Section 1.1.2.4) focuses purely on subjective wellbeing and shares many similarities with Diener's model (above). Chapter 2 expands this definition into a model which separates

drivers and outcome variables. However, before the model is presented it is essential to look at models for employee and teacher wellbeing and what drives teacher wellbeing.

The next section moves from general adult wellbeing models to more specific models of employee wellbeing. Understanding the core of general adult wellbeing is important for school stakeholders as it can open a discussion of what schools can reasonably influence for their employees, and what might be beyond their remit. The models that are presented next, focus in on the key elements of employee wellbeing which will be more relevant to stakeholders hoping to improve their employees' wellbeing in school. It is important to explore these general employee models, firstly, because there has been more research into general employee wellbeing than teacher wellbeing, but secondly and importantly, also because a 'teacher' is not the only type of employee in a school. School stakeholders can not only consider what might be of relevance for their teaching population, but also what might be important for other types of staff at the school including admin and support staff who might be reflected better in the general models of occupational wellbeing than in the more specific models of teacher wellbeing that follow.

1.5.1.2 Specific Models of Employee Wellbeing

As the discussion turns from adult wellbeing models to more specific employee wellbeing models, the emphasis shifts from general wellbeing to the wellbeing of people within their work or organisational context. It is noteworthy that the field of employee wellbeing research has achieved greater maturity in comparison to the relatively emergent research on teacher wellbeing. Employing insights from employee wellbeing research within educational workplace settings can illuminate valuable perspectives on the wellbeing of school staff members. This integration of knowledge equips school stakeholders with a more comprehensive understanding of their work environment, thus affording them distinct advantages in their decision-making processes.

Employee wellbeing is a heavily researched area, and models that have been developed in this field range from simple to complex, but they mostly centre around 6 key areas (Berkman et al., 2014):

- Job demands, control, and support;
- Effort and reward imbalance;
- Organizational justice;
- Nonstandard work schedules including shift and precarious work;
- Work and family conflict and associated supervisor and workplace support; and
- Schedule control and flexible work arrangements.

Below, some of the most cited models of employee

wellbeing are explored to provide an overview of different approaches that can be taken. School stakeholders can use these as discussion points within their own school contexts and decide to which extent these different variables are relevant in their context.

Employee Wellbeing Example Model 1: Vitamin Model

Warr's (1987; 2007) *Vitamin Model* synthesises empirical literature to identify 12 key "vitamins" of workplace wellbeing, describing a series of interrelated components which influence employee wellbeing. These components include employee opportunity for:

- a) Control
- b) Using their skill-set
- c) Having defined work goals
- d) Task/work variety
- e) Clarity in one's working role and work performance
- f) Social contact with others
- g) Income/salary level
- h) Feeling safe in one's work environment
- i) Feeling valued and offering significance in one's job role
- j) Appropriate and supportive supervision
- k) Feeling secure in one's role and having opportunity for further career development
- l) Fair and equitable treatment of employees

Warr's model uses the vitamin analogy to describe how, like certain vitamins (e.g., Vitamin A), different workplace components, when experienced in moderation, can have a beneficial effect, but when received in excess can have a detrimental effect. By understanding and balancing these components, organizations can create a work environment that fosters employee wellbeing

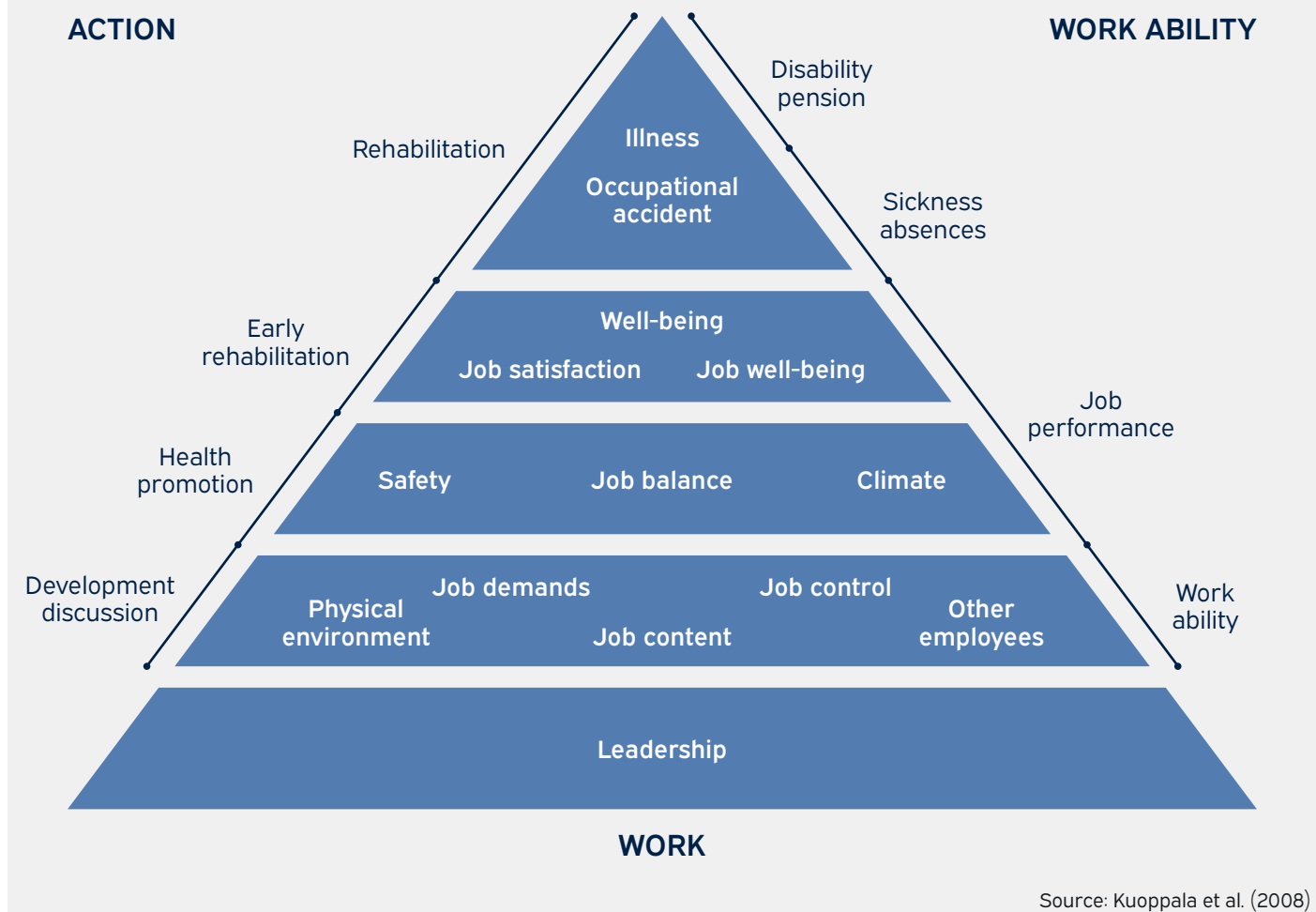
and avoids the negative effects of excessive or deficient experiences of these "vitamins". As with vitamins, the optimal combination of each component will vary between individuals, depending on their preferences and their needs, which are shaped by both work-related and personal factors. For example, employees who are also parents/guardians might have different priorities in their lives and their workplace from an employee who does not have dependents.

School staff could use these 'vitamins' as a point for discussion. Staff voice is a crucial element when designing interventions (as explored in this report) and having models such as this one which give a myriad of factors which can influence employee wellbeing can help school stakeholders understand some of the important elements which might drive employee wellbeing in their context.

Employee Wellbeing Example Model 2: Job Wellbeing Pyramid

The *Job Well-being Pyramid* (Kuoppala et al., 2008) is a visual representation of the various factors that the authors suggest contribute to employee wellbeing. This pyramid represents a hierarchical model illustrating the relationship between the working environment and employee health. The value of such a model lies in how it demonstrates how outcomes, such as health and wellbeing, are served by numerous underlying levels, highlighting the importance of these lower levels in achieving wellbeing outcomes. The pyramid is structured in such a way so as to focus on what actions workplace leaders can take as well as focusing on what makes work better for employees, through what is termed "work-ability".

FIGURE 5: KUOPPALA'S JOB WELL-BEING PYRAMID



This model is useful for school stakeholders to consider the trajectory of interventions that they put in place to improve staff wellbeing, as well as considering at what level the majority of their challenges sit, and at what level stakeholders want to intervene to create impact. It is also important to see that leadership (which could be at many different levels within a school) is an important foundation stone for other workplace wellbeing variables. School stakeholders may not agree with the hierarchy presented in this model, but it is useful to know that there are many pathways to impact and to consider what these might be in their school context, and how they relate to each other.

Employee Wellbeing Example Model 3: Job Demands-Resources Model

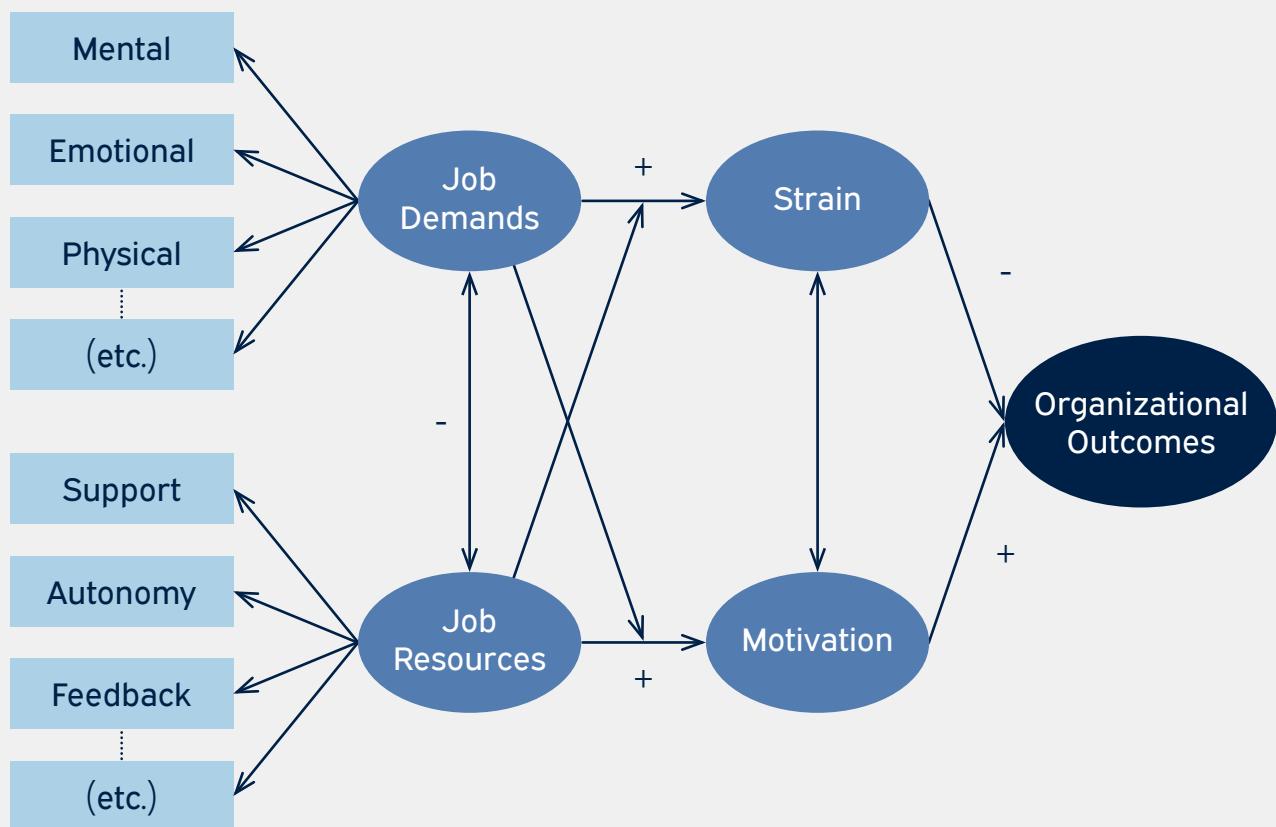
The *Job Demands-Resources Model* (Bakker & Demerouti, 2007; below) could serve as a framework for policymakers and school stakeholders to better understand employee wellbeing, as it outlines different factors and interactions between these factors which might influence organisational (wellbeing) outcomes. As is demonstrated in the figure below, this model represents more of the relationship between the factors

involved in employee wellbeing than either of the two models previously discussed.

This model considers how various mental, emotional, and physical, job demands might interact with various social and cognitive job resource expectations, and how these all interact with not only one another, but with strain and motivation too. These dynamic interactions, and the balance between job demands and job resources, offers a comprehensive model that clearly demonstrates the complex interplay between these factors and how they might differ for individuals.

This model clearly illustrates how the job quality (driven through the balance of demands and resources) can produce both negative and positive outcomes for the employee and organisation. An extension of this model takes the form of the *Job Demand-Control-Support Model* (Van der Doef & Maes, 2010), whereby the support element of the initial model is brought into sharper focus. It expands on how job demands, job control, and social support within the workplace each interact and can help or hinder worker outcomes, depending on how they are balanced in the context of each individual.

FIGURE 6: THE JD-R MODEL



Source: Bakker & Demerouti (2007, p.313)

The three models presented above each take a different approach to employee wellbeing and should give school stakeholders insights into what they might want to explore in their own settings. One crucial element which can work with all these models is staff voice. It is vital that, in the exploration of workplace wellbeing, the employees are involved in the shaping how an organisation, in this context a school, understands and impacts wellbeing.

There are many ways in which employee voice can be represented within an organisation or workforce, examples include: regular team meetings; staff surveys; suggestion boxes; employee representatives; focus groups; open-door policies; and 360-degree feedback. Unions are another example; unions are of collectives of workers who form an organisation to represent the needs of their peers, advocate for worker rights, and for improved working conditions. Whilst previous research indicated negative relationships between union membership and job satisfaction, this picture has started to change with analysis of data from the 21st century, which has found positive associations between union membership and wellbeing; including job satisfaction, life satisfaction, and greater negative associations with dimensions such as stress and depression (Blanchflower & Bryson, 2020; Donegani & McKay, 2012).

The elements and structure of these three models should be considered by schools on their teacher wellbeing journey, in addition to staff voice, and there are many more models of employee wellbeing in the public domain that schools may wish to consider exploring as part of their discussions and decision-making. Later in the report, specific drivers will be discussed, interventions, and ways to measure teacher wellbeing but first we will explore the more limited literature on models of teacher wellbeing. This area is still in its infancy so it is recommended that school stakeholders use these models as only one element in their teacher wellbeing toolkit.

1.5.1.3 Specific Models of Teacher Wellbeing

This section narrows its focus from the broader models of workplace and employee wellbeing to a more specific examination of teacher wellbeing; exploring approaches, components, foundational models and specific models. This report delves deeper into teacher wellbeing models that specifically employ the term "teacher wellbeing". School stakeholders are encouraged to explore other types of teacher models that may focus on the drivers of teacher wellbeing (but not wellbeing itself) to give them a comprehensive understanding of what elements can be considered at the broadest level.

1.5.1.3.1 Approaches to and Components of Teacher Wellbeing

The majority of studies on teacher wellbeing fall into the fields of psychology of wellbeing and positive psychology (Hascher & Waber, 2021). Researchers in the field of psychology of wellbeing understand teacher wellbeing through teachers' feelings and cognitive evaluations of their lives, as well as conceptions of meaning, purpose, and fulfilling one's potential (e.g., Chan, 2010). From this perspective, researchers conceptualise wellbeing through subjective wellbeing and psychological wellbeing. Whereas in the field of positive psychology, theoretical approaches centre on a recovery-oriented paradigm by trying to nurture what is best within the individual instead of using a 'deficit-based model' of psychopathology (Seligman & Csikszentmihalyi, 2000). In addition, positive psychology conceptualises wellbeing through the PERMA model (Seligman, 2011): Positive emotion, Engagement, Relationships, Meaning and purpose, and Accomplishment. Typically, researchers in this domain utilize the PERMA framework for exploring teacher wellbeing, which subsequently guides the measurement of teacher wellbeing. The PERMA measure has been found as having cross-time consistency and internal validity

(Butler & Kern, 2016). Other researchers conceptualise wellbeing through different specific dimensions. Collie et al. (2015) suggest teacher work-related wellbeing to centre around three wellbeing dimensions: 1) workload, 2) organisational, and 3) student-interaction wellbeing. Most recently, an OECD working paper proposed a new conceptual framework in which teachers' occupational wellbeing is defined around four key dimensions of wellbeing: cognitive, subjective, physical, and mental, and social wellbeing (Viac & Fraser, 2020).

The table below gives examples of various academic and organizational perspectives on teacher wellbeing and its components, highlighting the diverse interpretations of teacher wellbeing, acknowledging its multidimensional and interconnected nature. Each of these teacher wellbeing examples tailors their dimensions to the specific context of teaching, recognising the impact of teaching-related factors such as workload, organisational support, student interactions, and environmental features on overall wellbeing. School stakeholders can explore these components and discuss to what extent they are relevant to their context.

TABLE 4: TEACHER WELLBEING COMPONENT EXAMPLES

Framework	Components
Occupational wellbeing of teachers (Van Horn et al., 2004)	It includes: · Affective · Professional · Social · Cognitive · Psychosomatic dimension
Teachers' work-related wellbeing (Collie et al., 2015)	It includes: · Workload wellbeing · Organisational wellbeing · Student-interaction wellbeing
Teacher Wellbeing Survey (Sadick & Issa, 2017)	It includes: · Environmental feature rating · Psychological wellbeing · Social wellbeing · Physical wellbeing
OECD working paper (Viac & Fraser, 2020)	It includes: · Cognitive wellbeing · Subjective wellbeing · Physical and mental wellbeing · Social wellbeing
Teacher Subjective Wellbeing Questionnaire (Renshaw et al., 2015)	It includes: · Teaching efficacy · School connectedness

Many of the components highlighted in the table above are present in the example wellbeing models listed below. Before the example models are presented, a key model which has formed the foundation of many subsequent models of teacher wellbeing is discussed and its importance for school stakeholders is emphasised. School stakeholders are encouraged to look not only at what drives wellbeing at an individual and role level but to look across school and outside-school systems (such as community or government) which can have an impact on wellbeing for teachers.

1.5.1.3.2 Foundations of Teacher Wellbeing Models

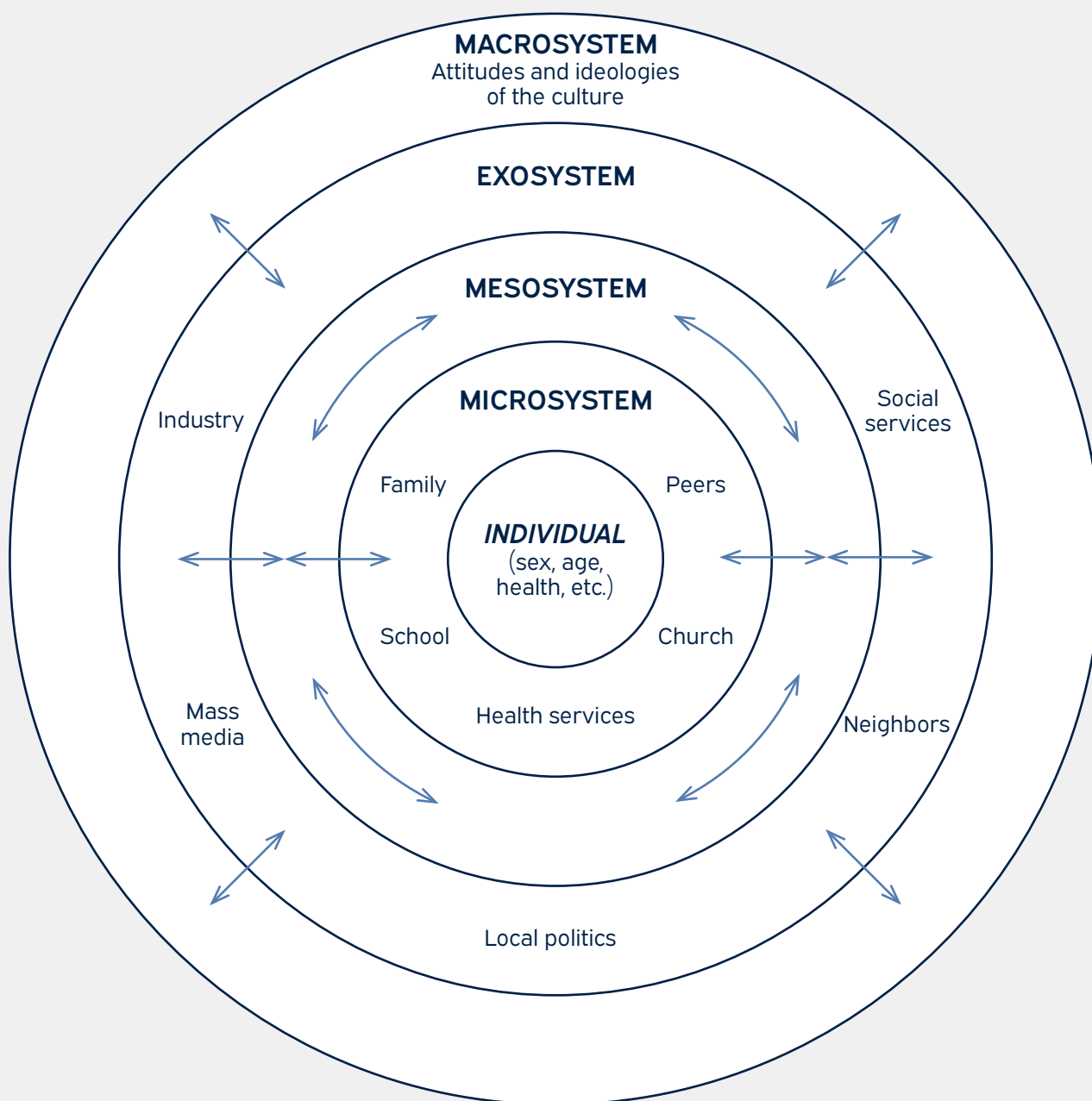
Systems Model is an important and prominent framework to understand the various influences on psychological development along the lifespan. While not focused on teacher wellbeing it is an essential foundational model to understand the various systems that interact within and outside a school to impact wellbeing. Many teacher wellbeing models have developed from this framework and it is essential for school stakeholders to reflect on their whole ecosystem before attempting to improve staff wellbeing.

The Ecological Systems Model emphasises the importance of looking beyond individual-led factors to understanding how numerous forces act to impact the individual, to varying degrees, with the nearest circle to the individual in the model indicating the most direct influence. The first concentric layer starts with the most direct or immediate influence on the individual (the

Microsystem) including people the individual interacts with frequently such as family and friends. The next layer (the Mesosystem) considers the influence of how the various individuals within the Microsystem interact, forming larger and broader groups of influence, and the effect this has on the individual. Next is the Exosystem which refers to broader environmental and societal influences on the individual such as local political decisions. Last, the Macrosystem consists of the overarching guiding principles determining society, such as particular cultures, the laws governing the system and governmental-led policies.

This model is valuable in highlighting how numerous broader factors outside the individual can still act to influence individual-level. As highlighted above, teacher wellbeing can be understood through Bronfenbrenner's model. Different influences operating at differing societal levels and proximity to the teacher themselves interact and influence teacher wellbeing. The model represents how there are a multitude of broader attitudes and factors which interact with different systems and individuals, revealing the interrelated nature of teacher wellbeing influences. For example, national attitudes towards the teaching profession (macrosystem) might inform the workload and type for teachers (exosystem), which might then inform the resources available/accessible within schools for teachers (mesosystem), which might then influence a teacher's interactions with their students and peers (microsystem), each feeding into the development of teacher wellbeing.

FIGURE 7: BRONFENBRENNER'S ECOLOGICAL SYSTEMS MODEL

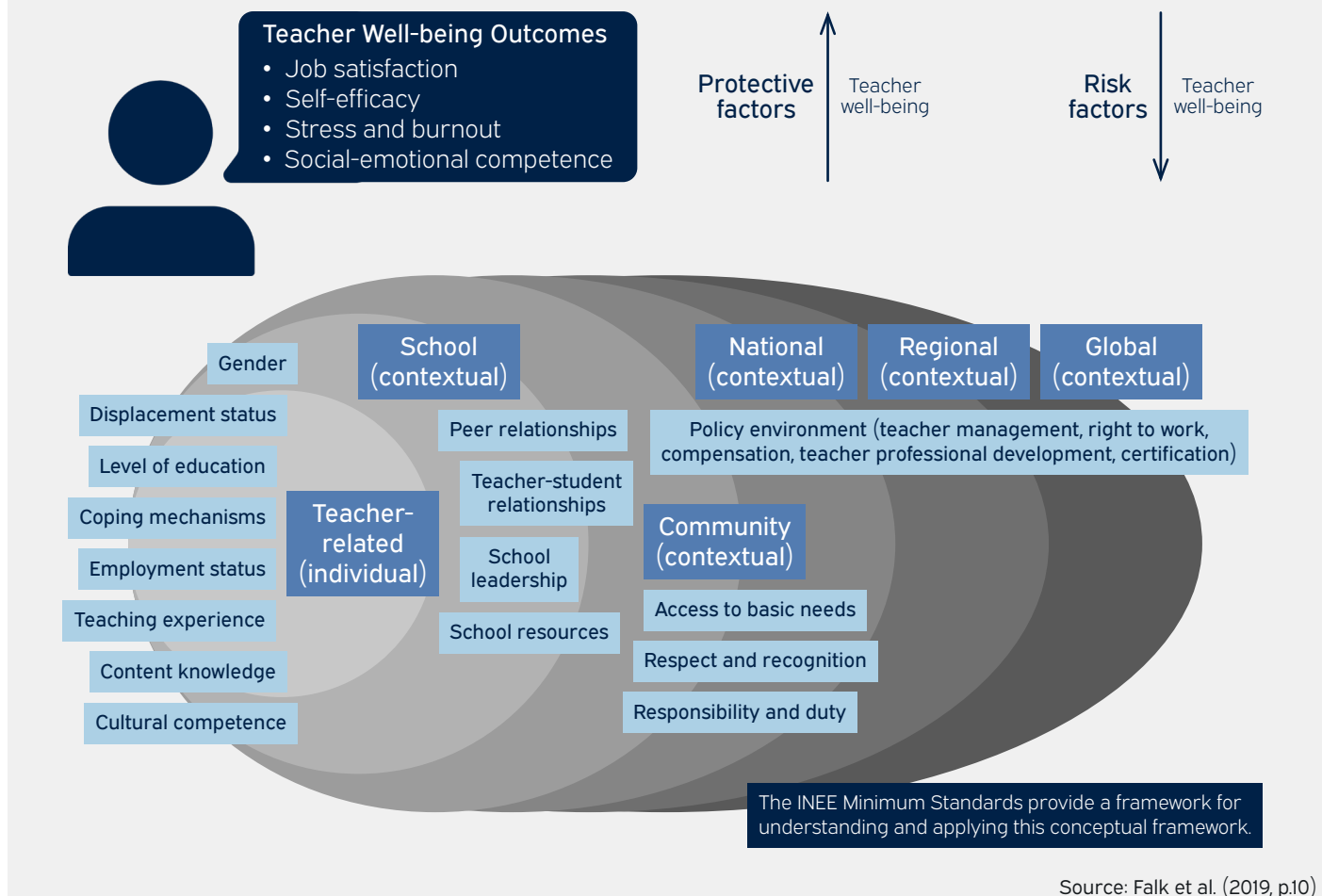


Source: Bronfenbrenner (1979)

There are many models related to wellbeing at school that have arisen from Bronfenbrenner's ecological model of child development. For example, the model developed for the Inter-agency Network for Education in Emergencies (INEE)'s Landscape Review, which was conducted by Falk et al. in 2019. This review utilises a socio-ecological framework to comprehensively understand the diverse environments and levels that influence teacher wellbeing. The proposed framework consists of six interconnected levels: individual, school, community, national, regional, and global.

Embracing Bronfenbrenner's socio-ecological approach, this framework offers a comprehensive understanding of teacher wellbeing, acknowledging the intricate interplay between different levels and environments. While originally devised to address the specific needs of teachers in low-resource, crisis, and conflict-affected contexts, this conceptual framework for teacher wellbeing holds potential for broader application in comprehending the relationship between teacher wellbeing and their environment in various settings.

FIGURE 8: INEE'S LANDSCAPE REVIEW



1.5.1.3.3 Example Teacher Wellbeing Models

In this section, mirroring the sections on general teacher wellbeing and specific employee wellbeing above, three example models of teacher wellbeing are presented. These models are not intended to be exhaustive but to give school stakeholders and understanding of the specific factors which relate to teacher wellbeing that are included within and across these models, and allow for comparison with the general adult wellbeing models and employee wellbeing models that are presented above. Schools stakeholders should again consider which elements of these models might be appropriate and impactful in their school context, and refer back to Bronfenbrenner's model to explore teacher wellbeing as part of the whole school system and beyond.

Teacher Wellbeing Example Model 1: Prosocial Classroom Model

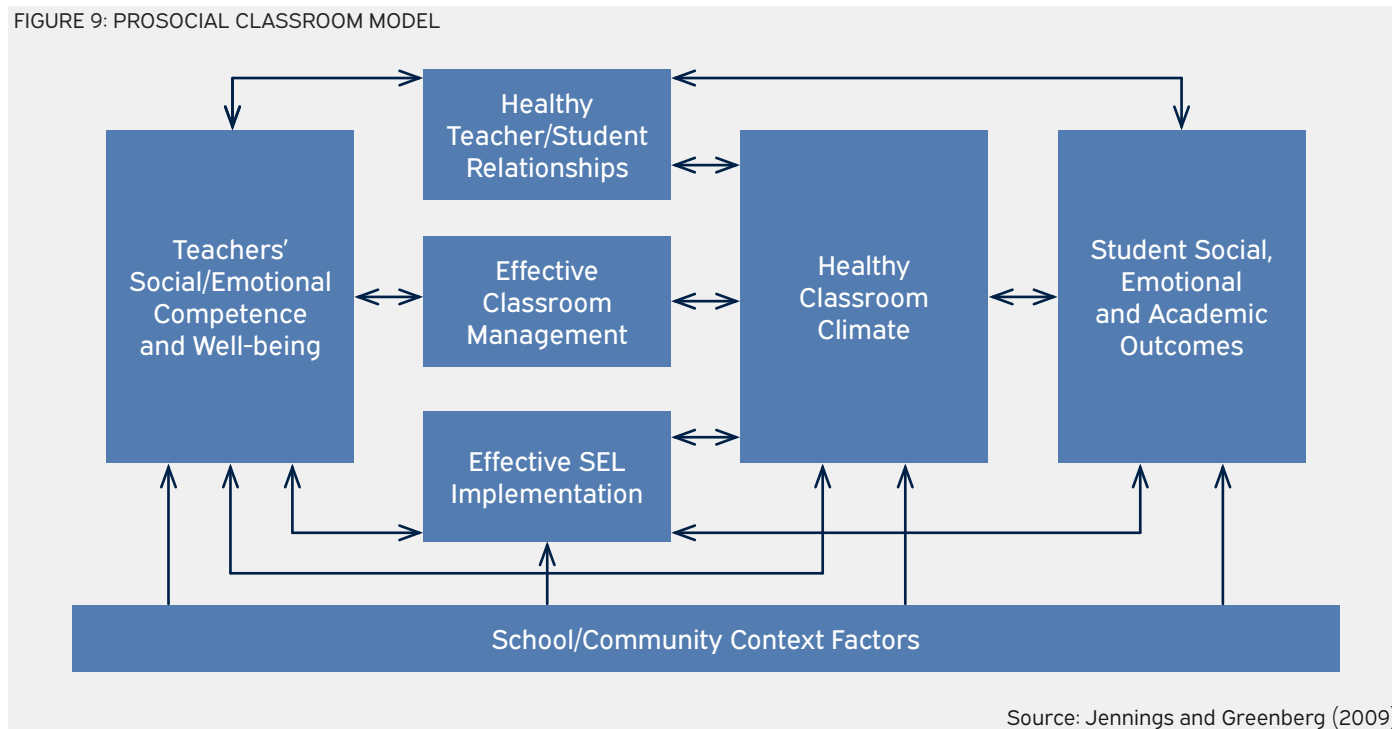
The Prosocial Classroom Model, introduced by Jennings and Greenberg in 2009, offers a comprehensive framework for understanding the intricate dynamics between teachers' social-emotional competence (SEC) and their wellbeing, and how these factors influence the classroom climate as well as students' social, emotional, and academic outcomes.

Within this model, the teacher's SEC emerges as a pivotal determinant in shaping the quality of teacher-student relationships, with implications for the overall classroom environment. Moreover, a teacher's elevated SEC not only fosters improved teacher-student interactions but also contributes significantly to effective classroom management. This, in turn, has a positive effect on the wellbeing and performance of their students. An essential aspect underscored by this model is the pivotal role that teachers with high SEC play in facilitating the successful implementation of Social-Emotional Learning (SEL) curricula in educational settings and poor SEC would potentially lead to a burnout cascade. As role models of social-emotional competence, they are instrumental in cultivating a healthy classroom climate that is conducive to optimal student development. Additionally, the Prosocial Classroom Model takes into account the contextual factors outlined in relevant research. These encompass elements such as co-teacher support, leadership within the school, prevailing school norms and values, community cultures, and local policies.

The Prosocial Classroom Model is a valuable tool for teachers, school administrators, students, researchers,

educators, and policy makers. It offers a holistic perspective on the relationship between teacher wellbeing, classroom climate, and student outcomes, with the potential to enhance the overall quality of learning and student experiences.

FIGURE 9: PROSOCIAL CLASSROOM MODEL



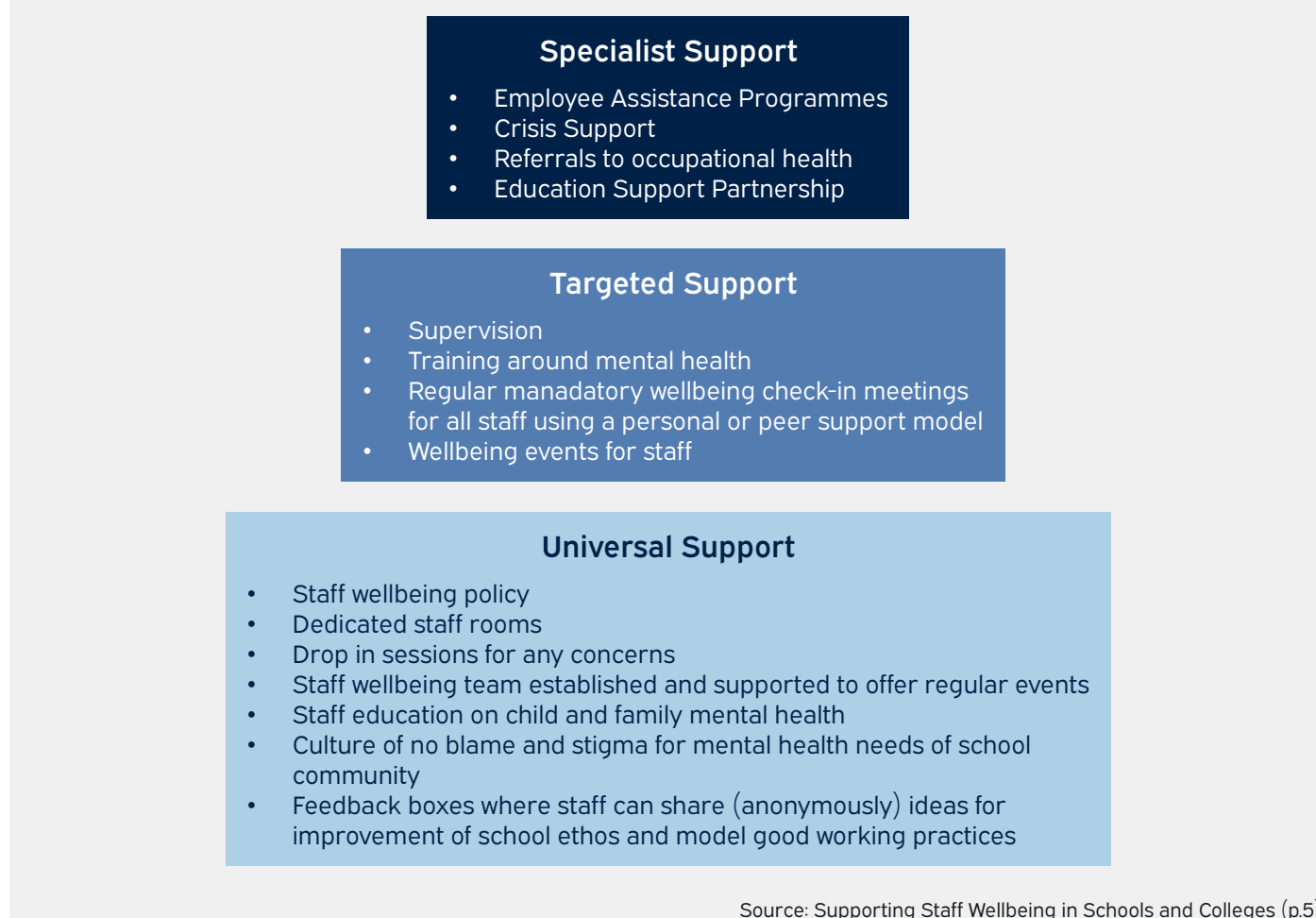
Source: Jennings and Greenberg (2009)

Teacher Wellbeing Example Model 2: Anna Freud Centre's Support Staff Wellbeing Diagram

The Anna Freud Centre, renowned for its expertise in child and family mental health, offers a comprehensive framework that addresses the diverse dimensions of staff wellbeing in educational settings. This model emphasizes the importance of nurturing the physical, mental, and emotional health of educators to ensure they can perform optimally and, in turn, provide better support to their students. The Anna Freud Centre's

approach encompasses universal, targeted, and specialist support services, making it a versatile and invaluable resource for schools seeking to create an environment where staff can flourish. This not only has positive implications for the educators themselves, such as reducing absences, enhancing job satisfaction, and supporting stress management, but also contributes to a more engaged and productive learning environment, benefiting both staff and students alike.

FIGURE 10: ANNA FREUD CENTRE'S SUPPORT STAFF WELLBEING DIAGRAM

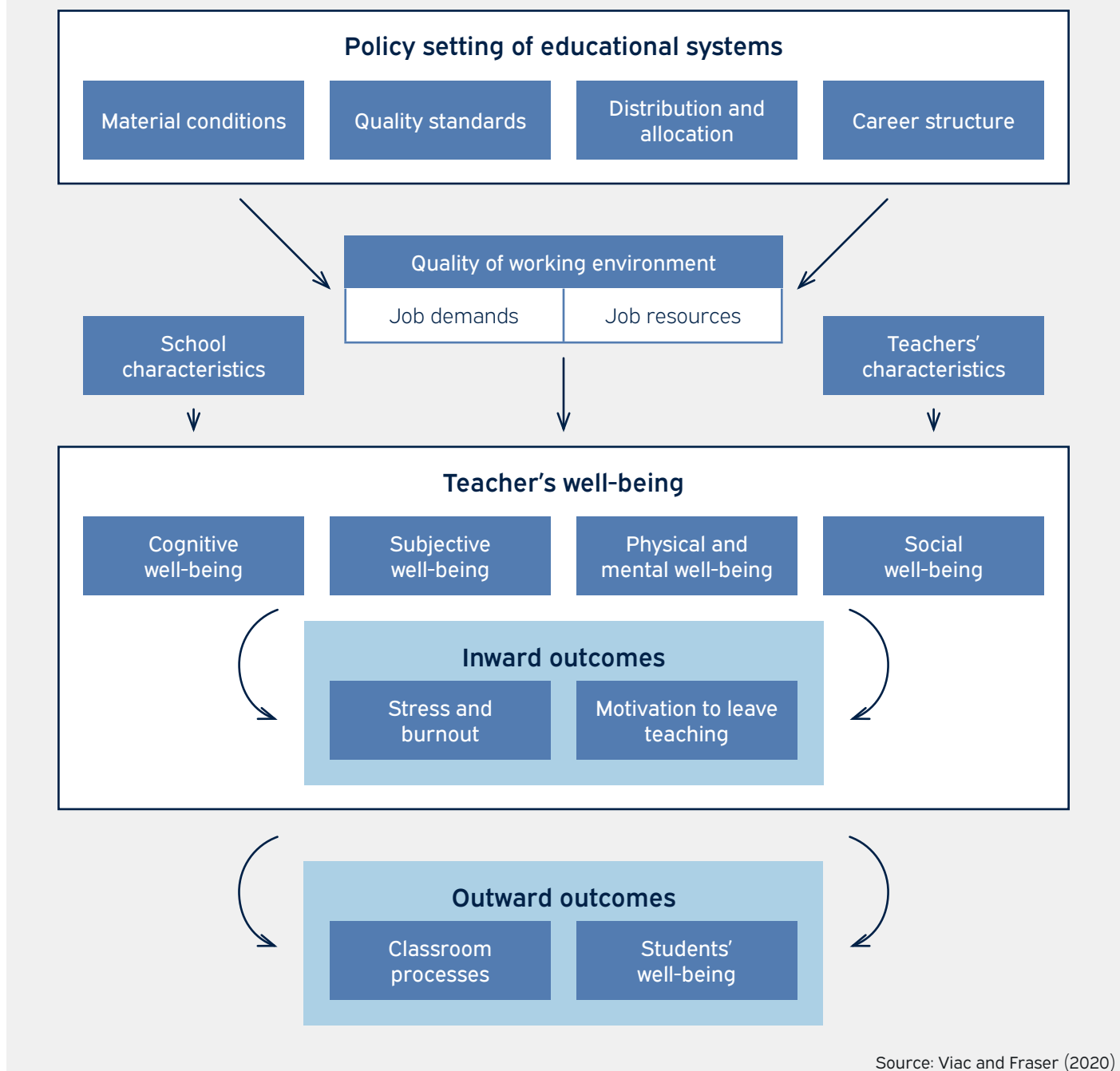


Teacher Wellbeing Example Model 3: OECD's Teacher Wellbeing Framework

The Teacher Wellbeing Framework for teachers developed by the OECD (Viac & Fraser, 2020) focuses more from an occupational wellbeing perspective, establishing a close relationship between teacher wellbeing, schools, and educational systems. This comprehensive framework integrates insights from various sources, including OECD studies and established frameworks like the Teaching and Learning International Study (TALIS). First, the framework outlines four fundamental dimensions of teacher wellbeing: cognitive wellbeing, subjective wellbeing,

physical and mental wellbeing, and social wellbeing. The model then examines how quality of the working environment impacts these dimensions, which are in turn influenced by policy settings of educational systems. Other factors influence teacher wellbeing, outlined in this model as school characteristics and teachers' characteristics. By addressing these key factors, this framework serves as a valuable guide in understanding and improving teachers' occupational wellbeing. The model also extends to show outcomes of teacher occupational wellbeing, which helps us understand the complex interactions at play and the impacts that changing teacher wellbeing might lead to.

