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A Scoping Review and Educator and Student Interviews

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Kimberly A. Schonert-Reichl
University of Illinois Chicago

Denise Buote
Arbor Educational & Clinical Consulting Inc.

Rebecca N. Baelen
University of Illinois Chicago

Joshua Lovett
University of Illinois Chicago

Maryam Al-Khalaf
WISE, Qatar Foundation

Kay Thursby Bourke
University of Illinois Chicago

Claire Galloway
University of Illinois Chicago

Aynsley Parker
University of Illinois Chicago

Ahmed Baghdady
WISE, Qatar Foundation

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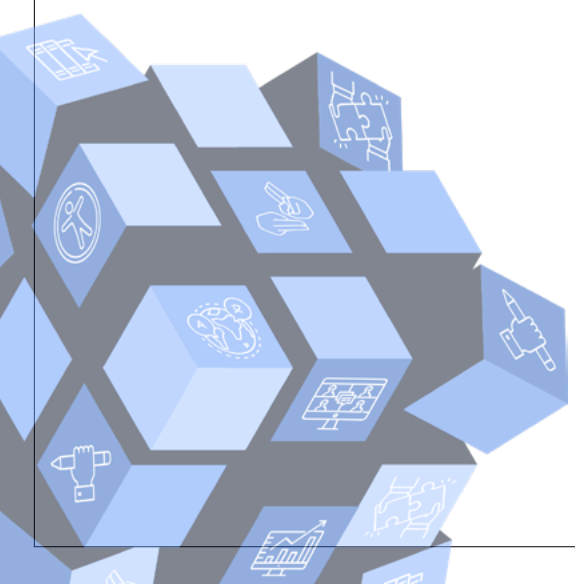
Glossary of Terms

Term	Definition
Assets	A useful and desirable thing or quality; the skills, strengths, and knowledge of individuals and communities.
Burnout	A syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: feelings of energy depletion or exhaustion; increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and reduced professional efficacy.
Conceptualization	The action or process of forming a concept or idea of something.
Construct	A mental image, idea, or theory, especially a complex one formed from several simpler elements.
Grey Literature	Information produced outside of traditional publishing and distribution channels, and can include reports, policy literature, working papers, newsletters, government documents, speeches, white papers, urban plans, and so on.
Eudaimonic Well-being	The subjective experiences associated with living a life of virtue in pursuit of human excellence, growth, and meaning.
Evidence-based	Any concept or approach that is derived from or informed by evidence.
Hedonic Well-being	A focus on desire pleasure seeking and the presence of positive emotions and absence of negative ones.
Life Satisfaction	The extent to which a person positively evaluates the overall quality of their life.
Job Satisfaction	The extent to which a person's hopes, desires, and expectations about the employment they are engaged in are fulfilled.
Mixed-Methods Research	A procedure for collecting, analyzing, and "mixing" both quantitative and qualitative research and methods in a single study to understand a research problem.
Positive Psychology	A branch of psychology focused on the character strengths and behaviors that allow individuals to build a life of meaning and purpose.
Psychological Distress	A state of emotional suffering characterized by symptoms of depression (e.g., intense sadness) and anxiety (e.g., feeling on edge).
Qualitative Research	Research that involves collecting and analyzing non-numerical data (e.g., text, video, or audio) to understand concepts, opinions, or experiences.
Quantitative Research	A research strategy that focuses on the collection and analysis of numerical data.

"RADaR" Technique	"Rigorous and Accelerated Data Reduction;" involves using tables and spreadsheets to develop tables of qualitative data to convert it into a more user-friendly format for analysis.
Scoping Review	A type of knowledge synthesis that uses a systematic approach to map existing or emerging literature on a given topic.
Social and Emotional Competence	The ability to interact with others, regulate one's own emotions and behavior, solve problems, and communicate effectively.
Social and Emotional Learning	Involves evidence-based programs, practices, and policies through which children, youth, and adults acquire the competencies to recognize and manage emotions, develop caring and concern for others, establish positive relationships, make responsible decisions, and handle challenging situations effectively.
Well-being	Encompasses quality of life and the ability of people and societies to contribute to the world with a sense of meaning and purpose (from the World Health Organization).



Executive Summary

The crisis of children's mental health and rising disparities in educational outcomes have become global concerns, particularly due to the surge in mental health challenges among children and youth attributed to the COVID-19 pandemic and other global events that have caused disruptions to student learning and social and emotional well-being. Alongside the declines in the well-being of children and youth have been concomitant challenges for the teaching profession leading to discernible increases in teacher stress and burnout, potentially causing teacher shortages worldwide. In light of these concerning trends in the well-being of children and teachers, research examining the relationship between teacher and student well-being in the context of learning and teaching is profoundly needed not only to advance science and theory but to also to inform the design and implementation of programs and practices that allow for the creation of learning environments in which both teachers and students can thrive and flourish and reach their greatest potential.

In this extensive report, we present findings from two interrelated research studies that focused explicitly on exploring the relationship between teacher and student well-being in learning and teaching — a topic for which many questions remain. The aim of our research is to offer a deeper understanding of these relationships in order to provide valuable insights for educators, policymakers, and other stakeholders who share an investment in finding ways to improve educational experiences and opportunities for students, both in the present and in the future.

Our report consists of two components:

1. Scoping literature review: In our scoping literature review, we aimed to (1) synthesize existing research on the relationship of teacher well-being to student well-being and learning, (2) examine how these constructs are defined and measured, (3) assess when and where this research has taken place, (4) compile empirical findings from existing studies, and (5) pinpoint knowledge gaps for future research. A scoping review was chosen as our methodology in order to give a comprehensive overview of research on this topic, identify key concepts, theories, and research gaps, and provide guidance for future work.

2. Interviews with educators and students: We conducted interviews with educators and students in four countries: Australia, Canada, Colombia, and India, and with educators in Qatar. These interviews in five countries, allowed us to obtain diverse perspectives on how educator well-being affects student well-being and learning and vice versa.

This research builds upon prior work conducted by Proeschold-Bell et al. (2021) who conducted a scoping review and case studies on teacher well-being in Cambodia, Kenya, and Qatar. Our aim was to expand upon their findings, considering the increased attention to the connection between teacher well-being and student outcomes, particularly in the wake of the COVID-19 pandemic.

Scoping Review

Although some reviews have shown associations between teacher well-being and student outcomes, our scoping review aimed to provide a more comprehensive portrait of the extant literature by incorporating both quantitative and qualitative studies and sources from the grey literature (non-peer refereed publications). This allowed us to consider various conceptualizations of teacher and student well-being.

For the scoping review, we conducted an extensive search of academic databases for articles published between January 2000 through April 2023, restricted to peer-reviewed journal publications in English. We reviewed the titles and abstracts, using specific search terms aligned with the core concepts: teachers, teacher well-being, students, student well-being, student learning, and schools and classrooms. Our criteria ensured the inclusion of primary research reports with empirical data from K-12 classroom teachers and students, conducted during school hours, while excluding certain types of publications and studies.

This process led us to 7,629 unique publications, which we thoroughly screened, resulting in the inclusion of 67 studies meeting our criteria. These studies provided a substantial body of evidence to assess the relationship of teacher well-being to and student well-being and learning.

Key Findings from the Scoping Review:

Our scoping review identified a noticeable increase in studies published since 2000 that investigated the relationship between teacher well-being and student well-being and learning, with a peak in 2020 and 2021. The majority of these studies were conducted in the United States, followed by Canada, Australia, and the United Kingdom. The settings were predominantly public schools.

In terms of research design, these studies used diverse approaches, with cross-sectional designs being the most common, followed by qualitative and longitudinal approaches. The findings revealed that teacher well-being was positively associated with both student well-being and learning. A significant portion of studies explored the relationship between teacher well-being and student well-being, with the majority showing a positive association. A substantial number of studies investigated the link between teacher well-being and student learning, and these also reported a positive correlation, indicating that higher teacher well-being was linked to improved student achievement. What was noticeably absent from our review were any experimental studies showing a causal link of the relationship of teacher well-being to student well-being and learning, highlighting the need for more research in this field.

Our review also highlighted a variety of definitions of teacher and student well-being. Psychological distress and general well-being were the most commonly used terms in studies with teachers and students, respectively. This nuanced understanding of these constructs offers valuable insights into the multidimensional nature of teacher and student well-being and serves as a foundation for future research and interventions in the field of education.

Educator and Student Interviews:

Our inclusion of interviews in five countries emphasizes the importance of actively engaging with members of diverse educational communities in the research process to gain deeper insights into experiences more broadly. We found collaboration with educators and students to be indispensable for preventing overly generalized research outcomes. To that end, 32 semi-structured interviews with educators and 22 semi-structured interviews with students, ages ten to 17 years, were conducted in five countries on four continents. The chosen countries of Australia, Canada, Colombia, India, and Qatar represent a rich tapestry of cultural, ethnic, religious, political, and geographic contexts.

Our data analysis incorporated a staged process, using the **R**igorous and **A**ccelerated **D**ata **R**eduction (RADaR) technique (Watkins, 2017). This approach enabled us to streamline the data into manageable tables for efficient and rapid analysis, ensuring reliability through intercoder reliability assessments.

Key Findings from the Interviews:

The interviews revealed the interconnected nature of educator well-being and student well-being and learning in education. Across the four countries where both educators and students were interviewed, it was evident that educator well-being significantly influenced the classroom atmosphere, student emotions, and behaviors. Positive relationships between educators and students fostered trust, safety, and supportive environments where academic engagement thrived. In contrast, lower educator well-being led to less teacher-student interaction, more negative emotions, and disruptive behaviors, resulting in less learning and enjoyment for both educators and students. In Qatar, sentiments of educators aligned closely with educators in the other four countries.

The interviews also highlighted the

interconnectedness between educators and students. High levels of educator well-being contributed to innovative teaching techniques, a commitment to student input, advanced cognitive skill development, increased interaction, and adaptability to varying learning needs. These dynamic classroom environments sparked motivation and enthusiasm among students, enhancing the quality of the educational experience. Conversely, educators experiencing lower well-being tended to adopt a task-oriented approach, prioritizing content delivery over active student engagement, leading to disengagement, passive teaching methods, educator and student and decreased enthusiasm among students.

"Energy" contagion emerged as a central theme in our interviews, with both positive and negative "energy" profoundly shaping the classroom atmosphere and the promotion of well-being and learning. Positive "energy" was characterized by enthusiasm and passion, fostering creativity, innovation, and a love of learning. In contrast, lower educator well-being resulted in negative "energy" adversely affecting the learning process and students' feelings about their educational experience.

Student feelings about educators were notably influenced by the perceived enjoyment educators derived from teaching. When educators genuinely enjoyed their roles, students reported more positive feelings, respect, and a warm connection with them. Conversely, when educators did not appear to enjoy teaching, students reported negative emotions and disengagement.

The relationship between student well-being and educator well-being was found to be reciprocal and complex. Overall, educators felt more motivated and creative in their teaching when students exhibited higher levels of well-being and engagement. Balancing the needs of students with varying well-being levels presented a challenge for educators.

Conclusions

This comprehensive research explored the critical link between educator well-being and student well-being and learning. It addresses a significant gap in the existing literature, which has become especially important in the context of the rising mental health challenges among children worldwide. This study aimed to broaden our understanding of relationshp between teacher well-being and student well-being and learning and to gain valuable insights from educators and students. Our goal was to to enable educators, policymakers, and others invested in education to effectively promote student well-being and learning while considering the profound impact of teacher well -being.

Through a scoping literature review and educator and student interviews conducted across diverse cultural, geographical, and educational settings, this research provides valuable insights. The scoping review reinforced the positive connection between teacher well-being and both student well-being and learning. It underscores the importance of prioritizing teacher well-being to create productive, positive educational environments.

Moreover, the interviews further highlighted the dynamic between educator well-being and student well-being and learning. They showcased how educator well-being and student well-being are synergistic, creating a positive energy contagion in classrooms, fostering enthusiasm, engagement, and a love for learning. Conversely, when educator well-being wanes, classrooms become task-oriented, leading to diminished student enthusiasm and learning outcomes. The study also emphasizes the significance of student feelings toward educators and the reciprocal influence of student well-being on educator well-being.

In summary, this research underscores the critical

importance of nurturing both educator and student well-being to create engaging, positive, and productive learning environments where both teachers and students can thrive. It provides a strong foundation for further exploration and intervention in education, highlighting the multidimensional nature of teacher and student well-being and the potential for transformative change in educational practices and policies.

Recommendations

This study has yielded several recommendations for further research, practice, and policy to promote educator well-being and student well-being and learning:

Recommendations for Research:

1. Explore the Concept of Well-Being: Given the diverse definitions of well-being, further research should aim to create a comprehensive understanding of well-being in the field of education.

2. Deepen Research Efforts to Include Greater Diversity: Expanding research into different cultural contexts and educational systems can offer fresh perspectives and enrich the existing knowledge base.

3. Include Youth Voice in Research: Actively involving youth as participants or contributors in studies exploring the relationship between educator well-being and student well-being and learning can provide invaluable insights.

4. Conduct More Research that Includes Mixed Methods: Combining quantitative and qualitative approaches can provide deeper insights into the dynamics at play.

5. Investigate the Causal Relationships of Teacher Well-being to Student Well-being and Learning: Further research should explore causality and directionality to understand the mechanisms influencing these relationships.

6. Examine Differential Impacts of Educator Well-Being on Student Well-Being: Explore whether teacher well-being has a disproportionate impact on students with varying levels of well-being.

7. Conduct More Research That Focuses On Educator Well-Being From A Positive Psychological Perspective: Studying teacher well-being from a positive perspective could provide promising insights for future research.

8. Investigate the Power of Energy Contagion: Further investigations should delve into the significance of positive "energy" contagion within classroom environments.

Recommendations for Practice:

1. Disseminate the Current Body of Knowledge: Practitioners and educational stakeholders should actively disseminate the existing knowledge regarding the relationship between educator well-being and student well-being and learning.

2. Disseminate Evidence-Based Approaches to Mitigate Educator Burnout: Identifying and disseminating evidence-based approaches to reduce burnout among educators is crucial.

3. Provide Comprehensive Wellness Education to Educators: Equipping educators with tools to recognize signs of burnout and stress is essential for their well-being and the well-being of students.

4. Implement Evidence-Based Classroom and School-based Social and Emotional Learning (SEL) Programs that Promote Student Well-being. To promote student well-being evidence-base program and practices that draw from the field of SEL to promote student well-being and school success need to implemented and monitored.

Recommendations for Policy:

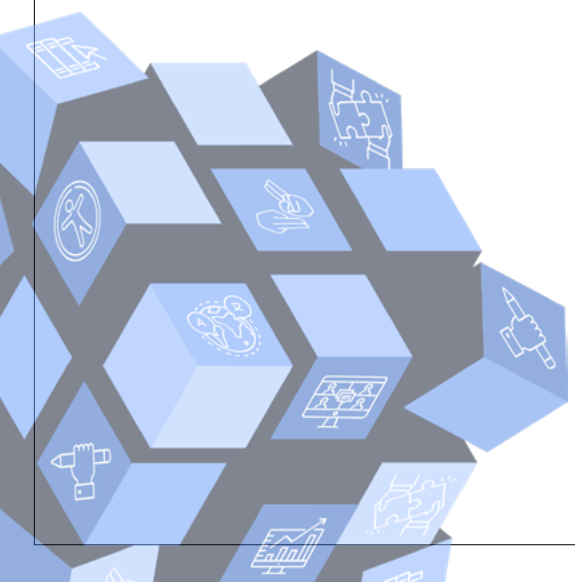
1. Implement Systematic Approaches to Monitor Educator Well-being: Policymakers should establish mechanisms to measure and monitor educator's well-being to facilitate timely interventions that can promote a healthier educational workforce and high quality teaching.

2. Implement Systematic Approaches to Monitor Student Well-being: Policymakers should also establish mechanisms to monitor student well-being at the population level in order to identify students' strengths and challenges and to implement and monitor evidence-based interventions that promote student well-being and learning.

3. Promote the Establishment of Well-being Teams in Schools to Focus on Supporting the Mental and Emotional Well-being of Educators and Students. These teams would be charged with fostering a positive school environment, implementing well-being practices that are culturally appropriate and evidence-based.

4. Establish National/Ministry-Level Policy Standards for Teacher Certification that Include a Focus on Teacher and Student Well-being: As we look ahead to the future of education, there needs to be be national/ministry level standards for teacher certification requirements so that teacher preparation programs include the most recent research and pedagogy on ways to promote the well-being and social and emotional competence (SEC) of students and teachers.

By following these recommendations and building upon the findings of this research, educators, policymakers, and stakeholders can enhance the educational experience, promoting the well-being of both educators and students. Ultimately, this study lays the foundation for transformative changes in educational practices and policies.



Chapter One: Introduction

We recognize an urgent need to focus on understanding the relationship between teacher well-being and student well-being in learning and teaching. The present study is designed to address a gap in the field and extends the first phase of work conducted by Proeschold-Bell et al. (2021) on teacher well-being. Specifically, this project consists of two complementary research studies exploring the relationship of teacher well-being to student well-being and learning through (1) a scoping literature review and (2) interviews with educators in five countries (Australia, Canada, Colombia, India, and Qatar) and children and adolescent students in four countries: Australia, Canada, Colombia, and India.

In the last decade, mental health challenges have been cited as the leading cause of disability and poor life outcomes for children and youth around the globe. The COVID-19 pandemic and other global disruptions have exacerbated this trend and highlighted disparities in the prevalence of mental health challenges across subpopulations of students (Luthar et al., 2021). Research studies worldwide have documented declines in children's and adolescents' mental health associated with the COVID-19 pandemic (Cost et al., 2021; Jones et al., 2021; Ravens-Sieberer et al., 2020). Among adolescents aged 13 to 17, a review of COVID-19 studies has documented increases in depression, anxiety, and stress (Nearchou et al., 2020). Additionally, children and adolescents from socio-economically disadvantaged backgrounds are two to three times more likely to develop mental health conditions compared to their peers from higher socio-economic backgrounds (Reiss, 2013). Similarly, the pandemic and worldwide mobilization for social justice have surfaced critical issues related to social justice and equity that must be addressed in our education systems.

The pandemic has exacerbated teacher stress and burnout and is projected to lead to a significant teacher shortage (Gadermann et al., 2021; Schmitt & DeCourcy, 2022). A recent Gallup poll found that 44 percent of K-12 educators in the U.S. reported feeling that they were very often or always burned out in their jobs, making them the most burned-out workers of any industry in the United States (Marken & Agrawar, 2022). Clearly, these statistics forecast an ominous future for the teaching profession.

With this growing crisis of mental health and the subsequent calls to action, how do schools and educators most effectively promote student happiness, optimism, and well-being –and take protective measures that mitigate adverse life events and promote positive mental health? What is the relationship between teacher well-being and student well-being and learning? Understanding the processes that may propel children and youth away from or toward well-being and learning has recently emerged as a focus of researchers, educators, and parents. However, more research is needed to support the development and implementation of effective preventive efforts that can: 1) equip educators and children with the social and emotional competencies (SECs) to flourish and thrive; and 2) equip teachers with the SECs to thrive in teaching and create supportive learning environments that promote student well-being and foster learning and more equitable and inclusive learning environments (Jagers et al., 2019).

Teachers are the engine that drives the promotion of student well-being and learning in classrooms and schools (Schonert-Reichl, 2017, 2019). Initial research indicates that teacher well-being plays an important role in influencing student well-being and the learning context (Jennings & Greenberg, 2009; Oberle & Schonert-Reichl, 2016). It should come as no surprise that, like students, teachers reported increased levels of stress over the past decade (Markow et al., 2013), and rising mental health challenges throughout the pandemic. For instance, in a 2020 survey with over 5,000 teachers across the United States, researchers found most teachers reported feeling anxious, fearful, worried, overwhelmed, and sad (Cipriano & Brackett, 2020). We see joint efforts geared toward supporting the well-being of teachers and students as an effective approach to addressing the rising trends in mental health challenges and to building optimal learning environments for students to develop, thrive and feel fully included.

Despite the research noted above, limited attention has been given to how teachers impact the development of student well-being; nor has research explored how teacher well-being impacts student learning. Little research has tested the impacts of programming designed to develop teacher well-being on student outcomes and/or whether these teachers are more capable of creating inclusive classroom environments that foster equitable educational outcomes (Schonert-Reichl, 2017). Failure to understand the role of teachers in cultivating student well-being and learning and the lack of insight on how best to support teacher well-being has led to a gap in knowledge regarding whether and how best to promote student well-being and learning and a classroom climate that supports their well-being and learning. More insight into these aspects is important in guiding theory and research regarding the promotion of well-being among students and teachers in learning and teaching.

Research also suggests that teachers with inadequate well-being may be more prone to experiencing a "burnout cascade," with negative implications for students (Jennings & Greenberg, 2009). For example, teachers who experience higher levels of burnout are more stressed, less effective in teaching and classroom management, less connected to their students, and less satisfied with their work (Dicke et al., 2014; Maslach et al., 2001). In addition, higher rates of teacher burnout impair students' abilities to regulate stress (Oberle & Schonert-Reichl, 2016), and negatively impact student behavior in the classroom, and academic achievement (Osher et al., 2007). Conversely, teachers who report higher levels of well-being also report greater use of practices that promote student well-being and learning (Hamilton & Doss, 2021).

The current educator well-being and student well-being and learning project was made possible with funding from the World Innovation Summit for Education (WISE), an initiative of Qatar Foundation for Education, Science and Community Development. There were three aims of this project. The first was to conduct a scoping literature review to identify recommendations for teacher and student well-being in learning and teaching. The second aim was to better understand perspectives on the link between educator well-being and student well-being and learning through interviews with educators in Australia, Canada, Colombia, India and Qatar, and with students in Australia, Canada, Colombia, and India. The third aim was to critically consider the interview and scoping review findings to identify ways, strongly supported by evidence, to support educator and student well-being in learning and teaching –and to make recommendations based on these.

The four overarching research questions that guided this research were:

1. How is educator well-being related to student well-being?
2. How is educator well-being related to student learning?
3. How is student well-being related to educator well-being?
4. How is student well-being related to educator teaching?

Contexts of the five countries

To learn more about the link between educator well-being and student well-being, and better understand experiences around the globe, we engaged with educators and students from diverse contexts. Specifically, we conducted interviews with educators in five countries: Australia, Canada, Colombia, India, and Qatar, as well as interviews with students in four countries: Australia, Canada, Colombia, and India. Including the voices of students who are directly impacted by educator well-being was deemed critical to deepen our understanding. These five countries offered opportunities to view diverse critical issues related to educator and student well-being in learning and teaching. What follows is an overview of each country, including specific information about the educational setting from which educator and student interview participants were drawn.

Australia

As the sixth-largest country by land mass, Australia has a comparably small population of approximately 26 million. The population is diverse, with more than 270 ethnic and cultural ancestries (Australian Bureau of Statistics, 2023; The Australian Human Rights Commission, 2014). Three percent of Australia's population are Aboriginal and Torres Strait Island peoples, the original inhabitants of the country. Although Australia technically has no official language, English is the de facto national language. In addition to English, there are more than 250 indigenous languages in Australia; efforts are being made to maintain, preserve and promote these indigenous languages.

The system of government is a federal parliamentary democracy under a constitutional monarchy. The federal government shares some powers with the six states and two internal territories. Although education is a shared responsibility of the federal government and state and territorial governments, education in Australia is primarily regulated by state and territory governments. Australia has a standardized national curriculum for all schools. School is mandatory from year one (age six) to year ten (15 to 16 years old). School graduation takes place in year 12 (17 to 18 years old; Australian Government Department of Foreign Affairs and Trade, n.d.). Vocational education and training are available at secondary and senior secondary schools.

In 2020, Australia spent 6.1 percent of its GDP on education, putting it in the top five of the 36 countries surveyed (OECD, 2022a). Overall, teachers in Australia earn an average of approximately $69,000 (USD), more than the OECD average (OECD, 2022a). Teacher salary is determined by years of experience, qualifications, and promotional levels.

In 2022, approximately four million students were enrolled in 9,614 schools in Australia. In 2021, 99.3 percent of children ages six to 15 years were enrolled in school (ACARA, 2021). The Australian education system is highly privatized, with 35.6 percent of students attending independent schools; this included both Catholic (19.7 percent) and Independent Schools (15.9 percent; Australian Bureau of Statistics, 2023). Additionally, the proportion of private investment in Australian schools is much greater than in other Organisation for Economic Co-operation and Development (OECD) countries (nearly 40 percent compared to the OECD average of 16 percent). Public education is fully paid for by funding from the federal, state, and territorial governments. Public schools in Australia are non-denominational. Catholic and independent schools require families to pay fees for education; however, the federal government does offer some funding to offset the costs of some Catholic and independent schools. English is the main language of instruction, although some schools offer bilingual programs or programs in other languages.