FIGURE 11: OECD'S TEACHER WELLBEING FRAMEWORK



These presented frameworks all underscore the significance of teacher wellbeing and how it interacts with its environment. The Prosocial Classroom Model specifically targets classroom settings, exploring the interplay between teachers' SEC, their wellbeing, and the resulting impact on students' social, emotional, and academic outcomes. In the second model, the Anna Freud Centre's framework broadens its scope to encompass the entire school context. It not only addresses individual wellbeing but also integrates universal, targeted, and specialist support services at various levels, from individual to policy. This inclusive

approach aims to cultivate an environment conducive to the flourishing of staff members. Lastly, the OECD's framework takes a global perspective, highlighting the intricate relationship between teacher wellbeing and broader educational systems on an international scale.

Collectively, these models offer valuable insights into the nature of teacher wellbeing and its relationship with surrounding influences and factors, thereby facilitating potential enhancements in learning and school policies. School stakeholders should consider exploration of these models as part of their teacher

wellbeing journey, in addition to the new model presented in Chapter 2, which offers a simple way of exploring the drivers highlighted in the next section.

1.5.2 Drivers of Teacher Wellbeing

The findings in the following section are intended to elucidate some of the most significant factors in the academic literature that have been found to affect teacher wellbeing. The literature was identified by searching for review articles in seven scientific English-language databases (for details see Appendix 1 in Chapter 4.1). The literature search was focused on schoolteachers in school settings, rather than other teachers, such as university lecturers, or other settings, such as clubs outside schools. The review highlighted that various individual and external factors act to both facilitate and impede teachers' wellbeing, which gives support to a multiple systems approach of wellbeing, supporting the notion that a human is a "system of interdependent systems" (Yildirim, 2014, p. 154). Yet, because of the holistic nature of various systems acting to affect the wellbeing of teachers, the factors associated with wellbeing are not always clear cut, with complex relationships between drivers. It is important to explore the intriguing and valuable interplay among various drivers, however it is not the focus of this report. For clarity, this report explores each factor separately, noting interactions where possible, along four broad areas: a) *Individual-level*, b) *Role-level*, c) *School-level* and d) *External factors*.

Teacher wellbeing is an area that has received relatively limited research attention, especially when compared to more extensively studied fields like child and adolescent wellbeing. Within the realm of teacher wellbeing research, a spectrum of evidence at various levels are encountered, each illuminating different facets of this complex subject. Notably, there is a dearth of rigorous, high-level research, including Randomized Controlled Trials (RCTs) that establish causality (Hascher & Waber, 2021). RCTs are universally acknowledged as the gold standard in human-centred research, enabling direct links to be drawn between conditions and outcomes, thereby facilitating the establishment of causal relationships. In the quest to understand teacher wellbeing comprehensively, a range of research methodologies becomes imperative. Qualitative studies, for example, offer an invaluable bottom-up approach to gather teachers' perspectives on wellbeing, which quantitative approaches may not fully encompass. As a result, this report will employ a diverse array of research methods, including both qualitative and quantitative studies, to provide a holistic exploration of the multifaceted landscape of teacher wellbeing.

In addition, as noted earlier, researchers sometimes use "wellbeing", "mental health", "stress", "psychological wellbeing", and other terms for related concepts interchangeably, thus it is necessary to include literature from a broader field than solely subjective wellbeing. As

will be evidenced in this section on drivers of teacher wellbeing, much of the research conducted in this field is correlational and is focused within single countries or specific populations. Thus, it is suggested that firm conclusions regarding causation be withheld at this time given the current state of the literature. The ability to make comparisons between studies has also been challenged by the fact that various researchers conceptualise wellbeing in different ways, with some utilising a multi-dimensional construct (e.g., psychological wellbeing), and others using only a single construct (e.g., life satisfaction), as illustrated in Chapter 1.1 on defining wellbeing.

It's essential to keep in mind that a consensus on the definition and measurement of teacher wellbeing remains elusive, as demonstrated in Section 1.5.1.3. As a result, the studies discussed in the following section may have employed various methodologies to measure TWB, potentially accounting for the observed variations in findings across different associations. However, it is important to emphasise that the factors listed in this section continue to offer valuable insights that can assist schools and policymakers in their ongoing efforts to grasp the factors influencing teacher wellbeing in their own contexts. The primary purpose of this section on drivers of wellbeing is to provide schools with a comprehensive overview of the current state of development for each driver concerning teacher wellbeing. While these drivers are frequently discussed topics in the realm of teacher wellbeing and practice, it is essential to recognise that the development and the associations between these drivers and teacher wellbeing can vary significantly.

1.5.2.1 Individual-level

In the exploration of the individual-level drivers of teacher wellbeing, a comprehensive array of factors that play a significant role in shaping the experiences and overall wellbeing of educators is presented. These factors encompass aspects such as gender, age, years of teaching experience, educational background, and teaching level. Additionally, critical dimensions, including physical health, income, job security, and psychological functioning are explored.

1.5.2.1.1 Gender

Studies across the topic of the relationship between teacher wellbeing and gender have reported mixed results (as highlighted below). Some studies have found a significant association between gender and wellbeing; with male teachers tending to have higher wellbeing and professional contentment and lower rates of stress, anxiety, and burnout compared to female teachers (Huang & Yin, 2018; Konu et al., 2010; Romano & Wahlstrom, 2000; Timms et al., 2006). However, some studies have not found a significant association between teacher wellbeing and gender (Janovská et al., 2017; Milfont et al., 2008).

Where gender differences are found, the variance in stress and wellbeing outcomes between genders may in part be due to female teachers forming closer bonds with their students and being more involved in their students' experiences, as signified by research showing how stress and emotional fatigue for female teachers are associated with relations between teachers and their students and colleagues, and students' progress and academic achievement (Antoniou et al., 2006; Huang & Yin, 2018). Further, female teachers often report lower wellbeing, particularly with regards to the challenge in handling disruptive student behaviour and managing competing family and personal duties when schoolwork spills over into personal life, challenges which are not reported as frequently by male teachers (Antoniou et al., 2006; Klapproth et al., 2020).

Where no gender differences are found this might be because there is no difference or might be explained by males and females have higher levels of certain types of wellbeing, as well as lower levels of other areas of wellbeing, which act to reduce the association between gender and teacher wellbeing. For instance, Roothman et al. (2003) found that females tend to score higher expressing affect and physical/somatic symptoms associated with higher wellbeing, whereas males score higher on self-concept and fortitude, also leading to higher levels of wellbeing. The authors explain these differences (albeit small) may be a result of different societal pressures and expectations. For instance, men might have greater self-esteem and self-concept compared to women owing to greater career opportunities and being judged less by society on aspects such as their physicality, or, on the other hand, women might be less judged by society regarding the expression of their feelings compared to men (Rand & Wright, 2000; Roothman et al., 2003). Although research findings suggest inconclusive results regarding gender effects on wellbeing, the difficulties experienced by female teachers are highlighted within the literature presented in this report and should be considered as women constitute a significant proportion of the teaching population (see Section 1.3.1). It should also be noted that little to no research exists outside of cisgender populations (i.e., individuals whose gender identity aligns with the sex they were assigned at birth) and therefore no conclusions can be drawn as to whether there are any differences in teacher wellbeing for these populations.

1.5.2.1.2 Age

Similar to the body of research on gender, the findings on the relationship between age and teacher wellbeing are inconsistent. While some research has not found a significant association between age and teacher wellbeing (e.g., Sadick & Issa, 2018; Soykan et al., 2019), conflicting results have emerged from other studies (as highlighted below). Some research has found that

younger teachers tend to experience greater levels of stress and burnout and have lower levels of wellbeing compared to older teachers (Antoniou et al., 2006; Lau et al., 2017), while additional research has found that wellbeing decreases as teachers age (Janovská et al., 2017; Özü et al., 2017). The inconsistency in findings may speak to findings within the general population in terms of age, in that some aspects of wellbeing have found to increase with age (i.e., growth in resources to handle stress), whilst others have been found to decrease with age (i.e., deteriorating health and vitality; Keyes, 1998; Steptoe et al., 2015). The general population has also been seen to follow a U-Shape wellbeing curve, with higher reported wellbeing levels occurring in youth and in old age, with a dip in wellbeing levels occurring in people aged 40-50 years (Graham & Ruiz Pozuelo, 2017). These factors could thus also have a significant impact on teachers' wellbeing with an understanding that younger teachers and those nearing retirement may report higher general wellbeing than their (largely) mid- to late- career counterparts in their 40s and 50s. However, these findings are related to general wellbeing and the specific literature on teacher wellbeing suggests that the reality of the relationship between age and wellbeing is more complicated. Therefore, the relationship between age and teacher wellbeing does not present a clear and conclusive picture, as it is influenced by various other factors, like teaching experience, and school stakeholders may wish to exclude teacher age as a factor in their discussions as the research does not paint a clear picture.

1.5.2.1.3 Teaching Experience

Furthermore, teaching experience may mediate the relationship between teacher age and wellbeing, as younger teachers often have less experience in the teaching profession. Some research has not found a significant association between teaching experience and wellbeing (Hascher & Waber, 2021; Romano and Wahlstrom, 2000), while other studies have found that lower wellbeing is associated with increased years of teaching experience (Janovská et al., 2017). On the other hand, other research has found that lower wellbeing is associated with fewer years of teaching and a greater abundance of tasks that they need to adapt to, which can increase their stress levels and reduce feelings of self-efficacy, thereby impacting their wellbeing (Antoniou et al., 2006; Huang & Yin, 2018; McCallum, 2020; Royer & Moreau, 2016). It is worth noting that these studies were conducted in different countries. For instance, Janovská et al.'s (2017) study focused on primary school teachers in Eastern Slovakia, whereas Romano and Wahlstrom's (2000) study was conducted in the United States, and Huang and Yin (2018) carried out their research in China. Therefore, the varying teaching situations across different countries could contribute to the inconsistent findings observed in the research on teaching experience, and also across

many of the drivers presented in this section. The demands, experiences, and context, of teaching vary widely cross-culturally (e.g., Huang & Yin, 2018) and, as this research area is in its infancy and there are a small number of studies in some areas (such as levels of teaching experience), this may explain the contradictory findings across many areas.

The mixed results in the relationship between teaching experience and wellbeing could also potentially be explained by a review conducted by Gray et al. (2017), which reports how novice teachers tend to suffer from higher rates of burnout, owing to the physical demands of teaching and inadequate time to balance personal needs, such as eating and exercising, with work demands, which can lessen their wellbeing levels. Conversely, those with more teaching experience might have higher rates of exhaustion, being more affected by work-life balance and external policies, which also affect their wellbeing levels. This is corroborated by studies showing that those with fewer years of teaching experience have higher rates of stress and burnout (Fisher, 2011), whereas those with more years of teaching experience have higher rates of exhaustion (Kokkinos, 2007). However, had significant differences in their participant populations: Fisher's (2011) study took place in urban areas of the United States with a sample of secondary/high school teachers, with the majority of the sample having 0-5 years of teaching experience and being 31-40 years of age. Whereas Kokkinos' (2007) study considered primary/elementary school teachers from Cyprus, Greece, who had a mean level of 11.96 years of teaching experience (56.8% having up to 10 years experience, and 43.2% having up to 35 years of experience). Since both high rates of stress and burnout and a high rate of exhaustion negatively impact wellbeing, disentangling the relationship between teaching experience and wellbeing becomes challenging. Overall, the literature points out that teachers with varying levels of teaching experience and age may be impacted by different stressors and demands, as well as having different resources at their disposal to help them cope, which in turn affect their wellbeing in different ways. Therefore school stakeholders should carefully consider individual teacher's experiences, rather than assuming that teaching experience will expose or shield them from adverse wellbeing outcomes.

1.5.2.1.4 Education Level

Similar to age, and teaching experience, the results of the relationship between teacher educational level and wellbeing are unclear (Lavy & Eshet, 2018; Yildirim, 2014). Studies have pointed out that it is important to consider the influence of educational level, as it is closely linked to teacher self-efficacy, which in turn affects teachers' wellbeing (Huang & Yin, 2018; OECD, 2019). One study conducted in the United States with

a teacher sample which had higher than average education level attainment found sufficient job-related supportive resources such as collegial support and specialist staff may play a more important role in buffering negative wellbeing than education level (Schaack et al., 2020).

It is also important to bear in mind that whilst the level of education received before entering the teaching profession might not be significantly associated with wellbeing, the quality of the initial training teachers received as well as their continuous learning, gaining new skills, and professional development are important in equipping teachers with the ability to cope with the demands of their role and maintain their motivation for their work, all important factors for their wellbeing (see OECD, 2019). The role of continuing education and development is explained in further detail below in Section 1.5.2.3.

1.5.2.1.5 Level of Teaching

Research findings on the relationship between grade level and teacher wellbeing present mixed results. While numerous studies have not found a significant relationship between wellbeing and grade level (Gloria et al., 2013; Lau et al., 2017; Renshaw et al., 2015), some research has found that the wellbeing and job satisfaction of those in secondary (high) school is lower than that of other grade levels, such as elementary (primary) school (Brouskeli et al., 2018; Konu et al., 2010). Brouskeli and colleagues (2018) suggest that these findings are a result of teachers in secondary schools (particularly at the upper secondary level) being faced with higher levels of pressure in helping their pupils pass university entrance exams and successfully complete their schooling.

Conversely, some studies have found the opposite relationship between grade levels and teacher wellbeing, with primary (elementary) school teachers experiencing greater negative affective states such as stress and burnout compared to other grade levels (Romano & Wahlstrom, 2000; Timms et al., 2006). The reason for this may have to do with the gender imbalance in primary teacher roles (significantly more females compared to males; as discussed above), where females are generally known to suffer from higher rates of mental health concerns (such as anxiety and depression) compared to males (Burns & Machin, 2001; Timms et al., 2006). In this regard, Huang & Yin (2018) found that female primary school teachers experience more job-related stress compared to both secondary school teachers and male primary school teachers, which the authors explain may be due to the heightened relational involvement between female teachers and their students. Other research has also found that primary school teachers report lower income and lower levels of satisfaction regarding their

salaries, which may also act to lessen their feelings of financial wellbeing and stability (OECD, 2020). However it should be noted that given that the majority of OECD member countries have high income economies, there may be challenges with generalising these findings more globally. No clear relationship has been found between grade levels and teacher wellbeing, and school stakeholders should not place emphasis on grade level in their teacher wellbeing discussions, particularly as comparisons are largely mainly made between primary (elementary) and secondary (high) schools, and in most cases school stakeholders will only need to consider one of these populations in isolation.

1.5.2.1.6 Public vs. Private School Teachers

Research comparing teacher wellbeing in state- or government-funded schools vs. private schools is limited. One study by Brady & Wilson (2022) on a sample of schools in England found that both private and state school teachers encounter stressors affecting their wellbeing but differ in what these stressors entail. The authors found that those in state schools suffer more from stresses with high workload demands related to accountability policies, whereas those in the private sector deal with other stressors that have more to do with pressures from parents (albeit to a lesser extent than state school teachers), associated with the higher educational fees involved in private schools. However, a study by Chen et al. (2022) on a Chinese sample of teachers from a private school found that the factors most impacting their wellbeing were pressure related to performance evaluation and accountability measures, along with increased time needed for research work for teaching. This suggests that stressors acting on teachers at different school types might be different depending on varying cultural contexts.

On the whole, when considering a more international population, teachers in private schools have reported greater satisfaction with their work and working conditions, better mental health, a better social climate, more autonomy, better self-appraisal and confidence, and more support in professional development, adding to the resources at their disposal to handle students better and teach more effectively than state school teachers (Green et al., 2008; Hooda & Sharma, 2013; Micklewright et al., 2014; OECD, 2019). Thus, whilst the research mostly points to more favourable wellbeing outcomes in private compared to state schools, it should also be noted that the wellbeing differences between school types are often small and variable, with greater impacts on wellbeing found for schools on an individual basis rather than owing to their 'state' or 'private' school status (Brady & Wilson, 2022).

1.5.2.1.7 Physical Health

The physical health of teachers has been found to relate to wellbeing through influencing their levels of physical exhaustion (Kern et al., 2014; Skaalvik, & Skaalvik, 2011). A study conducted with German teachers revealed better physical health compared to other occupations, including teachers having higher levels of physical activity, lower smoking rates, lower obesity rates, and improved cardiovascular health compared to the general population (Scheuch et al., 2015). However, the majority of research points to adverse outcomes relating to teachers' physical health, particularly regarding the chronic stress they are exposed to in their professional role (Burić et al., 2019). Chronic (longer-term) exposure to stress can negatively affect the body's homeostasis and endocrine systems, affecting healthy functioning and the body's ability to cope well and defend itself adequately (Gloria, 2013). In this regard, low wellbeing or stress has been associated with decreased vitality, decreased general health, sickness, sleep problems, and increase the use of painkillers (Milfront et al., 2008). Teachers have also been found to suffer particularly from higher rates of hypertension, exhaustion, fatigue, headaches, and tension because of their occupational stress compared to other professions (Van Horn et al., 2004; Yang et al., 2009). In response to these symptoms, physical exercise has been associated with the best ways teachers manage the stress and the negative somatic outcomes associated with the physical and emotional demands of their work, with consequent improvements in their wellbeing levels (Corbett et al., 2022; Romano and Wahlstrom, 2000). Physical health is something that school stakeholders could consider supporting with, either preventatively or remedially, through upstream management interventions to prevent chronic stress or lower-stream interventions to support those with physical health challenges, such as access to expert guidance or medical assessment and care.

Overall, the research into individual factors for teacher wellbeing do not present any strong actionable findings which would support school stakeholders with their wellbeing journeys. However, schools should always consider the findings from teacher voice promotion activities. If teachers themselves identify that there are individual-level factors within the school context that are proving challenging to their wellbeing, then these should be addressed through the lens of promoting equality and diversity, the relevant education and legal systems, and the school's own ethos, policies, and practices.

1.5.2.1.8 Psychological Functioning

In the following section, the relationship between teachers' psychological functioning and their wellbeing will be explored, with a specific focus on two pivotal aspects: personality and emotional competence.

1.5.2.1.8.1 Personality

In the general population, all personality groups have been tied to wellbeing outcomes, mostly to do with the sociability, goal setting, achievement, and positive and negative emotion sensitivity, associated with the various personality types (Janovská et al., 2017; Kling et al., 2003; Vorkapić & Peloza, 2017). Dimensions of personality are often studied using the Big Five model of personality (Goldberg, 1990), with groupings in five broad areas: openness to experience (curious vs cautious), conscientiousness (organised/efficient vs careless), extraversion (outgoing vs reserved), agreeableness (friendly vs critical), and neuroticism (anxious vs calm; Barrick & Mount, 1991). In terms of teacher wellbeing, research has found that out of all these personality traits, neuroticism is most negatively associated with wellbeing and job satisfaction, and conscientiousness most positively associated (Vorkapić & Peloza, 2017). It is suggested that those who have higher emotional control are more resilient and have stronger willpower, which might act to better enable them to cope in the face of work demands, allowing for higher work satisfaction (Janovská et al., 2017). Neuroticism has also been associated with lower life satisfaction, lower wellbeing outcomes, a lower sense of personal achievement, and increased emotional exhaustion, whereas extraversion has been linked to increased life satisfaction, increased self-esteem, positive wellbeing outcomes, and lower emotional exhaustion (Vorkapić & Peloza, 2017; Wong & Zhang, 2014).

One of the major criticisms of personality research in relation to wellbeing, concerns the possibility of conceptual overlap between the two fields, which might explain the high associations found between personality and wellbeing. In other words, both fields might be measuring the same concept, rather than the dimensions of personality predicting wellbeing outcomes (Schmutte & Ryff, 1997). As McCrae and Costa (1991) note, "Personality traits and emotions are so intimately tied that it is often difficult to distinguish the items on a mood measure from those on a personality inventory" (p. 227). Another issue with using personality research in relation to wellbeing is the variation which exists regarding cultural differences; for instance, those in more collectivist cultures such as China or Africa tend to have higher associations between socially focused dimension of personality and wellbeing, whereas those in more individualistic cultures, such as the United States, tend to show higher relations between self-focused

aspects of personality and wellbeing (Schimmack et al., 2002). Finally, there is also debate in the literature about whether personality is something fixed or malleable, further adding to the complication of using personality as a driver of wellbeing. Some argue that personality is malleable and can be shaped by the environment or beliefs about the ability to change one's personality (e.g., fixed vs growth mindset), particularly during childhood and adolescence (Boyce et al., 2013; Dweck, 2013; Roberts & DelVecchio, 2000) whereas others have argued for a more fixed view of personality (Costa & McCrae, 1980). Due to this inconclusive debate on personality research and wellbeing, it may be more beneficial for school stakeholders to focus on cultivable traits like emotional intelligence and resilience (see below).

1.5.2.1.8.2 Emotional Competence

Emotional intelligence, emotional regulation, and resilience have been extensively found to relate to teacher wellbeing in the literature (Acton & Glasgow, 2015; Bardach et al., 2022; Molero et al., 2019). Emotional intelligence describes the ability to sufficiently understand and regulate one's emotional state to cope with adverse events and positively grow from the experience (Mayer & Salovey, 1997). In this regard, specifically the ability to regulate one's emotional state by perceiving the positive side of situations, also termed *optimism*, has been shown to allow individuals to distance themselves from negative events and in so doing reduce the adverse impact the events might have on them (Seligman, 1991). In the teaching profession, those who are able to perceive their environments and their capabilities more positively, have been found to have a greater ability to cope with adversity and greater wellbeing levels (Gloria, 2013; Huang & Yin, 2018;). Another emotional regulation technique, giving one's full attention to the present moment in a non-judgmental manner (often termed as *mindfulness*), has also been associated with lower anxiety, stress, and higher teacher wellbeing, as well as influencing other factors such as teaching efficacy (Li, 2021).

Moreover, *resilience* which is described as the ability to handle challenging and stressful situations and effectively adapt to change, through proactive coping styles (Herrman et al., 2011) has been found to relate to teacher wellbeing. This is particularly noteworthy given the variety of demands within the teaching role and the constantly shifting nature of the teaching profession (Grenville-Cleave & Boniwell, 2012). The ability to adapt well and effectively has been shown to relate to teacher wellbeing through improving emotional intelligence, the ability to withstand and persevere through stressful and difficult moments, as well as the ability to bounce back quickly after adverse events have occurred (Beltman et al., 2011;

Callegari et al., 2016a; Herrman et al., 2011). Both emotional regulation and resilience have been associated with heightened teacher wellbeing in moderating the negative impacts of stress, reducing fatigue levels, and enhancing social relationships and work performance (Molero et al., 2019; Palomera et al., 2008; Zadworna-Cieślak, & Karolina, 2018; Zysberg et al., 2017). Together, a better ability to regulate their emotions provides teachers with the social and emotional resources required to cope with and adapt well to stress and other negative emotional states they may encounter as part of their professional role. Therefore school stakeholders should consider an exploration of the emotional demands of the teaching roles within their school and if this is highlighted as an areas for concern (particularly by teacher voice activities) then interventions in this areas should be considered.

1.5.2.2 Role-level

In this section two role-specific factors are explored: teacher self-efficacy and teacher motivation. While these two factors, as with the drivers in the section above, are psychological, they are specifically focused on the teaching role (although they may also apply more broadly).

1.5.2.2.1 Teacher Self-efficacy

Teacher self-efficacy describes the confidence teachers feel in their ability to do what is required of them (Klassen & Chiu, 2010). Teacher self-efficacy has been usefully divided into three broad areas: a) student engagement; b) classroom management; and c) instructional strategies (Tschannen-Moran & Hoy, 2001). In this regard, teachers have high teaching efficacy when they can engage their pupils adequately so that learning occurs, when they are able to manage difficult pupil behaviour and control the classroom environment, and when they have a toolkit of effective and creative teaching tools to enhance the learning processes. Teacher self-efficacy has been significantly negatively associated with burnout and lower wellbeing levels, higher rates of work stress, absenteeism, and attrition, and positively correlated with commitment to one's work and a pupils' academic performance (Collie et al., 2012; Molero et al., 2019; Schwarzer & Hallum, 2008; Skaalvik & Skaalvik, 2011). In particular, feeling unable to deal with student discipline problems has been found to be a significant contributor to burnout, whereas feeling able to manage the classroom has been found to be a significant protective factor against burnout (Bardach et al., 2022).

Compared with TALIS 2013, TALIS 2018 reported a decline in teachers' efficacy in Chile, the Flemish Community of Belgium, Finland, France, New Zealand, Norway, Romania, the Slovak Republic, and Sweden. Despite this, on average, teachers generally report high

levels of self-efficacy in different teaching domains, but novice teachers were less confident than experienced ones, with 78% of novices feeling they can control disruptive behaviour in their classroom compared to 87% of experienced teachers respectively (OECD, 2013; OECD, 2020). A study conducted in Australia with elementary school teachers found teachers with higher confidence in their abilities demonstrate better adaptability to change, less emotional exhaustion, and greater commitment to the work they need to perform (Granziera et al., 2022). Moreover, self-efficacy along with emotional resources to cope with stress (such as hope, resilience, and optimism) have been grouped to form a construct known as Psychological Capital (the HERO framework is an example of this in practice; Luthans et al., 2007). This construct has been shown to relate to improved teacher performance, lower attrition levels, and higher wellbeing (Avey et al., 2010; Kun & Gadanez, 2022; Luthans et al., 2007). This can be related to the increased levels of emotional resources to draw on during difficult times, as well as the ability to appraise situations positively and cope with them in a healthy manner, allowing teachers to feel better about performing the role required of them (Soykan et al., 2019).

Overall, when teachers feel confident in their ability to perform their role as expected, teachers feel more engaged in their work, in relationships with their pupils and other staff members, and have a higher sense of self-esteem, all contributing to their feelings of wellbeing (Hooda & Sharma, 2013; Klassen & Chiu, 2010; OECD, 2019). Research has moreover found that the relationship between wellbeing and efficacy might be cyclic in nature, with those experiencing higher negative states and anxiety tending to underestimate their efficacy (Huang & Yin, 2018). This may be because those experiencing negative psychological states tend to focus on the negative aspects of the situation and themselves, and this can lead to the generation of largely negative conclusions regarding one's working efficacy (Hallion & Ruscio, 2011). Thus, the exact causality between wellbeing and self-efficacy remains unclear, but it is evident that these two variables are strongly interrelated. Therefore, self-efficacy is something that school stakeholders should consider on their teacher wellbeing journey, particularly with a focus on the three main elements: student engagement, classroom management, and instructional strategies.

1.5.2.2.2 Teacher Motivation

In the literature of teacher motivation, the concept of teacher motivation encompasses both intrinsic and extrinsic factors, including inherent interest of teaching, social contextual influences, lifelong commitment, and the presence or absence of demotivating factors (Dörnyei & Ushioda, 2011; Han & Yin, 2016; Sinclair, 2008). This concept has garnered significant attention

in educational research as it is closely related to several variables, including not only teachers' psychological fulfilment and wellbeing, but also student motivation, educational reform, and teaching practice (Richardson & Watt, 2010). Teachers who are highly motivated are more engaged, interested, and fulfilled by their work, have been found to have a higher commitment to their role, reduced stress and emotional fatigue, and enhanced health and wellbeing (Benevene et al., 2018; Collie et al., 2012; Hall-Kenyon et al., 2014; Romano & Wahlstrom, 2000). More specifically, a study conducted with an Australian teacher sample found that those who exhibited high levels of motivation, including strong self-efficacy and a high valuation of their job, experienced the most positive wellbeing outcomes (Collie et al., 2017). Additionally, a study conducted with Norwegian teachers revealed that teacher wellbeing predicted higher engagement and lower motivation to leave the profession (Skaalvik & Skaalvik, 2011), indicating a bi-directional relationship between teacher motivation and teacher wellbeing. Motivation and its enhancement should be discussed by school stakeholders as an important aspect of teacher wellbeing and they should consider how they can explore this element in their own contexts.

Both role-level drivers of teacher wellbeing described in this section are recommended as discussion points for schools wishing to assess or enhance their teacher wellbeing. The evidence base around these areas is building and this can be coupled with findings from the general adult wellbeing occupational literature (Section 1.5.1.1 above) which has not been explored as fully in teacher-specific wellbeing research but should still be considered by school stakeholders as potential points for discussion and impact (such as job satisfaction, job engagement, and autonomy).

1.5.2.3 School-level

In this section, the focus is on school-level drivers that play a crucial role in shaping teacher wellbeing from literature. This section will offer an examination of factors such as work demands, supporting and appreciating professional development, relationships within the school, school climate, and class size.

1.5.2.3.1 Work Demands

The workload and demands of the teaching profession have been extensively linked to wellbeing in the literature (as detailed below). Within the teaching profession, work demands include high work volumes and long working hours, physical demands, pressure of meeting expectations and targets, lack of funding, relationship and emotional demands, and low work-related control and autonomy (Corrente et al., 2022; Naghieh et al., 2013; Romano & Wahlstrom, 2000; Soykan et al., 2019). High job demands have been associated with reduced teacher self-efficacy, wellbeing, and an elevated risk of burnout (Betoret, 2009; Klassen et

al., 2013; Skaalvik & Skaalvik, 2018). The relationship between high jobs demand and reduced wellbeing can be explained by the Job-Demands-Resources (JD-R) model, which hypothesises that if the demands of work (physical and/or mental demands) are not balanced with appropriate resources to cope with and mitigate these demands, negative consequences such as ill health and poor wellbeing result (Bakker & Demerouti, 2007; Sonnentag et al., 2010). When teachers do not have sufficient resources to meet the demands of the job, they experience exhaustion and high levels of stress, which in turn produces negative emotions and ill-health (Capone et al., 2019; Howard & Howard, 2020). These resources include: 'personal' ones relating to motivation and self-efficacy; 'contextual' ones relating to supportive relationships between colleges, students, and leadership; and 'strategies' relating to problem-solving abilities, continuous learning and development opportunities, and work-life balance (Hwang et al., 2017; Li, 2021; OECD, 2019).

Moreover, work demands, such as coping with violence and discipline issues within the classroom, has also been found to affect levels of emotional exhaustion, leading to increased risk of teacher burnout and mental health disorders (Beltman et al., 2011; Corrente et al., 2022). Pupil behaviour is often identified as the key stressor for teachers, significantly impacting their daily experiences of positive affect during class, teacher wellbeing, and job retention levels (Brady & Wilson, 2021; Li et al., 2022). Furthermore, having insufficient resources to assist at-risk students, or those who require greater care and supervision, have been identified as major sources of work-related stress for teachers (Richards, 2012). Finally, early career teachers might be particularly susceptible to experience more negative outcomes from excessive work demands, and their wellbeing can be improved through mentoring and coaching (Kutsyuruba et al., 2019).

It is worth noting that 49% of teachers have reported having excessive administrative work as a leading cause of work stress within OECD countries (OECD, 2020). High workloads can also spill over into teachers' personal lives, decreasing their restorative downtime and potentially contributing to family conflict (Burns & Machin, 2013). Overall, research points to associations between lower teacher wellbeing and teachers having insufficient resources to deal with the high work demands, pressure, and accountability that comes along with their role (Corrente et al., 2022; Gonzalez et al., 2017; Naghieh et al., 2013). Understanding the relationship between work demands and teacher wellbeing offers school stakeholders and policymakers pathways to improve teacher wellbeing through addressing and providing them with the necessary resources to balance the demands of their job.

1.5.2.3.2 Income and Job Security

A study conducted in United States, revealed associations between lower income, reduced teaching efficacy, and increased turnover rates among teachers (King et al., 2016). Similar findings were observed among rural Chinese teachers, where salary satisfaction significantly influenced their wellbeing (Tang et al., 2018). Additionally, qualitative research has shown that educators perceive economic factors, including income, as an important component of their overall work wellbeing (Jones et al., 2019). Interestingly, other research has indicated that wages do not necessarily impact occupational stress levels directly, but rather influence other aspects of the teaching role, such as job performance, absenteeism, and attrition rates (Chaudhury et al., 2006; Schaack et al., 2020). This suggests that income may affect teachers' personal lives, including their financial wellbeing and ability to meet personal expenses, which in turn can influence their teaching and might influence decisions to leave the profession (Schaack et al., 2020). These findings warrant the attention of researchers and policymakers, particularly considering that a 2018 TALIS report revealed that only 39% of teachers were satisfied with their salaries (OECD, 2020).

Moreover, other studies have found job security (e.g., health and retirement benefits) and job promotion and development play a larger role in retention and wellbeing than income (Holochwost et al., 2009; Li, 2021; Naghie et al., 2013). In this regard, job insecurity, as evidenced by teachers holding temporary contracts, has been associated with stress and anxiety at work (Forcella et al., 2009). Forcella et al.'s (2009) study, conducted with a sample of teachers in Italy, found that those over 50 years of age were particularly affected by holding temporary contracts. Finally, some studies have found that extrinsic factors such as salary were not the most important consideration for retaining teachers - rather intrinsic factors such as good student-teacher relationships, autonomy, and teaching efficacy played a larger role (Hall-Kenyon et al., 2014; Perrachione et al., 2008). Overall, income and job security emerge as significant factors, although their influence can be contingent on individual and contextual circumstances. In summary, job benefits encompassing health and retirement provisions, interpersonal connections, autonomy, and teaching efficacy, appear to hold greater importance than income itself in shaping teacher wellbeing and decisions pertaining to career continuity. Therefore schools should consider other job-related drivers above income, but also consider their own context and whether there are some teachers who may benefit from a higher income or job security (through discussion with individuals or feedback from teacher-voice-enhancing practices).

1.5.2.3.3 Supporting and Appreciating Professional Development

Low sense of personal achievement, lack of recognition, and limited opportunities for professional growth and development have been consistently tied to work satisfaction and wellbeing (Aelterman et al., 2007; Janovska et al., 2017; McCallum, 2020; Molero et al., 2019; Naghie et al., 2013; Seibt et al., 2013). Continuous professional development can play an important role in providing teachers with confidence (self-efficacy) in their role, as when teachers feel they are able to perform their role at a higher standard, this can lead to increased job satisfaction and wellbeing (OECD, 2019). A series of studies found that providing opportunities and support for career development and professional learning, such as collaborative teams or mentor relationships, has been found to facilitate professional growth and satisfaction (Konu et al., 2010; Soini et al., 2010; Webb et al., 2009). Studies also found that professional learning opportunities offered by schools have a positive correlation with teachers' hedonic and eudaimonic wellbeing, as well as their professional autonomy (Kensington-Miller, 2021; Liang et al., 2022; Tang et al., 2018). However, such policies should be applied cautiously, as when they act to further the workload and strain of teachers, this can negatively affect their wellbeing (Collie et al., 2017). In this way, appreciation of teachers' work and professional development can lead to greater work engagement and commitment, and consequent improved teacher wellbeing, when teachers find it useful, leading to further professional growth (Granziera et al., 2022; Somech & Bogler, 2002). Therefore, school stakeholders, as part of their teacher wellbeing journey, should consider their current processes for professional development and recognition, and view these as drivers of teacher wellbeing and potential pathways to impact.

1.5.2.3.4 Relationships at School

De Neve and colleagues (2018) found that relationships within the workplace was one of the greatest predictors of job satisfaction and workplace wellbeing, with feeling supported by colleagues at work being a major driver of life satisfaction. This is particularly true for the case of relationships with managers, where it has been found that managers are the greatest predictors of employee wellbeing and the long-term success of the organisation (Clifton & Harter, 2019). Indeed, social support and relationships within a school context is a major factor contributing to teacher wellbeing and health (Acton & Glasgow, 201; Janovská et al., 2017; Retallick & Butt, 2004), assisting teachers in building the resources they require to mitigate the stressful working demands they might encounter in their role (Collie et al., 2017). In this section, social relationships that teachers are involved in at school, including interactions with colleagues, students, parents, and leaders, are explored.

1.5.2.3.4.1 With Colleagues

Positive colleague relationships are crucial for promoting teacher wellbeing and efficacy. When teachers are part of collaborative and cooperative teams, positive working environments result, leading to higher rates of their wellbeing and efficacy (Ma & MacMillan, 1999; Toropova et al., 2021). Having good communication and trust between teacher colleagues has been found to reduce stress by mitigating the emotional strain of work through providing support and additional assistance during difficult moments (Brown & Roloff, 2011; Kinman et al., 2011; Konu et al., 2010; Romano & Wahlstrom, 2000). Further, when educators work together on school-related tasks, they can assist each other in areas they may be struggling with, helping to mitigate the anxiety related to working insufficiently (Collie et al., 2017). A study conducted with a sample of middle- and high-school teachers in Israel found learning from other colleagues can also prove beneficial, particularly in schools that make use of collaborative work policies that boost morale and professional learning, leading to higher rates of wellbeing (Somech & Bogler, 2002). However, the participation rate in professional collaboration among teachers is considerably lower, with one study suggesting that only 9% of teachers providing observation-based feedback to their colleagues (OECD, 2020). Conversely, across OECD countries and economies, an average of 71% of teachers reported that they found peer feedback to be valuable for improving their teaching. These contrasting results may indicate that teachers value and desire feedback and collaboration but may face constraints such as limited time or insufficient support to engage in such practices, (OECD, 2018), and that school stakeholders should explore this as a potentially impactful way of enhancing teacher wellbeing.

1.5.2.3.4.2 With Students

Positive student-teacher relationships have also been found to play an important role in job satisfaction, teacher wellbeing, teaching efficacy, and attrition levels (Acton & Glasgow, 2015; Gray et al., 2017; Romano & Wahlstrom, 2000). Strong relationships between teachers and their students increase teachers' confidence in their role and increase student engagement with the learning content, increasing work satisfaction and teacher's wellbeing at work (Ilgan et al., 2015; Turner & Theilking, 2019). Almost 35% of teachers who leave the field permanently do so because of problems with students (Ingersoll & Smith, 2003), suggesting that student behaviour is a contributing factor to teacher attrition (Ferguson et al., 2012). At the same time, the relationship formed with students is also often described as one of the most important reasons for staying in the profession, as well as the

most important source of enjoyment and motivation (Hargreaves, 1998; Hargreaves, 2000; O'Connor, 2008; Shann, 1998). Interestingly, elementary teachers reported a higher frequency of both positive and negative emotions (specifically anger and frustration), while secondary teachers experienced more alienation and felt more stereotyped by their students, reflecting the difference in student-teacher relationships characterized by respect (Hargreaves, 2000). It is suggested that the importance of student-teacher relationships lies in how their relationships become internalised by teachers, guiding how they react emotionally in their lives. Findings from in-depth interviews with teachers as well as correlational research suggests that teachers derive intrinsic rewards from developing close relationships with students, and experience negative emotions when these relationships are marked by disrespect, conflict, or distance (Spilt et al., 2011).