Schools in Australia, with few exceptions, run for six hours a day from Monday to Friday, late January/early February to mid-December every year, with five to six weeks off during their summer holidays, and two weeks off during the fall, winter, and spring.

Broadly, the Australian education system is structured in the following way (Australian Government of Foreign Affairs and Trade, n.d.):

1. Primary school: kindergarten to years 6 or 7
2. Secondary school: years 7 or 8 to Year 10
3. Senior secondary school: years 11 to 12

Australian students performed above the OECD average in the 2018 Programme for International Student Assessment (PISA) assessment in reading, ranking 16th as well as science, ranking 17th. In mathematics, students scored in the average range, ranking 29th among 78 participating countries (OECD, 2019). Overall, 84 percent of adults (ages 25-64) have completed upper secondary education in Australia, higher than the OECD average (OECD, 2020).

Interview site

For the project interviews, educators and students were recruited from a large co-educational independent boarding and day school serving children from early childhood through to school graduation. Located in an urban area in southeast Australia, the high-performing school provides inclusive education to a wide range of students leading to an International Baccalaureate (IB), state graduation diploma or a state applied learning certificate. Many school graduates move on to study in top universities around the world. In addition to a rich academic program, the school has a wide range of extra-curricular activities that include sports, arts, community service, and leadership development. The school serves approximately 1,600 students, with most students coming from within the country. To support students who require financial assistance, the school has an extensive scholarship and bursary program. The school has a strong focus on fostering the well-being of all students so that they can flourish. Through positive education, adventure based learning, and creative teaching methods, the school focuses on fostering twenty-first century skills to develop individuals who will make a positive difference in the world.

Canada

As the second largest country in the world by land area, Canada has a population of 40 million inhabitants (Government of Canada, 2023). The population is diverse, with more than 450 ethnic and cultural origins reported on the last census, with one in four Canadians belonging to a racialized group (Government of Canada, 2021). Canada's first inhabitants, indigenous peoples, make up five percent of the population. The system of government is a constitutional monarchy and a parliamentary democracy. Canada has two official languages: English and French; government efforts are being made to support the revitalization, preservation and promotion of indigenous languages.

Canada has a decentralized educational system. Each of the ten provinces and three territorial governments oversees its jurisdiction's accredited educational system that employs certified educators to teach the prescribed curriculum for the region. Education is further governed locally by democratically elected school boards with decision-making powers that influence school policies, financial management, and educational programming. School is mandatory for children from grade 1 (age six) through to grade 10 (age 16). Formal school ends at grade 11 (Quebec) or grade 12 (rest of Canada), after which students can choose to continue to opt for a two-year pre-university program (Quebec) or further post-secondary training or education (rest of Canada).

Canada spent 5.2 percent of its GDP on education in 2020 (World Bank, 2022a). Concerning educator salaries, public school teachers in Canada earn an average of between $39,000 (USD) for a first-year teacher to $68,000 (highest salary). The range of salaries varies greatly depending on the province/territory in which a teacher works. Teacher salary is determined by the level of education and years of teaching experience (Government of Canada, 2020). Overall private school salaries are lower than public school salaries.

Public and private educational institutions serve close to six million students in Canada from kindergarten to high school completion (grade 11 in Quebec and grade 12 in other regions of Canada; Government of Canada, 2021). Ninety-nine and a half percent of children are enrolled in elementary schools (World Economic Forum, 2017). Ninety-eight percent of students continue onto secondary school. As of the 2019/2020 school year, 91.8 percent of Canadian students attended publicly funded schools, and 7.6 percent attended private/independent schools. The remaining students (.6 percent) were homeschooled. (Government of Canada, 2021).

Public education in Canada is fully paid for through funding from each of the ten provinces and the three territories. Private schools require families to pay fees for education; however, in some provinces, independent schools receive partial government funding. Canadian public schools are non-denominational, except for the Catholic Public Schools, which are governed by Catholic School Boards and are fully funded by the government. English is the predominant language of instruction in schools in Canada, except for Quebec, where French is the dominant language of instruction. French is taught as a second language throughout Canada, as mandatory for certain grades or as an elective subject.

Two additional school types are offered throughout Canada (1) Francophone schools and (2) First Nations schools. Francophone school boards in each province/territory oversee Francophone schools that the federal and provincial governments jointly fund. Francophone schools serve Canadian students who meet one of the following criteria: have a Canadian parent whose first language learned and still understood is French; have a parent who received their education in French; is a student who is receiving their education in French in Canada. The Francophone school system is distinct from French immersion programs in public schools, which are open to any student who would like to receive their education in French, regardless of their language background. First Nations schools, fully funded by the federal government, are on First Nations reserves. The local First Nation operates these schools and serves local students belonging to the Nation.

Schools in Canada, with few exceptions, run for six hours a day from Monday to Friday, September to June every year, with two weeks off during the Christmas holidays, one to two weeks off during the spring and two months off during July and August

In general, schools in Canada are structured as follows:

1. Primary school: kindergarten to grade 7
2. Secondary school: grades 8 to 12

Note that in some areas, there are varying structures for school composition. For example, some school districts may have middle schools (grades 6 to 8), junior high schools (grades 7 to 9) and senior high schools (grades 10 to 12).

Canadian students consistently rank high on the Programme for International Student Assessment (PISA) assessment. In the 2018 PISA testing, Canada placed 6th in reading, 8th in science, and 12th in math among 78 participating countries (OECD, 2019). Ninety-two percent of all adults in Canada between the ages of 25 to 64 have completed upper secondary education (OECD, 2020).

Interview site

Interviews with educators and students in Canada took place at a site located in the province of Ontario. Ontario has invested significant resources to address the well-being of students through School Mental Health Ontario (SMHO), a provincial implementation support team that works with the Ministry of Education to develop a systematic and comprehensive approach to school mental health through providing evidence-informed resources, coaching, and training. The ultimate aim of these efforts is to enhance the quality and consistency of mental health promotion (e.g., social and emotional learning; mental health literacy training), prevention and early intervention programming (e.g., provision of brief interventions for students with mild to moderate mental health concerns) in schools. The Ontario interviews were conducted with educators and students from a public school board that serves students from rural and small urban communities through 23 elementary schools (Kindergarten to grade 8) and

two high schools (grades 8 to 12). Through SMHO, the school board has invested significant resources over the past eight years in enhancing their focus on social and emotional learning and trauma-informed practices throughout their schools to support student mental health and well-being.

Colombia

Colombia has a population of nearly 50 million, 82 percent of whom live in urban areas. The International Money Fund (IMF) has identified Colombia as a developing country, according to its lower economic performance. The country's overall population is diverse, with more than 87 ethnic groups and 64 spoken indigenous languages (Carroll, 2020). The official language of the country is Spanish, spoken by 99 percent of the population. In some regions with significant indigenous populations, indigenous languages are used as frequently as Spanish as the language of instruction, to preserve and promote the cultural heritage of indigenous communities.

Colombia's system of government is a presidential democratic republic. All students in Colombia must attend at least nine years of schooling, with a minimum of five years in primary school (ages six to ten) and four years in secondary school (ages 11 to 14). Primary and secondary schools follow a national curriculum. After the completion of grade nine, students may continue with upper secondary school where there are different options that lead to graduation, most notably a general or vocational track (OECD, 2022c). Upper secondary requires students to pay fees.

In 2020, Colombia spent 4.9 percent of its GDP on education (The World Bank, 2022b). The average salary of a teacher in Colombia is $11,000 USD (ERI, n.d.). With respect to salary progression, compared to other OECD countries, Colombian teachers spend fewer years teaching to reach the upper salaries (OECD, 2022c). Since 2002, the teaching profession has undergone reforms to further professionalize the workforce and raise standards for teachers entering the education system. These reforms include rigorous entry screening to the profession based on a standardized exam and the introduction of merit-based incentives (Brutti & Torres, 2022).

In 2021, approximately 9.7 million children attended basic and secondary education in Colombia (DANE, 2022). Ninety-five percent of children ages six to 14 were enrolled in primary and secondary education and 75 percent of Colombian students completed secondary school (OECD, 2022c). Public primary and secondary schools are run by the national government and are free to attend until grade 11. Private schools charge tuition fees and are predominately found in urban areas and are run by private organizations, corporations and individuals as well as the Roman Catholic Church. Spanish is the predominant language of instruction in Colombia. In the public school system, most students also have some instruction in English as a second language. For education in other languages, students need to attend private schools where they can be immersed in languages such as English, French, or German.

Colombia's academic calendar is composed of a 40-week schedule across two semesters. Schools choose between two academic calendar systems. The first academic calendar system, under which the majority of schools operate, begins in February, with a four-week vacation in the summer with the school year ending in November. The second system begins in September, has a four-week vacation in December, and ends in June. Institutions can use either calendar system, as long as the minimum number of teaching hours are met.

In general, schools in Colombia are structured in the following way:

1. Primary school: grades 1 to 5
2. Basic secondary school: grades 6 to 9
3. Upper secondary school: grades 10 and 11

Colombian students rank below the OCED average on the Programme for International Student Assessment (PISA) assessment. In the 2018 PISA

testing, Colombia placed 58th in reading, 62nd in science, and 69th in math among 78 participating countries (OECD, 2019). Thirty-one percent of 25–34-year-olds completed post-secondary (tertiary) training, compared to a 47 percent average across other OECD countries (OECD, 2022b). Seventy-five percent of students in Colombia attain grade 11 (OECD, 2022c).

Interview sites

Interviews with educators and students in Colombia took place in two sites. The first, located in a large urban area in southern Colombia, is a bilingual International School, accredited by the Council of International Schools (CIS) serving students from early childhood (age 18 months) to graduation (grade 12). The school offers three International Baccalaureate Programs: Primary Years Programme (PYP), Middle Years Programme (MYP) and the Diploma Programme (DP). All students go on to study at universities in Colombia or abroad. The school serves approximately 1,200 students, with 90 percent of students from Colombia and ten percent from other nationalities. The average student-teacher ratio is 8:1. The school offers numerous opportunities for students to participate in extra-curricular activities, (e.g., music, drama, clubs), sports, and exchange programs. With a focus on educating the heart and mind, the school strives to develop responsible citizens who are caring and contribute positively to the professions they pursue and to society at large.

The school promotes the values of respect, tolerance, responsibility, solidarity, honesty, and justice. As a CIS-accredited school, the school is required to address student well-being and child protection challenges. Student support is tailored for each student through a psychology and learning support team. Staff receive support for school-based challenges through a school-based Committee for the Well-being of Workers, a committee that is required by the Colombian government.

The second site, located in a small urban area in southern Colombia, is a private school of 308 students, run by a private foundation. The school serves students from preschool to grade 11, from a local company as well as from the local community. All students are Colombian with most students attending the school through substantial fee waivers due to their family's financial background.

The average student-teacher ratio at the school is 15:1. In their teaching approach, the school focuses on strengthening intellectual, social, emotional, and ethical competencies to promote the development of citizens who can achieve self-fulfillment as individuals, as social beings, and as part of the globalized world. The school promotes the values of freedom, commitment, respect, professionalism, honesty, solidarity, transparency, loyalty, effectiveness and justice. In addition to the regular programming, the school offers students extracurricular activities in sports and arts. The school has a strong focus on educator and student well-being and through a counselling team works with the school community to provide direct support and ongoing educational opportunities for both students and staff to promote well-being for everyone to create an environment of healthy co-existence. The student support services provide extra, tailored support to to support the success students who have particular educational, developmental, and economic needs.

India

India is the seventh-largest country by land mass and has a population of over 1.2 billion people (The World Bank, 2023). According to the last national census in 2011, there were 123 major languages. The official language in India is Hindi; however, English is a commonly spoken language. The country has been categorized as the world's largest democracy with a parliamentary form of government. Its economic growth over the last decade has made India an emerging global player in the world economy.

In 2022, India spent 2.9 percent of its GDP on education (Government of India: Department of Finance, n.d.). Teacher salaries vary widelyd in India and depend on qualifications, experience, and school type. The education system in India is

governed by the Ministry of Education. Beginning in the 2023-2024 school year, the new National Educational Policy, based on the pillars of access, equity, quality, and accountability, came into effect. With this new policy, come dramatic changes, including (India Energy Portal, 2023):

1. Establishment of a uniform and centralized board that will oversee education

2. Syllabus changes to promote creativity and curiosity among students through different teaching methods

3. New grade structure changes which include 12 years of schooling and three years of pre-school. The policy is based on the 5+3+3+4 model whereby students pass through four stages of education. Foundation (three years of preschool and two years of primary education); Preparatory stage (3rd to 5th class); Middle stage (6th to 8th class); and secondary stage (9th to 12th class)

4. New assessment approach which limits exams to students in the 2nd, 5th and 8th classes and board exams at the end of the 10th and 10th classes.

This policy change extends compulsory education from ages six to 14 to ages three to 18. The majority (80 percent) of recognized schools at the primary stage in India are government-run or supported. In most states, grades 11 and 12 are offered at high school; however, in select states, grades 11 and 12 are part of a junior college system.

The enrollment rate of Indian students at the primary level is 99 percent, with 97 percent completing primary education. As of 2021, 76.6 percent of females and 79 percent of males participated in secondary education (The World Bank, 2023). Private schools have become very popular in India, however many struggled to stay open during the COVID-19 pandemic as families who lost income struggled to pay school fees, while other schools were amalgamated (Drishti IAS, 2022). Just over one quarter (30 percent) of students in India attend private schools. These include Islamic *madrasa* schools, autonomous schools, or international schools. International schools are mostly affiliated with the International Baccalaureate Program and/or Cambridge International Examination, which guide the curricula. Instruction in private schools is typically done in English, but Hindi and/or the state's official language is often taught as a compulsory subject.

The academic calendar followed by all public schools in India begins in May or June and ends in March, with Diwali, Dussera, and Christmas holiday breaks throughout the year. Over 30 religious festivals are celebrated by a wide range of religious, linguistic, ethnic and other groups. International schools typically follow a Western academic calendar, beginning in August and ending in June, with breaks in November-December, and the spring.

Indian students participated in the Programme for International Student Assessment (PISA) 2009-2010 assessment. Students scored near the bottom of the OECD rankings; India has not participated since that time. The literacy rate among individuals 15 years and older is 74 percent (The World Bank, 2023). Among 25 to 34-year-olds in India, 21 percent have a tertiary qualification (i.e., university or higher education; OECD, 2023).

Interview site

For the interviews, educators and students were recruited from a co-educational independent school in the state of Haryana in northern India. The school, with approximately 500 students, uses English as the main language of instruction. Through a value-based education approach and creative learning environment that is dynamic and child-friendly, the school strives to achieve specific and measurable outcomes among students. Key goals of education are academic achievement and growth to prepare students to be in a global and connected world. The school serves children from preschool through to graduation (year 12). The average class size is 40 students. Most students in the school are first-generation learners.

Qatar

Qatar is an Arab state located on the Arabian Gulf coast. As of July 2023, Qatar had a population of just over three million (Planning and Statistics Authority, 2023). Qatar is composed of Qatari citizens and non-Qatari residents from all over the world. Although Arabic is the official language, English is commonly used in everyday communications as many non-Qatari residents come from non-Arabic-speaking backgrounds. Qatar identifies itself as a constitutional monarchy. Economically, oil and gas drive Qatar's economy and have allowed for major development efforts and benefits for the citizens such as free education, health and social services, and public service employment opportunities.

The Ministry of Education and Higher Education in Qatar has developed an education system with a clear strategy (MOEHE, n.d.). More specifically, this strategy has focused on improving the quality of teaching and learning, increasing student attainment levels, improving the learning environment, and utilizing technology to promote student learning outcomes. The Ministry of Education provides funding, oversight, and evaluation of all public schools. Education is also central to the Qatar National Vision 2030, the country's long-term vision to build a sustainable and varied economy (Oxford Business Group, 2022). Education is free from preschool to university for Qatari nationals. Education is mandatory for the primary and preparatory levels, although many students continue to secondary and higher education.

Qatar spent 8.9 percent of its GDP on education in 2021 (World Bank, 2022). Qatar relies on an expatriate teaching workforce from other Arab countries because of the lack of Qatari teachers compared to the number of students in the country. Female and foreign teachers make up a large percentage of the teacher workforce (72.2 percent female; 85.9 percent non-Qatari; Oxford Business Group, 2022).

There are four main types of schools: 1) government (public) schools, following a national curriculum); 2) international schools, following international curricula such as the International Baccalaureate; 3) private Arabic-language schools, following curricula approved by the Qatari Ministry of Education; and 4) community schools, which follow curricula from the home country (e.g., India, Egypt) of their students. In the 2020-2021 school year, there were over 200 public schools and kindergartens serving more than 126,250 Qatari and non-Qatari students (MOEHE, 2020). Most public schools in Qatar are gender-segregated, though some primary schools are co-educational. There were over 320 private schools, serving approximately 200,240 students.

The school year in Qatar typically begins in the early fall and ends in late spring. There is a two-month break that occurs in the summer between the school years.

Education is divided into four main levels.

1. Pre-primary: up to the age of five
2. Primary: grades 1 to 6
3. Preparatory: grades 7 to 9
4. Secondary: grades 10-12

Qatari students ranked below the OCED average on the 2018 Programme for International Student Assessment (PISA) assessment. Qatari students were ranked 60th in reading, 58th in science, and 60th in math among 78 participating countries (OECD, 2019). Thirty-one percent of 25 to 34-year-olds completed post-secondary (tertiary) training, compared to a 47 percent average across other OECD countries.

Interview sites

The first site for the interviews, located in Doha, is an international school providing a rigorous standards-based, internationally enriched American curriculum. It is a non-profit, U.S.-accredited, PreK–12 college preparatory school serving students from early childhood (age three years) to graduation (grade 12). The school is accredited by the New England Association of Schools and Colleges (NEASC). The school offers Advanced Placement (AP) and International Baccalaureate (IB) Diploma programs, in addition to specialized courses, such as Art, Music, and Drama. Most students go on to study at universities abroad, with some joining universities in Qatar. The school serves approximately 2,200 comprised of Qatari students and students from the large expatriate population in Qatar representing more than 80 countries.

The school offers numerous opportunities for students to participate in extra-curricular activities, (e.g., music, drama, clubs, leadership development) and service-learning trips. The school also has several varsity and junior varsity teams for basketball, soccer, and other sports. The school promotes values of respect, honesty, responsibility, and kindness and focuses on student learning in a safe, secure environment.

The school is committed to diversity, equity, inclusion, and social justice and has a child protection policy in place. The school is committed to safeguarding and promoting the welfare of all students. Since most of the teaching and administration workforce of the school are expatriates, the school has in place a comprehensive on-boarding and orientation program which allows new faculty and staff to effectively navigate the challenges that come with an international move. The school provides support and consultation during the recruitment and onboarding processes.

The second site, located in Doha, is a small charitable, non-profit school established by a development agency to reduce impediments to education faced by marginalized children in Qatar, so they can be integrated into the schooling system and complete formal education. The school offers a hybrid academic-vocational model delivered in the English language to non-Qatari students of both Arab and non-Arab heritage who were out of school. The school offers education in grades 7 to 13 following the British system. While the academic path is based on the International Cambridge curriculum, practical, hands-on skills are developed through recognized technical and vocational qualifications such as BTEC.

This is a girls-only school that aims to graduate students with occupational skills in greatest need in Qatar's labor market, while simultaneously facilitating their academic progression to higher education. The school serves girls who have had some educational gaps throughout their schooling due to financial barriers or documentation requirements of the Ministry of Education and Higher Education in Qatar. The school has approximately 330 students in grades 7 to 10 and is planning to open enrollment for grades 11 and 12 in the near future. The school creates a family atmosphere of respect, tolerance, acceptance, and humility where every student can learn, grow, and reach their full potential. The school focuses on the holistic development of individuals and gives students lifelong learning experiences which will help them establish and achieve their future goals.

Chapter Two: Scoping Literature Review – Background, Method, and Results

2.1 Scoping Review: Background and aims

Aims

The aims of the scoping review were to (1) distill the existing research literature on the relationship between teacher and student well-being in teaching and learning; (2) provide greater insight into how these constructs have been conceptualized and measured in the research; (3) establish a full understanding of where, when, and how this research was conducted; (4) synthesize empirical findings from this research; and (5) identify knowledge gaps in the literature to guide future research (Lockwood et al., 2019; Peters et al., 2020). Insights from this review inform suggestions for future research in the field, and help identify implications for future decision-making, especially as related to teacher well-being (Tricco et al., 2018).

A scoping review methodology was chosen as the most appropriate approach for addressing these research aims; scoping reviews can provide a comprehensive overview of research on any given topic, and they can identify methodologies used to guide future research (Arksey & O'Malley, 2005; Lockwood et al., 2019; Munn et al., 2018). Scoping reviews have been defined as "exploratory projects that systematically map the literature available on a topic, identifying key concepts, theories, sources of evidence, and gaps in the research" (Grimshaw, 2020, p. 34). Since the aims of the current project are "exploratory and descriptive in nature" (Peters et al., 2020, p. 2122), the authors considered a scoping review the most appropriate method.

Building on prior literature

The proposed project builds on research conducted by researchers at Duke University (Proeschold-Bell et al., 2021), which focused on the factors that underpin and promote teacher well-being and prevent work-related burnout. The rise in teacher mental health issues and burnout has coincided with an uptick in research focused on teacher well-being, its antecedents, and its consequences (Hascher & Waber, 2021). In a recent scoping review, Zhang and colleagues (2023), observed a rise in the volume of articles on teacher well-being over the past three decades, with

only a handful of articles published before 2000 (four percent of the total studies included in the review). The dramatic rise in the number of articles published on the topic since the onset of the COVID-19 pandemic plainly reflects heightened attention.

This increase of interest in teacher well-being has revealed myriad ways of defining teacher well-being (Hascher & Waber, 2021). Concepts of teacher well-being have been distinguished and addressed by the fields of well-being psychology, positive psychology, the psychology of work and organizations, health research, and the field of teacher well-being specifically. Hascher and Waber (2021) observed that much of the research on teacher well-being is based on general conceptions of well-being, rather than on ones that are specific to the challenges and demands of teaching. This suggests questions about the ways teacher well-being is typically described and defined. This work raises another question, explored qualitatively in a prior phase of this project (Proeschold-Bell et al., 2021): "To what extent does teachers' own well-being relate to that of students' well-being and/or learning, or vice versa?" (Hascher & Waber, 2021; Proeschold-Bell et al., 2021).

In the first phase of this project, Proeschold-Bell and colleagues (2021) concluded that in both Cambodia and Kenya, teacher absenteeism (thought to be the result of low levels of teacher well-being) had a negative impact on student learning outcomes. Teachers in Kenya also expressed that low levels of teacher well-being affected their ability to "properly deliver content and maintain healthy, positive relationships with students" (p. 38). In Qatar, teachers shared the perception that their well-being impacted their students' well-being and learning, suggesting that "when they are happy, their students are happy, but when they are unhappy this may cause students to feel disconnected or distressed, thus affecting their academic performance" (p. 38). However, some teachers contended that their own well-being did not affect that of their students. This perception was grounded in the understanding that as teachers, they must separate their personal and professional life; regardless of their well-being, teachers should not allow their mood to affect their students or change the way they interact with students.

Since the completion of the first phase of this project two years ago, a systematic review and meta-analysis have explored the associations between teacher well-being and student outcomes (i.e., Madigan & Kim, 2021; Maricutiou et al., 2023). In a systematic review, Madigan and Kim (2021) explored the link between teacher burnout and student academic achievement, as well as other student outcomes (Madigan & Kim, 2021). This review examined these associations through a focus on teacher burnout –relying on a deficit perspective of teacher well-being, as opposed to a more comprehensive, positive psychological, and assets-based conceptualization (e.g., happiness, thriving, flourishing; see Collie & Perry, 2019; Hascher et al., 2021; Seligman, 2009). This deficit approach has been the norm historically in research on teacher well-being (Spilt et al., 2011), whereby researchers have traditionally examined teacher well-being through the lens of stress and burnout or the absence of mental health symptoms such as depression and anxiety (Maricutoui et al., 2023; Spilt et al., 2011). The authors of this systematic review observed small to moderate affects of teacher burnout on student academic achievement; students taught by teachers' suffering from burnout tended to perform worse academically. They found small to moderate associations between teacher burnout and student motivation, whereby the more burned out the teachers were, the less motivated the students. However, there was little evidence that teacher burnout was associated with students' well-being, as conceptualized by students' depressive symptoms, emotional distress, or attempted suicide.

In a recent meta-analysis, Maricutoiu and colleagues (2023) took a more positive psychological and assets-based approach and examined the relations between teachers' subjective well-being and students' school experience (e.g., academic performance, academic engagement, student well-being). This meta-analysis focused solely on correlational studies of these relations and found teachers' eudaimonic well-being, defined as a sense of self-efficacy, engagement in teaching and absence of depression or anxiety, to be moderately associated with students' well-being and engagement, and moderately related to the quality of teacher-student interactions. It was weakly associated with student achievement. Only three studies explored the relations between teachers' hedonic well-being, defined as positive emotions, life satisfaction, and job satisfaction, with student outcomes, these results were omitted from their meta-analytical calculations. Because the meta-analysis was purely correlational in scope, the authors urged for more research to explore the directionality of these associations.