Moreover, teacher-targeted bullying, also known as teacher-targeted harassment or violence is an area that requires attention in some school contexts. Multiple studies have highlighted its prevalence, emphasizing the impact it can have on teachers' feelings of safety in their jobs. For instance, a study conducted in Luxembourg reported significant prevalence of teachers being victims of verbal attacks (24%), defamation (20%), and sexual harassment (7%; Steffgen & Ewen, 2007). Similarly, in a New Zealand study, 28% of participating teachers reported experiencing minor bullying from students on a weekly basis (Benefield, 2004). The impacts of adverse student behaviour can be substantial, posing a potential threat to the safety of teachers in schools, highlighting the need for attention to this issue.

The relationships between students and teachers are essential for school stakeholder to explore for their impact on both teacher and pupil wellbeing (see Taylor et al., 2022 for discussion of the impact on pupil wellbeing). Both teacher and pupil voice should be considered as critical to understanding the complex relationships that may exist in each school setting and should be the foundation of any discussion before any interventions are made (see Taylor et al., 2022 for a discussion of the importance of pupil and staff voice).

1.5.2.3.4.3 With Parents, Guardians, and Caregivers

Research also points to the important role "parent"-teacher ("parent" is used here as a catch-all term for any adult caregiver responsible for a student outside the school-setting) relationships play in teacher wellbeing (Soini et al., 2010). Negative parent-teacher relationships can act to further the stress placed on teachers, lessen their feelings of teaching efficacy, and worsen the teacher-student relationship, all of

which adversely affect teacher wellbeing (Forsyth et al., 2006; Westergård, 2007). Furthermore, strained parent-teacher relationships whereby parents place high demands and expectations on teachers can also be a great source of stress for teachers (Brady & Wilson, 2022), which could negatively impact teacher wellbeing. Parent-teacher conflict often occurs when the parent of the child and the teacher have different perceptions of the student achievement or behaviour (Handayani, 2023). Research has shown the relationship that teachers build with parents seems to be particularly important for early career teachers (Hascher & Waber, 2021), therefore, it may be valuable to provide support and strategies for novice teachers in handling the pressures stemming from parent interactions. Finally, the nature of parent-teacher interactions is changing, with one study conducted with Finnish teachers highlighting that parents and teachers communicate through digital platforms most of the time, but that not enough research study how specific role of digital communication in building parent-teacher partnerships (Kuusimäki et al., 2019). This evolving digital dimension could potentially offer new avenues for developing effective parent-teacher relationships.

1.5.2.3.4.4 With Leaders

School principals, headteachers, and leaders play a crucial role in fostering a positive environment for teaching and learning in schools. A meta-analysis conducted by Liebowitz and Porter (2019) revealed that an increase in principal time or skill is directly associated with a positive influence on teacher wellbeing; specifically, a 1 standard deviation difference in principal time or skill is correlated with a 0.34–0.38 standard deviation improvement in teacher wellbeing. Similarly, other studies also found that their relations with teachers seem to be of particular importance in mitigating the impacts of stress on teachers' psychological functioning (Konu et al., 2010; Langford & Crawford, 2022; Sackney et al., 2000). Having a supportive headteacher has also been tied to lower levels of stress, higher rates of productivity, higher job satisfaction, and lower levels of attrition (Corrente et al., 2022; Jackson, 2018). Leaders and senior staff members who show teachers respect, encourage vocalisation of feedback, actively listen to teachers' thoughts and concerns, take decisive action on these thoughts, provide support, and offer advice are associated with enhanced teacher wellbeing as well as secondary, student-related outcomes (Cann et al., 2021; Hall-Kenyon et al., 2014; Hascher & Waber, 2021; Janovská et al., 2017; Naghieh et al., 2015). One study has concluded three leadership actions which need to be made into habits to improve teacher wellbeing: value teacher's voice, work, and effort; provide meaningful professional development opportunities for teachers, and grant

teachers adequate agency in decision-making (Cann et al., 2021). Finally, school leaders have a crucial role in providing assistance, empathy, and advocacy, for teachers during challenging times (Butt & Retallick, 2002). School leaders should reflect on their leadership style within their context, investigating the drivers of wellbeing associated with leadership outlined above, and explore ways of obtaining anonymous feedback from colleagues which can be used to enhance their approach, if needed.

1.5.2.3.5 School Climate

Research by Aelterman et al. (2007) found that school climate and policy explain over a third of the variance in teachers' wellbeing in a Belgian teacher sample. A positive school climate involves a shared, inclusive, supportive community within the school, and a climate which includes all members of the school environment (students, teachers, parents, and the wider community; McCallum & Price, 2010; Ofsted, 2019; Wong & Zhang, 2014). It is thus apparent that social processes play an important role in teacher wellbeing, particularly through providing emotional and work-related support as well as through contributing to a larger sense of school cohesion, collaboration, and sense of belonging (Butt & Retallick, 2002). In relation to teacher wellbeing, Johnson et al. (2007) usefully divides school climate into 5 broad areas: a) participation in school decision making and work autonomy; b) good teacher-student relationships; c) feelings of belonging and affiliation with the school; d) how open the school is to change, development and innovation; and e) having sufficient resources to carry out teaching duties. Each of these aspects interact to support teachers in carrying out their role sufficiently, and in so doing, have been found to lead to enhanced teacher wellbeing (Gray et al., 2017; Thapa et al., 2013).

Research indicates that school stakeholders have the capacity to shape a positive school climate through various strategies. These include the prioritisation of wellbeing policies, the cultivation of positive relationships among both students and staff, the consistent and fair application of discipline, the implementation of safety measures, and active engagement with parents and the broader community (Gray et al., 2017; Hascher & Waber, 2021; McCallum, 2020). The school culture plays a significant role in facilitating emotional management, fostering autonomy, enhancing self-efficacy, and promoting positive working relationships, ultimately creating a supportive environment that prioritizes the wellbeing of every individual (Acton & Glasgow, 2015). Nevertheless, it is also necessary to recognise that these factors may require substantial effort on the part of leadership and school communities in order for them to have a beneficial effect, and add to the already demanding responsibilities of school leadership individuals (Dreer, 2022). School stakeholder should

explore the areas associated with school climate, many of which are listed as individual drivers within this section, and use them to guide their discussion of strengths and challenges within their own settings, emphasising that there is no one-size-fits all approach and, as previously highlighted, each school is a unique ecosystem.

These findings demonstrate that establishing a positive overarching school climate that fosters and encourages professional, mutually-supportive collegial relationships between teachers and administrators is of utmost importance in sustaining teachers and enhancing their wellbeing.

1.5.2.3.6 Class Size

Another important factor to consider in relation to teacher wellbeing is the class size or teacher-to-student ratio. The TALIS (2018) report found that the average class size in OECD countries is 23.8 pupils, but this can vary significantly between countries, with Estonia having an average class size of 17 pupils and Shanghai having an average class size of 34.8 pupils (OECD, 2020). Studies have shown that there is a positive correlation between student-teacher ratio and total work hours and also for workload stress for teachers, while a negative association has been found with teacher wellbeing (Hojo, 2021; Veronese et al., 2018). Specifically, teachers who are responsible for a large number of students often have to spend more time on tasks that are time-consuming, such as grading and providing feedback on student work, as well as communicating with parents or guardians, potentially resulting in increased workload and stress levels, which can have a negative impact on their overall wellbeing (Hojo, 2021; Veronese et al., 2018). This issue is further compounded by the shortage of teachers, which has become an increasingly urgent situation. For example, by comparing the results from TALIS 2013 and 2018, the proportion of lower-secondary/high school headteachers who reported that teacher shortages were hindering them 'a lot' increased from 6% to 22%. It is for this reason it was suggested that most primary/elementary (65%) schools and lower-secondary/high (73%) schools in the UK should prioritise reducing class sizes by recruiting more staff, particularly if extra funding became available (Sims & Jerrim, 2020).

1.5.2.4 Outside-school Factors

In this section, the external influences on teacher wellbeing will be explored which exist largely outside the school environment (but can have an impact on factors within it). These external factors extend beyond the control of schools but have a significant impact on teachers' experiences within educational institutions and their wellbeing. Our examination includes disparities in various contexts, external policies, and social recognition.

1.5.2.4.1 Disparities in Different Areas

Teachers in schools which reside in lower socio-economic areas report higher levels of stress compared than those in other socio-economic groups (Earthman & Lemasters, 2009; Richards, 2012; Sadick & Issa, 2017; Sheuch et al., 2015). Lower socio-economic status of the community which feeds into the school impacts the wellbeing of teachers through factors such as student gang involvement and violence, issues with substance abuse, and family matters which are brought into the teaching environment. More importantly, insufficient resources to support at-risk students and the safety concerns teachers might face have been identified as sources of stress contributing to teacher burnout (Richards, 2012). Additionally, some elements of the school's physical environment, such as noise, hazardous chemicals related to specialised teaching, ergonomic factors such as adequate ventilation, heating, lighting, and the use of technological equipment (which may be as a result of internal decisions or external forces such as school area and funding) have also been linked to teacher wellbeing (Earthman & Lemasters, 2009; Sadick & Issa, 2017; Sheuch et al., 2015).

More specifically, one study conducted in Canada found that those teachers working in rural areas tend to face greater challenges in relation to poorer living conditions, lower salaries, and fewer growth opportunities (such as professional development), leading to lower satisfaction with their work and wellbeing. In addition, travelling long distances to get to the school, as well as a limited availability of teaching resources, are both factors commonly associated with rural and low socio-economic neighbourhoods. Travelling distance and lack of resources can make it difficult for teachers to effectively perform their duties and may result in increased workload and stress levels, which can ultimately impact their wellbeing (Klassen et al., 2009). However, some research suggests that teachers in schools in rural areas have slightly higher wellbeing, owing to factors such as smaller student-teacher ratios and a more positive school climate (Burns & Machin, 2013; Hascher & Waber, 2021). As illustrated above, higher salary levels have been linked to higher teacher wellbeing and job satisfaction, particularly for those residing in rural areas where financial challenges may be more pronounced. Then again, in more urban areas, high levels of financial anxiety in teachers have been found in relation to high cost of living rates, particularly for newly qualified teachers (NQTs) who earn the least (Dizon-Ross et al., 2019). It is clear that no single factor can fully explain teacher wellbeing, as various factors can interact with or override one another depending on the situation and individual perceptions. Therefore, it is essential for schools in different areas to understand the unique stressors and challenges faced by their teachers and

address them accordingly, using tools like teacher voice to illuminate challenges.

Moreover, there is little attention paid to the wellbeing of teachers in crisis and conflict-affected contexts (Falk et al., 2019). In crisis and conflict-affected contexts, teachers face immense challenges in providing quality education due to factors such as: large class sizes, mixed age groups, diverse linguistic and educational backgrounds, and varying psychosocial needs of students with limited materials and professional development (Mendenhall, 2017). These difficulties are particularly prominent in contexts affected by crisis and conflict, where marginalised and vulnerable populations are disproportionately affected, and teachers face additional stress due to living in unstable and insecure environments (Burns & Lawrie, 2015; Kirk & Winthrop, 2013). Therefore, it is crucial for both educational institutions and governments to pay special attention to the wellbeing of teachers in unstable and insecure environments.

1.5.2.4.2 External Policy

Whilst teaching can often be highly rewarding, teachers also express how the impediments placed on them by curriculum and policy changes can be a major source of stress, particularly when such policies stand in contrast to their pedagogical experience and values (Moriarty et al., 2001). Education transformation policies such as the No Child Left Behind (2002) policy implemented in the United States have brought changes to the teaching curricula as well as the addition of high-stakes standardised testing to assess teaching quality and student achievement, placing considerable pressure and stress on teachers (Gonzalez et al., 2017; Schaubman et al., 2011).

Standardisation practises and accountability measures to assess teacher and pupil performance can also act to diminish the pedagogical aspect of teaching in addition to lessening teachers' creativity and autonomy, making lessons more about receiving the training necessary to get the correct answer than about receiving an education, which can be deeply frustrating and stressful for teachers (Ball, 2003; Gloria et al., 2013; Hobson & Maxwell, 2017; Koretz, 2009). Moreover, it also increases pressure and workload for teachers, detracting from the actual teaching and learning process (Micklewright et al., 2014).

Another policy reform measure often encountered in the educational sector concerns educational innovation practices involving changes to curriculum and pedagogical approaches (Ellis, 2013). Whilst the intentions behind these practices may be positive in trying to increase school effectiveness, often these can adversely affect teachers work satisfaction and wellbeing if they occur too frequently, are not valued,

or not seen as worthwhile by teachers, especially if teachers feel a loss of autonomy in their work, as well as a lack of support in implementing the necessary changes (Collie et al., 2017). Thus, policies aimed at lessening such authoritative leadership and instead encouraging collaborative work and promoting healthy workplaces have been found to positively influence both teacher and student wellbeing and achievement (Burns & Machin, 2013). Changes to educational policy can act to enhance the wellbeing of teachers but any changes should be considered by the school through the lens of teacher wellbeing: what would the strengths and challenges of the (often mandatory) implementation be and what can school stakeholders do to mitigate any potential negative outcomes.

1.5.2.4.3 Social Recognition

Concerningly, only 26% of teachers in TALIS-participating OECD countries and economies believe their work is valued by society (2018). Older teachers are more likely than younger colleagues to believe that the teaching profession is devalued, implying professional dissatisfaction as teachers advance in their careers (OECD, 2019). Some teachers may even leave their job prematurely due to a lack of recognition (OECD, 2019). Teacher social recognition, which involves recognising and rewarding teachers for their achievements, is a strong motivator for teachers in maintaining and enhancing their high-level instruction (Andrews, 2011). Importantly, a performance-oriented understanding of recognition can be harmful to teachers and harm teacher community and collaboration (Gardner, 2012; Movsessian, 2018). Researchers suggest that recognition should be viewed as part of personal identity development and emotional wellbeing rather than just forming part of an organisational performance agenda (Thrana & Fauske, 2014; Zurn, 2000). Currently, no direct relationship has linked societal recognition of teaching professionals to teachers wellbeing, but a study has found that perceived societal appreciation tap into feeling of collective social self-esteem among teachers (Spruyt et al., 2021).

1.5.3 Summary

There is a wealth of literature which has been dedicated to exploring the drivers of teacher wellbeing. These drivers have been categorised into four types of wellbeing drivers: a) *Individual-level*, b) *Role-level*, c) *School-level* and d) *External factors*. These four categories provide different perspectives through which school stakeholders can explore ways to improve wellbeing. It is important to emphasise that there is no universal, one-size-fits-all approach to categorizing these influencing factors and many of these factors interact or fit across multiple-categories. The subsequent exploration of teacher wellbeing interventions (see Section 1.6 below) will be directly informed by the findings presented within the above teacher wellbeing driver literature.

1.5.4 Findings and Recommendations

KF15: By considering both general wellbeing frameworks and teacher wellbeing frameworks, a more comprehensive and nuanced understanding of wellbeing in educational contexts can be achieved, acknowledging the diverse factors that influence the wellbeing of both individuals and teachers within their professional settings.

KF16: General adult wellbeing frameworks can include objective and subjective measures of wellbeing. Subjective wellbeing is the ultimate way of assessing an individual's wellbeing as to assess it, researchers ask them directly about their experiences and perceptions.

KF17: Employee wellbeing models often include these factors: job demands, control, and support; effort and reward imbalance; organizational justice; nonstandard work schedules including shift and precarious work; work and family conflict and associated supervisor and workplace support; and schedule control and flexible work arrangements.

KF18: Many teacher wellbeing models are based on the Ecological Systems Model and include influences across individual, school, and outside-school levels.

KF19: The prosocial classroom model, the Anna Freud Centre's Framework, and the OECD's Teacher Wellbeing Framework target different aspects surrounding teacher wellbeing. They collectively offer valuable insights into the nature of teacher wellbeing and its relationship with surrounding influences and factors, thereby facilitating potential enhancements in learning and school policies.

KF20: Findings on gender as a driver of teacher wellbeing are inconclusive and further research is needed. Schools shouldn't consider gender as a key driver of wellbeing for teachers within schools.

KF21: Teacher age in general should not be considered as a factor when designing wellbeing strategies and policies for schools. Those who are younger are often new to the profession and therefore have less teaching experience and may need more support, and those in middle-age generally experience a dip in their overall wellbeing. Support should focus on individual circumstances rather than age alone (although these circumstances, in some cases, may be age-related, e.g., menopause for women).

KF22: The findings on teaching experience are also varied. While there is no one group who seems to

be suffering from wellbeing it seems that those who are new to the profession and those who have been teaching for extended periods can suffer from lower wellbeing, exhaustion, and burnout. The varied nature of the findings is partially due to the samples employed in the research and it will be important for schools to take an assessment of teacher wellbeing, coupled with other factors such as burnout, to explore if there are any trends within their own population. Teaching experience alone cannot be used to determine which populations should receive support and interventions for improving wellbeing.

KF23: While level of education does not seem to significantly impact teacher wellbeing, it does influence other factors which are important for wellbeing. The quality of the initial training teachers received as well as their continuous learning, gaining new skills, and professional development are important in equipping teachers with the ability to cope with the demands of their role and maintain their motivation for their work.

KF24: On the whole, the literature on various socio-demographic factors, such as age, gender, teaching experience, and education level, reports heterogeneous results, highlighting the need for further studies to further understand and unpack these inconsistent findings. School stakeholders should not focus on these factors as significant drivers of wellbeing unless they are identified by the school community as key areas for impact.

KF25: Findings regarding the relationship between a teacher's grade level of teaching and their wellbeing are inconsistent. Most of the research conducted compares primary (elementary) and secondary (high) schoolteachers, which has no real implication for school policy as schools generally only work with one population exclusively (primary or secondary). Therefore, schools should focus on the goodness-of-fit for the individual teacher to the age groups they are teaching. Factors such as teacher self-efficacy and their perception of their ability to manage pupils of that age should be considered.

KF26: When looking at state versus private, the status of the school does not have a large impact on the wellbeing of teachers. Private schools should consider the burden of parental expectation due to fee paying, and the impact this may have on teachers. Strategies to buffer the impact of parental expectation on teachers should be considered.

KF27: Physical health is an area that seems to have benefits for teachers. Particularly physical activity is related to higher wellbeing. Schools may want to

consider ways they can support their staff's physical health and opportunities they can provide to improve health outcomes where driven and desired by their employees.

KF28: Salary satisfaction and job security should be considered as part of teacher wellbeing evaluations in schools, although the findings state that salary alone is not a big driver, it could be for individuals within a particular school context and should be explored.

KF29: Personality should not be used as part of wellbeing evaluations. There are too many questions which surround conceptualising personality and wellbeing for it to be a useful area to explore for school stakeholders.

KF30: Emotional intelligence, emotional regulation, self-efficacy, and resilience, have all been associated with higher teacher wellbeing. School stakeholders should consider exploring these drivers with their school staff as they could be effective pathways to impact for improving teacher wellbeing.

KF31: Workload is a crucial element of teacher wellbeing and should be explored as a factor for improvement. When teachers do not have sufficient resources to meet the demands of the job, exhaustion and high levels of stress result, potentially leading to negative emotions and ill-health. These resources include 'personal' ones relating to motivation and self-efficacy, 'contextual' ones relating to supportive relationships between colleagues, students, and leadership, and 'strategies' relating to problem-solving abilities, continuous learning and development opportunities, and work-life balance.

KF32: Workplace recognition and continuing professional development are positively associated with wellbeing for teachers. However, school stakeholders must ensure that any measures put in place do not create increased burden on staff as this can lead negative outcomes.

KF33: Relationships are very important for occupational wellbeing. For teachers, the relationships with colleagues, pupils, parents, and leaders, are all important. When teachers are part of collaborative and cooperative teams, positive working environments result, leading to higher rates of their wellbeing and efficacy. Strong relationships between teachers and their students increase teachers' confidence in their role and increase student engagement with the learning content, increasing work satisfaction and teacher's wellbeing

at work. Negative parent-teacher relationships can act to further the stresses placed on teachers, lessen their feelings of teaching efficacy, and worsen relationships between teachers and their pupils, all of which act to adversely affect wellbeing. School leaders and senior staff members who show teachers respect, encourage vocalisation of feedback, actively listen to teachers' thoughts and concerns, take decisive action on these thoughts, provide support, and offer advice are associated with enhanced teacher wellbeing as well as secondary, student-related, outcomes.

KF34: School climate is important for teacher wellbeing. In some research focusing on teacher wellbeing, it has been divided into the following areas: a) participation in school decision making and work autonomy; b) good teacher-student relationships; c) feelings of belonging and affiliation with the school; d) how open the school is to change, development and innovation; and e) having sufficient resources to carry out teaching duties. All of these aspects interact to support teachers in carrying out their role sufficiently, and in so doing, have been found to lead to enhanced teacher wellbeing.

KF35: Research has found that leaders create a positive environment through aspects such as prioritising wellbeing policies, encouraging positive relationships amongst pupils and staff, applying discipline fairly and consistently, implementing school safety measures, and taking active steps to involve parents and the larger community, and that these have pronounced effects on students' and teachers' wellbeing, work achievements, and behaviour.

KF36: Class size and the workload associated with it is an important factor in teacher wellbeing. Lower class size, and the reduced amount administrative work surrounding it, is preferential for teacher wellbeing.

KF37: Teachers working in schools in low socio-economic areas can experience lower wellbeing due to a myriad of reasons including factors such as student gang involvement and violence, issues with substance abuse, and family issues which are brought into the teaching environment. In addition to challenges with access to resources and more stressful physical environments. However, schools have very little influence over their location and funding.

KF38: Changes to education policy can both hinder and enhance teacher wellbeing depending on the context and approach. Schools should aim to discuss

potential pitfalls of government policies with staff and attempt to mitigate any negative outcomes where they have autonomy to do so.

KF39: Social recognition is important for teachers' wellbeing. Teachers who receive praise are more inclined to adapt their teaching methods for the better, which boosts student test results and improves classroom involvement. However, a performance-oriented understanding of recognition can be harmful to teachers. Researchers suggest that recognition should be viewed as part of personal identity development and emotional wellbeing rather than just forming part of an organisational performance agenda.

R8: Individual-level factors, such as gender and age, should not be considered as sole determinants of teacher wellbeing, and tailored support can benefit teachers at various career stages with different levels of experience. School stakeholders should look beyond these individual factors and use staff voice to identify areas that could be considered for impact, for example an individual-level factor may be relevant in a particular setting where a school ethos or policy makes it a relevant wellbeing indicator.

R9: Recognising the importance of salary satisfaction, job security, and workload management is crucial for enhancing teacher wellbeing. These work-related variables are important for school stakeholders to consider and staff voice should be considered to determine how important each of these are in each school context.

R10: Fostering positive relationships among colleagues, students, parents, and leadership, cultivating a positive school climate, and providing effective leadership support are key factors that contribute to teacher wellbeing. Prioritising continuous professional development, social recognition, promoting physical activity, and nurturing emotional intelligence and resilience are also essential. As each school is a unique ecosystem, some of these variables may have more impact than others and school stakeholders should hold discussions with relevant stakeholders to determine which are most important and also decide where easy and impactful interventions can be made (see below for more details on interventions and implementation).

Teacher Wellbeing Interventions

1.6

1.6 Teacher Wellbeing Interventions

As teachers often play a pivotal role in facilitating change within schools, knowledge about teacher wellbeing can aid in the effective implementation of wellbeing intervention programs within schools (Lochman, 2003). The literature on the topic of wellbeing interventions for teachers is currently in its infancy, and is a growing field of research (Hascher & Waber, 2021). Due to the limited literature available, this chapter is divided into two sections: the first investigates the existing general wellbeing interventions in the workplace, while the second examines the effectiveness of interventions intended to increase teacher wellbeing. The workplace is a fertile environment for intervention; enhanced employee wellbeing can bring about various benefits, such as improved overall health, increased work motivation, better interpersonal relationships, reduced absenteeism, and lower employee turnover (Tenney et al., 2016). Despite the distinct nature of the teaching profession, it is worth emphasising that many strategies and interventions that have been developed in the workplace in general could be adapted for teachers with careful consideration to ensure the relevance and effectiveness of these interventions in addressing the specific needs of teachers. Therefore, both wellbeing interventions more broadly for general employees and those more specifically designed for the teaching population are discussed.

Wellbeing Interventions for Employees:

1. Individual-level: Mindfulness interventions; Cognitive Behavioural Therapy (CBT); Resilience training; Physical activity interventions; Performance-based interventions; Women-centred interventions.
2. Structural level: Job-related interventions; Relationship-targeted interventions.

Wellbeing Interventions for Teachers: 1. Mindfulness and Positive Psychology; 2. Physical Exercise; 3. Professional Development for Teachers; 4. Multimodal Interventions.

Holistic intervention: 1. Organizational approach; 2. Whole-school approach (WSA).

1.6.1 Wellbeing Interventions for Employees

Different wellbeing interventions take different paths to improve wellbeing, each addressing different parts of the lived experience of an individual. Workplace interventions are defined as “planned, behavioural, theory-based actions that aim to improve employee health and wellbeing through changing the way work is designed, organised, and managed” (Nielsen & Abildgaard, 2013, p. 278). As the research on workplace wellbeing interventions is extensive, this report largely focuses on the highest-quality recent reviews and meta-analyses of the literature to provide an overall summary

account of workplace interventions used across varying professional sectors. The majority of reviews and meta-analyses included randomised control trials (RCTs) within their literature searches, in addition to observational data, quasi-experimental studies, field experiments, pre- and post-test studies, and panel data. In this section, firstly a discussion of the universal and targeted approaches to workplace intervention implementation is presented, followed by the digital intervention approach, as this is an emerging field of study within workplace wellbeing research, and then the various workplace interventions that have been studied.

1.6.1.1 Universal Approach and Targeted Approach

Before exploring specific interventions to improve wellbeing in the workplace, it is important to understand that interventions can be divided into two broad categories: universal and targeted (Wan Mod Yunus et al., 2018). The first is a *universal approach* that targets all employees in an organisation, regardless of their current state of wellbeing or mental health. As illustrated in the previous section, the concepts of wellbeing and mental health are often used interchangeably in the workplace. This strategy seeks to improve the overall wellbeing of all individuals within the company by offering them the tools and resources needed to maintain good wellbeing. The second strategy is the *targeted approach*, which is aimed primarily at those at risk of lower levels of wellbeing. This strategy focuses on delivering personalised interventions to those who need extra help managing their psychological wellbeing (Sanders & Morawska, 2010). Universal approaches provide the most value in enabling preventative measures to support wellbeing, and by allowing for the inclusion of a larger sample population (Tan et al., 2014). However, in trying to make the intervention useful to as many people as possible, such interventions often require larger financial and administrative investments overall compared with a targeted approach, and the intervention programmes might not provide as much personalised targeted support and potency (Dodge, 2020). The targeted approach might prove more useful in that it provides a more intense and focused wellbeing approach, though a drawback might be that it places a larger administrative and resource intensive burden per employee, and that fewer people are able to benefit directly from the intervention (Dodge, 2020; McLaughlin, 2011). Both universal and targeted approaches to promoting employee wellbeing can be considered by schools, albeit the specific strategies and techniques utilised may differ depending on the intervention (see below for individual interventions).

1.6.1.2 Digital Approach

Whilst some research indicated that digital interventions are less effective compared to face-to-face programs (Vanhove et al., 2016; Watson et al., 2018), most research suggests favourable outcomes regarding digital modes

of intervention delivery (Carolan et al., 2017). Digital interventions are of particular importance in society today, as there is an increasing number of workplace interventions which are being designed in web-based or app-based formats. In a recent review of 21 RCT studies, Carolan et al. (2017) found that digital interventions had a small, positive effect on outcomes related to work effectiveness and wellbeing. This is consistent with other reviews and meta-analyses, which found small positive effects of digital-based interventions on improving mental health outcomes and stress management (Heber et al., 2017; Stratton et al., 2017). The content in these digital wellbeing approaches largely made use of Cognitive Behavioural Therapy (CBT) approaches, though these were not more effective than other psychological approaches, such as those focused on stress and coping, mindfulness, and problem-solving training (Carolan et al., 2017). The review also found that there was no statistical difference between self-guided digital approaches and guided digital approaches in psychological wellbeing outcomes, but that guided interventions had greater intervention engagement levels, which is favourable in terms of intervention effectiveness. Additional research has also found heightened engagement as well as greater levels of efficacy for guided interventions compared to self-guided (Baumeister et al., 2014; Heber et al., 2017; Zarski et al., 2016). Carolan et al. (2017) also suggested that no significant differences were found for targeted vs. universal approaches, although there was a trend toward there being more favourable outcomes for targeted approaches, which the authors suggest may be as a consequence of heightened sensitivity of measures for the target group.

The main benefits of digital-based interventions are that they improve barriers to accessibility by allowing individuals to access the intervention at any place and at any time, creating the space for an anonymous interface, and being scalable and thus more cost-effective (Junge et al., 2015). However, because of this increased flexibility and informality, and the lack of structured time and place required for these intervention types, adherence levels may be adversely affected (Carolan et al., 2017). It is thus important to emphasise that if digital interventions are used, consideration be given to the best ways to improve participant adherence and engagement levels. In this regard, research points to the most favourable outcomes regarding digital interventions when they are: a) guided; b) short in duration (6-7 weeks); c) use multi-modal deliverance systems (such as email or text messaging in addition to web-based platforms); d) made to be more tailored to the individual and their needs; and e) incorporate measurement techniques so that participants can monitor their progress (Carolan et al., 2017; Kelders et al., 2012).

1.6.1.3 Most Studied Workplace Interventions

In the following section, those workplace interventions which have been most reviewed in the literature and with the highest quality evidence (such as RCTs) are listed. It is important to note that the majority of interventions can be delivered using a digital approach, a targeted approach, or a universal approach. To help readers better understand these interventions, we divide them into two broad categories: a) individual-level (affecting the worker as an individual); and b) structural-level (systemic changes to how organisations are run and how work is performed).

1.6.1.3.1 Individual-level

Individual-level interventions are interventions which focus on the employees directly as individuals, and aim to affect their perceptions, actions, or behaviours. Here, a variety of empirically studied individual-level interventions, ranging from mindfulness to performance-based interventions, are outlined.

Mindfulness Interventions

Much of the research focusing on individual-level workplace interventions considers interventions aimed at improving the emotional capabilities of employees (Pieper et al., 2019). Within this area, evidence points to yoga and mindfulness interventions as those providing the most favourable outcomes regarding work-related stress and wellbeing (NICE, 2022). Mindfulness interventions are oriented around bringing one's attentional awareness to the present moment in a non-judgmental and curious manner (Bartlett et al., 2019). They have shown improvements in many areas relating to wellbeing, such as increasing employees' ability to handle adverse events by being less affected by intense emotional states and being able to view situations more flexibly, allowing for more resilient views of challenging situations (Good et al., 2016). Moreover, the positive outcomes following mindfulness interventions were also found in health outcomes, job stresses, relationships, and absenteeism (Bartlett et al., 2019; NICE, 2022; Pieper et al., 2019). Based on relatively strong evidence from systematic reviews, NICE (2022) recommended mindfulness to all British workers.

Nevertheless, within the literature focusing on mindfulness interventions in the workplace, there exists great heterogeneity in outcomes, owing to the great variance in organisation type, sample characteristics and size, as well as intervention design and content, with some research even demonstrating detrimental effects on wellbeing and exhaustion levels when participants are required to commit extra time on top of working hours (Bartlett et al., 2019). Thus, when using mindfulness-based interventions, consideration should be given to additional time commitments and employee burden (Shapiro et al., 2005). Moreover, it should also be kept in mind that mindfulness may not

be suitable for everyone. First, caution should be paid regarding the effects of mindfulness for some sub-populations, such as those suffering from PTSD, where mindfulness may worsen mental health issues (NICE, 2022). Second, a study also found that effect sizes of mindfulness-based interventions tended to be lower in a sample identified as physically ill in comparison to the general population, and a population with poor mental health (van Agteren et al., 2021). Third, the level of motivation or readiness has been found to strongly influence the outcomes of mindfulness interventions (Donald et al., 2020). Thus, it should also be considered that despite the abundance of favourable evidence for mindfulness-based interventions, this intervention may not be suitable for everyone. Mindfulness interventions have gained popularity in the workplace due to their ease of implementation and integration, however, the aforementioned elements indicate that caution is needed in their implementation to ensure optimal outcomes for the entire workforce.

Cognitive Behavioural Therapy (CBT)

With regard to emotion regulation and stress regulation interventions such as CBT, emotional skills training, and positive psychology interventions, the evidence once again points to mixed results, demonstrating both improvements in wellbeing and stress as well as null effects (NICE, 2022; Richardson & Rothstein, 2008). One possible explanation for these mixed findings might have to do with the suitability of these intervention types for workplace settings. For instance, Carolan et al. (2017) suggest that CBT approaches as they now appear are not wholly appropriate for the workplace as they are not theoretically driven by problems typically experienced at work (such as occupational stress). Furthermore, emotional regulation interventions might be noticeably useful only for those struggling with more acute emotional concerns. In this regard, rehabilitation, or counselling therapies such as CBT, have proven especially effective for those struggling with mental health issues, as long as a professional individual with the correct qualifications delivers the intervention (NICE, 2022; Pieper et al., 2019). Stigma around mental health issues is an important aspect of improving wellbeing at work, which is another area where rehabilitation or counselling therapies may also prove useful (Daniels et al., 2021; NICE, 2022).

Resilience Training

Other stress management interventions are used in the workplace, such as resilience training, which has become particularly popular in recent years, with mixed evidence in support. The evidence has found that some studies indicate positive effects on job related stress and wellbeing (Robertson et al., 2015), whilst other research has shown limited impact on mental wellbeing (Abbott et al., 2009; Taylor, 2019) and other job-related indicators such as job satisfaction

(NICE, 2022; Pieper et al., 2019; Tetrack & Winslow, 2015). Once again, though there are mixed results regarding the effectiveness of these interventions for all employees, though the evidence does point to them being particularly valuable for those struggling with mental health in improving their mental health, wellbeing, job satisfaction, and quality of life (NICE, 2022; Stratton et al., 2017). Further, the effects of resilience training seem to have favourable effects on certain populations over time. For instance, Vanhove et al. (2016) found that in resilience programs, outcomes such as stress and absenteeism reduced over time with universal interventions, but increased over time for targeted populations as these individuals might experience more stress and have fewer coping or protective factors compared to the general population.

Physical Activity Interventions

Physical activity, movement, and nutrition are well established for their importance in health and wellbeing (Chan et al., 2019; Owen & Corfe, 2017; Ozemek et al., 2019; Warburton & Bredin, 2017). Physical exercise programmes have been widely found to have a beneficial influence on adult wellbeing (Klaperski et al., 2019; Rogerson et al., 2020). While research has found positive findings regarding increased nutrition and physical activity interventions in the workplace in terms of work performance, health, and absenteeism (Commissaris et al., 2016; Grimani et al., 2019), research focusing on wellbeing outcomes has found mixed results. Some evidence reviews have found limited to no evidence for the effectiveness of physical activity interventions such as physical exercise, walking in the park, or massage therapy on wellbeing outcomes (NICE, 2022; Pieper et al., 2019). However, this may be due to methodological limitations, such as a lack of comparison control groups, inconsistent use of measurements, and small sample sizes, as argued by Abidin et al. (2018), whose review found promising findings for physical activity interventions such as yoga, exercise, and walking. Evidence indicates improved worker wellbeing following yoga programme interventions (Hartfiel et al., 2011; Trent et al., 2019). Yoga interventions were found to have particularly beneficial outcomes when used in conjunction with mindfulness or meditation (NICE, 2022; Pieper et al., 2019). An earlier review on workplace interventions found positive findings for wellbeing regarding aerobic exercise and weight training interventions occurring over a period of 8–24 weeks (Graveling et al., 2008). Other alternative physical activity intervention types, such as microbreaks (taking a break from your desk after a defined period, such as one hour), find positive effects on wellbeing, particularly in relation to desk-heavy jobs (Mainsbridge et al., 2020). Interventions incorporating sit-to-stand desks have shown mixed results for pain-related outcomes, while workplace strength training has demonstrated beneficial effects

on pain and the prevention of upper back and shoulder problems, affecting quality of life (Pieper et al., 2019). Last, it is important to note that sleep therapy, which is aimed at improving employees' sleep quality, has shown some positive benefits regarding wellbeing, though further empirical study needs to be conducted to strengthen the evidence base (NICE, 2022).

Performance-based Interventions

An important aspect of workplace wellbeing is the feeling employees have that they can perform their work at the level expected of them (Singh et al., 2019). Interventions in this area focus on improving worker efficacy through equipping workers with greater skills and knowledge through training such as continuous professional development (CPD) or selection, optimisation, and compensation (SOC; NICE, 2022). While few reviews and meta-analyses exist in this area focused on wellbeing outcomes, those that have been conducted find mixed results, with some findings indicating positive effects and others indicating null effects (NICE, 2022; Watson et al., 2018). When performance-based interventions are solely focused on employee performance, with little regard made to employee wellbeing, such interventions can cause more harm than good (Guest, 2017; Oprea et al., 2019). However, when these interventions are oriented around employee wellbeing, they work by increasing the self-efficacy and self-empowerment of employees in terms of their work tasks and work relationships and providing them with more personal resources to draw on to cope with challenging work situations (Aguinis & Kraiger, 2009; Noe et al., 2014; Rego, 2009). Increased training in the workplace has also been tied to increased job satisfaction and heightened engagement with work, both of which impact one's wellbeing (Schmidt, 2010). Thus, performance-based interventions can be beneficial for employee wellbeing so long as they are not solely directed at performance, and that they also improve employee feelings of efficacy and engagement with their work.

Women-centred Interventions

Jiménez-Mérida et al.'s (2021) review considers health and wellbeing interventions focused exclusively with women employees. This is important as people with different genders might have different social, biological, psychological needs, different types of work they need to carry out and different work-life balance demands (Crawford et al., 2016). Some of the main women-centred interventions included in Jiménez-Mérida et al.'s (2021) review include: a) creating designated areas for breast-feeding; b) promoting a healthy lifestyle (i.e., exercise, taking short breaks throughout the day, healthy nutritional habits); and c) relieving premenstrual symptoms through yoga exercises. However, owing to the paucity of quality research in the area, the authors are unable to make firm conclusions

regarding which interventions may be most useful for women employees. Furthermore, a common theme expressed in this area of research is the need for these types of interventions to occur within the working day if they are to be taken up by female employees (Mailey et al., 2017). This is due to the general, societal pressures on working women, who might have to balance personal demands and responsibilities outside of work, which might make the addition of a wellbeing intervention into their already busy schedules less viable (Mailey et al., 2017).

1.6.1.3.2 Structural Level

Structural-level interventions influence how work is performed by employees by considering the way in which organisations are run and have been associated with improved worker wellbeing, particularly when these interventions allow for more worker autonomy and participation in working conditions (Fox et al., 2020). The importance of structural-level approaches lies not only in their ability to promote wellbeing but also in their ability to mitigate against mental health issues (NICE, 2022). There are numerous organisational-level intervention types, but for simplicity, this report divides these into two general areas: job-related interventions and relationship-targeted interventions.

Job-related interventions

The way that work is performed by employees and how they are expected to work can have a significant impact on their job satisfaction, workplace wellbeing, and overall wellbeing. One of the most significant ways that work expectations can be impacted is through interventions that alter the flexibility of how and when work is performed (Joyce et al., 2010). Interventions pertaining to flexiwork, participatory-level interventions, and lean management are explored below.

Flexiwork, also known as self-scheduling, enables workers to have greater autonomy and control over their work and working conditions, which has been demonstrated to improve wellbeing, particularly in terms of work-life balance, workplace stress, and personal relationships, especially for women employees (Fox et al., 2020; Pieper et al., 2019). *Job redesign interventions* aim to identify and address problems related to work, such as workload or work hours, to provide employees with more autonomy in decision-making (Tims & Bakker, 2010). However, the success of work redesign interventions in improving employee wellbeing varies based on the intervention's context and type (Daniels et al., 2017; Fox et al., 2020). According to research, lowering workload and demands and making resources more readily available to employees are highly effective ways to boost employee wellbeing (Bakker & Demerouti, 2007; Fox et al., 2020; NICE, 2022; Nielsen & Christensen, 2021).

Participatory-level interventions, in which employees collaborate to identify and solve workplace problems, have gained popularity in recent years (Strickland et al., 2019). These interventions can provide employees with the opportunity to exert their influence and voices in decision-making, thereby enhancing team dynamics and workplace culture (Fox et al., 2020). *Job crafting*, a type of participatory intervention involving changes to job roles, relationships, and work type (Wrzesniewski & Dutton, 2001), has had mixed results. Some job crafting studies demonstrate mixed or no direct effects on wellbeing related outcomes (Crawford et al., 2010; Oldham & Hackman, 2010), whilst others demonstrate positive effects on engagement and job satisfaction (Layard & De Neve, 2023; NICE, 2022; Oprea et al., 2019). Job crafting can increase person-job fit by cultivating greater resources for individuals to mitigate against work demands, increasing their motivation and engagement in their work, and consequent wellbeing (Rudolph et al., 2017; Tims et al., 2022).