Addressing knowledge gaps

Although these recent reviews provide promising evidence that teacher well-being is in fact related to student academic achievement, motivation, engagement, well-being, and the quality of student-teacher interactions, a more comprehensive understanding and overview of the literature is needed. Firstly, these reviews excluded a significant portion of the existing literature on these relations, namely qualitative and mixed-methods studies. Secondly, they did not examine several key grey literature sources (e.g., white papers, policy reports). For instance, Maricutiou et al. (2023), only examined correlational studies, thereby excluding longitudinal, experimental, quasi-experimental, and qualitative studies. Thirdly, they did not review or categorize the various conceptualizations of teacher and student well-being in the included studies – impeding the synthesis of findings and conclusions that could be drawn about these relations.

The present study used a scoping review methodology to provide a more comprehensive understanding of the landscape of research on the relations between teacher and student well-being in teaching and learning, specifically in K-12 settings. This review examined studies that employed a fuller spectrum of research designs – both quantitative and qualitative – and studies that were drawn from other grey literature sources. Additionally, this review examines these relationships for a broad range of well-being descriptors (e.g., stress and thriving). A search of PROSPERO, Cochrane Database of Systematic Reviews, the Campbell Collaboration database, Open Science Framework, Joanna Briggs Institute Database of Systematic Reviews and Implementation Reports, PsychInfo, and the Education Resources Information Center (ERIC) confirmed that there were no research reviews underway at the time of our pre-registration and search that matched our efforts.

2.2 Scoping review: Method

Overarching approach

Methodological guidance from Peters et al. (2020) informed our approach to the scoping review, as well as approaches used in scoping reviews on related topics or those with similar objectives (Chan et al., 2022; Nelson et al., 2016; Proeschold-Bell et al., 2021; Stratford et al., 2020; Tudor et al., 2022; Zhang et al., 2023). The scoping review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR; Tricco et al., 2018). See Figure 2.0 for the PRISMA-ScR flow diagram. A university librarian at the University of Illinois Chicago was consulted throughout the study (e.g., for the selection of databases, solidifying search terms and search strings; Morris et al., 2016). The final scoping review protocol was pre-registered on Open Science Framework Registries (https://osf.io/93vwp/).

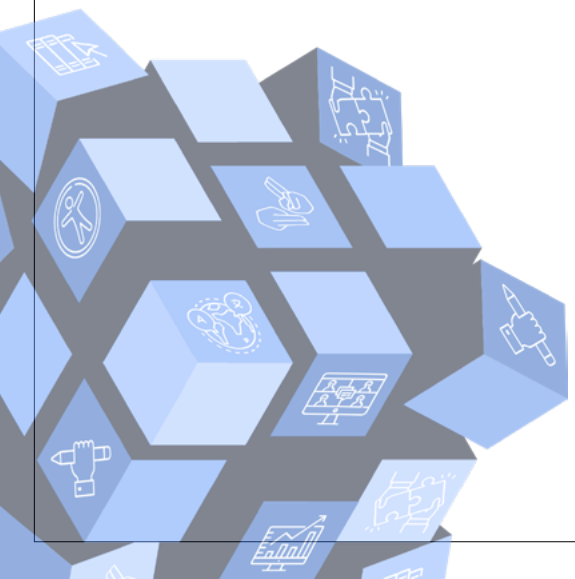
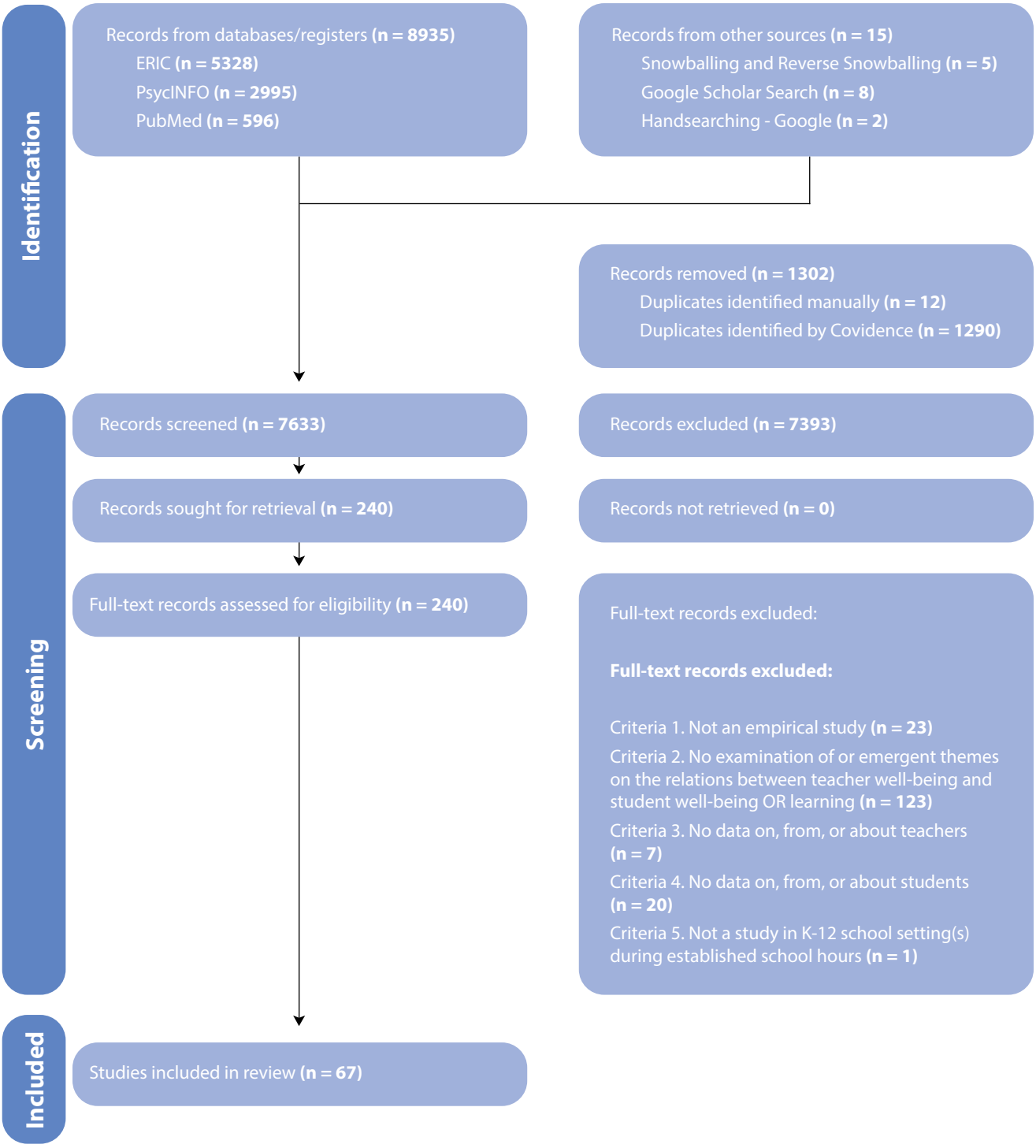


Figure 2.0 PRISMA-ScR Diagram



Notes.One record included for review contained two studies that met our inclusion criteria. Therefore, a total of 66 records were included, however, we extracted data from 67 studies.

Search terms and databases

We sought to identify relevant peer-reviewed and grey literature publications using similar search strategies. We outline search strategies for each approach below.

To locate peer-reviewed literature, we searched the following academic databases: APA PsychINFO (ProQuest), PubMed, and ERIC (EBSCOhost). Searches were conducted for literature published between January 2000 and April 2023; the search was restricted to peer-reviewed journal publications in English, given the language restrictions of the research team. We searched the titles and abstracts of all results generated through the three databases using controlled vocabulary terms and relevant subject heading terms for each database. These terms align with the six conceptual areas of our research aims: (1) teachers (e.g., teacher, educator, school-teacher); (2) teacher well-being (e.g., well-being, job satisfaction, happiness, burnout, stress, depression); (3) students (e.g., student, youth, child, learner); (4) student well-being (e.g., well-being, anxiety); (5) student learning (e.g., learning, academic achievement, academic outcome*, academic performance); and (6) schools and classrooms (i.e., school, classroom). These categories were informed by our inclusion and exclusion criteria detailed below and provided in Table 2.1, and again, draw from a broader conceptualization of well-being encompassing a full spectrum of constructs from burnout to thriving. See Appendix A for final searches conducted within each database.

To locate grey literature, a three-pronged search strategy was undertaken drawing from the work of Godin et al. (2015) and Paez (2017). First, snowballing was conducted (see Sayers, 2008) using six exemplary articles (Arens & Morin, 2016; Braun et al., 2020; Briner & Dewberry, 2007; Collie & Martin, 2017; Granziera et al., 2023; Oberle & Schonert-Reichl, 2016), one meta-analysis on this topic (Maricutoiu et al., 2023), as well as one systematic review on this topic (Madigan & Kim, 2021). These eight articles provided some direction for identifying the search terms for the scoping review conducted in the databases mentioned above and in the grey literature searches. We also implemented a reverse snowballing process with these same eight articles to identify more contemporary articles using the citation tracking feature in Google Scholar and the anonymous function in the web browser to avoid the influence of the user's previous search history (Sayers, 2008). We located the eight articles in Google Scholar and identified more recent articles that cited each article. Finally, we searched Google search engines, including Google and Google Scholar to identify any other relevant and non-redundant records (i.e., the first 100 results). See Appendix B for the final Google and Google Scholar search strings.

Inclusion and exclusion criteria

For inclusion, records needed to (1) represent a primary research report of an empirical study; (2) include data on, from, or about K-12 classroom teachers (e.g., self-report, student reports of teachers, parent reports of teachers, evaluations or observations, performance tasks); (3) include data on, from, or about K-12 students (e.g., self-report, teacher-reports, parent reports, grades, performance tasks); (4) examine or identify emergent themes about the relations between teacher well-being and student well-being OR on the relations between teacher well-being and student learning, as conceptualized in our dictionary of search terms; (5) include research taking place during established school hours in K-12 school setting(s) (see Table 2.1 for full list of inclusion and exclusion criteria).

Table 2.1 Summary of Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion
Empirical Study	Report is an empirical study that presents data.	Report is not an empirical study that presents data.
Concept	Report examines or identifies emergent themes about the relations between teacher and student well-being OR teacher well-being and student learning, as conceptualized in our dictionary of search terms.	Report does not examine or identify emergent themes about the relations between teacher and student well-being OR teacher and student learning, as conceptualized in our dictionary of search terms.
Teachers	Report includes data on, from, or about K-12 classroom teachers.	Report does not include data on, from, or about K-12 classroom teachers (i.e., pre-service, preschool, early childhood, adult, cooperating, itinerant, resource, and substitute teachers; teacher assistants, student-teachers, teacher interns, and tutors).[a]
Students	Report includes data on, from, or about K-12 students.	Report does not include data on, from, or about K-12 students (i.e., medical, nursing, university, college, preschool, continuation, evening, and part-time students).[a]
Context	Report involves the collection and presentation of data about teachers and students who are operating in K-12 schools during established school hours.	Report does not involve the collection and presentation of data about teachers and students who are operating in K-12 schools during established school hours (i.e., after-school programming, extended learning or extended-day programming, school activities conducted over the holidays or summers, pull out sessions or one-on-one tutoring sessions).
Type of Article	Publications were primary literature presenting data (peer-reviewed and grey literature considered).	Publications were not primary literature (e.g., meta-analyses, systematic reviews, scoping reviews, literature reviews, editorials, commentaries, theoretical articles, conference abstracts and proceedings, books, and book chapters).
Time Period	Publications were published between Jan. 1, 2000 to April 1, 2023.	Publications were published before Jan. 1, 2000 or after April 1, 2023.
Language	Publications were written in English.	Publications were not written in English.

Note. [a] Studies were included if the study population included students and/or teachers from primary or elementary schools AND preschools, or if the study population included students and/or teachers from secondary school(s) AND post-secondary schools.

In considering the various types of publication, we excluded meta-analyses, systematic reviews, scoping reviews, literature reviews, editorials, commentaries, theoretical articles, conference abstracts and proceedings, books, and book chapters. With regards to the teacher study population, we focused on K-12 classroom teachers and excluded studies of pre-service teachers, preschool teachers, teacher assistants, student-teachers, early childhood educators, adult educators, cooperating teachers, itinerant teachers, resource teachers, substitute teachers, teacher interns, and tutors. With regards to the student study population, we focused on K-12 classroom students, and excluded studies of medical, nursing, university, college, preschool, continuation, evening, and part-time students. However, if the study population included students and/or teachers from primary school(s) (elementary) and preschool(s) (early childhood education), we included the study. Similarly, if the study population included students and/or teachers from secondary school(s) and post-secondary schools (e.g., universities), we included the study. Lastly, with regards to context, we focused on studies that took place during the established school day in K-12 school contexts, so we excluded studies of after-school programming, extended learning or extended-day programming, school activities conducted over the holidays or summers, pull out sessions or one-on-one tutoring sessions.

Screening process

Searches of the three academic databases identified an initial 7629 unique records (see Figure 2.0 for summary of results from screening process). All peer-reviewed results were exported for screening to Covidence. Covidence software deduplicates records and offers online screening and data extraction tools for scoping reviews (Kellermeyer et al., 2018). Four trained reviewers (AP, CG, JL, KB) used a screening manual to screen the titles and abstracts of all unique records yielded from the peer-review search (see Appendix C for screening manual). An initial training was carried out with these coders. Then, a test screening was conducted to assess inter-rater agreement, which yielded high agreement (89.5 percent). Inter-rater agreement was assessed regularly throughout this process (Belur et al., 2018; Peters et al., 2020). As such, the four reviewers screened the titles and abstracts of the remaining records. Following this process, three trained reviewers engaged in a full-text review of records that either met the inclusion criteria or were in need of further review, as the titles and abstracts are not representative of the entire publication (Arksey & O'Malley, 2005). Disagreements regarding the inclusion or exclusion of full-text records were resolved through full team discussion.

For the grey literature, two trained reviewers (AP and CG) screened results from the Google Scholar and Google searches using the same screening manual as the peer-reviewed screening process (i.e., first 100 results were screened; see Godin et al., 2015). Additionally, one trained reviewer (AP) conducted snowballing and reverse snowballing with the six exemplary articles and two previous reviews on this topic (Madigan & Kim, 2021; Maricutoiu et al., 2023). The grey literature search yielded 15 non-redundant and relevant results. All results were exported to Covidence, where a trained reviewer (KB) carried out the full-text review using the same screening manual (See Appendix D for full reference list of included studies).

Data extraction and analysis

We extracted data from the 67 studies that met our inclusion criteria. Two trained reviewers (JL and KB) extracted the following characteristics using a standardized form developed by the research team: (1) where and when the study was conducted (e.g., study year, geographic location); (2) study aims; (3) study setting (e.g., public schools, private schools, etc.) and number of study participants (teachers and/or students); (4) how the study was conducted (i.e., study design and study funding); (5) description of the study findings focused on the relation of teacher well-being to student well-being and learning and (6) conceptualizations and measures of teacher well-being, student well-being, and student learning

– for qualitative studies, if these specific constructs were not formally conceptualized or asked about, we reviewed and extracted themes purported to be representative of the constructs of interest. See Appendix E for the complete extraction form.

For the conceptualizations and measures, we limited our extraction to the constructs of interest (teacher and student well-being and learning). For the findings, we limited our extraction to the findings that examined the relationship between teacher and student well-being and learning. The data extraction form was pilot tested on three publications by two members of the research team (JL and KB); subsequent modifications were made to the form prior to the full extraction process. For quantitative data, frequency analysis and descriptive statistics were used to analyze the extracted data (Peters et al., 2020). For qualitative data, thematic analysis was used (Braun & Clarke, 2013).

2.3 Scoping review: Results

When and where studies were conducted

We observed an upward trend in the number of studies that examined the relationship between teacher well-being and student well-being and/or learning. The greatest number of studies were conducted in 2020 and 2021 (see Figure 2.1). Of the 67 studies that met our inclusion criteria and reported on their location, 23 were carried out in the United States (34 percent) followed by six studies in Canada (nine percent), five in Australia (seven percent), and four in the United Kingdom (six percent; see Figure 2.2).

Figure 2.1 Included Studies by Year

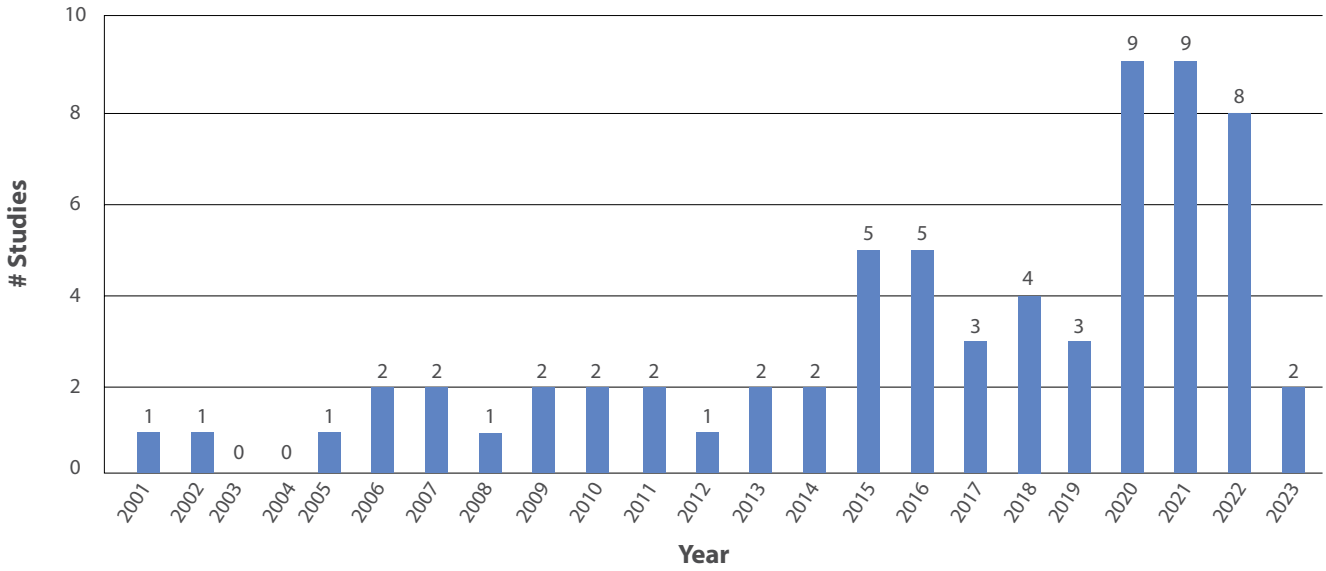
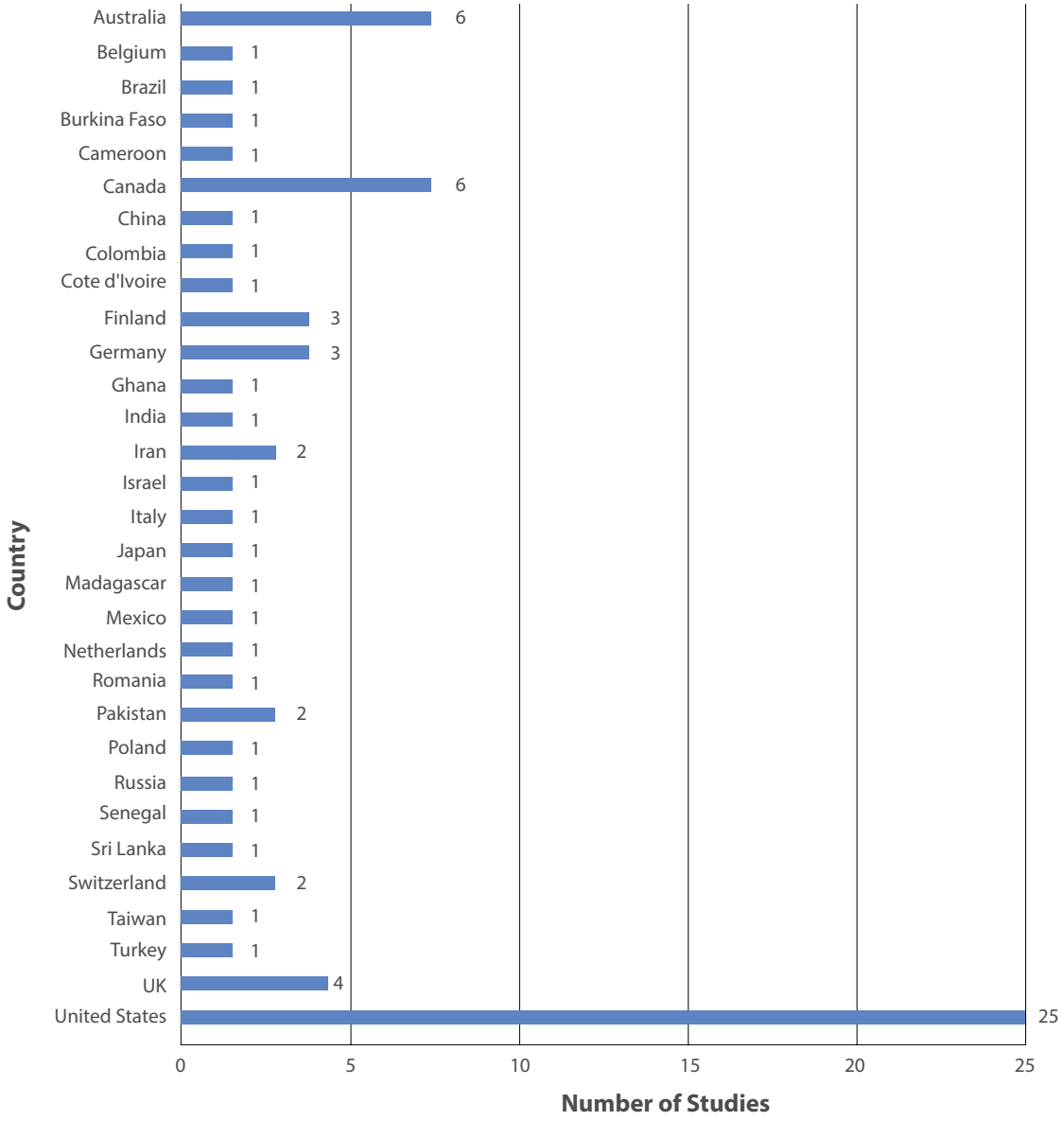


Figure 2.2 Included Studies by Country



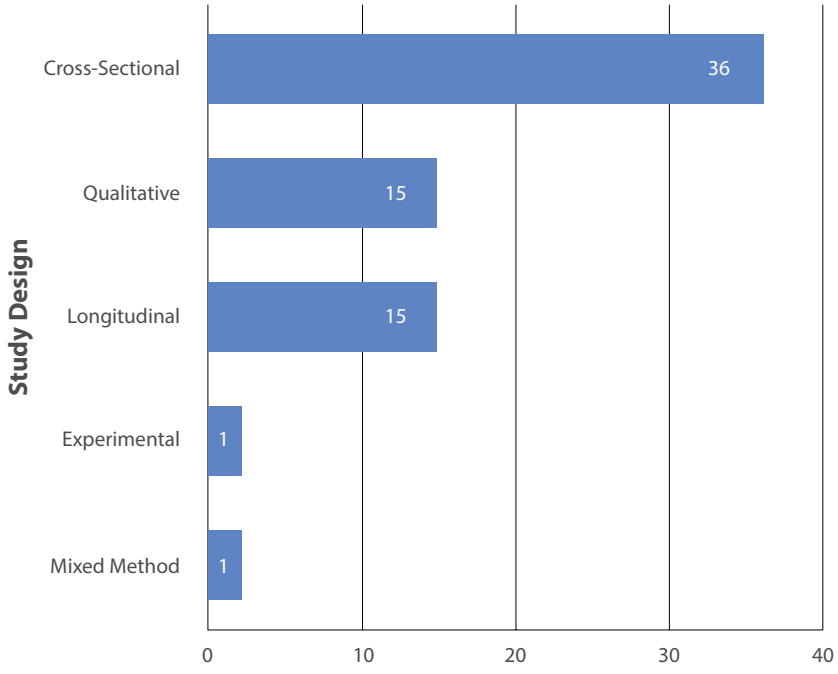
Twenty-five studies (37 percent) were conducted solely with elementary school students, six with middle school students (nine percent), and 15 with high school students (22 percent). Four studies (six percent) were with carried out with a combination of elementary and middle school students, another four were with middle and high school students (six percent), and one study was conducted with high school and university students. Seven studies (ten percent) included students across elementary, middle, and high school and the remaining five studies (seven percent) did not report the grade level of students in their study. Refer to Appendix F for a table with the full list of included studies and the above-described demographic information.