Lean management, another participatory-orientation intervention type, has also demonstrated improvements to employee wellbeing, especially in jobs requiring a shared purpose, such as social and public roles, by involving employees in decision-making through collaborative meetings that emphasise the collaborative process (Fox et al., 2020). Whilst Fox et al. (2020) highlighted mixed findings for the outcomes of participatory interventions on wellbeing, they deemed the approach to be promising and suggested the mixed findings were due to the variation of participatory intervention types used by different workplaces. In addition, as Nielsen and Christensen (2021) suggest, the way in which these interventions are properly implemented and adhered to is a crucial aspect of their success and effectiveness. Adhering to intervention guidelines and utilising methods such as surveys and questionnaires that allow organisations to tailor interventions to the particulars of their business are some of the best ways to ensure this (NICE, 2022).

Overall, though the existing evidence is promising, it is insufficient to draw decisive conclusions about the effectiveness of participatory-level and job redesign intervention types (Fox et al., 2020). Nevertheless, a continuous theme emphasised in this area of research is the importance of involving employees in the decision-making process regarding their work environment and how their work is performed in terms of their wellbeing, job satisfaction, and work performance. Research has found that these types of interventions can be counterproductive when governed solely by top-down leadership, eliminating employee voice and control in their jobs (Oprea et al., 2019).

Relationship-Targeted interventions

Interventions targeting the improvement of

relationships amongst employees, team dynamics, instilling an organisational culture of trust, support, open communication, and are aimed at the group-level have been found to be important for wellbeing (Daniels et al., 2017; Fox et al., 2020). Social relationships are an important driver of employee health, wellbeing, and performance (Nielsen et al., 2017). In fact, research shows that relationships and feeling socially supported are two the most important drivers of workplace wellbeing and job satisfaction (De Neve et al., 2018). Workplaces that instil health behaviour norms and a positive workplace culture that has a sense of support, common purpose, and trust have been found to be especially important for mental wellbeing at work through influencing employees' feelings of belonging and meaning (Daniels et al., 2021; Knight et al., 2017; NICE, 2022). Training that focuses on improving managerial and leadership skills as well as the relationships between leaders and employees has also found favourable results regarding employee stress levels and affective wellbeing (Graveling et al., 2008; Skakon et al., 2010).

The social and group elements of wellbeing interventions are also important aspects for intervention effectiveness (Daniels et al., 2021), particularly regarding manager-employee relations and peer-to-peer support (NICE, 2022). In fact, it is argued that the main way in which workplace interventions might be most effective is through the enhanced relational effects brought on by the intervention in getting employees to communicate and work together or in creating interactive group-based environments (NICE, 2022; Watson et al., 2018). However, whilst the relational component of work appears to be important for favourable wellbeing outcomes, as Fox et al. (2020) indicate, the current literature contains insufficient high-quality empirical evidence to allow for the drawing of conclusions regarding relational interventions in the workplace setting.

1.6.1.3 Implementation

An important aspect to emphasise in the study of workplace intervention effectiveness is the importance of understanding why and how interventions might work in some instances and not in others, i.e., the mechanisms of intervention effectiveness. Research has found that the following strategies can enhance intervention efficacy: ensuring clear understanding of and adherence to intervention guidelines; ensuring adequate funds and resources before commencing the intervention; making enough room for the intervention so that it does not compete with employees' work priorities (such as time pressures and workload); garnering employee participation and support; and providing leaders with support in implementing the intervention (Daniels et al., 2017; 2021; NICE, 2022; Roodbari et al., 2022).

Another important aspect of the implementation process is how interventions are adapted to best fit a specific organisational context whilst still adhering to the core principles and design of the intervention (Herrera-Sánchez et al., 2017). Here, as emphasised by Pieper et al. (2019), it is suggested that engaging employees in the intervention process, garnering their feedback, and being open to necessary changes based on feedback, are crucial elements required for intervention success. Pieper et al. (2019) also emphasise the importance of continuous evaluation of the intervention and monitoring of its adherence and outcomes in terms of making sure the core tenants of the interventions are being consistently recognised. It is also important to note the intentions behind intervention implementation, as when they are aimed at increasing standards of work or productivity, rather than focused on improving employee wellbeing, employee wellbeing can remain unaffected and, in some instances, can even be harmed (Fox et al., 2020; Oprea et al., 2019).

1.6.1.4 Critique and Conclusions

Overall, whilst promising findings have been found for workplace wellbeing interventions, more research is needed in this area owing to the large variation in workplace wellbeing interventions offered, as well as the heterogeneity in outcomes observed (Abraham, 2019; NICE, 2022). Individual-led interventions rely on a restricted view of health and wellbeing, often targeting certain aspects, such as reducing stress or increasing physical activity, and produce only small effects in terms of wellbeing and health (Fox et al., 2020). Specific individual-level intervention study findings, such as those for mindfulness interventions, might not be generalisable to all, as oftentimes selection bias in participation might come into play (Fleming, 2023). Selection bias within workplace individual-led wellbeing interventions might be a consequence of individuals within a workplace who might have an interest in wellbeing already, or be ready to make a change, thus might be keener to be involved in a wellbeing intervention. Groups of individuals who are more motivated to engage with an intervention might thus show enhanced intervention effects (Donald et al., 2020). This could potentially lead to the recording of a stronger effect of the intervention than would have occurred within a randomly selected group, and such strong findings might not be reported with a recognition of the potential effect that selection bias might have had on the findings. Again, it is important to emphasise that certain wellbeing interventions might have differential effects on a population, depending on the characteristics and context of that population (van Agteren et al., 2016; Weiss et al., 2016).

In addition, these individual-level interventions can often add to the time pressures already placed on employees, creating adverse rather than positive outcomes (Shapiro et al., 2005). It is for this reason that individual-

level interventions should not be used to replace more structural-level or organisational-level interventions aimed at reducing stressors and improving wellbeing at work (NICE, 2022). This speaks to the value of taking a more holistic approach to wellbeing, which considers not just aspects of the worker as an individual but also aspects of the larger environment and context in which employees work (McKenzie et al., 2019). What ultimately may be of most value is that organisations incorporate interventions and changes at both the individual- and structural-level, aimed at building the resources available to employees and, by so doing, lessening the adverse effects that work might have on their wellbeing and health (Nielsen et al., 2017).

1.6.2 Wellbeing Interventions for Teachers

In order to explore the literature of wellbeing interventions for teachers, it is essential to refer back to the theoretical basis of teacher wellbeing to understand what drives teacher wellbeing, and what can be done to improve wellbeing and mitigate adverse experiences. The theoretical frameworks of teacher wellbeing presented above (see 1.5.1.3 Models of Teacher Wellbeing) highlight the contextual and complex nature of teacher wellbeing, often highlighting various ecological factors within a school; how the physical, social, and structural, environment can impact teachers' wellbeing. Teacher wellbeing is often conceptualized as a multifaceted phenomenon, including but not limited to components of social wellbeing, cognitive wellbeing, and professional wellbeing (Collie et al., 2015; Renshaw et al., 2015; Sadick & Issa, 2017; Van Horn et al., 2004; Viac & Fraser, 2020). Furthermore, employee wellbeing models more generally, such as the Job Demands-Resources model, can be applied within a teacher-specific context, and be used to understand how expectations within the teaching role and resources at a school level can influence teacher wellbeing (Betoret, 2009; Granziera et al., 2020; Klassen et al., 2013; Skaalvik & Skaalvik, 2018). It is through understanding the relationship between these different influences on teacher wellbeing which allows for the development of interventions to successfully improve teacher wellbeing. These models offer valuable insights into the nature of teacher wellbeing and its relationship with surrounding influences and factors, thereby facilitating potential enhancements in learning and school policies.

This section of the report focuses on interventions aimed at improving teacher wellbeing. Specifically, the focus has largely been on interventions that used gold-standard designs to measure their effectiveness. It's important to note, however, that even the effects found from RCTs may not necessarily generalize to different school settings or cultural contexts. Moreover, this section also includes some interventions that have been studied but have yet to reach a consensus on their effectiveness in order to give a broader overview. As wellbeing-specific studies are limited, reference has also been made in this report to

interventions which explore other positive outcomes that are related to (teacher) wellbeing, such as affect.

When exploring teacher wellbeing intervention research, it is important to be mindful of the limitations of the research. A common theme running throughout the literature is the expression of the need for more research incorporating a stronger research design, such as RCTs, in the area of teacher workplace intervention research (Beames et al., 2023; Naghieh et al., 2015). Moreover, there is great variance in the studies identified in the reviews and meta-analyses in terms of wellbeing measures, contexts, sample group characteristics, and organisation size, which can cause great heterogeneity in observed results (Nielsen & Miraglia, 2017; Pieper et al., 2019), including in teacher wellbeing intervention research (Iancu et al., 2017). Furthermore, it should also be borne in mind that the majority of research conducted in this area has taken place in Western regions such as Europe and North America, and thus the generalisability of these findings may be limited (Daniels et al., 2017; Tetrick & Winslow, 2015). There are also limited wellbeing intervention studies which consider teacher populations explicitly, which further narrows the literature available to review. Where teacher populations have been explored with wellbeing interventions, these have often included small sample sizes, which can limit the generalisability of the findings. Thus, it is suggested that strong conclusions regarding workplace wellbeing and interventions should be withheld at this point, and schools should consider each intervention's potential within their own settings, policies, and communities.

As previously highlighted, the existing literature is limited in its explicit exploration of teacher wellbeing interventions in comparison to the literature exploring workplace wellbeing more broadly. Findings suggest that different wellbeing, mental health, and management, programmes to help equip teachers with knowledge and practical advice on how to manage their own wellbeing have promising findings (Corrente et al., 2022; Kidger et al., 2016).

Within the existing literature, academics have been able to establish that teacher wellbeing interventions can be broadly separated into individual interventions and organisational interventions (Naghieh et al., 2015). This distinction in type of teacher wellbeing interventions will be explored in further depth below. It should be emphasised that the characteristics and underlying features of different interventions may overlap. The categories which the interventions have been allocated are designed to highlight their main characteristics, and should not be considered as mutually exclusive to other categories.

1.6.2.1 Individual Interventions

Individual interventions can be understood as interventions which focus on a specific activity domain, within which teachers are able to be active agents in (Naghieh et al., 2015). Individual interventions explored in this section are: mindfulness and positive psychology; physical exercise; professional development; and multimodal interventions. These areas are highlighted because have been most explored within the limited, current body of teacher wellbeing individual-intervention literature. It is important to emphasize that teachers' stress can also arise from structural issues, such as an unrealistic workload, large class sizes, and being underpaid, as previously discussed. This report does not focus on acclimatising teachers to these challenges caused by structural policy, and school stakeholders should consider whether policy changes should be made before focusing on wellbeing interventions. For example, if the work context is dangerous and relentless for school staff this should be addressed by policy changes rather than trying to implement wellbeing interventions to help the school staff cope with extreme working conditions. Wellbeing initiatives should be discussed as one type of intervention, but schools should also consider whether their working practices and policies can be adapted to foster greater wellbeing.

Teacher professional development interventions, though not explicitly teacher wellbeing interventions, will be addressed within this exploration of wellbeing interventions, as professional development programmes address many of the sources of stress or poor teacher wellbeing, thus they influence teacher wellbeing outcomes.

1.6.2.1.1 Mindfulness and Positive Psychology

Reviews of studies relating to mindfulness interventions have been explored within teacher populations and have generally found that mindfulness interventions can be applied successfully within a teacher population, and that engaging in mindfulness interventions can be shown to improve teacher wellbeing (Bardach et al., 2022; Hwang et al., 2017; Meiklejohn et al., 2012). In a review of predominately US-based studies, one study in Israel, and one in England, Meiklejohn et al. (2012) found that mindfulness-based teacher interventions can improve to teacher wellbeing and drivers of wellbeing, including but not limited to: improved cognitive functioning, improved mental health, and improved ability to maintain positive and supportive staff-student relationships. Similarly, Hwang et al. (2017) found that all studies presented a positive effect of mindfulness interventions on teacher wellbeing measures, with the greatest effect sizes ranging from $d=0.89$ to $d=1.85$, indicating a large effect size (Cohen, 1992). Both reviews, however, noted that extensive further research is needed in order to develop a more rigorous understanding of mindfulness interventions

and the impacts these have on teaching staff, and on the students. Examples of specific, named mindfulness interventions are explored below, though it is important to note that many of the themes and approaches within the following named interventions are not exclusive to each intervention, and that many named and unnamed mindfulness interventions share similar characteristics (Hwang et al., 2017; Meiklejohn et al., 2012).

Within teacher wellbeing mindfulness interventions, it is important to note that the constructs of positive psychology and mindfulness have often been used in conjunction with one another as both approaches aim to encourage self-regulation and aim to lessen socio-emotional distress (Cebolla et al., 2017). Mindfulness-based techniques emphasise self-awareness and meditation, whereas positive psychology stresses cognitive functioning and stress reduction by focusing on cognitive patterns and behaviours (Cebolla et al., 2017; Lazaridou & Pentaris, 2016; Vo & Allen, 2021; Waters et al., 2022). Prior to exploration of the following interventions, it is worth noting the above similarities and differences between mindfulness approaches and positive psychology approaches. The following named interventions have been included as they have often been explored within the field of teacher wellbeing interventions (Hwang et al., 2017; Meiklejohn et al., 2012).

Stress Management and Relaxation Techniques (SMART) in Education

This intervention takes multiple routes to encouraging mindfulness, involving sessions for meditation and embodied mindfulness (mindful movements), sessions dealing with fear and anger, as well as providing resources and opportunities to share information and tips with how to best exercise kindness and empathy, and how to deal with conflict (Benn et al., 2012; Jennings & DeMauro, 2017). In a study exploring the effects of the SMART 5-week implementation, Benn et al. (2012) found that, mean teacher scores significantly decreased in self-reported stress and anxiety, and increased self-reported personal growth, empathy, and forgiveness at post-test and at 2 month follow up. Such a finding has been replicated, with Roeser et al. (2013) finding that teachers in a randomised group with the SMART intervention reported a significant increase in self-compassion than teachers in a control group following the end of the trial. Within the Roeser et al. (2013) study, teachers engaged in 36 contact hours of SMART informed Mindfulness Training. Though the Roeser et al. (2013) study does not explicitly measure subjective wellbeing, the measures include some elements of affective wellbeing, such as occupational self-compassion, occupational stress, occupational burnout, anxiety and depression symptoms.

Mindfulness-Based Stress Reduction (MBSR)

MBSR is a time-intensive intervention, usually asking

teachers to complete 2.5-hour sessions each week over an 8-week period and 7-hour silent retreat da. Participants are also encouraged to engage in mindfulness strategies in their own time beyond the in-person components (Bonde et al., 2022). Various randomised control trials have found that MBSR interventions tend to elicit greater (significant) effect sizes in pre- and post- intervention measures (described below) for teachers that engaged in MBSR than the control group (Flook et al., 2013; Frank et al., 2015; Gouda et al., 2016). Flook et al. (2013) found that teachers within the MBSR intervention group showed significant reduction in psychological distress symptoms and emotional exhaustion, and significant increases to mindfulness, self-compassion, feelings of personal accomplishment, classroom organisation, and attention, in comparison to a group of teachers within a control group. In addition, findings suggest that teachers who engaged in an MBSR intervention showed significant post-test increases in affective self-regulation, self-compassion, sleep quality, and mindfulness indices, in comparison to a control group (Frank et al., 2015). Gouda et al. (2016) found significant, medium effect sizes for outcomes relating to teacher wellbeing in their pilot, randomised waitlist-control study, suggesting that perceived interpersonal conflict reduced ($d = 0.49$), and perceived mindfulness improved with the MBSR teachers in comparison to the control ($d = 0.66$). These three distinct studies (Flook et al., 2013; Frank et al., 2015; Gouda et al., 2016) were randomised control trials, which is a methodology through which the success of an intervention can be understood, thus the empirical evidence would suggest that MBSR is a successful intervention in improving teacher wellbeing, as well as outcomes relating to teacher wellbeing, for the populations and settings explored.

Cultivating Awareness and Resilience in Education (CARE)

The CARE programme involves the training of teachers to improve emotional self-regulation monitoring, encouraging mindful and compassionate teaching exercise, and these interventions have been delivered in a range of intensities, from 2-day training sessions to a weeklong residential retreat (Jennings et al., 2011). The findings tended towards a positive (but non-significant) effect of CARE on different teacher wellbeing measures, such as Positive and Negative Affect Scale (PANAS), Center for Epidemiologic Studies Depression Scale (CES-D), Teacher Sense of Efficacy Scale (TSES), and Five Facet of Mindfulness Questionnaire (FFMQ; Jennings et al., 2011). It was reported that 93% of teacher participants felt satisfied with their involvement in the CARE intervention (Jennings et al., 2011), and it is vital that the experiences of teachers taking part in an intervention are also considered in relation to the efficacy of a given intervention (Dreer

& Gouasé, 2022). Jennings et al. (2011) found that after the CARE intervention there were improvements in autonomy supportive orientation, negative affect, self-efficacy, as well as Performing in School (PIS) scores. In a subsequent study, Jennings et al. (2013) found significant intervention effects on improving self-efficacy, burnout, and mindfulness. Such findings have been replicated (Schussler et al., 2016), with additional supporting qualitative evidence suggesting that teachers become more aware of their psychosomatic reactions to stress and that they feel more reflective of their internal states. It is important to note that these studies did not have a control group, and only employed American participants, thus further study is recommended prior to evaluating the efficacy of CARE.

1.6.2.1.2 Physical Exercise

It is important to note that evidence suggests that teachers, much like the general population, often already engage in physical activity in their lifestyles as a mechanism through which to manage stress (Romano & Wahlstrom, 2000). In a study conducted with teachers in Finland, Bogaert et al. (2014) found that there was a significant relationship between physical activity in leisure time and multiple outcomes, suggesting that increased physical activity in leisure time might lead to: improved mental health, improved physical health, improved job satisfaction, a reduction in occupational stress, as well as a reduction in absenteeism. In a review of international studies exploring physical exercise lifestyles with teachers at different educational institutions (kindergarten/pre-school to university), Rosales-Ricardo et al. (2017) found only 8 studies which were able to provide empirical evidence and concluded that the studies suggested a positive relationship between physical exercise and quality of life. The studies often reported that physical activity had a positive effect on multiple domains of life, including social, emotional, and physical health (Rosales-Ricardo et al., 2017).

One example of a specific physical activity wellbeing intervention explored with teachers is yoga programmes (Hepburn & McMahon, 2017; Latino et al., 2021). It is important to note, however, that the yoga interventions which have been conducted with teachers (and are thus explored here), often have small sample sizes which limit generalisability. One such intervention is 'CALM' (Community Approach to Learning Mindfully) and is an intervention which involves daily yoga practices involving both physical exercise as well as breathing and meditation practices (Harris et al., 2016). Sixty-four middle school teachers participated in this intervention study and 90% of them indicating that they would continue their engagement with the intervention (Harris et al., 2016). Teachers who participated in CALM showed significant improvements in distress tolerance and positive affect as compared

to the control group. Teachers in the CALM group also considerably outperformed teachers in the control group in terms of mindful observation scores at the post-test stage. Several measures of wellbeing drivers, however, revealed no significant changes between the teacher groups, such as teacher burnout or stress. In addition, Telles et al. (2018) studied a group of primary school teachers and discovered that a 15-day yoga residential retreat led to significant differences in their wellbeing and anxiety levels between pre- and post-intervention. However, caution should be given because yoga encompasses a variety of skills and is not only a physical exercise, but also a meditation and self-regulation practise. More research is needed to determine which elements of yoga contribute to such a positive impact on wellbeing (Zarate et al., 2018).

1.6.2.1.3 Professional Development for Teachers

There is limited evidence of large-scale, gold-standard research on teacher professional development programmes for improving teacher wellbeing, and further study must be conducted. The existing small-scale research suggests that teacher professional development programmes have been found to improve staff cohesion, better ability to manage workload, and improved interactions with students and parents (O'Brien et al., 2022).

Professional development programmes have been defined as programmes through which working individuals are supported in the development of skills and practical knowledge which could help them progress further in their professions (Buysse & Hollingsworth, 2009). Within the context of teaching, professional development can be conceptualised as having the ultimate goal to improve student learning, through which teachers engage in programmes which are structurally and purposefully targeted at improving their pedagogical knowledge and practical experience (Postholm, 2012). It is interesting to note that for many teachers, they note that there is an expectation that they must invest a lot of their own personal time and effort into being a teacher (Edling & Frelin, 2013).

As explored in prior sections, teacher self-efficacy, burnout, and work-related stress are significant determinants of teacher wellbeing (Bardach et al., 2022; Collie et al., 2012; Gray et al., 2017; Li, 2021; Molero et al., 2019; Sandilos et al., 2018; Skaalvik & Skaalvik, 2011). Professional development programmes are one way of impacting these drivers of wellbeing. Particularly, since there is limited evidence exploring the effectiveness of teacher wellbeing interventions on teacher outcomes (Corbett et al., 2022). Interventions centred around professional development suggest beneficial influence on teacher wellbeing drivers, and consequently student wellbeing and student learning, and therefore should be explored as one type of

intervention for consideration by school stakeholders on their wellbeing journey.

Teacher professional development programmes vary in their characteristics (Guskey & Yoon, 2009; Yoon et al., 2007), ranging between the authority of the individual delivering the intervention, the length of the programmes, and the content and intensity of the delivery of the professional development interventions. This further complicates our understanding and ability to reflect on the efficacy professional development programmes on teacher wellbeing, as they often differ so broadly.

Kilgallon et al. (2008) explored professional development programme outcome measures with a sample of 63 teachers in Australia, teaching children between ages 3-8 years old. The study found that approximately half of the teachers reported that colleague relationships were very important factors influencing their outcomes, with 74% reporting that colleague relationships influence job satisfaction, 20% reporting that colleague relationships influence occupational motivation, and 33% reporting that colleague relationships influence professional commitment. These findings are interesting to note, while accounting for the study's small sample size and limitations in generalisability.

Finally, the broad definition of professional development can make it difficult to identify professional development programmes as targeted for professional development. For example, interventions such as CARE (explored above as a mindfulness intervention) have been identified as professional development programmes, even though they are rooted in mindfulness (Schussler et al., 2016). As teacher wellbeing interventions have been found to improve teacher and student performance, it could be argued that all teacher wellbeing interventions are, by proxy, professional development interventions. However, it is utmost importance that schools respect the importance of improving teacher wellbeing in of itself, and not solely as a driver of school attainment (Lindorff, 2020).

1.6.2.1.4 Multimodal Interventions

The term 'multimodal teacher wellbeing interventions' refers to interventions that include multiple techniques; taking influence from the above-explored individual interventions, but have taken an integrative approach, are explored; combining different approaches to improve teacher wellbeing. Current research on this type of intervention for teacher wellbeing is limited, and the Achiever Resilience Curriculum is given as one example below.

Achiever Resilience Curriculum (ARC)

The ARC intervention is multimodal intervention developed by Cook et al. (2017). Within ARC, 'Achiever' serves as an acronym which identifies the different approaches to wellbeing intervention that the curriculum covers. The acronym stands for: A- Awareness and empowerment through mindfulness; C- Choosing to pay attention to the positive and practising gratitude; H- Helping others; I- Identifying unhealthy thoughts and changing these to become healthier; E- Exercise, eating and sleeping well; V- Values one holds; E- Establishing a social support system; and R- Rewards through relaxation and recreation (Cook et al., 2017). In a study conducted by Cook et al. (2017), the randomly assigned ARC intervention group followed 5 weeks of 2.5-hour sessions led by the primary researcher in the project, and the authors observed significant reductions in self-reported stress, increased self-efficacy, and increased intentions to implement change (effect sizes were: .69, .64, and .77 respectively) with the ARC intervention teachers. However, the sample was limited to American teachers, and had a limited sample size of 44, thus further work is needed to increase participant diversity and improve the generalizability of findings. These findings suggest that integrative approaches to wellbeing interventions for teachers is promising, though further studies are required exploring multimodal interventions with larger sample sizes in order to diversify the samples of teachers, so that the findings are more robust and representative.

1.6.2.2 Holistic Interventions

Holistic interventions are explored below in relation to 'organisational' and 'whole school' approaches, as these intervention approaches recognise the role that higher-level decision making has for the lived experiences of those within a school community, including teacher wellbeing. In this review, holistic interventions are considered as interventions which aim to act beyond an individual level intervention. Prior sections of this report have detailed the importance of understanding the holistic nature of factors which can drive teacher wellbeing, and how intricate these relationships between drivers and teacher wellbeing can be. The following section explores the field of wellbeing literature through the lens of organisational approach (one which considers the organisation of a school), as well as through the lens of whole school approaches (WSAs; involving multiple school stakeholders within an intervention).

1.6.2.2.1 Organisational Approach

Within the context of teacher wellbeing, organisational interventions could relate to systemic and institutional decisions and processes which influence the roles of the teachers. For example, national curriculums, contractual obligations, and workplace expectations, are each example of potential areas for organisational

intervention (Naghieh et al., 2015). However, Nagieh et al. (2015) identified that there are very few intervention studies which address organisational level interventions among teachers, and that organisational level interventions often did not recognise teacher wellbeing as a primary outcome to be measured. Existing literature which has studied organisational level teacher wellbeing interventions is explored and limitations are discussed.

Brady and Wilson (2021) argue that the initiatives which are most well received by teachers are those which arise in supportive whole-school cultures that: encourage teachers' feelings of autonomy and competence, increase the ability for meaningful work, whilst also aiming to reduce burdensome demands. Such an argument is supported by the findings that organisational approaches within occupational wellbeing tend to be the most sustainable and effective methods in which to improve worker wellbeing (Layard & De Neve, 2023). Providing support to teachers in developing strategies to mitigate against burdensome stresses before they arise, as well as incorporating intercollegiate feedback on teaching or lesson plans, have both been identified as valuable WSA approaches which can assist teachers in reducing burden and increasing their wellbeing and teaching efficacy (Granziera et al., 2021). Furthermore, it has been found that when the school supports teachers' basic psychological needs (such as autonomy, relatedness, and competence), teachers are able to develop and grow the personal resources necessary to support their own wellbeing, through factors such as being efficacious in their work and maintaining strong relationships with their students and other members of staff (Connell & Wellborn, 1991; Ryan & Deci, 2000). It is thus important to consider how the school can support the wellbeing of teachers, through promoting aspects such as supportive, trusting relationships, opportunities for meaningful work and engagement, and the provision of sufficient resources to allow for effective handling of job demands (Cefai & Cavioni, 2014).

Glazerman (2012) introduced an organisational-level intervention which incentivised teachers based on school performance, by providing monetary bonuses for teachers who performed well, and encouraging the mentoring and collaboration of teaching staff to help bring about greater student outcomes (Chicago Teacher Advancement Program). Teacher wellbeing can be conceptualised in this study through teacher retention rates, and Glazerman (2012) found that intervention groups had greater teacher retention rates than control groups at 12, 24, and 36-months post-intervention. However, teacher retention might be better conceptualised as a proxy for teacher wellbeing, rather than a direct wellbeing measure, thus

it is difficult to draw conclusions as to the influence organisational-level interventions can have on teacher wellbeing. Morris et al. (2019) conducted a case study in Australian schools, using a participatory action research approach to develop strategies to support the development of a positive school culture amongst school staff. Both quantitative and qualitative results highlighted a change in leadership style into one which fosters appraisal and recognition of teachers' work, participation in decision-making, professional growth opportunities, and being supportive are key factors in the positive school cultural change (Morris et al., 2019).

An expert commentary on healthy working environments by Kossek et al. (2012) usefully divides the most critical characteristics of positive worker environments into three broad areas: a) feeling one has control over how one works (job control/job autonomy); b) feeling supported by colleagues and those in leadership positions; and c) being in a working culture which values good professional performance, whilst acknowledging the importance of having a balanced personal life too. Evidence indicates that it is important for schools to consider such aspects if they wish to create positive working environments for their teachers and staff which act to enhance their wellbeing, job satisfaction, and work efficacy (Toropova et al., 2021). Crucial aspects for creating a healthy work environment for teachers include: having adequate access to teaching resources, being able to cope with manageable workloads and administrative tasks, greater teacher autonomy and decision-making opportunities, and sufficient professional development opportunities (Benevene et al., 2020; Sims, 2020; Toropova et al., 2021). These aspects might allow teachers to feel competent in their professional role and feel confident in their ability to teach the material they need to effectively, maintain effective discipline within the classroom, and balance work with their personal lives (McCallum, 2021). Furthermore, staff cooperation and collaboration, and supportive leadership have also been found to be important in creating a positive working environment in schools, leading to higher rates of school cohesion, teacher wellbeing and teaching efficacy (Ma & MacMillan, 1999; Toropova et al., 2021).

Evidence has explored how constraining work environments can increase pressure and stress for teachers, leading to poorer wellbeing (Collie et al., 2012; Corbett et al., 2022; Corrente et al., 2022; García-Carmona et al., 2019; Von der Embse et al., 2019). However, there is limited existing literature evaluating the organisational teacher wellbeing interventions, and their effects on teacher wellbeing. Further research needs to be conducted exploring organisational interventions, particularly in light of the recent increase in the prescriptive and bureaucratic nature of

educational curriculums, which subsequently calls into question teacher professionalism and agency, and the expectations placed on the teaching vocation (Beck & Young, 2005; Jennings & Greenberg, 2009; Samier, 2002).

1.6.2.2.2 Whole School Approach (WSA)

The Whole School Approach (WSA) to teacher wellbeing considers how both the physical environment of the school as well as the way in which the school is organised, the values which are encouraged within the school, the school climate and relationships, and the integration of government-led policies, all act to influence the wellbeing of teachers (Lester et al., 2020). This approach is thus a holistic one, giving credence to Bronfenbrenner's (1979) ecological systems model in consideration towards broader factors which might impact teachers' wellbeing. Through this approach, teachers are not understood as being removed from being solely responsible for their own wellbeing, as Ecological Systems Theory situates the teachers within with consideration toward larger structures, such as school-level factors which also play an important role in the wellbeing of teachers (Granziera et al., 2022). Further, the WSA considers how unhealthy workplace environments influence not only the wellbeing of teachers, but broader members of the school community, such as pupils, parents, and the wider community in which the school resides. The WSA emphasises the importance of all members of the school community feeling a sense of belonging and cohesion within the school (Rowe et al., 2007). Importantly, the WSA highlights the value of promoting a culture of inclusiveness, of adhering to democratic principles and respect, and of encouraging involvement in school-led activities and community (Rowe et al., 2007). The values reinforce the importance that different individuals within a school environment should be included as active participants within the development of wellbeing in school.

An example of a WSA intervention is the School-Wide Positive Behavioural Interventions (SWPB), which works under the theoretical grounding of providing systemic change in order to induce greater productivity across the school system (Fallon et al., 2012). The SWPB is a multi-level, hierarchical model, which recognises the need to address different school stakeholders, and different target behaviours/outcomes (Horner et al., 2017). SWPB is an intervention which allows for the facilitation of intrapersonal and interpersonal faculty team skill development, allowing for the encouragement of more positive outcomes through implementing different techniques and interventions depending on the needs of different at-risk populations within a school (Sørli, 2021). Though there are many studies which have recognised the positive influence that SWPB interventions can have on

student academic outcomes (Berg, 2021) and student behavioural outcomes (Bradshaw et al., 2012; Sørli et al., 2021), few SWPB interventions have explicitly measured teacher wellbeing driver outcomes (Ross et al., 2012). It was found that SWPB interventions improved rates of teacher burnout and self-perceptions of their own efficacy (Ross et al., 2012), which are indicative of (and drivers of) worker wellbeing (Milfont et al., 2007). Further research must be conducted in order to identify teacher wellbeing outcomes as an explicit, primary outcome, in order for us to better understand the complexities of wellbeing in a school environment.

The significance of WSAs is reflected in the growing literature focusing on whole-school initiatives and models for improving the wellbeing of the different members of the school community (Mackenzie & Williams, 2018; O'Connor et al., 2017; van Wingerden et al., 2017). Further, numerous whole-school initiatives such as the WHO's Health Promoting Schools model (Langford et al., 2014), and various policy-level initiatives in countries such as Australia, Asia-Pacific, the United States, and Europe, are being endorsed as best practice for supporting health and wellbeing within schools (Rowe et al., 2007; Wright, 2014).

Though whole-school wellbeing interventions have been explored in the existing student wellbeing literature (for a summary please refer to Zhou et al., 2024), there is a critical gap within the existing literature whereby teacher wellbeing outcomes are often not measured (Adi et al., 2007). However, meta-analyses and systematic reviews within the field of wellbeing suggest that whole-school approaches, approaches which target the school environment and multiple facets of school life (curriculum, pedagogy, physical environment), are some of the most the most effective approaches in bringing about a positive change (Adi et al., 2007; Goldberg et al., 2019). Such findings could be used to inform the development of further research, most notably the development of whole-school wellbeing intervention randomised control trials, whereby multiple outcome variables including teacher wellbeing are measured. Intervention at such a high level is considered to be a key component to successful teacher wellbeing interventions, and there is recognition that for sustainable changes to be made, school policy should be changed to best support teacher wellbeing (Corrente et al., 2022; Gray et al., 2017; Kyriacou, 2001; Puertas Molero et al., 2019). However, to conduct gold standard RCTs, researchers need to employ very large samples, with very strict measures, and therefore need considerable funding and resources to bring the research into fruition.

1.6.3 Critique and Conclusions

Despite the body of evidence suggesting that wellbeing interventions for teachers can bring about a positive

change in school wellbeing, a scoping review (Corbett et al., 2022) has identified that due to limitations to the existing empirical literature, it is difficult to draw comparisons across teacher wellbeing interventions, and thus makes it hard to understand the effectiveness of such interventions. In the review of teacher wellbeing interventions, wellbeing is operationalised by a variety of measures (Hascher & Waber, 2021; Vo & Allen, 2022), which again makes it difficult to compare the effectiveness of a given intervention.

Another methodological limitation of many of the teacher wellbeing intervention studies is the lack of a control group (Vo & Allen, 2022), which makes it difficult for causal relationships to be drawn between the wellbeing interventions and the outcomes (Kinser & Robins, 2013). In addition, teacher wellbeing interventions might be subject to bias (Bardach et al., 2022), whereby publication is more likely to be achieved in the event of a positive relationship between wellbeing interventions and outcomes. Although wellbeing intervention studies might be prone to such limitations, the existing literature should be used by school stakeholders to facilitate discussions around wellbeing interventions, as some types of intervention may be more relevant to their unique school ecosystem than others. Schools should feel confident to explore these interventions knowing that no one type of intervention works in all school settings and that teacher wellbeing intervention research is still in its infancy.

Importantly, the teacher wellbeing intervention research findings align with the occupational wellbeing intervention findings, thus strengthening the body of wellbeing intervention literature as a whole. Schools can act as a vehicle through which wellbeing interventions are delivered to students, to teachers, and holistically to the school community. There is evidence to suggest that individual-level interventions can be successfully deployed to bring about improvement in teacher wellbeing, such as mindfulness and professional development programmes, though again it is important to stress the importance of recognising the needs of teachers within a specific context and the understanding that teacher wellbeing interventions might not be universally successful. There is evidence to suggest that for a more sustainable improvement in wellbeing, a holistic approach is better than an individualistic one, where multiple drivers of wellbeing are considered, and intracommunity factors are considered in order to bring about longer lasting improvements of wellbeing.

1.6.4 Findings and Recommendations

KF40: Interventions to improve wellbeing in the workplace can be divided into two broad categories. The first is a universal approach that targets all employees in an organisation, regardless of their

current state of wellbeing or mental health. The second strategy is the targeted approach, which is aimed primarily at those at risk of lower levels of wellbeing. Both approaches have strengths and challenges, and both should be considered for use within schools.

KF41: Research points to the most favourable outcomes regarding digital interventions when they are: a) guided; b) short in duration (6-7 weeks); c) use multi-modal deliverance systems (such as email or text messaging in addition to web-based platforms); d) made to be more tailored to the individual and their needs; and e) incorporate measurement techniques so that participants can monitor their progress.

KF42: Mindfulness interventions are a popular and effective way to improve employee wellbeing as long as they don't place an additional burden on staff. The interventions are most effective when the participants are motivated to participate, and caution should be paid to offering these interventions to individuals who are suffering from mental or physical illness.

KF43: Cognitive Behavioural Therapy (CBT), emotional skills training, resilience training, and positive psychology interventions had mixed results in terms of increases in wellbeing in decreases in stress. It has been suggested that CBT approaches, as they now appear, are not wholly appropriate for the workplace as they are not theoretically driven by problem areas typically experienced at work and schools should consider whether they are appropriate for their staff or as a targeted intervention for particular groups.

KF44: Physical activity and sleep interventions in the workplace have mixed results, while interventions in these areas do seem to have positive benefits (e.g., on work performance, health, and absenteeism) in improving wellbeing. However, there is a strong relationship between physical activity and wellbeing outside the occupational literature so schools could consider whether an intervention of this nature would be suitable for their staff.

KF45: Any interventions which focus on employee performance should be conducted through a supportive wellbeing lens; focusing on increasing self-efficacy and self-empowerment. However, this is an under-researched area and there is a lack of strong research evidence on improvements in wellbeing for this type of workplace wellbeing intervention.

KF46: Employee voice is an important aspect of employee wellbeing. Involving employees in the decision-making process regarding their work environment and how their work is performed in terms of their wellbeing, job satisfaction, and work performance, has been shown to have positive outcomes. Research has found that these types of interventions can be counterproductive when governed solely by top-down leadership, eliminating employee voice and control in their jobs.

KF47: Research shows that relationships and feeling socially supported are the most important drivers of workplace wellbeing and job satisfaction. Workplaces that instil health behaviour norms and a positive workplace culture that has a sense of support, common purpose, and trust have been found to be especially important for mental wellbeing at work through influencing employees' feelings of belonging and meaning. Although more evidence from high quality research is needed.

KF48: Training that focuses on improving managerial and leadership skills as well as the relationships between leaders and employees has also found favourable results regarding employee stress levels and affective wellbeing.

KF49: Research has found that strategies to ensure clear understanding of, and adherence to, intervention guidelines, ensuring adequate funds and resources before commencing the intervention, making enough room for the intervention so that it does not compete with employees' work priorities (such as time pressures and workload), garnering employee participation and support, and providing leaders with support in implementing the intervention are all powerful methods for ensuring intervention effectiveness.

KF50: Another important aspect of the implementation process is how interventions or programs are adapted to the organisational context whilst still adhering to the core principles and design of the intervention.

KF51: Schools should consider incorporating interventions and changes at both the individual staff level and the structural school level, aimed at building the resources available to employees and, by so doing, lessening the adverse effects that work might have on their wellbeing and health.

KF52: Crucial aspects for creating a healthy work environment for teachers include: having adequate access to teaching resources; being able to cope with manageable workloads and administrative

tasks; greater teacher autonomy and decision-making opportunities; and sufficient professional development opportunities.

KF53: A common theme running throughout the literature consulted is the expression of the need for more research incorporating stronger research designs, such as RCTs, in the area of workplace intervention research.

KF54: There is great variance in the studies utilised in terms of wellbeing measures, contexts, sample groups, and organisation size, which can cause great heterogeneity in observed results. Additionally, the majority of research conducted in this area has taken place in Western regions such as Europe and North America, and thus the generalisability of these findings may be limited.

R11: It is suggested that strong conclusions regarding workplace wellbeing and interventions should be withheld at this point and schools should consider each intervention's potential within their own settings, policies, and communities. As schools are unique ecosystems there is no one intervention that will be effective in all school settings.

R12: When considering interventions to enhance teacher wellbeing, it is advantageous to employ a combination of universal and targeted strategies. For instance, implementing mindfulness-based interventions universally for all teachers, while selectively applying Cognitive Behavioral Therapy (CBT) to specific teacher groups, could be an effective approach. However, it is crucial to exercise caution to avoid overburdening participants, as those who are motivated tend to achieve better results.

R13: Care should be taken when offering interventions to individuals who may be experiencing mental or physical illness.

R14: Successful implementation relies on several key factors, including the provision of clear guidelines, adequate resources, active employee participation, and robust leadership support. Ensuring that teachers have a voice and can actively participate in decision-making processes is paramount. Additionally, adapting interventions to the unique context of each school, addressing both individual and structural aspects, and prioritising evidence-based practices are all essential steps in the pursuit of promoting teacher wellbeing. Again, it is essential to acknowledge that there is no one-size-fits-all solution, and schools should tailor their interventions to align with their specific needs and circumstances.

Adult Wellbeing Measurements 1.7

1.7 Adult Wellbeing Measurements

Evaluating wellbeing is the initial step towards enhancement and a crucial consideration for school stakeholders before delving into any potential interventions. The first phase of the measurement journey is taking stock of reviewing the existing data within each school and determining essential baseline measures. Establishing these baseline measurements is essential for measuring the effectiveness of any interventions and providing school stakeholders with insights into the current state of wellbeing in their educational environment.

Wellbeing measurements in childhood and adolescence have been researched extensively (see Taylor et al., 2022 for details), and recent developments in the field of teacher wellbeing research have resulted in advances in the conceptualisation and operationalisation of teacher wellbeing. However, as there is not currently a universal conceptual criterion of teacher wellbeing, and various measurements exist in an attempt to measure teacher wellbeing. By providing an overview of these measurements, readers can gain a general understanding of how teacher wellbeing has been studied and how different measurements have been used to emphasise different conceptual understandings of teacher wellbeing. Recommendations about core measurements are discussed in Chapter 2 but school stakeholders should consider, beyond the core measurements, which measures are appropriate for their population, setting, and wellbeing journey.

1.7.1 Measurements Used in Academic Research

A wide variety of measurement instruments have been used to measure teacher wellbeing in academic research. Hascher and Waber (2021) found that of 98 studies exploring teacher wellbeing (across 40 different countries), most studies used general concepts and

measures of wellbeing, such as subjective wellbeing and life satisfaction, instead of using measures which take into account the specific challenges, stresses, and responsibilities of teaching. A limited amount of research has grounded professional wellbeing within the teaching context, and within teacher wellbeing academic literature, there is no consensus on which measurement should be used.

Included in the tables below are some of the commonly used measurements in national and international research across three distinct categories: general measures of adult wellbeing, general occupational measures of wellbeing, and specific teacher wellbeing measures. The nature of teaching as an occupation is varied, and as such, different measurements of wellbeing might be more or less relevant to teachers within different contexts. The examples of measurements below can be used by school stakeholders to explore different pathways through which wellbeing can be measured for teachers, depending on what is contextually relevant for their school.

It is also worth noting that schools can use multiple measures for a broader picture if valuable to their context. School stakeholders should consider the more international measures as only one part of their teacher wellbeing measurement toolkit, to be used for international benchmarking and comparison with large international datasets. Measurements such as Cantril's Ladder have been used by large organisations and in widely consumed publications, such as in the World Happiness Report (Helliwell et al., 2023). By comparing a school's own data on teacher wellbeing with the findings from international publications, this might make it easier to relay findings to school stakeholders who may find comparisons at the national and international level useful. Readers can refer to Appendix 4.2 for some of the measures which arose in the literature review which are frequently found to be drivers of adult wellbeing for schools to consider as part of their wellbeing journey.

TABLE 5: EXAMPLES OF ADULT WELLBEING MEASURES

Measure	Content	Age	Reliability	Language Validation	Availability
The Satisfaction with Life Scale Diener et al. (1985)	Five-item scale, asking respondents to rate between 1-7 the extent to which they agree with each item. The score of 31-35 indicates the individual is 'extremely satisfied', a score of 20 indicates 'neutral', and a score of 5-9 indicates 'extremely dissatisfied'. An example item: "I am satisfied with my life".	Adults (appropriate for age 13 years and above; Esnaola et al., 2017)	Cronbach's Alpha = 0.83 (Bayani et al., 2007)	English French Spanish	Freely available for commercial and/or research use.
Cantril Ladder Question	A single measurement of subjective wellbeing, respondents are asked the following: "Please imagine a ladder, with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?"	Adults (appropriate for 10 years and above; Mazur et al., 2018)	Test-retest: Cronbach's alpha between .70 and .58 (Levin & Currie, 2014)	English French Spanish	Freely available for commercial and/or research use.
Office for National Statistics ONS-4	Four-item scale asking respondents to rate from 0-10 how they feel in response to each item. Each item measures one of the following: life satisfaction, happiness, anxiety, and worthwhileness.	Adults (appropriate for age 10 and above)	Reliability considered to be high (Cronbach's alpha value = 0.90) (Benson et al., 2019)	English	Freely available for commercial and/or research use.

Positive and Negative Affect Schedule PANAS 	20-item scale, asking respondents how often they have felt each item in the past week (scored from 1-5). The maximum score for positive affect is 50, and the maximum score for negative affect is 50.	Adults (child version for ages 7-14 available)	Reliability considered to be satisfactory (Cronbach's alpha value = 0.84 - 0.90) (Watson et al., 1988)	English French Spanish	Freely available for commercial and/or research use.
Psychological Well Being (PWB) Ryff (1989)	42-item scale, asking respondents to rate between 1-7 the extent to which they agree with each item. PWB measures six aspects of wellbeing and happiness: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. There is also an 18-item version of PWB.	Adult (Ryff & Keyes, 1995; Curhan et al., 2014)	Cronbach's Alpha ranged from 0.70 to 0.85 (Manchiraju, 2020)	English French Spanish	Freely available for commercial and/or research use.
Flourishing Scale Diener et al. (2010)	Eight-item scale, asking respondents to rate between 1-7 the extent to which they perceive success regarding relationships, self-esteem, purpose, and optimism and agree with each item. The maximum score is 56, indicating high wellbeing.	13 years and above (Carmona-Halty et al., 2022)	Cronbach's Alpha = 0.88 (Tong & Wang, 2017)	English French Spanish	Freely available for commercial and/or research use.
PERMA Profiler Seligman (2011) Butler & Kern (2016)	23-item scale, asking respondents to rate from 1-10 their perceptions of themselves in relation to each item. The Perma Profiler can be used to measure the following nine subscales: positive emotion, engagement, relationships, meaning, accomplishment, negative emotion, health, loneliness, and overall wellbeing.	12 years and above (Burke & Minton, 2019)	Cronbach's Alpha ranged from 0.74 to 0.94 (Burke & Minton, 2019)	English French Spanish	Freely available for commercial and/or research use.

These measures of general wellbeing are internationally recognized and extensively validated, having been employed in numerous studies conducted across diverse countries and languages. Utilizing and validating these measures within international datasets presents a valuable opportunity for benchmarking teacher wellbeing on a global scale. By incorporating these established general measures, schools can gain valuable insights into

how their teachers' wellbeing compares to professionals in various fields worldwide. Importantly, it's noteworthy that these measures are not confined to the teaching profession or school context. Their extensive utilization across diverse populations and settings makes them a compelling foundation for assessing teacher general wellbeing within the broader landscape of global wellbeing.

TABLE 6: EXAMPLES OF OCCUPATIONAL WELLBEING MEASURES

Measure	Content	Age	Reliability	Language Validation	Availability
Warr's scale of job related affective wellbeing Warr (1990)	52-item scale, measuring wellbeing through five subscales: job-related affective wellbeing, non-job related affective wellbeing, competence, aspiration, and negative job carry-over.	Adults (Mielniczuk & Laguna, 2018)	Cronbach's alpha range from 0.78 to 0.90 (Laguna et al., 2019)	English	Not available for commercial and/or research use.
The Job Satisfaction Survey (JSS) Spector (1985)	36-item scale, asking respondents to rate between 1-6 the extent to which they agree with each item. The items measure nine dimensions of job satisfaction: pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, co-workers, nature of work, and communication.	Adults	Cronbach's Alpha = 0.86 (Stankovska et al., 2017)	English French Spanish	Freely available for commercial and/or research use.
Job Affective Related Wellbeing Scale (JAWS) van Katwyk et al. (2000)	30-item scale, asking respondents to rate from 1-5 the frequency with which they relate to each item in the last 30 days. JAWS measures four subscales: high arousal, low arousal, pleasurable, and displeasurable.	Adults	Cronbach's alpha ranged from 0.80 to 0.95 (van Katwyk et al., 2000)	English Spanish	Freely available for commercial and/or research use.
Satisfaction with Work Scale (SWWS) Blais et al. (1991) Bérubé et al. (2007)	Five-item scale, asking respondents to rate from 1-5 the extent to which they agree with each item. The SWWS is adapted from the Satisfaction with Life Scale to be focused on occupational contexts.	Adults	Cronbach's Alpha = 0.87 (Merino et al., 2021)	English French	Not available for commercial and/or research use.

Occupational wellbeing measures are useful for schools to consider, as it allows for schools to understand how teachers feel within a workplace. Schools might be particularly interested in occupational wellbeing measures, as such measures could provide valuable insight into what the school is like as an employer and

a workplace. Many of these occupational measures have also been used in academic contexts beyond the empirical exploration of teacher wellbeing, which will allow for comparisons between a school's own teacher dataset with large datasets that employ these measures (for teaching and other contexts).

TABLE 7: EXAMPLES OF TEACHER WELLBEING MEASURES

Measure	Content	Age	Reliability	Language Validation	Availability
Teacher Subjective Wellbeing Questionnaire (TSWQ) Renshaw et al. (2015)	Eight-item scale, asking teachers to rate from 1-4 how frequently they have felt each item in the last month. The TSWQ measures two subscales: school connectedness and teaching efficacy.	Adults	Cronbach's alpha = 0.86 (Renshaw et al., 2015)	English	Freely available for commercial and/or research use.
Teacher Well-being Scale (TWS) Collie et al. (2015)	16-item scale, asking teachers to rate from 1-7 how they feel about each of the items. TWS measures three subscales: workload wellbeing, organisational wellbeing, and student interaction wellbeing.	Adults	Cronbach's alpha ranged from 0.82 – 0.90 (Collie et al., 2015)	English	Not available for commercial and/or research use.
OECD PISA teacher measurements	PISA Development questionnaires whereby teachers are the respondents, providing individual and school-level data. Wellbeing related components include: occupational, economic, physical health, etc. It contains 10 questions to understand teachers' general feelings about their jobs.	Adults	Unavailable	English French Spanish	Not available for commercial and/or research use.
OECD TALIS measurements	A large questionnaire which is delivered to collect information on teachers, and TALIS includes the following wellbeing components: cognitive, subjective, physical and mental, and social.	Adults	Unavailable	English French Spanish	Not available for commercial and/or research use.

Teacher-specific occupational wellbeing measures provide valuable insight into the experiences of teachers and recognise the complex nature of teaching as an occupation, and as a result, the nuanced nature of teacher wellbeing. It is recommended that school stakeholders explore these teacher-specific measures of wellbeing to understand how wellbeing is measured in this unique context, and to form part of their discussions about which wellbeing measurement to employ in their context.

1.7.2 Key Performance Indicator and Core Measurements

A measuring approach for school stakeholders should contain a Key Performance Indicator (KPI), core measurements, and questionnaires designed specifically for the target group and educational setting. This approach recognises the diversity of educational settings and ensures that measurements are appropriate and applicable to the specific context. These basic metrics (the KPI and Core Measurements) give a consistent approach to measuring wellbeing across diverse contexts, but bespoke surveys allow for a more nuanced understanding of the particular elements influencing teacher wellbeing in specific educational settings.

Below we recommend a KPI and set of Core Measurements which can be used as a foundation which school stakeholders can build their own set of questionnaires (from existing questionnaires or new designs) which is appropriate for their school and context. Taking the definition of teacher wellbeing recommended in Section 1.1.2.4, we focus our core measurements on the three aspects of subjective wellbeing.

"This school promotes the wellbeing of our staff. We define wellbeing as our staff being satisfied with their school lives, having positive experiences at, and feelings about, school, and believing that what they do at school gives them some purpose and meaning."

The KPI recommended is job satisfaction, which mirrors the pupil school life satisfaction KPI in the 'Wellbeing in Education in Childhood and Adolescence' report (see Taylor et al., 2022). This is because schools are more likely to be able to 'move the needle' for their staff on workplace wellbeing than they are on general wellbeing, because they have more control over the factors that contribute to it (see Chapter 1.5 for details). The KPI and Core Measurements below are taken from a paper by De Neve and Ward (2023) which highlights the necessity of measuring all the elements of subjective wellbeing (life satisfaction, affect, and eudaimonia), with relation to workplace wellbeing, in a way that "...provide[s] meaningful variation in the different measures of workplace wellbeing, while not being overly burdensome" (p.14 De Neve and Ward). The KPI and Core Measurements are designed to be used in any workplace and therefore are not only

relevant for teachers but other members of staff at school, making these foundational questions highly inclusive in a school setting.

KPI: Job Satisfaction

Question: "Overall, how satisfied are you with your job?"

Response on an 11-point scale: 0 (not at all) to 10 (completely)

Core Measurements

As above – responses on an 11-point scale from 0 (not at all) to 10 (completely)

- "Overall, how purposeful and meaningful do you find your work?"
- "How happy did you feel while at work during the past week?"
- "How stressed did you feel at work during the last week?"

These four questions (across the KPI and Core Measurements) are shortly to be adopted by several large organisations focused on workplace metrics (including wellbeing), which will provide a rich source of data for international benchmarking comparisons. For an in-depth discussion of the rationale for these items, please refer to De Neve and Ward (2023).

1.7.3 Summary

The measurements summarised above highlight different empirically based measurements which could be incorporated by schools in their own research. Many of the wellbeing measures relate to adult wellbeing more generally, but teacher-specific wellbeing measures have also been explored, including the TSES and MBI-ES. We have included a simple KPI and Core Measurements which can be used by schools as a foundation for their staff wellbeing journey. Given the nature of the teaching role and the nuanced pressures and stressors that teachers experience in their role, schools might decide to build upon the KPI and Core Measurements and include an educator-oriented wellbeing measure for their teaching staff. The inclusivity of the KPI and Core Measurements mean they can be used across the school staff population and then more comprehensive questionnaires can be added (if desired and appropriate) for specific populations such as teachers, classroom assistants, admin staff, or senior leadership teams.

1.7.4 Findings and Recommendations

KF55: The first phase of the measurement journey is taking stock of reviewing the existing data within

each school and determining essential baseline measures.

KF56: There is not currently a universal conceptual criterion of teacher wellbeing, and various measurements exist in an attempt to measure teacher wellbeing.

KF57: The nature of teaching as an occupation is varied, and as such, different measurements of wellbeing might be more or less relevant to teachers within different contexts.

KF58: Schools can use multiple measures of wellbeing for a broader picture if valuable to their context.

KF59: School stakeholders should consider the more international measures as only one part of their teacher wellbeing measurement toolkit, to be used for international benchmarking and comparison with large international datasets.

R15: Schools should explore staff wellbeing measures with a lens on what would be appropriate to measure in their setting (in line with their own policies and practices). School stakeholders should consider using staff voice as a way of highlighting key areas to focus on as part of their wellbeing journey. The KPI and Core Measurements can be used as a foundation by every school for every member of staff to assess wellbeing in a brief and accessible way. School stakeholders can then decide what additional measurements are relevant for their staff in their context.

Teacher Wellbeing Framework

2

2 Teacher Wellbeing Framework

2.1 Rationale

To comprehensively evaluate teacher wellbeing, it is recommended to also explore the factors influencing it. These drivers encompass a wide range of elements, including individual-level factors, role-level factors, school-level factors, and external factors, as detailed in the preceding sections. By examining these foundational drivers, schools can effectively identify the sources of influence on teacher wellbeing. However, it is essential to recognise that in various research contexts, what are often identified as drivers of teacher wellbeing are sometimes used as proxies for teacher wellbeing itself. For example, while mental health could be considered a driver of teacher wellbeing, assessments like the Depression, Anxiety, and Stress Scale (DASS) are frequently employed as measures of teacher wellbeing itself. In practice, disentangling these drivers from the outcomes of teacher wellbeing can be a complex undertaking, as they are often closely intertwined and mutually reinforcing.

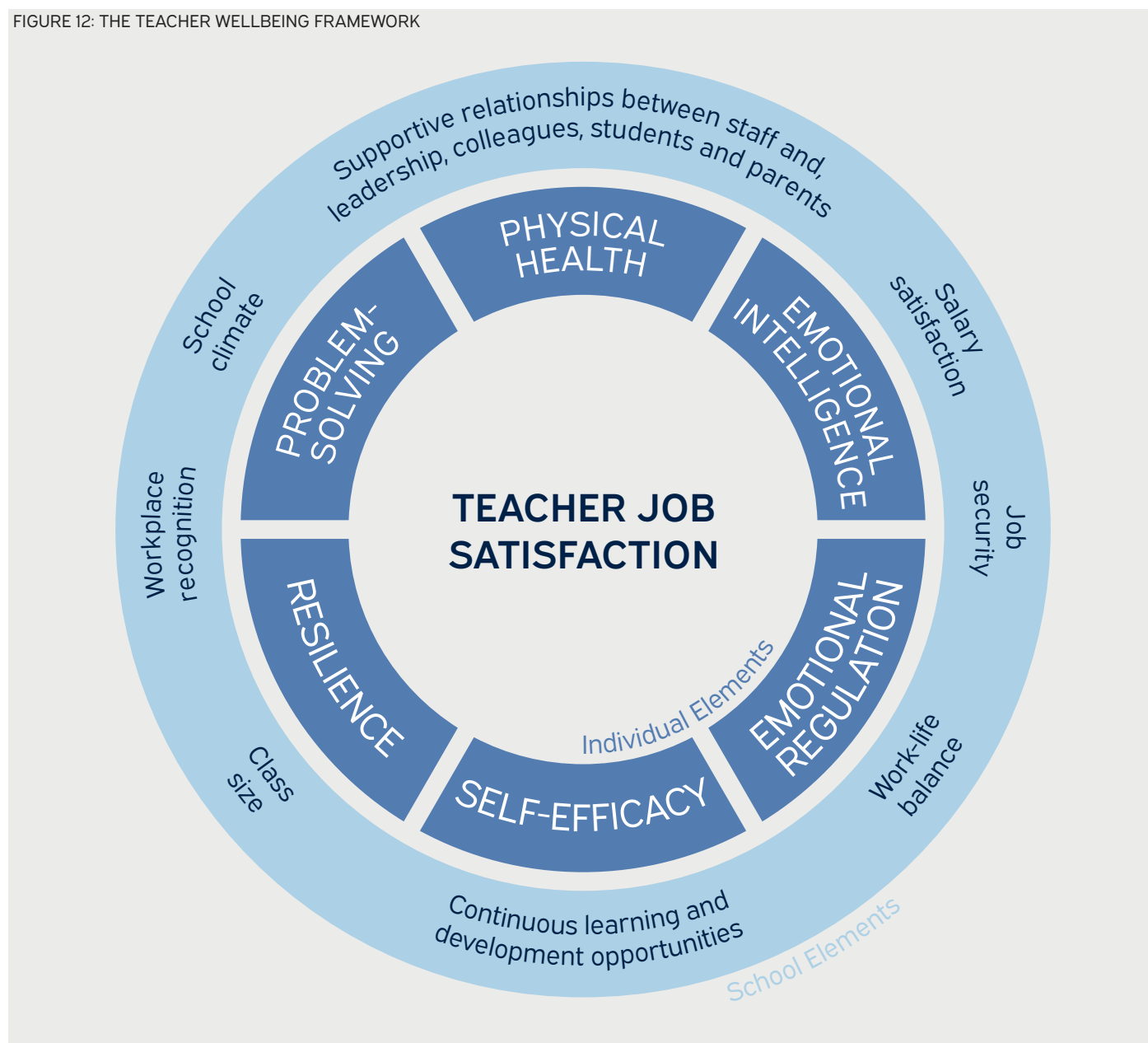
Below we present a preliminary teacher wellbeing framework with areas that show promise for being drivers of teacher wellbeing. It should be noted that this area of research is still in its infancy and much of

the driver research is still conducted with small sample sizes, only with schoolteachers (rather than the wider school staff), with no consensus on measurement. This framework is not definitive and should be used primarily as a discussion point amongst school stakeholders and its contents will change over time as the literature progresses. Each school is a unique ecosystem and some of the drivers will be more relevant to your context than others. It is important to use staff voice to identify drivers of wellbeing in your setting and to take measurements that can give school stakeholders further insights into what factors are important in their context.

The KPI for the framework is job satisfaction as this is the most logical simple measure to use (as detailed in 1.7.3 above) but the driver evidence in the framework is gathered from studies using a wide range of wellbeing measures so this should be borne in mind when deciding which measures to add in your setting to compliment the KPI and Core Measurements. It should also be noted that there are likely other factors which may not have arisen from the teacher wellbeing literature review which have a positive or negative effect on the things associated with wellbeing. Therefore, the list of drivers is not exhaustive and staff voice can be used as a powerful tool to identify specific wellbeing drivers for staff in your setting.

2.2 The Framework

FIGURE 12: THE TEACHER WELLBEING FRAMEWORK



The Teacher Wellbeing Framework represents the key wellbeing drivers that show promise within the teacher wellbeing literature. At its core, the framework recommends measuring school staff job satisfaction using the question: “Overall, how satisfied are you with your job?” with responses on an 11-point scale ranging from 0 (not at all) to 10 (completely). To more fully explore school staff wellbeing, three additional questions are included: “Overall, how purposeful and meaningful do you find your work?”; “How happy did you feel while at work during the past week?”; and “How stressed did you feel at work during the last week?”.

These four questions are shortly to be adopted by several large organisations as part of their workplace metrics (including wellbeing), which will provide a rich source of data for international benchmarking comparisons. For an in-depth discussion of the rationale for these items, please refer to De Neve and Ward (2023).

Within the Teacher Wellbeing Framework, a pivotal distinction is drawn between individual and school elements. Drawing from an in-depth literature review in preceding chapters, the individual elements highlighted in the framework encompass emotional intelligence, emotional regulation, self-efficacy, resilience, problem-

solving, and physical health. The strength of these individual-level elements can significantly influence teacher job satisfaction, with higher levels correlating with greater job satisfaction.

Similarly, the framework highlights eight school-level elements identified in the literature as impactful on teacher job satisfaction: salary satisfaction, job security, work-life balance, continuous learning and development opportunities, class size, workplace recognition, school climate, and supportive relationships within the school community. Each of these school-level elements has the potential to impact teacher job satisfaction.

The identified individual and school elements within the Teacher Wellbeing Framework serve as valuable indicators and prompts for schools to assess the elements most pertinent to their unique ecosystems (which may include elements within the framework and beyond it). This framework is intended as a catalyst for schools to embark on further investigations into their own teacher wellbeing, fostering a proactive approach to cultivating a positive and supportive work environment for educators. Utilising this framework, along with a consideration of each school's unique ecosystem, and increasing opportunities for staff and pupil voice, empowers schools to tailor their strategies and interventions, ultimately contributing to the holistic wellbeing of their teaching staff.

References

3

3 References

For a full list of references used in this report and access to additional supplementary materials, visit wellbeing.hmc.ox.ac.uk/schools.

- Abbott, J.-A., Klein, B., Hamilton, C., & Rosenthal, A. (2009). The impact of online resilience training for sales managers on wellbeing and performance. *E-Journal of Applied Psychology*, 5(1), 89–95.
- Abdin, S., Welch, R. K., Byron-Daniel, J., & Meyrick, J. (2018). The effectiveness of physical activity interventions in improving wellbeing across office-based workplace settings: a systematic review. *Public Health*, 160, 70–76. <https://doi.org/10.1016/j.puhe.2018.03.029>
- Abraham, J. M. (2019). Employer wellness programs—a work in progress. *Jama*, 321(15), 1462–1463. <https://doi.org/10.1001/jama.2019.3376>
- Acton, R., & Glasgow, P. (2015). Teacher wellbeing in neoliberal contexts: A review of the literature. *Australian Journal of Teacher Education*, 40(8), 99–114. <http://dx.doi.org/10.14221/ajte.2015v40n8.6>
- Adamson, B. (2012). International comparative studies in teaching and teacher education. *Teaching and Teacher Education*, 28(5), 641–648. <https://doi.org/10.1016/j.tate.2012.02.003>
- Adi, Y., Killoran, A., Janmohamed, K., & Stewart-Brown, S. (2007). Systematic review of the effectiveness of interventions to promote mental wellbeing in children in primary education: Report 1: Universal Approaches Non-violence related outcomes.
- Aelterman, A., Engels, N., Van Petegem, K., & Pierre Verhaeghe, J. (2007). The wellbeing of teachers in Flanders: the importance of a supportive school culture. *Educational Studies*, 33(3), 285–297. <https://doi.org/10.1080/03055690701423085>
- Aguinis, H., & Kraiger, K. (2009). Benefits of training and development for individuals and teams, organizations, and society. *Annual Review of Psychology*, 60, 451–474 <https://doi.org/10.1146/annurev.psych.60.110707.163505>
- Agyapong, B., Obuobi-Donkor, G., Burbach, L., & Wei, Y. (2022). Stress, burnout, anxiety and depression among teachers: a scoping review. *International Journal of Environmental Research and Public Health*, 19(17), 10706. <https://doi.org/10.3390/ijerph191710706>
- Aknin, L. B., De Neve, J. E., Dunn, E. W., Fancourt, D. E., Goldberg, E., Helliwell, J. F., ... & Ben Amor, Y. (2022). Mental health during the first year of the COVID-19 pandemic: A review and recommendations for moving forward. *Perspectives on Psychological Science*, 17(4), 915–936. <https://doi.org/10.1177/17456916211029964>
- Aldridge, J. M., Fraser, B. J., Fozdar, F., Ala'i, K., Earnest, J., & Afari, E. (2016). Students' perceptions of school climate as determinants of wellbeing, resilience and identity. *Improving Schools*, 19(1), 5–26. <https://doi.org/10.1177/1365480215612616>
- Allen, R., Jerrim, J., & Sims, S. (2020). How did the early stages of the COVID-19 pandemic affect teacher wellbeing. Centre for Education Policy and Equalising Opportunities (CEPEO) Working Paper, 1, 20–15. <https://repec-cepeo.ucl.ac.uk/cepeow/old-style/cepeowp20-15.pdf>
- Allen, J., Mahamed, F., & Williams, K. (2020). Disparities in education: E-learning and COVID-19, who matters?. *Child & Youth Services*, 41(3), 208–210.
- Alves, R., Lopes, T., & Precioso, J. (2021). Teachers' wellbeing in times of Covid-19 pandemic: factors that explain professional wellbeing. *IJERI: International Journal of Educational Research and Innovation*, 15, 203–217. <https://doi.org/10.46661/ijeri.5120>

- Amabile, T. M., Barsade, S. G., Mueller, J. S., & Staw, B. M. (2005). Affect and creativity at work. *Administrative science quarterly*, 50(3), 367-403. <https://doi.org/10.2189/asqu.2005.50.3.367>
- Anastasiou, S., & Garametsi, V. (2021). Perceived leadership style and job satisfaction of teachers in public and private schools. *International Journal of Management in Education*, 15(1), 58-77. <https://doi.org/10.1504/IJMIE.2021.111817>
- Anderson, D., Imdieke, S., & Standerford, N. S. (2011). Feedback please: Studying self in the online classroom. *International Journal of Instruction*, 4(1).
- Andrews, H. A. (2011). Supporting quality teachers with recognition. *Australian Journal of Teacher Education*, 36(12), 59-70. <https://doi.org/10.14221/ajte.2011v36n12.5>
- Anna Freud Centre. Supporting Staff Wellbeing in Schools. <https://d1uw1dikibnh8j.cloudfront.net/media/11451/3rdanna-freud-booklet-staff-wellbeing-new-address-april-2020.pdf>
- Antoniou, A. S., Polychroni, F., & Vlachakis, A. N. (2006). Gender and age differences in occupational stress and professional burnout between primary and high-school teachers in Greece. *Journal of Managerial Psychology*, 21(7), 682-690. <https://doi.org/10.1108/02683940610690213>
- Antony, M. M., Bieling, P. J., Cox, B. J., Enns, M. W., & Swinson, R. P. (1998). Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological Assessment*, 10(2), 176.
- Avey, J. B., Luthans, F., Smith, R. M., & Palmer, N. F. (2010). Impact of positive psychological capital on employee wellbeing over time. *Journal of Occupational Health Psychology*, 15(1), 17. <https://doi.org/10.1037/a0016998>
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13(1), 27-45.
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309-328. <https://doi.org/10.1108/02683940710733115>
- Ball, S. J. (2003). The teacher's soul and the terrors of performativity. *Journal of Education Policy*, 18(2), 215-228. <https://doi.org/10.1080/0268093022000043065>
- Balistreri, S., Di Giacomo, F. T., Noisette, I., & Ptak, T. (2012). Global Education: Connections, Concepts, and Careers. Research in Review 2012-4. College Board.
- Bandura, A., & Walters, R. H. (1977). Social learning theory (Vol. 1). Prentice Hall: Englewood cliffs.
- Bardach, L., Klassen, R.M. & Perry, N.E. (2022). Teachers' Psychological Characteristics: Do They Matter for Teacher Effectiveness, Teachers' Wellbeing, Retention, and Interpersonal Relations? An Integrative Review. *Educational Psychology Review*, 34, 259-300. <https://doi.org/10.1007/s10648-021-09614-9>
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: a meta-analysis. *Personnel Psychology*, 44(1), 1-26. <https://doi.org/10.1111/j.1744-6570.1991.tb00688.x>
- Bartlett, L., Martin, A., Neil, A. L., Memish, K., Otahal, P., Kilpatrick, M., & Sanderson, K. (2019). A systematic review and meta-analysis of workplace mindfulness training randomized controlled trials. *Journal of Occupational Health Psychology*, 24(1), 108-126. <https://doi.org/10.1037/ocp0000146>
- Baumeister, H., Reichler, L., Munzinger, M., & Lin, J. (2014). The impact of guidance on Internet-based mental health interventions—A systematic review. *Internet Interventions*, 1(4), 205-215. <https://doi.org/10.1016/j.invent.2014.08.003>
- Bayani, A. A., Koocheky, A. M., & Goodarzi, H. (2007). The reliability and validity of the satisfaction with life scale.
- Beames, J.R., Spanos, S., Roberts, A. et al. Intervention Programs Targeting the Mental Health, Professional Burnout, and/or Wellbeing of School Teachers: Systematic Review and Meta-Analyses. *Educ Psychol Rev* 35, 26 (2023). <https://doi.org/10.1007/s10648-023-09720-w>

- Beck, J., & Young, M. F. D. (2005). The assault on the professions and the restructuring of academic and professional identities: A Bernsteinian analysis. *British Journal of Sociology of Education*, 26(2), 183–197. <https://doi.org/10.1080/0142569042000294165>
- Beltman, S., Mansfield, C. F., & Price, A. (2011). Thriving not just surviving: A review of research on teacher resilience. *Educational Research Review*, 6(3), 185–207. <https://doi.org/10.1016/j.edurev.2011.09.001>
- Benefield, J. (2004). Teachers-the new targets of schoolyard bullies. Wellington: Post Primary Teachers Association New Zealand.
- Benevene, P., De Stasio, S., & Fiorilli, C. (2020). Wellbeing of school teachers in their work environment. *Frontiers in Psychology*, 11, 1239. <https://doi.org/10.3389/fpsyg.2020.01239>
- Benn, R., Akiva, T., Arel, S., & Roeser, R. W. (2012). Mindfulness training effects for parents and educators of children with special needs. *Developmental Psychology*, 48(5), 1476–1487. <https://doi.org/10.1037/a0027537>
- Benson, T., Sladen, J., Liles, A., & Potts, H. W. W. (2019). Personal Wellbeing Score (PWS)—a short version of ONS4: Development and validation in social prescribing. *BMJ Open Quality*, 8(2), e000394. <https://doi.org/10.1136/bmjopen-2018-000394>
- Berkman, L. F., Kawachi, I., & Theorell, T. (2014). Working conditions and health. *Social epidemiology*, 2, 153–181.
- Bérubé, Nicole & Donia, Magda & Gagné, Marylène & Houlfort, Nathalie & Koestner, Richard. (2007). Validation of the Satisfaction with Work Scale, 28.
- Betoret, F. D. (2009). Self-efficacy, school resources, job stressors and burnout among Spanish primary and secondary school teachers: A structural equation approach. *Educational Psychology*, 29(1), 45–68. <https://doi.org/10.1080/01443410802459234>
- Blais, M. R., Lachance, L., Forget, J., Richer, S., & Duhé, D. M. (1991). Satisfaction with work scale [Conference session]. Annual Society for Social Research Conference in Trois-Rivières, Trois-Rivières, Quebec.
- Blanchflower, D. G., & Bryson, A. (2020). Now Unions Increase Job Satisfaction and Wellbeing (No. w27720). National Bureau of Economic Research. <https://doi.org/10.3386/w27720>
- Blum, R. W., Libbey, H. P., Bishop, J. H., & Bishop, M. (2004). School Connectedness—Strengthening Health and Education Outcomes for Teenagers. *Journal of School Health*, 74, 231–235. <https://doi.org/10.1111/j.1746-1561.2004.tb08278.x>
- Billett, P., Turner, K., & Li, X. (2022). Australian teacher stress, wellbeing, self-efficacy, and safety during the COVID-19 pandemic. *Psychology in the Schools*, 1–21. <https://doi.org/10.1002/pits.22713>
- Bloom, D. (2004). Globalization and Education: An Economic Perspective.
- Bogaert, I., De Martelaer, K., Deforche, B., Clarys, P., & Zinzen, E. (2014). Associations between different types of physical activity and teachers' perceived mental, physical, and work-related health. *BMC Public Health*, 14(1), 534. <https://doi.org/10.1186/1471-2458-14-534>
- Bonde, E. H., Fjorback, L. O., Frydenberg, M., & Juul, L. (2022). The effectiveness of mindfulness-based stress reduction for school teachers: A cluster-randomized controlled trial. *European Journal of Public Health*, 32(2), 246–253. <https://doi.org/10.1093/eurpub/ckab223>
- Bowles, T., & Arnup, J. (2016). Should I stay or should I go? Resilience as a protective factor for teachers' intention to leave the teaching profession. *Australian Journal of Education*, 60(3), 229–244. <https://doi.org/10.1177/0004944116667620>
- Boyce, C. J., Wood, A. M., & Powdthavee, N. (2013). Is Personality Fixed? Personality Changes as Much as “Variable” Economic Factors and More Strongly Predicts Changes to Life Satisfaction. *Social Indicators Research*, 111(1), 287–305. [doi:10.1007/s11205-012-0006-z](https://doi.org/10.1007/s11205-012-0006-z)

- Bradburn, N. M. (1969). The structure of psychological well-being.
- Bradshaw, C. P., Waasdorp, T. E., & Leaf, P. J. (2012). Effects of School-Wide Positive Behavioral Interventions and Supports on Child Behavior Problems. *Pediatrics*, 130(5), e1136–e1145. <https://doi.org/10.1542/peds.2012-0243>
- Brady, J., & Wilson, E. (2022). Comparing sources of stress for state and private school teachers in England. *Improving Schools*, 25(2), 205–220. <https://doi.org/10.1177/13654802211024758>
- Briner, R., & Dewberry, C. (2007). Staff wellbeing is key to school success: A research study into the links between staff wellbeing and school performance. Worklife support.
- Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. Harvard University Press.
- Brouskeli, V., Kaltsi, V., & Maria, L. (2018). Resilience and occupational wellbeing of secondary education teachers in Greece. *Issues in Educational Research*, 28, 43–60.
- Brown, L. A., & Roloff, M. E. (2011). Extra-role time, burnout, and commitment: The power of promises kept. *Business Communication Quarterly*, 74(4), 450–474. <https://doi.org/10.1177/1080569911424202>
- Bryson, A., & MacKerron, G. (2017). Are you happy while you work?. *The economic journal*, 127(599), 106–125. <https://doi.org/10.1111/econj.12269>
- Bureau of Labor Statistics, Job Openings and Labour Turnover Survey. (2023). <https://www.bls.gov/jlt/>
- Burić, I., Slišković, A., & Penezić, Z. (2019). Understanding teacher wellbeing: a cross-lagged analysis of burnout, negative student-related emotions, psychopathological symptoms, and resilience. *Educational Psychology*, 39(9), 1136–1155. <https://doi.org/10.1080/01443410.2019.1577952>
- Burke, J., & Minton, S. J. (2019). Well-being in post-primary schools in Ireland: The assessment and contribution of character strengths. *Irish Educational Studies*, 38(2), 177–192. <https://doi.org/10.1080/03323315.2018.1512887>
- Burns, M., & Lawrie, J. (2016). Where It's Needed Most: Quality Professional Development for All Teachers- Summary Document. <https://doi.org/10.13140/RG.2.1.2044.3761>
- Burns, R. A., & Machin, M. A. (2010). Identifying gender differences in the independent effects of personality and psychological wellbeing on two broad affect components of subjective wellbeing. *Personality and Individual Differences*, 48(1), 22–27. <https://doi.org/10.1016/j.paid.2009.08.007>
- Burns, R. A., & Machin, M. A. (2013). Employee and workplace wellbeing: A multi-level analysis of teacher personality and organizational climate in Norwegian teachers from rural, urban and city schools. *Scandinavian Journal of Educational Research*, 57(3), 309–324. <https://doi.org/10.1080/00313831.2012.656281>
- Butler, J., & Kern, M. L. (2016). The PERMA-Profil: A brief multidimensional measure of flourishing. *International Journal of Wellbeing*, 6(3). <https://doi.org/10.5502/ijw.v6i3.526>
- Butt, R. & Retallick, J. (2002). Professional well-being and learning: A study of administrator-teacher workplace relationships. *The Journal of Educational Enquiry*, 3(1), 17–34.
- Buyse, V., & Hollingsworth, H. L. (2009). Program Quality and Early Childhood Inclusion: Recommendations for Professional Development. *Topics in Early Childhood Special Education*, 29(2), 119–128. <https://doi.org/10.1177/0271121409332233>
- Callegari, C., Bertù, L., Lucano, M., Ielmini, M., Braggio, E., & Vender, S. (2016). Reliability and validity of the Italian version of the 14-item Resilience Scale. *Psychology Research and Behavior Management*, 277–284.
- Canadian Teachers Federation. (2020). Teacher Mental Health Check-In Survey. <https://vox.ctf-fce.ca/wp-content/uploads/2020/11/Doc-13-1-Pandemic-Research-Report-Teacher-Mental-Health-Check-in-Survey.pdf>

- Cann, R. F., Riedel-Prabhakar, R., & Powell, D. (2021). A model of positive school leadership to improve teacher wellbeing. *International Journal of Applied Positive Psychology*, 6, 195-218. <https://doi.org/10.1007/s41042-020-00045-5>
- Cantril, H. (1965). *The pattern of human concerns*. New Brunswick, NJ: Rutgers University Press.
- Capone, V., Joshanloo, M., & Park, M. S. A. (2019). Burnout, depression, efficacy beliefs, and work-related variables among school teachers. *International Journal of Educational Research*, 95, 97-108. <https://doi.org/10.1016/j.ijer.2019.02.001>
- Carli, L. L. (2020). Women, gender equality and COVID-19. *Gender in Management: An International Journal*, 35(7/8), 647-655. <https://doi.org/10.1108/GM-07-2020-0236>
- Carmona-Halty, M., Marín-Gutierrez, M., Mena-Chamorro, P., Sepulveda-Páez, G., & Ferrer-Urbina, R. (2022). Flourishing Scale: Adaptation and Evidence of Validity in a Chilean High School Context. *Frontiers in Psychology*, 13, 795452. <https://doi.org/10.3389/fpsyg.2022.795452>
- Carnevale, J. B., & Hatak, I. (2020). Employee adjustment and wellbeing in the era of COVID-19: Implications for human resource management. *Journal of Business Research*, 116, 183-187. <https://doi.org/10.1016/j.jbusres.2020.05.037>
- Carolan, S., Harris, P. R., & Cavanagh, K. (2017). Improving employee wellbeing and effectiveness: systematic review and meta-analysis of web-based psychological interventions delivered in the workplace. *Journal of Medical Internet Research*, 19(7), e271. <https://doi.org/doi:10.2196/jmir.7583>
- Cebolla, A., Demarzo, M., Martins, P., Soler, J., & Garcia-Campayo, J. (2017). Unwanted effects: Is there a negative side of meditation? A multicentre survey. *PLOS ONE*, 12(9), e0183137. <https://doi.org/10.1371/journal.pone.0183137>
- Cefai, C., & Cavioni, V. (2014). *Social and Emotional Education in Primary School: Integrating Theory and Research into Practice*. Springer New York. <https://doi.org/10.1007/978-1-4614-8752-4>
- Centofanti, S., Lushington, K., Wicking, A., Wicking, P., Fuller, A., Janz, P., & Dorrian, J. (2019). Establishing norms for mental well-being in young people (7–19 years) using the General Health Questionnaire-12. *Australian Journal of Psychology*, 71(2), 117-126. <https://doi.org/10.1111/ajpy.12227>
- Chan, J. S., Liu, G., Liang, D., Deng, K., Wu, J., & Yan, J. H. (2019). Special issue—therapeutic benefits of physical activity for mood: a systematic review on the effects of exercise intensity, duration, and modality. *The Journal of Psychology*, 153(1), 102-125. <https://doi.org/10.1080/00223980.2018.1470487>
- Chan, M. K., Sharkey, J. D., Lawrie, S. I., Arch, D. A., & Nylund-Gibson, K. (2021). Elementary school teacher wellbeing and supportive measures amid COVID-19: An exploratory study. *School Psychology*, 36(6), 533. <https://doi.org/10.1037/spq0000441>
- Chaudhury, N., Hammer, J., Kremer, M., Muralidharan, K., & Rogers, F. H. (2006). Missing in action: teacher and health worker absence in developing countries. *Journal of Economic Perspectives*, 20(1), 91-116. <https://doi.org/10.1257/089533006776526058>
- Chen, J., Cheng, H., Zhao, D., Zhou, F., & Chen, Y. (2022). A quantitative study on the impact of working environment on the wellbeing of teachers in China's private colleges. *Scientific Reports*, 12(1), 3417. <https://doi.org/10.1038/s41598-022-07246-9>
- Chen, X., Shao, J., Pu, X., & Wang, Z. (2023). Childhood Maltreatment and Adolescents' Peer Victimization: The Effect of Security, School Connectedness and Gender. *Children and Youth Services Review*, 106843. <https://doi.org/10.1016/j.childyouth.2023.106843>
- Cheng, L., & Lam, C. Y. (2021). The worst is yet to come: the psychological impact of COVID-19 on Hong Kong music teachers. *Music Education Research*, 23(2), 211-224. <https://doi.org/10.1080/14613808.2021.1906215>
- Clifton, J. & Harter, J. (2019) *It's the Manager*. Gallup Press.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 385-396. <https://doi.org/10.2307/2136404>