In terms of the study setting, 30 studies (45 percent) were conducted in public schools, while six studies (nine percent) were done in a mix of private and public schools. Additionally, three studies (four percent) were conducted with teachers and students in vocational or technical schools, and 28 studies (42 percent) did not report on this information. A total of 24 studies (36 percent) collected data in urban schools, while just two studies (three percent) gathered this data in suburban schools and two in rural schools (41 studies did not report this information).

How studies were conducted: Study designs

The included studies used a wide array of research methods to examine the relationship between teacher well-being and student well-being and/or learning. The most common approach to exploring these relations was through a cross-sectional design – a total of 36 out of the 67 included studies (54 percent). A total of 15 studies (22 percent) used a qualitative design, which included interviews, focus groups, observations, and case studies. Additionally, 15 studies (22 percent) used a longitudinal approach. One study with elementary school students used a mixed-method longitudinal design to explore the relationships between teacher stress and student learning motivation, phonological awareness, and pre-reading skills (Pakarinen et al., 2010). Finally, one study used an experimental design to examine the impact of a teacher training program for new elementary school teachers and their students (Tolan et al., 2020). However, teacher well-being was analyzed as a moderator of the tested intervention and no causal relationships between teacher well-being and student learning were explored (see Figure 2.3).

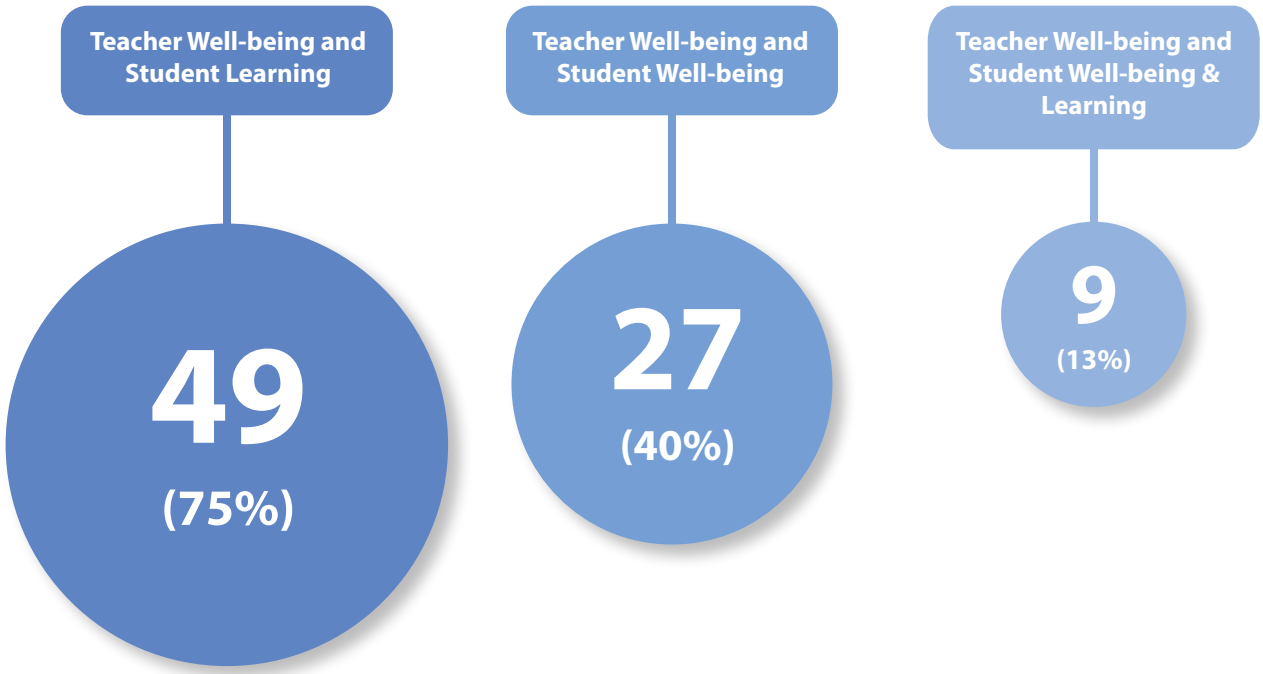
Figure 2.3. Included Studies by Study Design



Study findings

A total of 27 studies (40 percent) explored the relationship between teacher well-being and student well-being, while 49 studies (75 percent) explored the relationship between teacher well-being and student learning. Interestingly, nine of the 67 included studies (13 percent) explored the relationships between teacher well-being and student well-being, as well as teacher well-being and student learning. See Figure 2.4.

Figure 2.4. Studies Exploring the Relationships of Interest.



Of the studies that explored the relationship between teacher well-being and student well-being, 25 (93 percent) found teacher well-being was positively associated with student well-being (i.e., higher teacher well-being was correlated with higher student well-being; lower teacher burnout/stress was related to higher student well-being or lower student stress). For example, in a cross-sectional study with middle school students in England and Wales, Harding and colleagues (2019) found that teacher well-being was related to better student well-being and lower student psychological distress. Teacher depressive symptoms were also associated with lower student well-being and higher levels of student psychological distress. These relations remained when individual student factors were included in their models, as well as school-level factors, teacher absenteeism and teacher-student relationships. However, when teacher presenteeism was included in these models (i.e., the extent to which teacher health problems reportedly affected their work), the associations no longer remained.

Two studies found no association between teacher and student well-being on any of the outcome measures used to explore this relationship (Carroll et al., 2021; Szczygiel, 2020). Szczygiel (2020) carried out a cross-sectional study with elementary school students in Poland and found no association between teacher and student math anxiety. Carroll et al. (2020) conducted a two-wave longitudinal study with elementary, middle, and high school students in Australia. They found a positive relationship between teacher well-being and student learning, but no association between teacher stress or burnout and student well-being.

In our scoping review, we found only one study in which teacher well-being was negatively associated with student well-being. Specifically, high levels of teacher satisfaction were found to be associated with lower levels of student well-being, but only for a subgroup of students. However, the study also found that students' perceptions of teachers' well-being moderated the relationship between teachers' own reported well-being and that of their students (Van Petegem et al., 2007). In

other words, levels of student well-being were likely to be higher when they perceived their teacher to be uncertain and dissatisfied, even if the teacher reported high levels of well-being. See Figures 2.5a and 2.5b.

Figure 2.5a Aggregate Results from Studies Examining Teacher Well-Being and Student Well-Being.

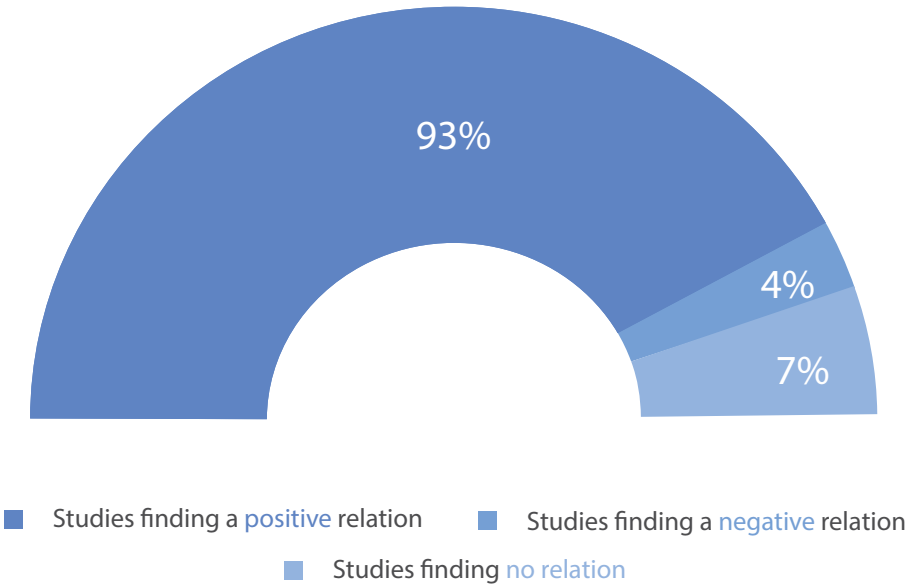
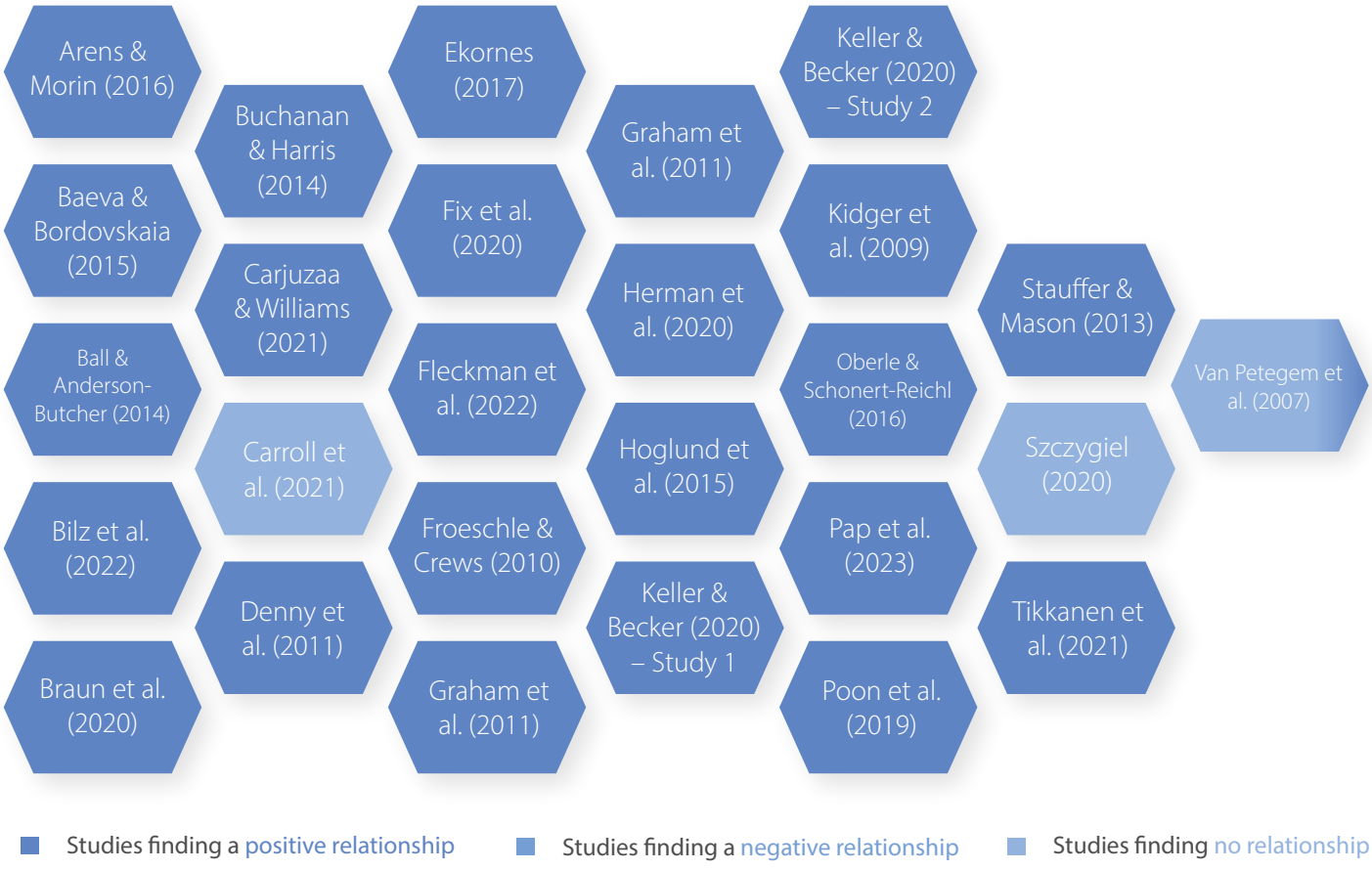


Figure 2.5b Results from Studies Examining Teacher Well-Being and Student Well-being: By Individual Study.