- Cohen, J. (1992). Statistical Power Analysis. *Current Directions in Psychological Science*, 1(3), 98–101. <https://doi.org/10.1111/1467-8721.ep10768783>
- Coker, A. O., Coker, O. O., & Sanni, D. (2018). Psychometric properties of the 21-item Depression Anxiety Stress Scale (DASS-21). *African Research Review*, 12(2), 135. <https://doi.org/10.4314/afrrrev.v12i2.13>
- Coker, A., & Omoluabi, P. (2009). Validation Of Maslach Burnout Inventory. *IFE Psychologia*, 17(1). <https://doi.org/10.4314/ifep.v17i1.43750>
- Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology*, 104(4), 1189. <https://doi.org/10.1037/a0029356>
- Collie, R. J., Shapka, J. D., Perry, N. E., & Martin, A. J. (2015). Teacher Wellbeing: Exploring Its Components and a Practice-Oriented Scale. *Journal of Psychoeducational Assessment*, 33(8), 744–756. <https://doi.org/10.1177/0734282915587990>
- Collie, R. J., Perry, N. E., & Martin, A. J. (2017). School context and educational system factors impacting educator stress. In T. M. McIntyre, S. E. McIntyre & D. J. Francis (Eds.), *Educator stress: An occupational health perspective* (pp. 3–22). Springer International Publishing. https://doi.org/10.1007/978-3-319-53053-6_1
- Commissaris, D. A., Huysmans, M. A., Mathiassen, S. E., Srinivasan, D., Koppes, L. L., & Hendriksen, I. J. (2016). Interventions to reduce sedentary behavior and increase physical activity during productive work: a systematic review. *Scandinavian Journal of Work, Environment & Health*, 42(3), 181–191. <https://doi.org/10.5271/sjweh.3544>
- Connell, J. P., & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-system processes. In M. R. Gunnar & L. A. Sroufe (Eds.), *Self processes and development* (pp. 43–77). Lawrence Erlbaum Associates, Inc.
- Comprehensive mental health action plan 2013–2030. Geneva: World Health Organization; 2021. Licence: CC BY-NC-SA 3.0 IGO.
- Cook, C. R., Miller, F. G., Fiat, A., Renshaw, T., Frye, M., Joseph, G., & Decano, P. (2017). Promoting secondary teachers' well-being and intentions to implement evidence-based practices: randomized evaluation of the achiever resilience curriculum: Promoting Teachers' Wellbeing. *Psychology in the Schools*, 54(1), 13–28. <https://doi.org/10.1002/pits.21980>
- CooperGibson (2019). School and college staff wellbeing: evidence from England, the UK and comparable sectors. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/937601/Wellbeing-literature-review_final18052020_ap.pdf
- Corbett, L., Bauman, A., Peralta, L. R., Okely, A. D., & Phongsavan, P. (2022). Characteristics and effectiveness of physical activity, nutrition and/or sleep interventions to improve the mental wellbeing of teachers: A scoping review. *Health Education Journal*, 81(2), 196–210. <https://doi.org/10.1177/00178969211062701>
- Corrente, M., Ferguson, K., & Bourgeault, I. L. (2022). Mental Health Experiences of Teachers: A Scoping Review. *Journal of Teaching and Learning*, 16(1), 23–43. <https://doi.org/10.22329/jtl.v16i1.6856>
- Costa, P. T., & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being - happy and unhappy people. *Journal of Personality and Social Psychology*, 38, 668–678. <https://doi.org/10.1037/0022-3514.38.4.668>
- Cotofan, M., De Neve, J. E., Golin, M., Kaats, M., & Ward, G. (2021). Work and wellbeing during COVID-19: Impact, inequalities, resilience, and the future of work. World Happiness Report, 153–190. <https://thecovidirectory.com/wp-content/uploads/2022/03/Work-Wellbeing-during-COVID.pdf>
- Crawford, J., Davis, A., Cowie, H. & Dixon, K. (2016) Women and the ageing workforce: implications for occupational safety and health – a review – executive summary. European Agency for Safety and Health at Work. <https://doi.org/10.2802/082637>
- Crawford, J. R., & Henry, J. D. (2004). The Positive and Negative Affect Schedule (PANAS): Construct validity, measurement properties and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, 43(3), 245–265. <https://doi.org/10.1348/0144665031752934>

- Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology*, 95(5), 834–848. <https://doi.org/10.1037/a0019364>
- Crehan, L. (2016). *Cleverlands: The secrets behind the success of the world's education superpowers*. Unbound.
- Csibra, G., & Gergely, G. (2006). Social learning and social cognition: The case for pedagogy. *Processes of change in brain and cognitive development. Attention and performance XXI*, 21, 249–274.
- Curhan, K. B., Levine, C. S., Markus, H. R., Kitayama, S., Park, J., Karasawa, M., Kawakami, N., Love, G. D., Coe, C. L., Miyamoto, Y., & Ryff, C. D. (2014). Subjective and Objective Hierarchies and Their Relations to Psychological Well-Being: A U.S./Japan Comparison. *Social Psychological and Personality Science*, 5(8), 855–864. <https://doi.org/10.1177/1948550614538461>
- Daniels, K., Gedikli, C., Watson, D., Semkina, A., & Vaughn, O. (2017). Job design, employment practices and wellbeing: A systematic review of intervention studies. *Ergonomics*, 60(9), 1177–1196. <https://doi.org/10.1080/00140139.2017.1303085>
- Daniels, K., Watson, D., Nayani, R., Tregaskis, O., Hogg, M., Etuknwa, A., & Semkina, A. (2021). Implementing practices focused on workplace health and psychological wellbeing: A systematic review. *Social Science & Medicine*, 277, 113888. <https://doi.org/10.1016/j.socscimed.2021.113888>
- De Carlo, A., Girardi, D., Falco, A., Dal Corso, L., & Di Sipio, A. (2019). When does work interfere with teachers' private life? An application of the job demands-resources model. *Frontiers in Psychology*, 10, 1121. <https://doi.org/10.3389/fpsyg.2019.01121>
- Del Boca, D., Oggero, N., Profeta, P., & Rossi, M. (2020). Women's and men's work, housework and childcare, before and during COVID-19. *Review of Economics of the Household*, 18, 1001–1017. <https://doi.org/10.1007/s11150-020-09502-1>
- De Neve, J. E., Krekel, C., & Ward, G. (2018). Work and well-being: A global perspective. Global happiness policy report, 74–128.
- De Neve, J-E., Ward, G. (2023). Measuring Workplace Wellbeing. University of Oxford Wellbeing Research Centre Working Paper 2303. doi.org/10.5287/ora-exxjkdzym
- Diener, E. (1984). Subjective wellbeing. *Psychological Bulletin*, 95(3), 542–575. <https://doi.org/10.1037/0033-2909.95.3.542>
- Diener, E. (2009). The science of well-being: The collected works of Ed Diener (Vol. 37, pp. 11–58). New York: Springer.
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13
- Diener, E., Oishi, S., & Lucas, R. E. (2015). National accounts of subjective well-being. *American Psychologist*, 70(3), 234–242. <https://doi.org/10.1037/a0038899>
- Diener, E., & Suh, M. E. (1998). Subjective well-being and age: An international analysis. In K.W. Schaie & M.P. Lawton (Eds.), *Annual review of gerontology and geriatrics: Vol. 17. Focus on emotion and adult development* (pp. 304–324). New York: Springer.
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. W., Oishi, S., & Biswas-Diener, R. (2010). New wellbeing measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, 97, 143–156. <https://doi.org/10.1007/s11205-009-9493-y>
- Dizon-Ross, E., Loeb, S., Penner, E., & Rochmes, J. (2019). Stress in Boom Times: Understanding Teachers' Economic Anxiety in a High-Cost Urban District. *AERA Open*, 5(4). <https://doi.org/10.1177/2332858419879439>
- Dodge, K. A. (2020). Annual Research Review: Universal and targeted strategies for assigning interventions to achieve population impact. *Journal of Child Psychology and Psychiatry*, 61(3), 255–267. <https://doi.org/10.1111/jcpp.13141>

- Dodge, R., Daly, A., Huyton, J., and Sanders, L. (2012). The challenge of defining wellbeing. *International Journal of Wellbeing*, 2(3), 222–235. <https://doi.org/10.5502/ijw.v2i3.4>.
- Donald, J.N., Bradshaw, E.L., Ryan, R.M., Basarkod, G., Ciarrochi, J., Duineveld, J.J., Guo, J., & Sahdra, B.K. (2020). Mindfulness and Its Association With Varied Types of Motivation: A Systematic Review and Meta-Analysis Using Self-Determination Theory. *Personality and Social Psychology Bulletin*, 46(7), 1121–1138. <https://doi.org/10.1177/0146167219896136>
- Donegani, C.P. and McKay S. (2012). Is there a paradox of lower job satisfaction among trade union members? European evidence. *Transfer: European Review of Labour and Research*, 18(4), 471–489. <https://doi.org/10.1177/1024258912459312>
- Dörnyei, Z., & Ushioda, E. (2013). Teaching and Researching: Motivation (0 ed.). Routledge. <https://doi.org/10.4324/9781315833750>
- Dreer, B. (2022). Teacher well-being: Investigating the contributions of school climate and job crafting. *Cogent Education*, 9(1), 2044583. <https://doi.org/10.1080/2331186X.2022.2044583>
- Dreer, B., & Gouasé, N. (2022). Interventions fostering well-being of schoolteachers: A review of research. *Oxford Review of Education*, 48(5), 587–605. <https://doi.org/10.1080/03054985.2021.2002290>
- Dudenhöffer, S., Claus, M., Schöne, K., Letzel, S., & Rose, D. M. (2017). Sickness presenteeism of German teachers: prevalence and influencing factors. *Teachers and Teaching*, 23(2), 141–152. <https://doi.org/10.1080/13540602.2016.1204284>
- Dweck, C. S. (1999). Self-theories: Their role in motivation, personality, and development. Psychology Press.
- Earthman, G. I., & Lemasters, L. K. (2009). Teacher attitudes about classroom conditions. *Journal of Educational Administration*, 47(3), 323–325. <https://doi.org/10.1108/09578230910955764>
- Edling, S., & Frelin, A. (2013). Doing good? Interpreting teachers' given and felt responsibilities for pupils' well-being in an age of measurement. *Teachers and Teaching*, 19(4), 419–432. <https://doi.org/10.1080/13540602.2013.770234>
- Edmans, A. (2012). The link between job satisfaction and firm value, with implications for corporate social responsibility. *Academy of Management Perspectives*, 26(4), 1–19. <https://doi.org/10.5465/amp.2012.0046>
- Elbaz, S., Richards, J. B., & Provost Savard, Y. (2022). Teleworking and work-life balance during the COVID-19 pandemic: A scoping review. *Canadian Psychology/Psychologie canadienne*. <https://doi.org/10.1037/cap0000330>
- Ellis, A.K. (2013). Research on educational innovations (4th ed.). Routledge.
- Esnaola, I., Benito, M., & Antonio-Agirre, I. (2017). Measurement invariance of the Satisfaction With Life Scale (SWLS) by country, gender and age. *Psicothema*, 29.4, 596–601. <https://doi.org/10.7334/psicothema2016.394>
- Exton, C. and L. Fleischer (2020), "The Future of the OECD Well-being Dashboard", OECD Statistics Working Papers, No. forthcoming, OECD Publishing, Paris.
- Falk, D., Shephard, D., & Mendenhall, M. (2022). "I always take their problem as mine" – Understanding the relationship between teacher-student relationships and teacher well-being in crisis contexts. *International Journal of Educational Development*, 95, 102670. <https://doi.org/10.1016/j.ijedudev.2022.102670>
- Falk, D., Varni, E., Finder J., & Frisoli, P. (2019). Landscape Review: Teacher Well-being in Low Resource, Crisis, and Conflict-affected Settings. Inter-agency Network for Education in Emergencies. https://inee.org/sites/default/files/resources/TWB%20Landscape%20Review_August%202019_0.pdf
- Fallon, L. M., O'Keeffe, B. V., & Sugai, G. (2012). Consideration of Culture and Context in School-Wide Positive Behavior Support: A Review of Current Literature. *Journal of Positive Behavior Interventions*, 14(4), 209–219. <https://doi.org/10.1177/1098300712442242>

- Ferguson, K., Frost, L., & Hall, D. (2012). Predicting teacher anxiety, depression, and job satisfaction. *Journal of Teaching and Learning*, 8(1). <https://doi.org/10.22329/JTL.V8I1.2896>
- Fisher, M. H. (2011). Factors influencing stress, burnout, and retention of secondary teachers. *Current Issues in Education*, 14(1), 1-36.
- Fletcher, G. (2016). *The philosophy of well-being: An introduction*. Routledge.
- Flèche, S. (2017). Teacher quality, test scores and non-cognitive skills: Evidence from primary school teachers in the UK. CEP Discussion Papers (CEPDP1472). Centre for Economic Performance, London School of Economics and Political Science, London.
- Flèche, S. & Layard, R. (2017) Do more of those in misery suffer from poverty, unemployment or mental illness? *Kyklos*, 70(1), 27-41. <https://doi.org/10.1111/kykl.12129>
- Fleming, W. (2023). Estimating effects of individual-level workplace mental wellbeing interventions: Cross-sectional evidence from the UK. <https://doi.org/10.5287/ORA-YED9G7YRO>
- Flook, L., Goldberg, S. B., Pinger, L., Bonus, K., & Davidson, R. J. (2013). Mindfulness for Teachers: A Pilot Study to Assess Effects on Stress, Burnout, and Teaching Efficacy: Mindfulness for Teachers. *Mind, Brain, and Education*, 7(3), 182-195. <https://doi.org/10.1111/mbe.12026>
- Forcella, L., Di Donato, A., Reversi, S., Fattorini, E., & Boscolo, P. (2009). Occupational stress, job insecurity and perception of the health status in Italian teachers with stable or temporary employment. *Journal of Biological Regulators and Homeostatic Agents*, 23(2), 85-93.
- Forsyth, P. B., Barnes, L. L., & Adams, C. M. (2006). Trust-effectiveness patterns in schools. *Journal of Educational Administration*, 44(2), 122-141. <https://doi.org/10.1108/09578230610652024>
- Fox, K. E., Johnson, S. T., Berkman, L. F., Sianoja, M., Soh, Y., Kubzansky, L. D., & Kelly, E. L. (2021). Organisational-and group-level workplace interventions and their effect on multiple domains of worker wellbeing: A systematic review. *Work & Stress*, 36(1), 30-59. <https://doi.org/10.1080/02678373.2021.1969476>
- Frank, J. L., Reibel, D., Broderick, P., Cantrell, T., & Metz, S. (2015). The Effectiveness of Mindfulness-Based Stress Reduction on Educator Stress and Well-Being: Results from a Pilot Study. *Mindfulness*, 6(2), 208-216. <https://doi.org/10.1007/s12671-013-0246-2>
- García-Carmona, M., Marín, M. D., & Aguayo, R. (2019). Burnout syndrome in secondary school teachers: A systematic review and meta-analysis. *Social Psychology of Education*, 22, 189-208. <https://doi.org/10.1007/s11218-018-9471-9>
- Gardner, H. K. (2012). Performance pressure as a double-edged sword: Enhancing team motivation but undermining the use of team knowledge. *Administrative Science Quarterly*, 57(1), 1-46. <https://doi.org/10.1177/0001839212446454>
- Gibbs, S., & Miller, A. (2014). Teachers' resilience and wellbeing: A role for educational psychology. *Teachers and Teaching*, 20(5), 609-621. <https://doi.org/10.1080/13540602.2013.844408>
- Glazerman, S., & Seifullah, A. (n.d.). An Evaluation of the Chicago Teacher Advancement Program (Chicago TAP) After Four Years. Mathematica Policy Research. <https://EconPapers.repec.org/RePEc:mpr:mprres:0d1cb089f9ae47349715889e1b2a9037>
- Glazzard, J., & Rose, A. (2020). The impact of teacher wellbeing and mental health on pupil progress in primary schools. *Journal of Public Mental Health*, 19(4), 349-357. <https://doi.org/10.1108/JPMH-02-2019-0023>
- Gloria, C. T., Faulk, K. E., & Steinhardt, M. A. (2013). Positive affectivity predicts successful and unsuccessful adaptation to stress. *Motivation and Emotion*, 37, 185-193. <https://doi.org/10.1007/s11031-012-9291-8>
- Goldberg, D. P. (1972). General Health Questionnaire-12. *Australian Journal of Psychology*. <https://doi.org/10.1037/t00297-000>

- Goldberg, J. M., Sklad, M., Elfrink, T. R., Schreurs, K. M., Bohlmeijer, E. T., & Clarke, A. M. (2019). Effectiveness of interventions adopting a whole school approach to enhancing social and emotional development: a meta-analysis. *European Journal of Psychology of Education*, 34, 755-782. <https://doi.org/10.1007/s10212-018-0406-9>
- Gonzalez, A., Peters, M. L., Orange, A., & Grigsby, B. (2017). The influence of high-stakes testing on teacher self-efficacy and job-related stress. *Cambridge Journal of Education*, 47(4), 513-531. <http://dx.doi.org/10.1080/0305764X.2016.1214237>
- Good, D. J., Lyddy, C. J., Glomb, T. M., Bono, J. E., Brown, K. W., Duffy, M. K., ... & Lazar, S. W. (2016). Contemplating mindfulness at work: An integrative review. *Journal of Management*, 42(1), 114-142. <https://doi.org/10.1177/014920631561700>
- Gouda, S., Luong, M. T., Schmidt, S., & Bauer, J. (2016). Students and teachers benefit from mindfulness-based stress reduction in a school-embedded pilot study. *Frontiers in Psychology*, 7, 590. <https://doi.org/10.3389/fpsyg.2016.00590>
- Graham, C., & Ruiz Pozuelo, J. (2017). Happiness, stress, and age: How the U curve varies across people and places. *Journal of Population Economics*, 30(1), 225-264. <https://doi.org/10.1007/s00148-016-0611-2>
- Granziera, H., Collie, R. J., & Martin, A. J. (2022). Teacher wellbeing: A complementary variable-and person-centered approach harnessing Job Demands-Resources theory. *Contemporary Educational Psychology*, 71, 102121. <https://doi.org/10.1016/j.cedpsych.2022.102121>
- Graveling, R. A., Crawford, J. O., Cowie, H., Amati, C., & Vohra, S. (2008). A review of workplace interventions that promote mental wellbeing in the workplace. Institute of Occupational Medicine.
- Gray, C., Wilcox, G., & Nordstokke, D. (2017). Teacher mental health, school climate, inclusive education and student learning: A review. *Canadian Psychology/psychologie canadienne*, 58(3), 203. <https://doi.org/10.1037/cap0000117>
- Green, G. R. (2014). Study to investigate self-reported teacher absenteeism and desire to leave teaching as they relate to teacher-reported teaching satisfaction, job-related stress, symptoms of depression, irrational beliefs, and self-efficacy (Publication No. 3632413). [Doctoral dissertation, City University of New York]. ProQuest Dissertations Publishing.
- Green, F., Machin, S., Murphy, R., & Zhu, Y. (2008). Competition for private and state school teachers. Centre for the Economics of Education.
- Grenville-Cleave, B., & Boniwell, I. (2012). Surviving or thriving? Do teachers have lower perceived control and wellbeing than other professions? *Management in Education*, 26(1), 3-5. <https://doi.org/10.1177/0892020611429252>
- Grimani, A., Aboagye, E., & Kwak, L. (2019). The effectiveness of workplace nutrition and physical activity interventions in improving productivity, work performance and workability: a systematic review. *BMC Public Health*, 19, 1-12. <https://doi.org/10.1186/s12889-019-8033-1>
- Guest, D. E. (2017). Human resource management and employee wellbeing: Towards a new analytic framework. *Human Resource Management Journal*, 27(1), 22-38. <https://doi.org/10.1111/1748-8583.12139>
- Guglielmi, R. S., & Tatrow, K. (1998). Occupational stress, burnout, and health in teachers: A methodological and theoretical analysis. *Review of Educational Research*, 68(1), 61-99. <https://doi.org/10.3102/00346543068001061>
- Guskey, T. R., & Yoon, K. S. (2009). What Works in Professional Development? *Phi Delta Kappan*, 90(7), 495-500. <https://doi.org/10.1177/003172170909000709>
- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, 43(6), 495-513. <https://doi.org/10.1016/j.jsp.2005.11.001>
- Hall-Kenyon, K. M., Bullough, R. V., MacKay, K. L., & Marshall, E. E. (2014). Preschool teacher wellbeing: A review of the literature. *Early Childhood Education Journal*, 42(3), 153-162. <https://doi.org/10.1007/s10643-013-0595-4>
- Hallion, L. S., & Ruscio, A. M. (2011). A meta-analysis of the effect of cognitive bias modification on anxiety and depression. *Psychological Bulletin*, 137(6), 940-958. <https://doi.org/10.1037/a0024355>

- Han, J., & Yin, H. (2016). Teacher motivation: Definition, research development and implications for teachers. *Cogent Education*, 3(1), 1217819. <https://doi.org/10.1080/2331186X.2016.1217819>
- Handayani, Y. S. (2023). Management of Teachers-Parents Relationship to Improve Teacher Subjective Well-Being: A Literature Review. *Psychological Research on Urban Society*, 6(1). <https://doi.org/10.7454/proust.v6i1.1106>
- Harding, S., Morris, R., Gunnell, D., Ford, T., Hollingworth, W., Tilling, K., ... & Kidger, J. (2019). Is teachers' mental health and wellbeing associated with students' mental health and wellbeing?. *Journal of Affective Disorders*, 242, 180-187. <https://doi.org/10.1016/j.jad.2018.08.080>
- Hargreaves, A. (1998). The emotional practice of teaching. *Teaching and Teacher Education*, 14(8), 835-854. [https://doi.org/10.1016/S0742-051X\(98\)00025-0](https://doi.org/10.1016/S0742-051X(98)00025-0)
- Hargreaves, A. (2000). Mixed emotions: Teachers' perceptions of their interactions with students. *Teaching and Teacher Education*, 16(8), 811-826. [https://doi.org/10.1016/S0742-051X\(00\)00028-7](https://doi.org/10.1016/S0742-051X(00)00028-7)
- Harris, A. R., Jennings, P. A., Katz, D. A., Abenavoli, R. M., & Greenberg, M. T. (2016). Promoting Stress Management and Wellbeing in Educators: Feasibility and Efficacy of a School-Based Yoga and Mindfulness Intervention. *Mindfulness*, 7(1), 143-154. <https://doi.org/10.1007/s12671-015-0451-2>
- Hartfiel, N., Havenhand, J., Khalsa, S. B., Clarke, G., & Krayner, A. (2011). The effectiveness of yoga for the improvement of well-being and resilience to stress in the workplace. *Scandinavian journal of work, environment & health*, 37(1), 70-76. <https://doi.org/10.5271/sjweh.2916>
- Hascher, T., & Waber, J. (2021). Teacher wellbeing: A systematic review of the research literature from the year 2000-2019. *Educational Research Review*, 34, 100411. <https://doi.org/10.1016/j.edurev.2021.100411>
- Hays, R. D., Sherbourne, C. D., & Mazel, R. M. (1993). The rand 36-item health survey 1.0. *Health Economics*, 2(3), 217-227. <https://doi.org/10.1002/hec.4730020305>
- Health Safety Executive (2022). Work -related Stress, Anxiety and Depression in Great Britain, 2022 <https://www.hse.gov.uk/statistics/causdis/stress.pdf>
- Heber, E., Ebert, D. D., Lehr, D., Cuijpers, P., Berking, M., Nobis, S., & Riper, H. (2017). The benefit of web-and computer-based interventions for stress: a systematic review and meta-analysis. *Journal of Medical Internet Research*, 19(2), e32. <https://doi.org/10.2196/jmir.5774>
- Helliwell, J. F., Layard, R., Sachs, J. D., Aknin, L. B., De Neve, J.-E., & Wang, S. (Eds.). (2023). World Happiness Report 2023 (11th ed.). Sustainable Development Solutions Network.
- Hepburn, S., & McMahon, M. (2017). Pranayama Meditation (Yoga Breathing) for Stress Relief: Is it Beneficial for Teachers?. *Australian Journal of Teacher Education*, 42(9). <http://dx.doi.org/10.14221/ajte.2017v42n99>
- Herrman, H., Stewart, D. E., Diaz-Granados, N., Berger, E. L., Jackson, B., & Yuen, T. (2011). What is resilience?. *The Canadian Journal of Psychiatry*, 56(5), 258-265. <https://doi.org/10.1177/070674371105600504>
- Herman, K. C., Hickmon-Rosa, J. E., & Reinke, W. M. (2018). Empirically derived profiles of teacher stress, burnout, self-efficacy, and coping and associated student outcomes. *Journal of Positive Behavior Interventions*, 20(2), 90-100. <https://doi.org/10.1177/1098300717732066>
- Herzberg-Druker, E., Kristal, T., & Yaish, M. (2022). Does the Pandemic Affect Inequality within Families?: The Case of Dual-Earner Couples in Israel. *Gender & Society*, 36(6), 895-921. <https://doi.org/10.1177/08912432221128222>
- Hobson, A. J., & Maxwell, B. (2017). Supporting and inhibiting the wellbeing of early career secondary school teachers: Extending self-determination theory. *British Educational Research Journal*, 43(1), 168-191. <https://doi.org/10.1002/berj.3261>

- Holochwost, S. J., DeMott, K., Buell, M., Yannetta, K., & Amsden, D. (2009, October). Retention of staff in the early childhood education workforce. In *Child & Youth Care Forum* (Vol. 38, pp. 227-237). Springer.
- Hooda, D., & Sharma, N. (2013). Mental Health among Private and Government School Teachers up to 10th Standards. In D. Hooda & N. Sharma (Eds.), *Mental Health Risks and Resources* (pp. 125-145). Global Vision Publishing House
- Hojo, M. (2021). Student-Teacher Ratio, Work Hours, and Workload Stress Experienced by Teachers. <https://doi.org/10.21203/rs.3.rs-212437/v1>
- Horner, R. H., Sugai, G., & Anderson, C. M. (2017). Examining the Evidence Base for School-Wide Positive Behavior Support. *Focus on Exceptional Children*, 42(8). <https://doi.org/10.17161/fec.v42i8.6906>
- Howard, J. T., & Howard, K. J. (2020). The effect of perceived stress on absenteeism and presenteeism in public school teachers. *Journal of Workplace Behavioral Health*, 35(2), 100-116. <https://doi.org/10.1080/15555240.2020.1724794>
- Huang, S., & Yin, H. (2018). Teacher efficacy and affective wellbeing in Hong Kong: An examination of their relationships and individual differences. *ECNU Review of Education*, 1(2), 102-126. <https://doi.org/10.30926/ecnuoe2018010205>
- Hughes, J., & Kwok, O. M. (2007). Influence of student-teacher and parent-teacher relationships on lower achieving readers' engagement and achievement in the primary grades. *Journal of Educational Psychology*, 99(1), 39-51. <https://doi.org/10.1037/0022-0663.99.1.39>
- Huppert, F. A. (2009). Psychological well-being: Evidence regarding its causes and consequences. *Applied psychology: health and well-being*, 1(2), 137-164.
- Huppert, F. A., & So, T. T. (2013). Flourishing Across Europe: Application of a New Conceptual Framework for Defining Well-Being. *Social indicators research*, 110(3), 837-861. <https://doi.org/10.1007/s11205-011-9966-7>
- Hulls, P. M., Richmond, R. C., Martin, R. M., & de Vocht, F. (2020). A systematic review protocol examining workplace interventions that aim to improve employee health and wellbeing in male-dominated industries. *Systematic Reviews*, 9, 1-7. <https://doi.org/10.1186/s13643-019-1260-9>
- Hwang, Y.-S., Bartlett, B., Greben, M., & Hand, K. (2017). A systematic review of mindfulness interventions for in-service teachers: A tool to enhance teacher wellbeing and performance. *Teaching and Teacher Education*, 64, 26-42. <https://doi.org/10.1016/j.tate.2017.01.015>
- Iancu, A. E., Rusu, A., Măroiu, C., Păcurar, R., & Maricuțoiu, L. P. (2018). The effectiveness of interventions aimed at reducing teacher burnout: A meta-analysis. *Educational psychology review*, 30, 373-396. <https://doi.org/10.1007/s10648-017-9420-8>
- Igarashi, H., & Saito, H. (2014). Cosmopolitanism as cultural capital: Exploring the intersection of globalization, education and stratification. *Cultural Sociology*, 8(3), 222-239. <https://doi.org/10.1177/1749975514523935>
- Ilgan, A., Ozu-Cengiz, O., Ata, A., & Akram, M. (2015). The relationship between teachers' psychological wellbeing and their quality of school work life. *The Journal of Happiness & Wellbeing*, 3(2), 159-181.
- Ilies, R., Huth, M., Ryan, A. M., & Dimotakis, N. (2015). Explaining the links between workload, distress, and work-family conflict among school employees: Physical, cognitive, and emotional fatigue. *Journal of Educational Psychology*, 107(4), 1136-1149. <https://doi.org/10.1037/edu0000029>
- Ingersoll, R. M., & Smith, T. M. (2003). The wrong solution to the teacher shortage. *Educational leadership*, 60(8), 30-33. https://repository.upenn.edu/gse_pubs/126
- International Monetary Fund. (2020). Policy Responses to COVID19. <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19>
- Isen, A. M., Daubman, K. A., & Nowicki, G. P. (1987). Positive affect facilitates creative problem solving. *Journal of personality and social psychology*, 52(6), 1122-1131. <https://doi.org/10.1037/0022-3514.52.6.1122>

- Israel, B. A., Baker, E. A., Goldenhar, L. M., & Heaney, C. A. (1996). Occupational stress, safety, and health: conceptual framework and principles for effective prevention interventions. *Journal of Occupational Health Psychology*, 1(3), 261-286. <https://doi.org/10.1037/1076-8998.1.3.261>
- Jackson, A. T., & Frame, M. C. (2018). Stress, health, and job performance: What do we know?. *Journal of Applied Biobehavioral Research*, 23(4), e12147. <https://doi.org/10.1111/jabr.12147>
- Janovská, A., Orosová, O., & Janovský, J. (2017). Head teacher's social support, personality variables and subjective wellbeing of Slovak primary teachers. *Orbis Scholae*, 10(3), 71-87. <https://doi.org/10.14712/23363177.2017.11>
- Jamal, F., Fletcher, A., Harden, A., Wells, H., Thomas, J., & Bonell, C. (2013). The school environment and student health: a systematic review and meta-ethnography of qualitative research. *BMC Public Health*, 13(1), 1-11. <https://doi.org/10.1186/1471-2458-13-798>
- Jennings, P. A., & DeMauro, A. A. (2017). Individual-Level Interventions: Mindfulness-Based Approaches to Reducing Stress and Improving Performance Among Teachers. In T. M. McIntyre, S. E. McIntyre, & D. J. Francis (Eds.), *Educator Stress* (pp. 319–346). Springer International Publishing. https://doi.org/10.1007/978-3-319-53053-6_14
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79(1), 491-525. <https://doi.org/10.3102/0034654308325693>
- Jennings, P., Snowberg, K., Coccia, M., & Greenberg, M. (2011). Improving classroom learning environments by Cultivating Awareness and Resilience in Education (CARE): Results of two pilot studies. *Journal of Classroom Interactions*, 46, 27-48.
- Jennings, P. A., Frank, J. L., Snowberg, K. E., Coccia, M. A., & Greenberg, M. T. (2013). Improving classroom learning environments by Cultivating Awareness and Resilience in Education (CARE): Results of a randomized controlled trial. *School Psychology Quarterly*, 28(4), 374-390. <https://doi.org/10.1037/spq0000035>
- Jerrim, J., Sims, S., & Allen, R. (2021). The mental health and wellbeing of teachers in England. Quantitative Social Science-UCL Social Research Institute, University College London.
- Jiménez-Mérida, M. R., Romero-Saldaña, M., Molina-Luque, R., Molina-Recio, G., Meneses-Monroy, A., De Diego-Cordero, R., & Vaquero-Abellán, M. (2021). Women-centred workplace health promotion interventions: A systematic review. *International Nursing Review*, 68(1), 90-98. <https://doi.org/10.1111/inr.12637>
- Jiskrova, G. K. (2022). Impact of COVID-19 pandemic on the workforce: from psychological distress to the Great Resignation. *J Epidemiol Community Health*, 76(6), 525-526. <http://dx.doi.org/10.1136/jech-2022-218826>
- Johnson, B., Stevens, J. J., & Zvoch, K. (2007). Teachers' Perceptions of School Climate: A Validity Study of Scores From the Revised School Level Environment Questionnaire. *Educational and Psychological Measurement*, 67(5), 833-844. <https://doi.org/10.1177/0013164406299102>
- Jones, C., Hadley, F., Waniganayake, M., & Johnstone, M. (2019). Find your tribe! Early childhood educators defining and identifying key factors that support their workplace wellbeing. *Australasian Journal of Early Childhood*, 44(4), 326-338. <https://doi.org/10.1177/1836939119870906>
- Joyce, K., Pabayo, R., Critchley, J. A., & Bambra, C. (2010). Flexible working conditions and their effects on employee health and wellbeing. *Cochrane Database of Systematic Reviews*, 2010(2). <https://doi.org/10.1002/14651858.CD008009.pub2>
- Junge, M. N., Lehr, D., Bockting, C. L., Berking, M., Riper, H., Cuijpers, P., & Ebert, D. D. (2015). For whom are internet-based occupational mental health interventions effective? Moderators of internet-based problem-solving training outcome. *Internet Interventions*, 2(1), 39-47. <https://doi.org/10.1016/j.invent.2014.11.007>
- Kärkkäinen, K., & Vincent-Lancrin, S. (2023). Social and emotional skills (SES): Latest evidence on teachability and impact on life outcomes (OECD Education Working Papers 304; OECD Education Working Papers, Vol. 304). <https://doi.org/10.1787/ba34f086-en>

- Katz, D. A., Greenberg, M. T., Jennings, P. A., & Klein, L. C. (2016). Associations between the awakening responses of salivary α -amylase and cortisol with self-report indicators of health and wellbeing among educators. *Teaching and Teacher Education*, 54, 98-106. <https://doi.org/10.1016/j.tate.2015.11.012>
- Kavak, N., Yamak, H., Bilici, S. C., Bozkurt, E., Darici, O., & Ozkaya, Y. (2012). The evaluation of primary and secondary teachers' opinions about in-service teacher training. *Procedia-Social and Behavioral Sciences*, 46, 3507-3511. <https://doi.org/10.1016/j.sbspro.2012.06.094>
- Kazlauskaitė, R., Martinaitytė, I., Lyubovnikova, J., & Augutytė-Kvedaravičienė, I. (2022). The physical office work environment and employee wellbeing: Current state of research and future research agenda. *International Journal of Management Reviews*, 1-30. <https://doi.org/10.1111/ijmr.12315>
- Kelders, S. M., Kok, R. N., Ossebaard, H. C., & Van Gemert-Pijnen, J. E. (2012). Persuasive system design does matter: a systematic review of adherence to web-based interventions. *Journal of Medical Internet Research*, 14(6), e152. <https://doi.org/10.2196/jmir.2104>
- Kensington-Miller, B. (2021). 'My attention shifted from the material I was teaching to student learning': The impact of a community of practice on teacher development for new international academics. *Professional Development in Education*, 47(5), 870-882. <https://doi.org/10.1080/19415257.2019.1677746>
- Kern, M. L., Waters, L., Adler, A., & White, M. (2014). Assessing employee wellbeing in schools using a multifaceted approach: Associations with physical health, life satisfaction, and professional thriving. *Psychology*, 5(6), 500-513. <https://doi.org/10.4236/psych.2014.56060>
- Keyes, C. L. M. (1998). Social wellbeing. *Social Psychology Quarterly*, 121-140. <https://doi.org/10.2307/2787065>
- Keyes C. L. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of consulting and clinical psychology*, 73(3), 539-548. <https://doi.org/10.1037/0022-006X.73.3.539>
- Kidger, J., Brockman, R., Tilling, K., Campbell, R., Ford, T., Araya, R., King, M., & Gunnell, D. (2016). Teachers' wellbeing and depressive symptoms, and associated risk factors: A large cross sectional study in English secondary schools. *Journal of Affective Disorders*, 192, 76-82. <https://doi.org/10.1016/j.jad.2015.11.054>
- Kinser, P. A., & Robins, J. L. (2013). Control Group Design: Enhancing Rigor in Research of Mind-Body Therapies for Depression. *Evidence-Based Complementary and Alternative Medicine*, 2013, 1-10. <https://doi.org/10.1155/2013/140467>
- Kinman, G., Wray, S., & Strange, C. (2011). Emotional labour, burnout and job satisfaction in UK teachers: The role of workplace social support. *Educational Psychology*, 31(7), 843-856. <https://doi.org/10.1080/01443410.2011.608650>
- Kirk, J., & Winthrop, R. (2013). Teaching in contexts of emergency and state fragility. In J. Kirk, M. Dembélé, & S. Baxter (Eds.) *More and better teachers for quality education for all: Identity and motivation, systems and support* (pp. 121-139). Retrieved from <https://moreandbetterteachers.files.wordpress.com/2013/09/more-and-better-teaching-september-2013.pdf>
- Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology*, 102(3), 741-756. <https://doi.org/10.1037/a0019237>
- Klassen, R. M., Yerdelen, S., & Durksen, T. L. (2013). Measuring Teacher Engagement: Development of the Engaged Teachers Scale (ETS). *Frontline Learning Research*, 1(2), 33-52. <https://doi.org/10.14786/flr.v1i2.44>
- Klaperski, S., Koch, E., Hewel, D., Schempp, A., & Müller, J. (2019). Optimizing mental health benefits of exercise: The influence of the exercise environment on acute stress levels and wellbeing. *Mental Health & Prevention*, 15, 200173. <https://doi.org/10.1016/j.mhp.2019.200173>
- Klapproth, F., Federkeil, L., Heinschke, F., & Jungmann, T. (2020). Teachers' Experiences of Stress and Their Coping Strategies during COVID-19 Induced Distance Teaching. *Journal of Pedagogical Research*, 4(4), 444-452. <https://doi.org/10.33902/JPR.2020062805>

- Klassen, R. M., Foster, R. Y., Rajani, S., & Bowman, C. (2009). Teaching in the Yukon: Exploring teachers' efficacy beliefs, stress, and job satisfaction in a remote setting. *International Journal of Educational Research*, 48(6), 381-394. <https://doi.org/10.1016/j.ijer.2010.04.002>
- Klassen, R. M., Yerdelen, S., & Durksen, T. L. (2013). Measuring teacher engagement: development of the engaged teachers scale (ETS). *Frontline Learning Research*, 1(2), 33-52.
- Klusmann, U., Richter, D., & Lüdtke, O. (2016). Teachers' emotional exhaustion is negatively related to students' achievement: Evidence from a large-scale assessment study. *Journal of Educational Psychology*, 108(8), 1193.
- Kling, K. C., Ryff, C. D., Love, G., & Essex, M. (2003). Exploring the Influence of Personality on Depressive Symptoms and Self-Esteem Across a Significant Life Transition. *Journal of Personality and Social Psychology*, 85(5), 922-932. <https://doi.org/10.1037/0022-3514.85.5.922>
- King, E. K., Johnson, A. V., Cassidy, D. J., Wang, Y. C., Lower, J. K., & Kintner-Duffy, V. L. (2016). Preschool teachers' financial wellbeing and work time supports: Associations with children's emotional expressions and behaviors in classrooms. *Early Childhood Education Journal*, 44, 545-553. <https://doi.org/10.1007/s10643-015-0744-z>
- Kilgallon, P., Maloney, C., & Lock, G. (2008). Early Childhood Teachers' Sustainment in the Classroom. *Australian Journal of Teacher Education*, 33(2). <https://doi.org/10.14221/ajte.2008v33n2.3>
- Kniffin, K. M., Narayanan, J., Anseel, F., Antonakis, J., Ashford, S. P., Bakker, A. B., ... & Vugt, M. V. (2021). COVID-19 and the workplace: Implications, issues, and insights for future research and action. *American Psychologist*, 76(1), 63-77. <https://doi.org/10.1037/amp0000716>
- Knight, C., Patterson, M., & Dawson, J. (2017). Building work engagement: A systematic review and meta-analysis investigating the effectiveness of work engagement interventions. *Journal of Organizational Behavior*, 38(6), 792-812. <https://doi.org/10.1002/job.2167>
- Kokkinos, C. M. (2007). Job stressors, personality and burnout in primary school teachers. *British Journal of Educational Psychology*, 77(1), 229-243. <https://doi.org/10.1348/000709905X90344>
- Kongcharoen, J., Onmek, N., Jandang, P., & Wangyisen, S. (2020). Stress and work motivation of primary and secondary school teachers. *Journal of Applied Research in Higher Education*, 12(4), 709-723. <https://doi.org/10.1108/JARHE-04-2019-0088>
- Konu, A., Viitanen, E., & Lintonen, T. (2010). Teachers' wellbeing and perceptions of leadership practices. *International Journal of Workplace Health Management*, 3(1), 44-57. <https://doi.org/10.1108/17538351011031939>
- Koretz, D. (2009). *Measuring Up: What Educational Testing Really Tells Us*. Harvard University Press. <https://www.hup.harvard.edu/catalog.php?isbn=9780674035218>.
- Kossek, E. E., Kalliath, T., & Kalliath, P. (2012). Achieving employee wellbeing in a changing work environment: An expert commentary on current scholarship. *International Journal of Manpower*, 33(7), 738-753. <https://doi.org/10.1108/01437721211268294>
- Kossek, E. E., Ruderman, M. N., Braddy, P. W., & Hannum, K. M. (2012). Work-nonwork boundary management profiles: A person-centered approach. *Journal of Vocational Behavior*, 81(1), 112-128. <https://doi.org/10.1016/j.jvb.2012.04.003>
- Krekel, C., Ward, G., & De Neve, J. E. (2019). Employee well-being, productivity, and firm performance: Evidence and case studies. Global happiness and wellbeing Policy Report.
- Kun, A., & Gadanez, P. (2022). Workplace happiness, well-being and their relationship with psychological capital: A study of Hungarian teachers. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*, 41(1), 185-199. <https://doi.org/10.1007/s12144-019-00550-0>
- Kuoppala, J., Lamminpää, A., Liira, J., & Vainio, H. (2008). Leadership, Job Wellbeing, and Health Effects—A Systematic Review and a Meta-Analysis. *Journal of Occupational and Environmental Medicine*, 50(8), 904-915. <http://www.jstor.org/stable/44997630>

- Kutsyuruba, B., Godden, L., & Bosica, J. (2019). The impact of mentoring on the Canadian early career teachers' well-being. *International Journal of Mentoring and Coaching in Education*, 8(4), 285–309. <https://doi.org/10.1108/IJMCE-02-2019-0035>
- Kuusimäki, A.-M., Uusitalo-Malmivaara, L., & Tirri, K. (2019). The Role of Digital School-Home Communication in Teacher Well-Being. *Frontiers in Psychology*, 10, 2257. <https://doi.org/10.3389/fpsyg.2019.02257>
- Kyriacou, C. (2001). Teacher Stress: Directions for future research. *Educational Review*, 53(1), 27–35. <https://doi.org/10.1080/00131910120033628>
- La Placa, V., McNaught, A., & Knight, A. (2013). Discourse on wellbeing in research and practice. *International Journal of Wellbeing*, 3(1).
- Laguna, M., Mielniczuk, E., & Razmus, W. (2019). Test of the bifactor model of job-related affective well-being. *Europe's Journal of Psychology*, 15(2), 342–357. <https://doi.org/10.5964/ejop.v15i2.1632>
- Langford, S., & Crawford, M. (2022). Walking with teachers: A study to explore the importance of teacher wellbeing and their careers. *Management in Education*, 08920206221075750. <https://doi.org/10.1177/08920206221075750>
- Lau, P. S. Y., Yuen, M. T., & Chan, R. M. C. (2005). Do demographic characteristics make a difference to burnout among Hong Kong secondary school teachers? *Social Indicators Research*, 71, 491–516. <https://doi.org/10.1007/s11205-004-8033-z>
- Lau, P. S., Wang, B., & Myers, J. E. (2017). Measuring the wellness of secondary school teachers in Hong Kong: Adaptation of the Chinese 5F-Wel. *Measurement and Evaluation in Counseling and Development*, 50(1-2), 89–108. <https://doi.org/10.1080/07481756.2017.1327288>
- Latino F, Cataldi S, Fischetti F. Effects of an 8-Week Yoga-Based Physical Exercise Intervention on Teachers' Burnout. *Sustainability* 13: 2104, 2021. doi: 10.3390/su13042104.
- Lavy, S., & Eshet, R. (2018). Spiral effects of teachers' emotions and emotion regulation strategies: Evidence from a daily diary study. *Teaching and Teacher Education*, 73, 151–161. <https://doi.org/10.1016/j.tate.2018.04.001>
- Layard, R., & De Neve, J. E. (2023). Wellbeing: Science and Policy. Cambridge University Press.
- Lazaridou, A., & Pentaris, P. (2016). Mindfulness and spirituality: Therapeutic perspectives. *Person-Centered & Experiential Psychotherapies*, 15(3), 235–244. <https://doi.org/10.1080/14779757.2016.1180634>
- Lester, L., Cefai, C., Cavioni, V., Barnes, A., & Cross, D. (2020). A Whole-School Approach to Promoting Staff Wellbeing. *Australian Journal of Teacher Education*, 45(2), 1–22. <https://doi.org/10.14221/ajte.2020v45n2.1>
- Lester, L., & Cross, D. (2015). The relationship between school climate and mental and emotional wellbeing over the transition from primary to secondary school. *Psychology of Wellbeing*, 5, 1–15. <https://doi.org/10.1186/s13612-015-0037-8>
- Lestyanawati, R., & Widyantoro, A. (2020). The strategies and problems faced by Indonesian teachers in conducting e-learning during COVID-19 outbreak. *CLLiENT (Culture, Literature, Linguistics, and English Teaching)*, 2(1), 71–82. <https://doi.org/10.32699/cllient.v2i1.1271>
- Levin, K. A., & Currie, C. (2014). Reliability and Validity of an Adapted Version of the Cantril Ladder for Use with Adolescent Samples. *Social Indicators Research*, 119(2), 1047–1063. <https://doi.org/10.1007/s11205-013-0507-4>
- Li (2021). Psychological wellbeing, mindfulness, and immunity of teachers in second or foreign language education: a theoretical review. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.720340>
- Li, P.-H., Mayer, D., & Malmberg, L.-E. (2022). Teacher well-being in the classroom: A micro-longitudinal study. *Teaching and Teacher Education*, 115, 103720. <https://doi.org/10.1016/j.tate.2022.103720>

- Liang, W., Song, H., & Sun, R. (2022). Can a professional learning community facilitate teacher well-being in China? The mediating role of teaching self-efficacy. *Educational Studies*, 48(3), 358–377. <https://doi.org/10.1080/03055698.2020.1755953>
- Liddicoat, A.J., Scarino, A. & Kohler, M. (2018). The impact of school structures and cultures on change in teaching and learning: the case of languages. *Curric Perspect*, 38, 3–13. <https://doi.org/10.1007/s41297-017-0021-y>
- Liebowitz, D. D., & Porter, L. (2019). The effect of principal behaviors on student, teacher, and school outcomes: A systematic review and meta-analysis of the empirical literature. *Review of Educational Research*, 89(5), 785–827. <https://doi.org/10.3102/0034654319866133>
- Lindorff, A. (2020). The impact of promoting student wellbeing on student academic and non-academic outcomes: An analysis of the evidence. Oxford University Press - Oxford Impact. <https://ora.ox.ac.uk/objects/uuid:2b562315-8876-4c1f-a173-76a7605ecfed>
- Lizana, P. A., & Vega-Fernandez, G. (2021). Teacher teleworking during the covid-19 pandemic: Association between work hours, work-family balance and quality of life. *International journal of Environmental Research and Public Health*, 18(14), 7566. <https://doi.org/10.3390/ijerph18147566>
- Lochman, J. E. (2003). Commentary: School Contextual Influences on the Dissemination of Interventions. *School Psychology Review*, 32(2), 174–177. <https://doi.org/10.1080/02796015.2003.12086190>
- Lomas, T. (2021). Life balance and harmony: Wellbeing's golden thread. *International Journal of Wellbeing*, 11(1), 50–68. <https://doi.org/10.5502/ijw.v11i1.1477>
- Lund, B., & Wang, T. (2023). Chatting about ChatGPT: How may AI and GPT impact academia and libraries?. *Library Hi Tech News*. 40. 10.1108/LHTN-01-2023-0009.
- Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology*, 60(3), 541–572. <https://doi.org/10.1111/j.1744-6570.2007.00083.x>
- Ma, X., & MacMillan, R. B. (1999). Influences of workplace conditions on teachers' job satisfaction. *The Journal of Educational Research*, 93(1), 39–47. <https://doi.org/10.1080/00220679909597627>
- MacBeath, J., & Galton, M. J. (2008). Teachers Under Pressure. Sage Publications Ltd. <https://www.torrossa.com/en/resources/an/4912348>
- Mackenzie K, Williams C. (2018). Universal, school-based interventions to promote mental and emotional well-being: what is being done in the UK and does it work? A systematic review. *BMJ Open* 2018;8:e022560. 10.1136/bmjopen-2018-022560
- Mailey, E. L., Rosenkranz, S. K., Ablah, E., Swank, A., & Casey, K. (2017). Effects of an intervention to reduce sitting at work on arousal, fatigue, and mood among sedentary female employees. *Journal of Occupational and Environmental Medicine*, 59(12), 1166–1171. <https://doi.org/10.1097/JOM.0000000000001131>
- Mainsbridge, C. P., Cooley, D., Dawkins, S., de Salas, K., Tong, J., Schmidt, M. W., & Pedersen, S. J. (2020). Taking a Stand for Office-Based Workers' Mental Health: The Return of the Microbreak. *Frontiers in Public Health*, 8, 215. <https://doi.org/10.3389/fpubh.2020.00215>
- Manchiraju, S. (2020). Psychometric evaluation of the Ryff's Scale of psychological wellbeing in self-identified American entrepreneurs. *Journal of Business Venturing Insights*, 14, e00204. <https://doi.org/10.1016/j.jbvi.2020.e00204>
- Marken, S., & Agrawal, S. (2022, June 13). K-12 Workers have Highest Burnout Rate in US. Gallop. <https://news.gallup.com/poll/393500/workers-highest-burnout-rate.aspx>
- Marks, N., & Shah, H. (2004). A well-being manifesto for a flourishing society. *Journal of Public Mental Health*, 3(4), 9–15. <https://doi.org/10.1108/17465729200400023>

- Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach Burnout Inventory Manual* (3rd ed.) CPP, Inc.
- Maxwell, S., Reynolds, K. J., Lee, E., Subasic, E., & Bromhead, D. (2017). The impact of school climate and school identification on academic achievement: Multilevel modeling with student and teacher data. *Frontiers in Psychology*, 8, 1-21. <https://doi.org/10.3389/fpsyg.2017.02069>
- Mayer, J. D. & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional Development and Emotional Intelligence: Implications for Educators* (pp. 3-31). Basic Books.
- Mazur, J., Szkulciecka-Dębek, M., Dzielska, A., Drozd, M., & Małkowska-Szkutnik, A. (2018). What does the Cantril Ladder measure in adolescence? *Archives of Medical Science*, 1, 182-189. <https://doi.org/10.5114/aoms.2016.60718>
- McCallum, F. (2020). The changing nature of teachers' work and its impact on wellbeing. *Critical perspectives on teaching, learning and leadership: Enhancing Educational Outcomes*, 17-44. https://doi.org/10.1007/978-981-15-6667-7_2
- McCallum, F. (2021). Teacher and Staff Wellbeing: Understanding the Experiences of School Staff. In: Kern, M.L., Wehmeyer, M.L. (eds) *The Palgrave Handbook of Positive Education*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-64537-3_28
- McCallum, F., & Price, D. (2010). Well teachers, well students. *The Journal of Student Wellbeing*, 4(1), 19-34. <https://doi.org/10.21913/JSW.v4i1.599>
- McCrae, R. R., & Costa, P. T. (1991). Adding Liebe und Arbeit: The Full Five-Factor Model and Well-Being. *Personality and Social Psychology Bulletin*, 17(2), 227-232. <https://doi.org/10.1177/014616729101700217>
- McKenzie, J., Olson, R. E., Patulny, R., Bellocchi, A., & Mills, K. A. (2019). Emotion management and solidarity in the workplace: A call for a new research agenda. *The Sociological Review*, 67(3), 672-688. <https://doi.org/10.1177/0038026118822982>
- McLaughlin, K. A. (2011). The public health impact of major depression: a call for interdisciplinary prevention efforts. *Prevention Science*, 12, 361-371. <https://doi.org/10.1007/s11121-011-0231-8>
- Meiklejohn, J., Phillips, C., Freedman, M. L., Griffin, M. L., Biegel, G., Roach, A., Frank, J., Burke, C., Pinger, L., Soloway, G., Isberg, R., Sibinga, E., Grossman, L., & Saltzman, A. (2012). Integrating Mindfulness Training into K-12 Education: Fostering the Resilience of Teachers and Students. *Mindfulness*, 3(4), 291-307. <https://doi.org/10.1007/s12671-012-0094-5>
- Mendenhall, M. 2017. Strengthening teacher professional development: Local and global communities of practice in Kakuma refugee camp. London, Save the Children, UNHCR and Pearson.
- Mendoza, R. D. (2019). The variation between public and private secondary school teachers in Sulu: Evidence from verbal English fluency, workplace stress, coping mechanism and job performance. *Asian EFL Journal*, 21(2), 359-376.
- Merino, M. D., Privado Zamorano, J., & Durán, R. (2021). Satisfaction with Life Scale (SWLS) adapted to work: Psychometric Properties of the Satisfaction with Work Scale (SWWS). *Anales de Psicología*, 37(3), 557-566. <https://doi.org/10.6018/analesps.430801>
- Micklewright J., Jerrim J., Vignoles A., Jenkins A., Allen R., Ilie S., Bellarbre E., Barrera F., Hein C. (2014). Teachers in England's secondary schools: Evidence from TALIS 2013. Department for Education. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/322910/RR302_-_TALIS_report_NC.pdf
- Mielniczuk, E., & Łaguna, M. (2018). The factorial structure of job-related affective well-being: Polish adaptation of the Warr's measure. *International Journal of Occupational Medicine and Environmental Health*. <https://doi.org/10.13075/ijomeh.1896.01178>
- Milfont, T. L., Denny, S., Ameratunga, S., Robinson, E., & Merry, S. (2008). Burnout and wellbeing: Testing the Copenhagen burnout inventory in New Zealand teachers. *Social Indicators Research*, 89, 169-177. <https://doi.org/10.1007/s11205-007-9229-9>

- Molero, P. P., Ortega, F. Z., Jiménez, J. L. U., & Valero, G. G. (2019). Influence of emotional intelligence and burnout syndrome on teachers wellbeing: A systematic review. *Social Sciences*, 8(6), 185. <https://doi.org/10.3390/socsci8060185>
- Montejo, A. M. R., Fonseca, N. Y., De La Cruz, S. R. P., & Díaz-Camargo, E. (2022). Psychological wellbeing and everyday activities in rural and urban teachers in North of Santander during the COVID-19 pandemic. *Gaceta Medica de Caracas*, S692-S699. <https://doi.org/10.47307/GMC.2022.130.s3.22>
- Moriarty, V., Edmonds, S., Blatchford, P., & Martin, C. (2001). Teaching young children: Perceived satisfaction and stress. *Educational Research*, 43(1), 33-46. <https://doi.org/10.1080/00131880010021276>
- Morris, J. E., Lummis, G. W., Lock, G., Ferguson, C., Hill, S., & Nykiel, A. (2020). The role of leadership in establishing a positive staff culture in a secondary school. *Educational Management Administration & Leadership*, 48(5), 802-820. <https://doi.org/10.1177/1741143219864937>
- Movsessian, J. (2018). The need for teacher recognition and its impact on school culture [MA thesis, California State University San Marcos]. <http://hdl.handle.net/10211.3/2064377>
- Mseleku, Z. (2020). A literature review of E-learning and E-teaching in the era of Covid-19 pandemic. *International Journal of Innovative Science and Research Technology*, 5(10), 588-597.
- Naghieh, A., Montgomery, P., Bonell, C. P., Thompson, M., & Aber, J. L. (2015). Organisational interventions for improving wellbeing and reducing work-related stress in teachers. *Cochrane Database of Systematic Reviews*, (4). <https://doi.org/10.1002/14651858.CD010306.pub2>
- Naghieh, A., Montgomery, P., Bonell, C. P., Thompson, M., & Aber, J. L. (2013). Organisational interventions for improving wellbeing and reducing work-related stress in teachers. In The Cochrane Collaboration (Ed.), *Cochrane Database of Systematic Reviews* (p. CD010306). John Wiley & Sons, Ltd. <https://doi.org/10.1002/14651858.CD010306>
- Neff, K. D. (2003). The Development and Validation of a Scale to Measure Self-Compassion. *Self and Identity*, 2(3), 223-250. <https://doi.org/10.1080/15298860309027>
- Neff, K. D., Bluth, K., Tóth-Király, I., Davidson, O., Knox, M. C., Williamson, Z., & Costigan, A. (2021). Development and Validation of the Self-Compassion Scale for Youth. *Journal of Personality Assessment*, 103(1), 92-105. <https://doi.org/10.1080/00223891.2020.1729774>
- NICE (2022) Mental wellbeing at work. www.nice.org.uk/guidance/ng212
- Nielsen, K., & Abildgaard, J. (2013). Organizational interventions: A research-based framework for the evaluation of both process and effects. *Work & Stress*, 27(3), 278-297. <https://doi.org/10.1080/02678373.2013.812358>
- Nielsen, K., & Miraglia, M. (2017). What works for whom in which circumstances? On the need to move beyond the 'what works?' question in organizational intervention research. *Human Relations*, 70(1), 40-62. <https://doi.org/10.1177/0018726716670226>
- Nielsen, K., Nielsen, M. B., Ogonnaya, C., Käsälä, M., Saari, E., & Isaksson, K. (2017). Workplace resources to improve both employee wellbeing and performance: A systematic review and meta-analysis. *Work & Stress*, 31(2), 101-120. <https://doi.org/10.1080/02678373.2017.1304463>
- Nielsen, K., & Christensen, M. (2021). Positive participatory organizational interventions: A multilevel approach for creating healthy workplaces. *Frontiers in Psychology*, 12, 696245. <https://doi.org/10.3389/fpsyg.2021.696245>
- Noe, R. A., Clarke, A. D., & Klein, H. J. (2014). Learning in the twenty-first-century workplace. *Annual Review of Organizational Psychology and Organizational Behavior*, 1(1), 245-275. <https://doi.org/10.1146/annurev-orgpsych-031413-091321>
- O'Brien, S., McNamara, G., O'Hara, J., & Brown, M. (2022). Learning by doing: Evaluating the key features of a professional development intervention for teachers in data-use, as part of whole school self-evaluation process. *Professional Development in Education*, 48(2), 273-297. <https://doi.org/10.1080/19415257.2020.1720778>

- O'Connor, K. E. (2008). "You choose to care": Teachers, emotions and professional identity. *Teaching and Teacher Education*, 24(1), 117-126. <https://doi.org/10.1016/j.tate.2006.11.008>
- O'Connor, C., Michaels, S., Chapin, S., & Harbaugh, A. G. (2017). The silent and the vocal: Participation and learning in whole-class discussion. *Learning and Instruction*, 48, 5-13. <https://doi.org/10.1016/j.learninstruc.2016.11.003>
- Oducado, R. M., Rabacal, J., & Tamdang, K. (2021). Perceived stress due to COVID-19 pandemic among employed professional teachers. *International Journal of Educational Research and Innovation*, (15), 305-316. <https://doi.org/10.46661/ijeri.5284>
- OECD. (2013). OECD Guidelines on Measuring Subjective Wellbeing. OECD Publishing. <https://doi.org/10.1787/9789264191655-en>.
- OECD. (2014). TALIS 2013 Results: An International Perspective on Teaching and Learning. OECD Publishing. <https://dx.doi.org/10.1787/9789264196261-en>
- OECD. (2019). Education at a Glance 2019: OECD Indicators. OECD Publishing. <https://doi.org/10.1787/f8d7880d-en>.
- OECD. (2020). TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued Professionals. OECD Publishing. <https://doi.org/10.1787/19cf08df-en>.
- OECD. (2021). An Assessment of the Impact of COVID-19 on Job and Skills Demand Using Online Job Vacancy Data. OECD Publishing. https://read.oecd-ilibrary.org/view/?ref=1071_1071334-wh692jshet&title=An-assessment-of-the-impact-of-COVID-19-on-job-and-skills-demand-using-online-job-vacancy-data
- OECD. (2022). The Unequal Impact of COVID-19: A Spotlight on Frontline Workers, Migrants and Racial/ethnic Minorities. OECD Publishing. <https://doi.org/https://doi.org/10.1787/f36e931e-en>
- OECD (2023), Women teachers (indicator). doi: 10.1787/ee964f55-en (Accessed on 24 February 2023)
- Ofsted. (2019). Teacher wellbeing at work in schools and further education providers. Ofsted. <http://hdl.voced.edu.au/10707/568226>.
- Oldham, G. R., & Hackman, J. R. (2010). Not what it was and not what it will be: The future of job design research. *Journal of Organizational Behavior*, 31(2-3), 463-479. <https://doi.org/10.1002/job.678>
- Oprea, B. T., Barzin, L., Vîrgă, D., Iliescu, D., & Rusu, A. (2019). Effectiveness of job crafting interventions: A meta-analysis and utility analysis. *European Journal of Work and Organizational Psychology*, 28(6), 723-741. <https://doi.org/10.1080/1359432X.2019.1646728>
- Orwilius, L., Nilsson, M., Nilsson, E., Wenemark, M., Walfridsson, U., Lundström, M., Taft, C., Palaszewski, B., & Kristenson, M. (2018). The Swedish RAND-36 Health Survey—Reliability and responsiveness assessed in patient populations using Svensson's method for paired ordinal data. *Journal of Patient-Reported Outcomes*, 2(1), 4. <https://doi.org/10.1186/s41687-018-0030-0>
- Owen, L., & Corfe, B. (2017). The role of diet and nutrition on mental health and wellbeing. *Proceedings of the Nutrition Society*, 76(4), 425-426. <https://doi.org/10.1017/S0029665117001057>
- Ozamiz-Etxebarria, N., Idoiaga Mondragon, N., Dosil Santamaría, M., & Picaza Gorrotxategi, M. (2020). Psychological symptoms during the two stages of lockdown in response to the COVID-19 outbreak: an investigation in a sample of citizens in Northern Spain. *Frontiers in Psychology*, 1491. <https://doi.org/10.3389/fpsyg.2020.01491>
- Ozemek, C., Lavie, C. J., & Rognmo, Ø. (2019). Global physical activity levels—Need for intervention. *Progress in Cardiovascular Diseases*, 62(2), 102-107. <https://doi.org/10.1016/j.pcad.2019.02.004>
- Özü, Ö., Zepeda, S., Ilgan, A., Jimenez, A. M., Ata, A., & Akram, M. (2017). Teachers' psychological wellbeing: a comparison among teachers in USA, Turkey and Pakistan. *International Journal of Mental Health Promotion*, 19(3), 144-158. <https://dx.doi.org/10.1080/14623730.2017.1326397>

- Palomera, R., Fernández-Berrocal, P., & Brackett, M. A. (2008). Emotional intelligence as a basic competency in pre-service teacher training: Some evidence. *Electronic Journal of Research in Educational Psychology*, 6(2), 437-454.
- Panari, C., & Simbula, S. (2016). Presenteeism "on the desk": The relationships with work responsibilities, work-to-family conflict and emotional exhaustion among Italian schoolteachers. *International Journal of Workplace Health Management*, 9(1), 84-95. <https://doi.org/10.1108/IJWHM-11-2013-0047>
- Pérez-Fuentes, M. C., Molero Jurado, M. M., Simón Márquez, M. M., Oropesa Ruiz, N. F., & Gázquez Linares, J. J. (2020). Validation of the Maslach Burnout Inventory-Student Survey in Spanish adolescents. *Psicothema*, 32.3, 444-451. <https://doi.org/10.7334/psicothema2019.373>
- Perrachione, B. A., Rosser, V. J., & Petersen, G. J. (2008). Why Do They Stay? Elementary Teachers' Perceptions of Job Satisfaction and Retention. *Professional Educator*, 32(2).
- Petrovski, V., Miraschieva, S., & Petrova Gjorgjeva, E. (2011). Multiculturalism, globalization and the implications on education. *Procedia - Social and Behavioral Sciences*, 15, 1366-1371. [10.1016/j.sbspro.2011.03.294](https://doi.org/10.1016/j.sbspro.2011.03.294)
- Pfeffer, F. T. (2015). Equality and quality in education. A comparative study of 19 countries. *Social Science Research*, 51, 350-368. <https://doi.org/10.1016/j.ssresearch.2014.09.004>
- Pieper, C., Schröer, S., & Eilerts, A. L. (2019). Evidence of workplace interventions—a systematic review of systematic reviews. *International Journal of Environmental Research and Public Health*, 16(19), 3553. <https://doi.org/10.3390/ijerph16193553>
- Pietarinen, J., Pyhältö, K., Soini, T., & Salmela-Aro, K. (2013). Reducing teacher burnout: A socio-contextual approach. *Teaching and Teacher Education*, 35, 62-72. <https://doi.org/10.1016/j.tate.2013.05.003>
- Plenty, S., Östberg, V., Almquist, Y. B., Augustine, L., & Modin, B. (2014). Psychosocial working conditions: An analysis of emotional symptoms and conduct problems amongst adolescent students. *Journal of Adolescence*, 37(4), 407-417. <https://doi.org/10.1016/j.adolescence.2014.03.008>
- Popov, N. (2012). Structures of School Systems Worldwide: A Comparative Study. Bulgarian Comparative Education Society.
- Postholm, M. B. (2012). Teachers' professional development: A theoretical review. *Educational Research*, 54(4), 405-429. <https://doi.org/10.1080/00131881.2012.734725>
- Pressley, T., Ha, C., & Learn, E. (2021). Teacher stress and anxiety during COVID-19: An empirical study. *School Psychology*, 36(5), 367-376. <https://doi.org/10.1037/spq0000468>
- Puertas Molero, P., Zurita Ortega, F., Ubago Jiménez, J. L., & González Valero, G. (2019). Influence of Emotional Intelligence and Burnout Syndrome on Teachers Well-Being: A Systematic Review. *Social Sciences*, 8(6), 185. <https://doi.org/10.3390/socsci8060185>
- Radloff, L. S. (1977). The CES-D Scale: A Self-Report Depression Scale for Research in the General Population. *Applied Psychological Measurement*, 1(3), 385-401. <https://doi.org/10.1177/014662167700100306>
- Raja, R., & Nagasubramani, P. C. (2018). Impact of modern technology in education. *Journal of Applied and Advanced Research*, 3(1), 33-35. <https://dx.doi.org/10.21839/jaar.2018.v3S1.165>
- Rand, C. S. W. & Wright, B. A. (2000). Thinner females and heavier males: Who says? A comparison of female to male ideal body sizes across a wide age span. *International Journal of Eating Disorders*, 29, 45-50.
- Rannastu-Avalos, M., & Siiman, L. A. (2020). Challenges for distance learning and online collaboration in the time of COVID-19: Interviews with science teachers. In Collaboration Technologies and Social Computing: 26th International Conference, CollabTech 2020, Tartu, Estonia, September 8-11, 2020, *Proceedings 26* (pp.128-142). Springer International Publishing.

- Rath, T., & Harter, J. (2010). *Wellbeing: The five essential elements*. Gallup Press
- Redín, C. I., & Erro-Garcés, A. (2020). Stress in teaching professionals across Europe. *International Journal of Educational Research*, 103, 101623. <https://doi.org/10.1016/j.ijer.2020.101623>
- Rego, A. (2009). Do the opportunities for learning and personal development lead to happiness? It depends on work-family conciliation. *Journal of Occupational Health Psychology*, 14(3), 334–348. <https://doi.org/10.1037/a0014248>.
- Reimers, F.M. (2022). Learning from a Pandemic. The Impact of COVID-19 on Education Around the World. In: Reimers, F.M. (Ed.), *Primary and Secondary Education During Covid-19*. Springer. https://doi.org/10.1007/978-3-030-81500-4_1.
- Renshaw, T. L., Long, A. C., & Cook, C. R. (2015). Assessing teachers' positive psychological functioning at work: Development and validation of the Teacher Subjective Wellbeing Questionnaire. *School Psychology Quarterly*, 30(2), 289–306. <https://doi.org/10.1037/spq0000112>
- Retallick, J., & Butt, R. (2004). Professional wellbeing and learning: A study of teacher-peer workplace relationships. *The Journal of Educational Enquiry*, 5(1), 85–99.
- Richards, J. (2012). *Teacher stress and coping strategies: A national snapshot*. Taylor & Francis Group. <https://doi.org/10.1080/00131725.2012.682837>
- Richardson, K. M., & Rothstein, H. R. (2008). Effects of occupational stress management intervention programs: a meta-analysis. *Journal of Occupational Health Psychology*, 13(1), 69–93. <https://doi.org/10.1037/1076-8998.13.1.69>
- Richardson, P. W., & Watt, H. M. G. (2010). Current and future directions in teacher motivation research. In T. C. Urdan & S. A. Karabenick (Eds.), *Advances in Motivation and Achievement* (Vol. 16, pp. 139–173). Emerald Group Publishing Limited. [https://doi.org/10.1108/S0749-7423\(2010\)000016B008](https://doi.org/10.1108/S0749-7423(2010)000016B008)
- Riketta, M. (2008). The causal relation between job attitudes and performance: A meta-analysis of panel studies. *Journal of Applied Psychology*, 93(2), 472–481. <https://doi.org/10.1037/0021-9010.93.2.472>
- Roberts, B. W., & DelVecchio, W. F. (2000). The rankorder consistency of personality traits from childhood to old age: A quantitative review of longitudinal studies. *Psychological Bulletin*, 126(1), 3–25. <https://doi.org/10.1037/0033-2909.126.1.3>
- Robertson, I. T., Cooper, C. L., Sarkar, M., & Curran, T. (2015). Resilience training in the workplace from 2003 to 2014: A systematic review. *Journal of Occupational and Organizational Psychology*, 88(3), 533–562. <https://doi.org/10.1111/joop.12120>
- Robinson, L., Cotten, S. R., Ono, H., Quan-Haase, A., Mesch, G., Chen, W., ... & Stern, M. J. (2015). Digital inequalities and why they matter. *Information, Communication & Society*, 18(5), 569–582. <https://doi.org/10.1080/1369118X.2015.1012532>
- Roeser, R. W., Schonert-Reichl, K. A., Jha, A., Cullen, M., Wallace, L., Wilensky, R., Oberle, E., Thomson, K., Taylor, C., & Harrison, J. (2013). Mindfulness training and reductions in teacher stress and burnout: Results from two randomized, waitlist-control field trials. *Journal of Educational Psychology*, 105(3), 787–804. <https://doi.org/10.1037/a0032093>
- Rogers, C. R. (1961). *On becoming a person: A therapist's view of psychotherapy*. Boston: Houghton Mifflin.
- Rogerson, M., Wood, C., Pretty, J., Schoenmakers, P., Bloomfield, D., & Barton, J. (2020). Regular doses of nature: The efficacy of green exercise interventions for mental wellbeing. *International journal of environmental research and public health*, 17(5), 1526.
- Romano, J. L., & Wahlstrom, K. (2000). Professional stress and wellbeing of K-12 teachers in alternative educational settings: a leadership agenda. *International Journal of Leadership in Education*, 3(2), 121–135. <https://doi.org/10.1080/136031200292777>
- Roodbari, H., Axtell, C., Nielsen, K. (2022) Organisational interventions to improve employees' health and wellbeing: A realist synthesis. *Applied Psychology*, 71(3), 1058–1081. <https://doi.org/10.1111/apps.12346>

- Roorda, D. L., Koomen, H. M., Spilt, J. L., & Oort, F. J. (2011). The influence of affective teacher–student relationships on students' school engagement and achievement: A meta-analytic approach. *Review of Educational Research*, 81(4), 493–529. <https://doi.org/10.3102/003465431142179>
- Roothman, B., Kirsten, D., & Wissing, M. (2003). Gender Differences in Aspects of psychological wellbeing. *South African Journal of Psychology*, 33(4), 212–218. <https://doi.org/10.1177/008124630303300403>
- Rosales-Ricardo, Y., Orozco, D., Yaulema, L., Parreño, Á., Caiza, V., Barragán, V., Ríos, A., & Peralta, L. (2017). Actividad física y salud en docentes. Una revisión. *Apunts. Medicina de l'Esport*, 52(196), 159–166. <https://doi.org/10.1016/j.apunts.2016.07.004>
- Roser, M., & Ortiz-Ospina, E. (2016). Literacy. OurWorldInData. Retrieved from: <https://ourworldindata.org/literacy#citation>
- Ross, S. W., Romer, N., & Horner, R. H. (2012). Teacher Well-Being and the Implementation of School-Wide Positive Behavior Interventions and Supports. *Journal of Positive Behavior Interventions*, 14(2), 118–128. <https://doi.org/10.1177/1098300711413820>
- Rowe, F., Stewart, D., & Patterson, C. (2007). Promoting school connectedness through whole school approaches. *Health Education*, 107(6), 524–542. <https://doi.org/10.1108/09654280710827920>
- Rowan, B., Chiang, F. S., & Miller, R. J. (1997). Using research on employees' performance to study the effects of teachers on students' achievement. *Sociology of Education*, 256–284. <https://doi.org/10.2307/2673267>
- Royer, N., & Moreau, C. (2016). A survey of Canadian early childhood educators' psychological wellbeing at work. *Early Childhood Education Journal*, 44, 135–146. <https://doi.org/10.1007/s10643-015-0696-3>
- Rudolph, C. W., Katz, I. M., Lavigne, K. N., & Zacher, H. (2017). Job crafting: A meta-analysis of relationships with individual differences, job characteristics, and work outcomes. *Journal of Vocational Behavior*, 102, 112–138. <https://doi.org/10.1016/j.jvb.2017.05.008>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and wellbeing. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/110003-066X.55.1.68>
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological wellbeing. *Journal of Personality and Social Psychology*, 57(6), 106–1081. <https://doi.org/10.1037/0022-3514.57.6.1069>
- Ryff C. D. (2014). Psychological well-being revisited: advances in the science and practice of eudaimonia. *Psychotherapy and psychosomatics*, 83(1), 10–28. <https://doi.org/10.1159/000353263>
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological wellbeing revisited. *Journal of Personality and Social Psychology*, 69(4), 719–727. <https://doi.org/10.1037/0022-3514.69.4.719>
- Sackney, L., Noonan, B., & Miller, C. M. (2000). Leadership for educator wellness: An exploratory study. *International Journal of Leadership in Education*, 3(1), 41–56. <https://doi.org/10.1080/136031200292858>
- Sadick, A. M., & Issa, M. H. (2017). Occupants' indoor environmental quality satisfaction factors as measures of school teachers' wellbeing. *Building and Environment*, 119, 99–109. <https://doi.org/10.1016/j.buildenv.2017.03.045>
- Samier, E. (2002). Weber on Education and its Administration: Prospects for Leadership in a Rationalized World. *Educational Management & Administration*, 30(1), 27–45. <https://doi.org/10.1177/0263211X020301006>
- Sanders, M. R., & Morawska, A. (2010). Prevention: The role of early universal and targeted interventions. In R. C. Murrihy, A. D. Kidman, & T. H. Ollendick (Eds.), *Clinical handbook of assessing and treating conduct problems in youth* (pp. 435–454). Springer Science and Business Media. https://doi.org/10.1007/978-1-4419-6297-3_17
- Sandilos, L. E., Goble, P., Rimm-Kaufman, S. E., & Pianta, R. C. (2018). Does professional development reduce the influence of teacher stress on teacher–child interactions in pre-kindergarten classrooms? *Early Childhood Research Quarterly*, 42, 280–290. <https://doi.org/10.1016/j.ecresq.2017.10.009>

- Sayeed, A., Kundu, S., Al Banna, M., Christopher, E., Hasan, M. T., Rasheda Begum, M., ... & Islam Khan, M. S. (2020). Mental health outcomes of adults with comorbidity and chronic diseases during the COVID-19 pandemic: a matched case-control study. *Psychiatra Danubina*, 32(3-4), 491-498. <https://doi.org/10.24869/psyd.2020.491>
- Schaack, D. D., Le, V. N., & Stedron, J. (2020). When fulfillment is not enough: Early childhood teacher occupational burnout and turnover intentions from a job demands and resources perspective. *Early Education and Development*, 31(7), 1011-1030. <https://doi.org/10.1080/10409289.2020.1791648>
- Schaubman, A., Steston, E., & Plog, A. (2011). Reducing teacher stress by implementing collaborative problem-solving in school setting. *School Social Work Journal*, 35(2), 72-93. <https://iassw.org/about/school-social-work-journal/>
- Scheuch, K., Haufe, E., & Seibt, R. (2015). Teachers' health. *Deutsches Ärzteblatt International*, 112(20), 347-356. <https://doi.org/10.3238/arztebl.2015.0347>
- Schimmack, U., Radhakrishnan, P., Oishi, S., Dzokoto, V., & Ahadi, S. (2002). Culture, personality, and subjective well-being: integrating process models of life satisfaction. *Journal of personality and social psychology*, 82(4), 582.
- Schleicher, A. & Reimers, F. (2020). Schooling Disrupted, Schooling Rethought: How the COVID-19 Pandemic is Changing Education, OECD, https://read.oecdilibrary.org/view/?ref=133_133390-1rtuknc0hi&title=Schooling-disrupted-schooling-rethought-How-the-Covid-19-pandemic-is-changing-education
- Schmidt, S. W. (2010). The relationship between job training and job satisfaction: A review of literature. *International Journal of Adult Vocational Education and Technology (Ijivet)*, 1(2), 19-28. <https://doi.org/10.4018/javet.2010040103>
- Schmitt, J., & deCourcy, K. (2022). The pandemic has exacerbated a long-standing national shortage of teachers. Economic Policy Institute. <https://www.epi.org/publication/shortage-of-teachers/>
- Schmutte, P. S., & Ryff, C. D. (1997). Personality and well-being: Reexamining methods and meanings. *Journal of Personality and Social Psychology*, 73(3), 549-559. <https://doi.org/10.1037/0022-3514.73.3.549>
- Scheuch, K., Haufe, E., & Seibt, R. (2015). Teachers' Health. *Deutsches Ärzteblatt International*. <https://doi.org/10.3238/arztebl.2015.0347>
- Schussler, D. L., Jennings, P. A., Sharp, J. E., & Frank, J. L. (2016). Improving Teacher Awareness and Well-Being Through CARE: A Qualitative Analysis of the Underlying Mechanisms. *Mindfulness*, 7(1), 130-142. <https://doi.org/10.1007/s12671-015-0422-7>
- Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied Psychology*, 57, 152-171. <https://doi.org/10.1111/j.1464-0597.2008.00359.x>
- Schwarzer, R., Schmitz, G. S., and Daytner, G. T. (1999). Teacher Self-efficacy. Available at: <https://www.statisticssolutions.com/wp-content/uploads/wp-post-to-pdf-enhanced-cache/1/teacher-self-efficacy-scale.pdf>
- Seligman, M. E. P. (1991). Learned optimism. Random House.
- Seligman, M. (2011). Flourish. Free Press.
- Seligman, M. (2018). PERMA and the building blocks of well-being. *The Journal of Positive Psychology*, 13(4), 333-335. <https://doi.org/10.1080/17439760.2018.1437466>
- Seligman, M.E.P., Csikszentmihalyi, M. (2000). Positive Psychology: An Introduction. In: Flow and the Foundations of Positive Psychology (pp. 279-298). Springer. https://doi.org/10.1007/978-94-017-9088-8_18
- Seibt, R., Spitzer, S., Druschke, D., Scheuch, K., & Hinz, A. (2013). Predictors of mental health in female teachers. *International Journal of Occupational Medicine and Environmental Health*, 26, 856-869. <https://doi.org/10.2478/s13382-013-0161-8>

- Shallcross, A. J., Lu, N. Y., & Hays, R. D. (2020). Evaluation of the Psychometric Properties of the Five Facet of Mindfulness Questionnaire. *Journal of Psychopathology and Behavioral Assessment*, 42(2), 271–280. <https://doi.org/10.1007/s10862-019-09776-5>
- Shann, M. H. (1998). Professional commitment and satisfaction among teachers in urban middle schools. *The Journal of Educational Research*, 92(2), 67–73. <https://doi.org/10.1080/00220679809597578>
- Shapiro, S. L., Astin, J. A., Bishop, S. R., & Cordova, M. (2005). Mindfulness-based stress reduction for health care professionals: results from a randomized trial. *International Journal of Stress Management*, 12(2), 164 – 176. <https://doi.org/10.1037/1072-5245.12.2.164>
- Shin, D. C., & Johnson, D. M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social indicators research*, 5, 475–492.
- Shirmohammadi, M., Au, W. C., & Beigi, M. (2022). Remote work and work-life balance: Lessons learned from the covid-19 pandemic and suggestions for HRD practitioners. *Human Resource Development International*, 25(2), 163–181. <https://doi.org/10.1080/13678868.2022.2047380>
- Shukla, J., & Singh, R. M. (2021). Psychological Health amidst COVID-19: A Review of existing literature in the Indian Context. *Clinical Epidemiology and Global Health*, 11, 100736. <https://doi.org/10.1016/j.cegh.2021.100736>
- Sims, S. (2020). Modelling the relationships between teacher working conditions, job satisfaction and workplace mobility. *British Educational Research Journal*, 46(2), 301–320. <https://doi.org/10.1002/berj.3578>
- Sims, S., & Jerrim, J. (2020). TALIS 2018: Teacher Working Conditions, Turnover and Attrition. Statistical Working Paper. UK Department for Education. Castle View House East Lane, Runcorn, Cheshire, WA7 2GJ, UK.
- Sinclair, C. (2008). Initial and changing student teacher motivation and commitment to teaching. *Asia-Pacific Journal of Teacher Education*, 36(2), 79–104. <https://doi.org/10.1080/13598660801971658>
- Singh, S. K., Pradhan, R. K., Panigrahy, N. P., & Jena, L. K. (2019). Self-efficacy and workplace well-being: Moderating role of sustainability practices. *Benchmarking: An International Journal*, 26(6), 1692–1708. <https://doi.org/10.1108/BIJ-07-2018-0219>
- Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, 26(4), 1059–1069. <https://doi.org/10.1016/j.tate.2009.11.001>
- Skaalvik, E. M., & Skaalvik, S. (2011). Teacher job satisfaction and motivation to leave the teaching profession: Relations with school context, feeling of belonging, and emotional exhaustion. *Teaching and Teacher Education*, 27(6), 1029–1038. <https://doi.org/10.1016/j.tate.2011.04.001>
- Skaalvik, E. M., & Skaalvik, S. (2018). Job demands and job resources as predictors of teacher motivation and well-being. *Social Psychology of Education: An International Journal*, 21(5), 1251–1275. <https://doi.org/10.1007/s11218-018-9464-8>
- Skakon, J., Nielsen, K., Borg, V., & Guzman, J. (2010). Are leaders' wellbeing, behaviours and style associated with the affective wellbeing of their employees? A systematic review of three decades of research. *Work & Stress*, 24(2), 107–139. <https://doi.org/10.1080/02678373.2010.495262>
- Soini, T., Pyhältö, K., & Pietarinen, J. (2010). Pedagogical well-being: Reflecting learning and well-being in teachers' work. *Teachers and Teaching*, 16(6), 735–751. <https://doi.org/10.1080/13540602.2010.517690>
- Somech, A., & Bogler, R. (2002). Antecedents and Consequences of Teacher Organizational and Professional Commitment. *Educational Administration Quarterly*, 38(4), 555–577. <https://doi.org/10.1177/001316102237672>
- Sonnentag, S., Binnewies, C., & Mojza, E. J. (2010). Staying well and engaged when demands are high: The role of psychological detachment. *Journal of Applied Psychology*, 95(5), 965–976. <https://doi.org/10.1037/a0020032>

- Sørli, M.-A. (2021). Structural, cultural and instructional predictors essential to sustained implementation fidelity in schools: The School-Wide Positive Behavior Support Model (SWPBS). *International Journal of Educational Research Open*, 2, 100082. <https://doi.org/10.1016/j.ijedro.2021.100082>
- Sørli, M.-A., Ogden, T., & Olseth, A. R. (2016). Examining Teacher Outcomes of the School-Wide Positive Behavior Support Model in Norway: Perceived Efficacy and Behavior Management. *SAGE Open*, 6(2), 215824401665191. <https://doi.org/10.1177/2158244016651914>
- Soykan, A., Gardner, D., & Edwards, T. (2019). Subjective wellbeing in New Zealand teachers: An examination of the role of psychological capital. *Journal of Psychologists and Counsellors in Schools*, 29(2), 130-138. <https://doi.org/10.1017/jgc.2019.14>
- Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the job satisfaction survey. *American Journal of Community Psychology*, 13(6), 693.
- Spilt, J. L., Koomen, H. M., & Thijs, J. T. (2011). Teacher wellbeing: The importance of teacher–student relationships. *Educational Psychology Review*, 23, 457-477. <https://doi.org/10.1007/s10648-011-9170-y>
- Stankovska, G., Angelkoska, S., Osmani, F., Grncarovska, S.P. Job Motivation and Job Satisfaction among Academic Staff in Higher Education. In Popov, N., Wolhuter, C., Kalin, J., Hilton, G., Ogunleye, J., Niemczyk, E., & Chigisheva, O. (Eds.). (2017). *Current Business and Economics Driven Discourse and Education: Perspectives from around the World*. BCES Conference Books, Volume 15. Distributed by ERIC Clearinghouse.
- Steffgen, G., & Ewen, N. (2007). Teachers as victims of school violence. The influence of strain and school culture. *International journal on violence and schools*, 3(1), 81-93.
- Steptoe, A., Deaton, A., & Stone, A. A. (2015). Subjective wellbeing, health, and ageing. *Lancet*, 385 (9968), 640–648. [https://doi.org/10.1016/S0140-6736\(13\)61489-0](https://doi.org/10.1016/S0140-6736(13)61489-0)
- Stoeber, J., & Rennert, D. (2008). Perfectionism in school teachers: Relations with stress appraisals, coping styles, and burnout. *Anxiety, Stress, and Coping*, 21(1), 37-53. <https://doi.org/10.1080/10615800701742461>
- Stratton, E., Lampit, A., Choi, I., Calvo, R. A., Harvey, S. B., & Glozier, N. (2017). Effectiveness of eHealth interventions for reducing mental health conditions in employees: a systematic review and meta-analysis. *PloS One*, 12(12), e0189904. <https://doi.org/10.1371/journal.pone.0189904>
- Strickland, J., Kinghorn, A., Evanoff, B., & Dale, A. (2019). Implementation of the Healthy Workplace Participatory Program in a Retail Setting: A Feasibility Study and Framework for Evaluation. *International Journal of Environmental Research and Public Health*, 16(4), 590. <https://doi.org/10.3390/ijerph16040590>
- Soini, T., Pyhältö, K., & Pietarinen, J. (2010). Pedagogical wellbeing: reflecting learning and wellbeing in teachers' work. *Teachers and Teaching: Theory and Practice*, 16(6), 735-751. <https://doi.org/10.1080/13540602.2010.517690>
- Sonnentag, S., Binnewies, C., & Mojza, E. J. (2010). Staying well and engaged when demands are high: the role of psychological detachment. *Journal of Applied Psychology*, 95(5), 965 - 976. <https://doi.org/10.1037/a0020032>
- Somech, A., & Bogler, R. (2002). Antecedents and consequences of teacher organizational and professional commitment. *Educational Administration Quarterly*, 38(4), 555-577. <https://doi.org/10.1177/001316102237672>
- Soykan, A., Gardner, D., & Edwards, T. (2019). Subjective wellbeing in New Zealand teachers: An examination of the role of psychological capital. *Journal of Psychologists and Counsellors in Schools*, 29(2), 130-138. <https://doi.org/10.1017/jgc.2019.14>
- Sundaram, N., Abramsky, T., Oswald, W. E., Cook, S., Halliday, K. E., Nguipodop-Djomo, P., ... & COVID-19 Schools Infection Survey Study Group. (2022). Implementation of COVID-19 Preventive Measures and Staff Wellbeing in a Sample of English Schools 2020-2021. *Journal of School Health*, 93(4), 266-278. <https://doi.org/10.1111/josh.13264>

- Tan, L., Wang, M. J., Modini, M., Joyce, S., Mykletun, A., Christensen, H., & Harvey, S. B. (2014). Preventing the development of depression at work: a systematic review and meta-analysis of universal interventions in the workplace. *BMC medicine*, 12(1), 1-11. <https://doi.org/10.1186/1741-7015-12-74>
- Tang, Y., He, W., Liu, L., & Li, Q. (2018). Beyond the paycheck: Chinese rural teacher wellbeing and the impact of professional learning and local community engagement. *Teachers and Teaching*, 24, 825-839. <https://doi.org/10.1080/13540602.2018.1470972>
- Taylor, R. A. (2019). Contemporary issues: Resilience training alone is an incomplete intervention. *Nurse Education Today*, 78, 10-13. <https://doi.org/10.1016/j.nedt.2019.03.014>
- Taylor, L., De Neve, J.-E., DeBorst, L., & Khanna, D. (2022). Wellbeing in Education in Childhood and Adolescence (Report No. 1). International Baccalaureate Organisation.
- Telles, S., Gupta, R. K., Bhardwaj, A. K., Singh, N., Mishra, P., Pal, D. K., & Balkrishna, A. (2018). Increased Mental Well-Being and Reduced State Anxiety in Teachers After Participation in a Residential Yoga Program. *Medical Science Monitor Basic Research*, 24, 105-112. <https://doi.org/10.12659/MSMBR.909200>
- Tenaglia, S., (2023). Subjective wellbeing in different occupations in the UK 2012-2022. What Works Centre for Wellbeing. <https://whatworkswellbeing.org/resources/civil-service-wellbeing-over-time/>
- Tenney, E. R., Poole, J. M., & Diener, E. (2016). Does positivity enhance work performance?: Why, when, and what we don't know. *Research in Organizational Behavior*, 36, 27-46. <https://doi.org/10.1016/j.riob.2016.11.002>
- Tetrick, L. E., & Winslow, C. J. (2015). Workplace stress management interventions and health promotion. *Annual Review of Organizational Psychology and Organizational Behavior*, 2(1), 583-603. <https://doi.org/10.1146/annurev-orgpsych-032414-111341>
- Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, 83(3), 357-385. <https://doi.org/10.3102/0034654313483907>
- Thornton, A., & Raihani, N. J. (2008). The evolution of teaching. *Animal Behaviour*, 75(6), 1823-1836. <https://doi.org/10.1016/j.anbehav.2007.12.014>
- Thrana, H. M., & Fauske, H. (2014). The emotional encounter with child welfare services: The importance of incorporating the emotional perspective in parents' encounters with child welfare workers. *European Journal of Social Work*, 17(2), 221-236. <https://doi.org/10.1080/13691457.2013.798628>
- Tims, M., & Bakker, A. B. (2010). Job crafting: Towards a new model of individual job redesign. *SA Journal of Industrial Psychology*, 36(2), 1-9.
- Tims, M., Twemlow, M., & Fong, C. Y. M. (2022). A state-of-the-art overview of job-crafting research: current trends and future research directions. *Career Development International*, 27(1), 54-78. <https://doi.org/10.1108/cdi-08-2021-0216>
- Timms, C., Graham, D., & Caltabiano, M. (2006). Gender implication of perceptions of trustworthiness of school administration and teacher burnout/job stress. *Australian Journal of Social Issues*, 41(3), 343-358. <https://doi.org/10.1002/j.1839-4655.2006.tb00020.x>
- Tong, K. K., & Wang, Y. Y. (2017). Validation of the flourishing scale and scale of positive and negative experience in a Chinese community sample. *PLOS ONE*, 12(8), e0181616. <https://doi.org/10.1371/journal.pone.0181616>
- Toropova, A., Myrberg, E., & Johansson, S. (2021). Teacher job satisfaction: the importance of school working conditions and teacher characteristics. *Educational Review*, 73(1), 71-97. <https://doi.org/10.1080/00131911.2019.1705247>
- Tov, W. (2018). Well-being concepts and components. In E. Diener, S. Oishi, & L. Tay (Eds.), *Handbook of well-being*. Salt Lake City, UT: DEF Publishers. DOI:nobascholar.com

- Trent, N. L., Borden, S., Miraglia, M., Pasalis, E., Dusek, J. A., & Khalsa, S. B. S. (2019). Improvements in Psychological and Occupational Well-Being in a Pragmatic Controlled Trial of a Yoga-Based Program for Professionals. *Journal of alternative and complementary medicine (New York, N.Y.)*, 25(6), 593–605. <https://doi.org/10.1089/acm.2018.0526>
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783–805. [https://doi.org/10.1016/S0742-051X\(01\)00036-1](https://doi.org/10.1016/S0742-051X(01)00036-1)
- Turner, K., & Theilking, M. (2019). Teacher wellbeing: Its effects on teaching practice and student learning. *Issues in Educational Research*, 29(3), 938–960. <http://www.iier.org.au/iier29/turner2.pdf>
- Ueda, M., Nordström, R., & Matsubayashi, T. (2022). Suicide and mental health during the COVID-19 pandemic in Japan. *Journal of Public Health*, 44(3), 541–548. <https://doi.org/10.1093/pubmed/fdab113>
- UNESCO (2016). The World needs almost 69 million new teachers to reach the 2030 Education goals. <https://unesdoc.unesco.org/ark:/48223/pf0000246124>
- UNESCO. Assistant Director-General for Education, 2010–2018 (Qian Tang) & UNESCO. (2017). A Guide for ensuring inclusion and equity in education. UNESCO. <https://doi.org/10.54675/MHHZ2237>
- UNESCO. (2022). Transforming education from within: Current trends in the status and development of teachers. United Nations Educational, Scientific and Cultural Organization. <https://unesdoc.unesco.org/ark:/48223/pf0000383002>
- United Nations International Children's Emergency Fund. (2021). UNICEF GLOBAL COVID-19 Final Report. <https://www.unicef.org/media/96151/file/Corrigendum-UNICEF-Final-2020-Global-Covid-19-Situation-Report-Feb-Dec-2020.pdf>
- van Agteren, J., Iasiello, M., Lo, L., Bartholomaeus, J., Kopsaftis, Z., Carey, M., & Kyrios, M. (2021). A systematic review and meta-analysis of psychological interventions to improve mental wellbeing. *Nature Human Behaviour*, 5(5), 631–652. <https://doi.org/10.1038/s41562-021-01093-w>
- Van de Werfhorst, H. G., & Mijs, J. J. (2010). Achievement inequality and the institutional structure of educational systems: A comparative perspective. *Annual Review of Sociology*, 36, 407–428. <https://doi.org/10.1146/annurev.soc.012809.102538>
- Van der Doef, M., & Maes, S. (1999). The Job Demand-Control (-Support) Model and psychological well-being: A review of 20 years of empirical research. *Work & Stress*, 13(2), 87–114. <https://doi.org/10.1080/026783799296084>
- Von Der Embse, N., Ryan, S. V., Gibbs, T., & Mankin, A. (2019). Teacher stress interventions: A systematic review. *Psychology in the Schools*, 56(8), 1328–1343. <https://doi.org/10.1002/pits.22279>
- Van Horn, J. E., Taris, T. W., Schaufeli, W. B., & Schreurs, P. J. (2004). The structure of occupational wellbeing: A study among Dutch teachers. *Journal of Occupational and Organizational Psychology*, 77(3), 365–375.
- Vanhove, A. J., Herian, M. N., Perez, A. L., Harms, P. D., & Lester, P. B. (2016). Can resilience be developed at work? A meta-analytic review of resilience-building programme effectiveness. *Journal of Occupational and Organizational Psychology*, 89(2), 278–307.
- Van Katwyk, P. T., Fox, S., Spector, P. E., & Kelloway, E. K. (2000). Using the Job-Related Affective Wellbeing Scale (JAWS) to investigate affective responses to work stressors. *Journal of Occupational Health Psychology*, 5(2), 219–230. <https://doi.org/10.1037/1076-8998.5.2.219>
- van Wingerden, J., Bakker, A. B., & Derks, D. (2017). Fostering employee well-being via a job crafting intervention. *Journal of Vocational Behavior*, 100, 164–174. <https://doi.org/10.1016/j.jvb.2017.03.008>
- van Zanden, J. L., Rijpma, A., Malinowski, M., & Mira d'Ercole, M. (2020). How's Life? 2020: Measuring Wellbeing. OECD Publishing. <https://www.oecd.org/wise/how-s-life-23089679.htm>
- Varma, P., Junge, M., Meaklim, H., & Jackson, M. L. (2021). Younger people are more vulnerable to stress, anxiety and depression during COVID-19 pandemic: A global cross-sectional survey. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 109, 110236. <https://doi.org/10.1016/j.pnpbp.2020.110236>

- Veronese, G., Pepe, A., Dagdukee, J., & Yaghi, S. (2018). Social capital, affect balance and personal wellbeing among teachers in Israel and Palestine. *Teachers and Teaching*, 24(8), 951-964.
- Viac, C. & Fraser, P. (2020). Teachers' wellbeing: A framework for data collection and analysis. OECD Education Working Papers, 213. OECD Publishing. <https://doi.org/10.1787/c36fc9d3-en>
- Vo, D. T., & Allen, K.-A. (2022). A systematic review of school-based positive psychology interventions to foster teacher wellbeing. *Teachers and Teaching*, 28(8), 964-999. <https://doi.org/10.1080/13540602.2022.2137138>
- Von der Embse, N., Ryan, S. V., Gibbs, T., & Mankin, A. (2019). Teacher stress interventions: A systematic review. *Psychology in the Schools*, 56(8), 1328-1343. <https://doi.org/10.1002/pits.22279>
- Vorkapić, S. T., & Peloza, I. (2017). Exploring personality traits and wellbeing among pre-school and primary school teachers in Croatia. *Current Issues in Personality Psychology*, 5(1), 21-31. <https://doi.org/10.5114/cipp.2017.65830>
- Walker, M., Jack, W., & Van den Brande, J. (2019). Teacher Workload Survey 2019 Research Brief. Department of Education, England.
- Wang, M. T., & Degol, J. L. (2016). School climate: A review of the construct, measurement, and impact on student outcomes. *Educational Psychology Review*, 28(2), 315-352. <https://doi.org/10.1007/s10648-015-9319-1>
- Wańkowicz, P., Szylińska, A., & Rotter, I. (2021). The impact of the COVID-19 pandemic on psychological health and insomnia among people with chronic diseases. *Journal of Clinical Medicine*, 10(6), 1206. <https://doi.org/10.3390/jcm10061206>
- Wan Mohd Yunus, W. M. A., Musiat, P., & Brown, J. S. L. (2018). Systematic review of universal and targeted workplace interventions for depression. *Occupational and Environmental Medicine*, 75(1), 66-75. <https://doi.org/10.1136/oemed-2017-104532>
- Warburton, D. E., & Bredin, S. S. (2017). Health benefits of physical activity: a systematic review of current systematic reviews. *Current Opinion in Cardiology*, 32(5), 541-556. <https://doi.org/10.1097/HCO.0000000000000437>
- Ware, J. E., & Sherbourne, C. D. (1992). The MOS 36-Item Short-Form Health Survey (SF-36): I. Conceptual Framework and Item Selection. *Medical Care*, 30(6), 473-483. <https://doi.org/10.1097/00005650-199206000-00002>
- Warr, P. (1990). The measurement of wellbeing and other aspects of mental health. *Journal of Occupational Psychology*, 63(3), 193-210. <https://doi.org/10.1111/j.2044-8325.1990.tb00521.x>
- Warr, P. B. (1987). Work, unemployment and mental health. Clarendon Press.
- Warr, P. B. (2007). Work, Happiness, and Unhappiness. Lawrence Erlbaum Associates
- Waters, L., Algoe, S. B., Dutton, J., Emmons, R., Fredrickson, B. L., Heaphy, E., Moskowitz, J. T., Neff, K., Niemiec, R., Pury, C., & Steger, M. (2022). Positive psychology in a pandemic: Buffering, bolstering, and building mental health. *The Journal of Positive Psychology*, 17(3), 303-323. <https://doi.org/10.1080/17439760.2021.1871945>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063. <https://doi.org/10.1037/0022-3514.54.6.1063>
- Watson, D., Tregaskis, O., Gedikli, C., Vaughn, O., & Semkina, A. (2018). Wellbeing through learning: A systematic review of learning interventions in the workplace and their impact on wellbeing. *European Journal of Work and Organizational Psychology*, 27(2), 247-268. <https://doi.org/10.1080/1359432X.2018.1435529>
- Waterman, A. S., Schwartz, S. J., Zamboanga, B. L., Ravert, R. D., Williams, M. K., Bede Agocha, V., ... & Brent Donnellan, M. (2010). The Questionnaire for Eudaimonic Well-Being: Psychometric properties, demographic comparisons, and evidence of validity. *The journal of positive psychology*, 5(1), 41-61.

- Webb, R., Vulliamy, G., Sarja, A., Hämäläinen, S., & Poikonen, P.-L. (2009). Professional learning communities and teacher well-being? A comparative analysis of primary schools in England and Finland. *Oxford Review of Education*, 35(3), 405–422. <http://www.jstor.org/stable/27784569>
- Weiss, L. A., Westerhof, G. J., & Bohlmeijer, E. T. (2016). Can We Increase Psychological Well-Being? The Effects of Interventions on Psychological Well-Being: A Meta-Analysis of Randomized Controlled Trials. *PloS one*, 11(6), e0158092. <https://doi.org/10.1371/journal.pone.0158092>
- Westergård, E. (2007). Do teachers recognise complaints from parents, and if not, why not?. *Evaluation & Research in Education*, 20(3), 159–178. <https://doi.org/10.2167/eri412.0>
- WHO. (2022). Mental health. World Health Organization. <https://www.who.int/en/news-room/fact-sheets/detail/mental-health-strengthening-our-response>
- Wong, Y. H. P. & Zhang, L. (2014). Perceived School Culture, Personality Types, and Wellbeing among Kindergarten Teachers in Hong Kong. *Australian Journal of Early Childhood*, 39(2), 100–108. <https://doi.org/10.1177/183693911403900213>
- World Health Organization. (2001). The World Health Report 2001: Mental health: new understanding, new hope.
- Wright, K. (2014). Student Wellbeing and the Therapeutic Turn in Education. *The Australian Educational and Developmental Psychologist*, 31(2), 141–152. <https://doi.org/10.1017/edp.2014.14>
- Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a Job: Revisioning Employees as Active Crafters of Their Work. *The Academy of Management Review*, 26(2), 179. <https://doi.org/10.2307/259118>
- Yang, X., Ge, C., Hu, B., Chi, T., & Wang, L. (2009). Relationship between quality of life and occupational stress among teachers. *Public Health*, 123(11), 750–755. <https://doi.org/10.1016/j.puhe.2009.09.018>
- Yang, L., Jia, C.-X., & Qin, P. (2015). Reliability and validity of the Center for Epidemiologic Studies Depression Scale (CES-D) among suicide attempters and comparison residents in rural China. *BMC Psychiatry*, 15(1), 76. <https://doi.org/10.1186/s12888-015-0458-1>
- Yildirim, K. (2014). Main factors of teachers' professional wellbeing. *Educational Research and Reviews*, 9(6), 153–163. <https://doi.org/10.5897/ERR2013.1691>
- Yoon, K. S., Duncan, T., Lee, S. W.-Y., Scarloss, B., & Shapley, K. (2007). Reviewing the evidence on how teacher professional development affects student achievement (Issues & Answers Report, REL 2007–No. 033). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. Retrieved from <http://ies.ed.gov/ncee/edlabs>
- Zadworna-Cieślak, M., & Karolina, K. (2018). Psychological Wellbeing in the Teaching Profession. *Edukacja Dorosłych*, 2, 199–209.
- Zarate, K., Maggin, D. M., & Passmore, A. (2019). Meta-analysis of mindfulness training on teacher well-being. *Psychology in the Schools*, 56(10), 1700–1715. <https://doi.org/10.1002/pits.22308>
- Zarski, A. C., Lehr, D., Berking, M., Riper, H., Cuijpers, P., & Ebert, D. D. (2016). Adherence to internet-based mobile-supported stress management: a pooled analysis of individual participant data from three randomized controlled trials. *Journal of Medical Internet Research*, 18(6), e146. <https://doi.org/10.2196/jmir.4493>
- Zhang, C., Yu, M. C., & Marin, S. (2021). Exploring public sentiment on enforced remote work during COVID-19. *Journal of Applied Psychology*, 106(6), 797. <https://doi.org/10.1037/apl0000933>
- Zhao, Y., & Watterston, J. (2021). The changes we need: Education post COVID-19. *Journal of Educational Change*, 22(1), 3–12. <https://doi.org/10.1007/s10833-021-09417-3>
- Zheng, M., Bender, D., & Lyon, C. (2021). Online learning during COVID-19 produced equivalent or better student course performance as compared with pre-pandemic: empirical evidence from a school-wide comparative study. *BMC Medical Education*, 21, 1–11. <https://doi.org/10.1186/s12909-021-02909-z>

- Zurn, C. (2000). Anthropology and normativity: A critique of Axel Honneth's 'formal conception of ethical life.' *Philosophy and Social Criticism*, 26(1), 115-124. <https://doi.org/10.1177/0191453700026001066>
- Zysberg, L., Orenshtein, C., Gimmon, E., & Robinson, R. (2017). Emotional intelligence, personality, stress, and burnout among educators. *International Journal of Stress Management*, 24(S1), 122-136. <https://doi.org/10.1037/str0000028>

Supplementary Materials

4

4 Supplementary Materials

Appendix 4.1: Literature Search Strategy

4.1.1 Approach for Literature Review

For this report we conducted a non-systematic review of reviews on the wellbeing of teachers in primary and secondary educational settings (excluding university teachers/lecturers). This review was intended to be a scoping activity to inform the report, rather than be the focus of it. We searched the leading databases for psychological and educational research: Web of science; Scopus; PubMed; ProQuest; ProQuest Education Collection; The British Education Index; Cochrane Central. Given the limited literature (particularly reviews) on teacher wellbeing, we broadened the search criteria to include reviews on teacher mental health and health. Examples of our final search strategy is given below (using the search terms and Boolean operators for each database).

Scopus: (TITLE (teacher) AND (TITLE (wellbeing) OR TITLE (well-being) OR TITLE (mental) OR TITLE (health))) AND (LIMIT-TO (DOCTYPE , "re"))

Web of Science (limited by review):: TI=(teacher) AND (TI=(wellbeing) OR TI=(well-being) OR TI=(mental) OR TI=(health))

PubMed (limited by review): (teacher[Title]) AND (wellbeing[Title]) OR (teacher[Title]) AND (well-being[Title]) OR (teacher[Title]) AND (mental[Title]) OR (teacher[Title]) AND (health[Title])

ProQuest (limited by review): title(teacher) AND (title(well-being) OR title(wellbeing) OR title(mental) OR title(health))

ProQuest Education Collection incl. ERIC (limited by review): title(teacher) AND (title(well-being) OR title(wellbeing) OR title(mental) OR title(health))

British Education Index (limited by review): TI Teacher AND (TI wellbeing OR TI well-being OR TI mental OR TI health)

4.1.2 Identification and Sample Selection

- 265 articles were identified
- 225 articles remained after duplicates were removed from across databases.
- 2 reviewers (and an additional reviewer to settle discrepancies) identified 50 articles for a full text review.
- The full text review identified 25 review articles related to wellbeing in schools (covering: theory, measurements, and interventions). These articles are listed below. They formed the starting point for this report, but we also included relevant papers from other sources.

4.1.3 Final Sample

Acton, R., & Glasgow, P. (2015). Teacher Wellbeing in Neoliberal Contexts: A Review of the Literature. *Australian Journal of Teacher Education*, 40(40). <https://doi.org/10.14221/ajte.2015v40n8.6>

Anderson, M., Werner-Seidler, A., King, C., Gayed, A., Harvey, S. B., & O'Dea, B. (2019). Mental Health Training Programs for Secondary School Teachers: A Systematic Review. *School Mental Health*, 11(3), 489–508. <https://doi.org/10.1007/s12310-018-9291-2>

Bardach, L., Klassen, R. M., & Perry, N. E. (2022). Teachers' Psychological Characteristics: Do They Matter for Teacher Effectiveness, Teachers' Well-being, Retention, and Interpersonal Relations? An Integrative Review. *Educational Psychology Review*, 34(1), 259–300. <https://doi.org/10.1007/s10648-021-09614-9>

Chu, W., & Liu, H. (2021). Teacher wellbeing. *Asia Pacific Journal of Education*, 41(2), 401–404. doi:<https://doi.org/10.1080/02188791.2020.1858005>

Corbett, L., Bauman, A., Peralta, L. R., Okely, A. D., & Phongsavan, P. (2022). Characteristics and effectiveness of physical activity, nutrition and/or sleep interventions to improve the mental well-being of teachers: A scoping review. *Health Education Journal*, 81(2), 196–210. <https://doi.org/10.1177/00178969211062701>

- Ferguson, K., Corrente, M., & Bourgeault, I. (2022). Mental Health Experiences of Teachers: A Scoping Review. *Journal of Teaching and Learning*, 16(1), 23–43. <https://doi.org/10.22329/jtl.v16i1.6856>
- Gray, C., Wilcox, G., & Nordstokke, D. (2017). Teacher mental health, school climate, inclusive education and student learning: A review. *Canadian Psychology / Psychologie Canadienne*, 58(3), 203–210. <https://doi.org/10.1037/cap0000117>
- Guglielmi, R. S., & Tatrow, K. (1998). Occupational Stress, Burnout, and Health in Teachers: A Methodological and Theoretical Analysis. *Review of Educational Research*, 68(1), 61–99. <https://doi.org/10.3102/00346543068001061>
- Hall-Kenyon, K. M., Bullough, R. V., MacKay, K. L., & Marshall, E. E. (2014). Preschool Teacher Well-Being: A Review of the Literature. *Early Childhood Education Journal*, 42(3), 153–162. <https://doi.org/10.1007/s10643-013-0595-4>
- Hascher, T., & Waber, J. (2021). Teacher well-being: A systematic review of the research literature from the year 2000–2019. *Educational Research Review*, 34, 100411. <https://doi.org/10.1016/j.edurev.2021.100411>
- Hwang, Y.-S., Bartlett, B., Greben, M., & Hand, K. (2017). A systematic review of mindfulness interventions for in-service teachers: A tool to enhance teacher wellbeing and performance. *Teaching and Teacher Education*, 64, 26–42. <https://doi.org/10.1016/j.tate.2017.01.015>
- Li, S. (2021). Psychological Wellbeing, Mindfulness, and Immunity of Teachers in Second or Foreign Language Education: A Theoretical Review. *Frontiers in Psychology*, 12, 720340. <https://doi.org/10.3389/fpsyg.2021.720340>
- Li, Z. (2021). Teacher Well-Being in EFL/ESL Classrooms. *Frontiers in Psychology*, 12, 732412. <https://doi.org/10.3389/fpsyg.2021.732412>
- Puertas Molero, P., Zurita Ortega, F., Ubago Jiménez, J. L., & González Valero, G. (2019). Influence of Emotional Intelligence and Burnout Syndrome on Teachers Well-Being: A Systematic Review. *Social Sciences*, 8(6), 185. <https://doi.org/10.3390/socsci8060185>
- Naghieh, A., Montgomery, P., Bonell, C. P., Thompson, M., & Aber, J. L. (2015). Organisational interventions for improving wellbeing and reducing work-related stress in teachers. *Cochrane Database of Systematic Reviews*, (4)
- Sasmoko, S., Herisetyantri, I., Suroso, J., Harisno, Ying, Y., Rosalin, K., Chairiyani, R. P., Pane, M., & Permai, S. (2017). Am I a well being teacher? (A review of subjective wellbeing for elementary teachers). *Man in India*, 97, 293–300.
- Scheuch, K., Haufe, E., & Seibt, R. (2015). Teachers' Health. *Deutsches Ärzteblatt International*. <https://doi.org/10.3238/arztebl.2015.0347>
- Shu, K. (2022). Teachers' Commitment and Self-Efficacy as Predictors of Work Engagement and Well-Being. *Frontiers in Psychology*, 13, 850204. <https://doi.org/10.3389/fpsyg.2022.850204>
- Song, K. (2022). Well-Being of Teachers: The Role of Efficacy of Teachers and Academic Optimism. *Frontiers in Psychology*, 12, 831972. <https://doi.org/10.3389/fpsyg.2021.831972>
- Soni, P., & Bakhru, K. M. (2019). A review on teachers eudaemonic well-being and innovative behaviour: Exploring the importance of personality, work-life balance, self-efficacy and demographic variables. *International Journal of Learning and Change*, 11(2), 169. <https://doi.org/10.1504/IJLC.2019.101661>
- Spilt, J. L., Koomen, H. M. Y., & Thijs, J. T. (2011). Teacher Wellbeing: The Importance of Teacher–Student Relationships. *Educational Psychology Review*, 23(4), 457–477. <https://doi.org/10.1007/s10648-011-9170-y>
- Squires, V. (2019). The well-being of the early career teacher: A review of the literature on the pivotal role of mentoring. *International Journal of Mentoring and Coaching in Education*, 8(4), 255–267. <https://doi.org/10.1108/IJMCE-02-2019-0025>
- Van Droogenbroeck, F., & Spruyt, B. (2015). Do teachers have worse mental health? Review of the existing comparative research and results from the Belgian Health Interview Survey. *Teaching and Teacher Education*, 51, 88–100. <https://doi.org/10.1016/j.tate.2015.06.006>

- Zhang, X. (2021). The Effect of English as a Foreign Language Teachers' Optimism and Affectivity on Their Psychological Well-Being. *Frontiers in Psychology, 12*, 816204. <https://doi.org/10.3389/fpsyg.2021.816204>
- Zhao, Q. (2022). On the Role of Teachers' Professional Identity and Well-Being in Their Professional Development. *Frontiers in Psychology, 13*, 913708. <https://doi.org/10.3389/fpsyg.2022.913708>

Appendix 4.2: Measures of Drivers of Wellbeing

Presented here are different measures of wellbeing drivers which might be of use to schools in order to gain a better understanding of the experience of teachers and their wellbeing. Through analysis of drivers of teacher wellbeing, schools will be in a better position to evaluate how to improve teacher wellbeing, and understand where and why teachers might be struggling. Again, these measures have been used and validated in not only international contexts, but in other non-teacher populations. This allows for benchmarking and for schools to make comparisons between their findings and data from many different contexts.

TABLE A1: MEASURES OF DRIVERS OF WELLBEING

Measure	Content	Age	Reliability	Language Validation	Availability
The General Health Questionnaire-12 (GHQ-12) Goldberg (1972)	12-item scale, asking respondents to rate from 1-4 (from less than usual, to much more than usual) in relation to each item (a symptom or behaviour). GHQ-12 measures mental health and psychiatric functioning, and can be used to screen for psychiatric disorders.	7 years and above (Centofanti et al., 2019)	Cronbach's Alpha > 0.80 (Centofanti et al., 2019)	English French Spanish	Available for commercial and/or research use, with licence.
Maslach Burnout Inventory (MBI) Maslach et al. (1996)	22-item scale, asking respondents to rate from 0-6 the frequency with which they experience each of the items. The MBI measures three subscales: occupational exhaustion, depersonalisation, and personal accomplishment.	15 years and above (Pérez-Fuentes et al., 2020)	Cronbach's Alpha = 0.86 (Coker & Omoluabi, 2009)	English French Spanish	Not available for commercial and/or research use.
RAND 36-Item Short Form Survey Ware & Sherbourne (1992)	36-item scale, asking respondents to rate responses to each item (number of options varies depending on question). This measure identifies eight health concepts: physical functioning, bodily pain, role limitations due to physical health problems, role limitations due to personal or emotional problems, emotional wellbeing, social functioning, energy/fatigue, and general health perceptions.	14 years and above (Hays et al., 1993)	Ordinal alpha values varied between 0.86 and 0.97 (Orwelius et al., 2018)	English French Spanish	Freely available for commercial and/or research use.

Depression-Anxiety-Stress Scales (DASS-21) Antony et al. (1998)	21-item scale, asking respondents to rate from 0-3 the extent to which each item applies to their life. DASS-21 has three subscales, measuring depression, anxiety and stress.	14 years and above	Cronbach's Alpha = 0.91 (Coker, Coker & Sanni, 2018)	English French Spanish	Freely available for commercial and/or research use.
Teacher Self-Efficacy Scale (TSES) Schwarzer et al. (1999)	24-item scale, asking respondents how much they feel they are able to relate to each item (scored from 1-9). There are three subscales within TSES, measuring: <i>Efficacy in Student Engagement</i> , <i>Efficacy in Instructional Strategies</i> , and <i>Efficacy in Classroom Management</i> .	Teachers (adults)	Reliability considered to be satisfactory (Cronbach's Alpha = 0.87 - 0.94) (Tschannen-Moran & Hoy, 2001)	English French Spanish	Freely available for commercial and/or research use.
Centre for Epidemiologic Studies Depression (CES-D) Radloff (1977)	20-item scale, asking respondents how often they have felt or behaved each of the items in the past week (scored from 0-3). The maximum score is 60, with the higher the score indicating the respondent being more symptomatic of depression.	Adults (child version for ages 6-23 available)	Reliability considered to be satisfactory (Cronbach's Alpha = 0.83 - 0.93) (Yang et al., 2015)	English French Spanish	Freely available for commercial and/or research use.
Perceived Stress Scale (PSS) Cohen et al. (1983)	10-item scale, asking respondents how often they have felt each item in the past month (scored from 0-4). The maximum score is 40, with higher scores indicating higher perceived stress.	Young people and adults (age 12 and above)	Reliability considered to be satisfactory (Cronbach's Alpha = 0.85 - 0.89) (Crawford & Henry, 2004a; Crawford & Henry, 2004b)	English French Spanish	Freely available for commercial and/or research use.

Neff Self-Compassion Scale (NSCS) Neff (2003)	26-item scale asking respondents how often they relate to the item in how they act towards themselves in difficult times (scored from 1-5). Higher scores in the self-judgement, isolation and over-identification scales indicate less self-compassion before reverse-coding, and more self-compassion after reverse coding.	Young people and adults (age 14 and above)	Reliability considered to be satisfactory (Cronbach's Alpha = 0.87- 0.92) (Neff et al., 2003; Neff et al., 2021)	English French Spanish	Freely available for commercial and/or research use.
Five Facet of Mindfulness Questionnaire (FFMQ) Baer et al. (2006)	39-itemscale asking respondents to rate from 1-5 how true they believe each item to be for them. The FFMQ measures five subscales: observing, describing, acting and awareness, non judging, and nonreactivity.	Young people and adults (age 16 and above)	Reliability considered to be satisfactory (Cronbach's Alpha = 0.82) (Shallcross et al., 2020)	English French Spanish	Freely available for commercial and/or research use.

Further reading

Taylor, L. J., De Neve, J.-E., DeBorst, L., & Khanna, D. (2020). *Wellbeing in Education in Childhood and Adolescence (Report No. 1)*. International Baccalaureate Organization.

Zhou, W., Taylor, L., Boyle, L., Funk, S., DeBorst, L., & De Neve, J.-E. (2024). *Whole School Approach to Wellbeing in Childhood and Adolescence: Literature Review*. International Baccalaureate Organization.
(Summary version of this report available in English, French and Spanish)

Zhou, W., Taylor, L., Boyle, L., DeBorst, L., & De Neve, J.-E. (2024). *Physical Activity and Wellbeing in Childhood and Adolescence: Literature Review*. International Baccalaureate Organization.
(Summary version of this report available in English, French and Spanish)

References

For a full list of references used in this report and access to additional supplementary materials, visit wellbeing.hmc.ox.ac.uk/schools.