Of the 49 studies that explored the relationship between teacher well-being and student learning, 41 studies (84 percent) observed a positive relationship between these constructs (i.e., higher teacher well-being was related to greater student achievement; teacher stress/burnout was related to lower student achievement). For example, in a study of high school students in the United States, researchers observed that higher levels of teacher math anxiety were associated with lower math achievement, as measured by students' grades (Ramirez et al., 2018). Additionally, this association was partially explained by teachers' fixed mindsets. Students with more math anxious teachers were more likely to receive a message from that teacher that not all students are good at math, which then served to undermine their learning. In another study, Martinez-Sierra and colleagues (2022) examined the written responses of Mexican secondary school teachers who were asked to identify both important positive and negative experiences as math teachers, and to identify the triggers for these experiences. Student academic achievement, interest, and improvement triggered a positive set of emotions in teachers (e.g., happy for, appreciation, pride), while lack of student interest, bad behavior, and low achievement triggered negative emotions (e.g., disappointment, reproach, anger).

No studies reported a negative relationship between teacher well-being and student learning (e.g., lower teacher well-being was associated with higher student achievement). However, eight studies observed no association between teacher well-being and student learning (Adams, 2001; Barrera-Osorio et al., 2020; Caprara et al., 2006; Iqbal et al., 2016; Jõgi et al. 2022; Mahmoodi et al., 2022; Mantzicopoulos, 2005; Wu et al., 2020). For example, in a three-wave longitudinal study with Italian middle school students and teachers, student achievement in the first year of the study was not predictive of teacher job satisfaction in the second year of the study (Caprara et al., 2006). Additionally, teacher job satisfaction in the second year was not associated with student achievement (as measured by grades) in the third year of the study. See Figure 2.6a and 2.6b.

Refer to Appendix G for a table with the full list of included studies and their corresponding information (i.e., study design, conceptualizations, measures, and findings).

Figure 2.6a Aggregate Results from Studies Examining Teacher Well-Being and Student Learning.

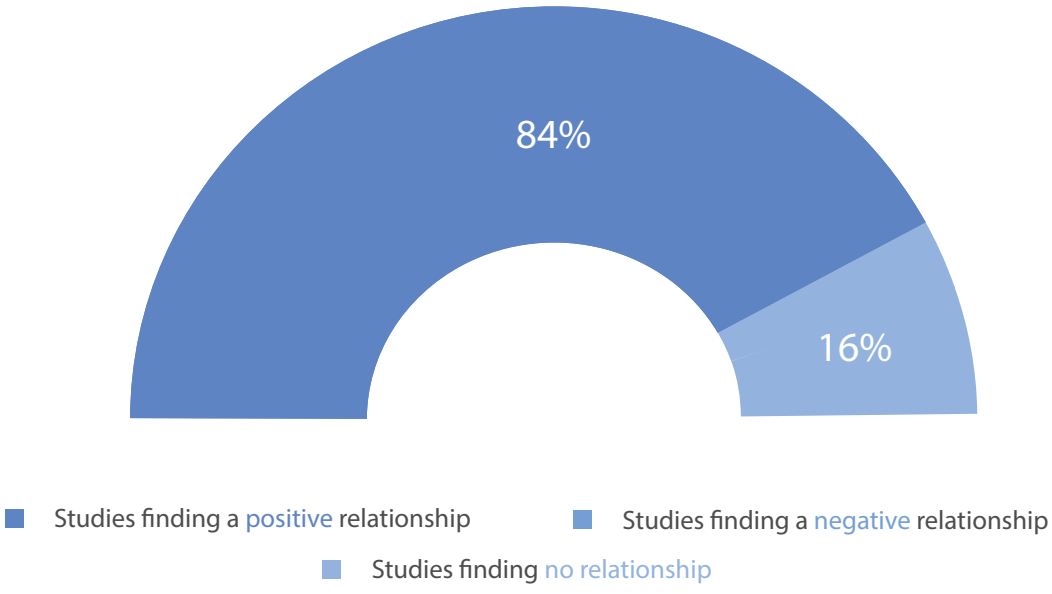
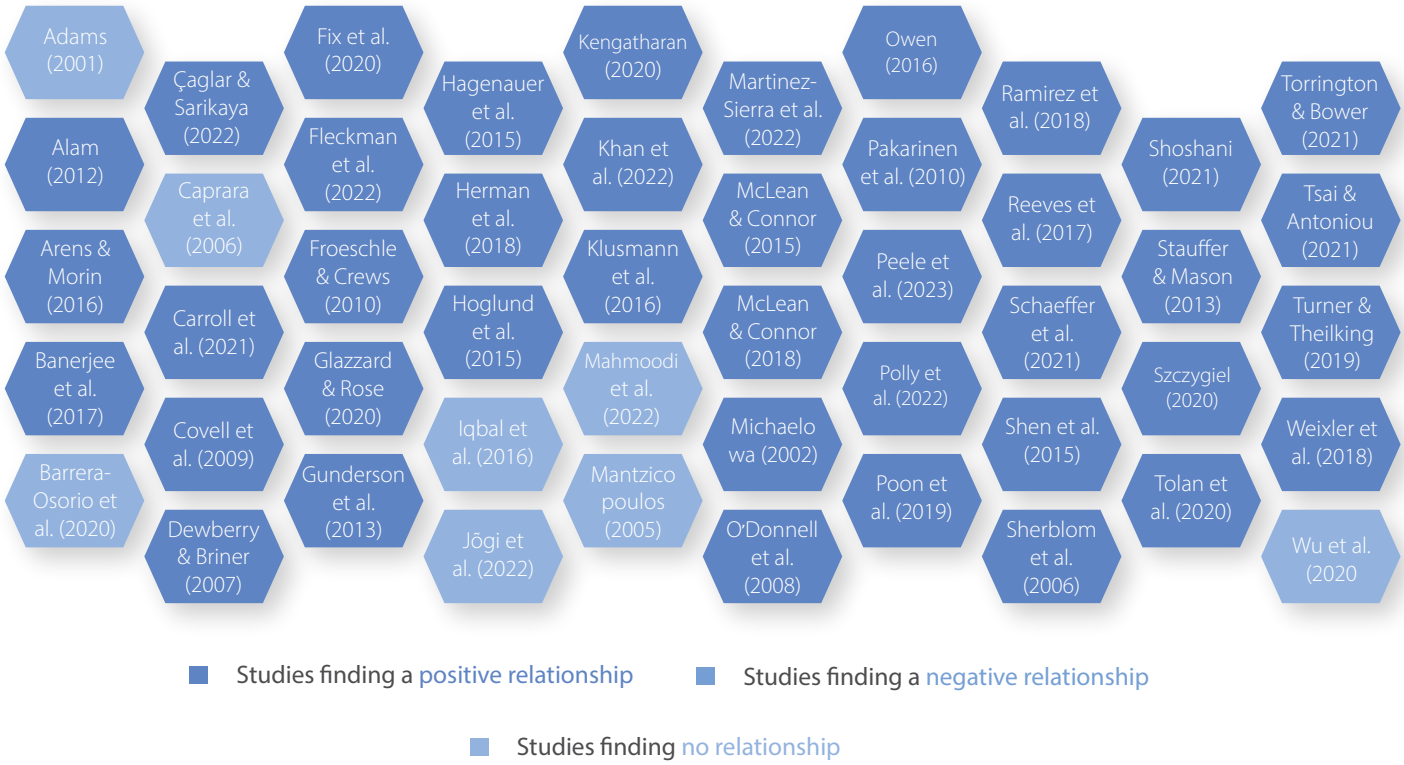


Figure 2.6b Results from Studies Examining Teacher Well-Being and Student Learning: By Individual Study.



Conceptualization and emergent themes in teacher well-being

One of the aims of our scoping review was to examine the various ways in which teacher well-being was defined across the included studies. Specifically, we examined the ways in which researchers defined teacher well-being in their studies, as well as the main themes that emerged through content analysis of qualitative studies.

The most common way in which teacher well-being was defined across studies was in terms of teacher psychological distress (i.e., teachers were considered to be low in well-being if they had high psychological distress) –found in 29 studies (43 percent of the 67 included studies). The next most common definition of teacher well-being used the specific terminology of teacher well-being (15 studies, 22 percent), followed by occupational burnout (14 studies, 21 percent) and job satisfaction (14 studies, 21 percent). Finally, nine studies defined teacher well-being in terms of emotions (13 percent) and five studies defined teacher well-being in terms of health (7 percent). Refer to Table 2.2 for the different categories by construct area (i.e., teacher well-being, student well-being, and student learning). See Figure 2.7 for a visual breakdown of conceptualizations of student and teacher well-being.

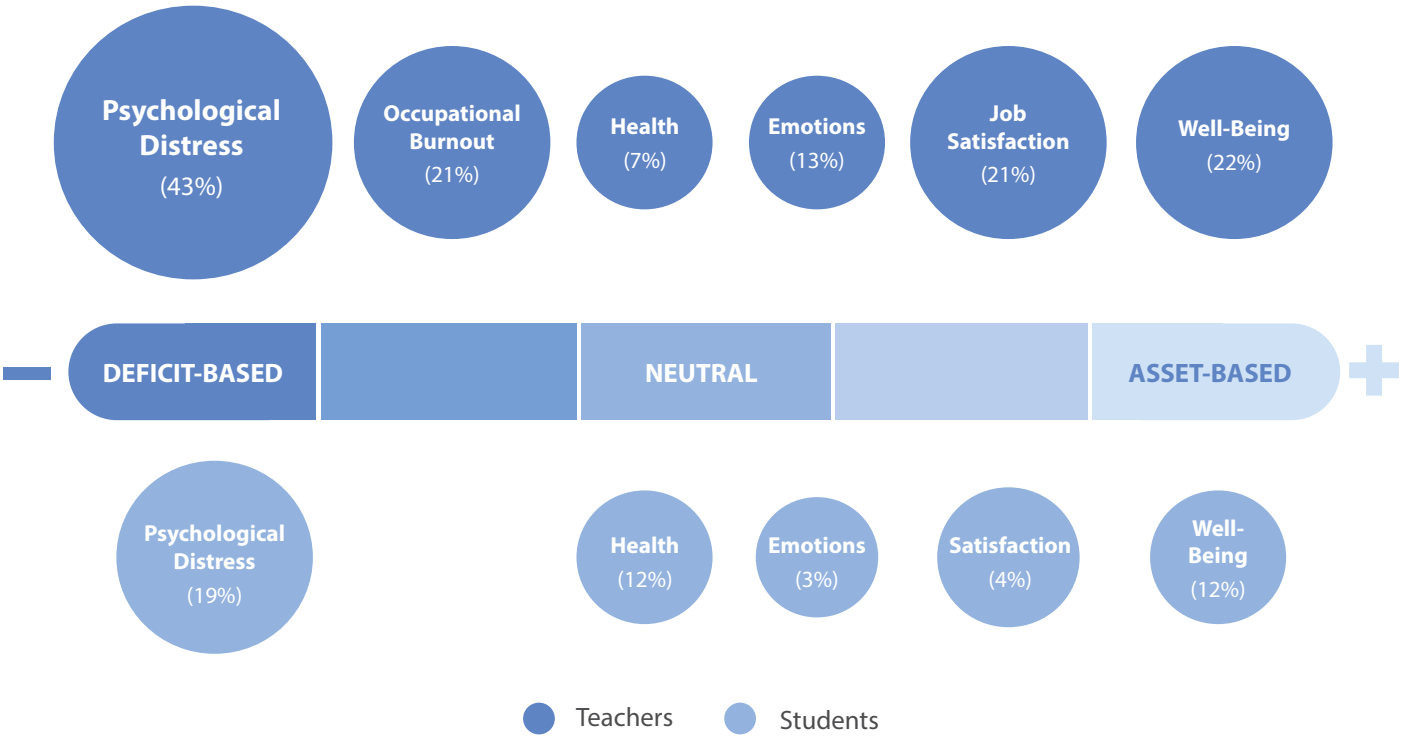
Table 2.2 Categorization of Conceptualizations and Emergent Themes

Concept	Number of Studies (%)*	Conceptualizations within Overarching Concept Area
Teacher Well-Being	67 Studies	
Psychological Distress	29 (43%)	anxiety, depression, sadness, irritation, stress, hopelessness, anger, stress, worry, helplessness, uncertainty, secondary traumatic stress, math anxiety, spatial anxiety, physiological stress, workload stress, depressive symptoms, coping
Well-Being (General)	15 (22%)	well-being, subjective psychological well-being, subjective well-being, life satisfaction, psychological safety, resilience, meaning in work, self-efficacy, life satisfaction, belonging, flourishing, self-care
Occupational Burnout	14 (21%)	burnout, mental health limitations, emotional exhaustion
Job Satisfaction	14 (21%)	job satisfaction, satisfaction with teaching, job happiness
Emotions	9 (13%)	positive and negative emotions, mood, emotional authenticity, affect, emotion regulation efficacy
Health	5 (7%)	mental health, physical health, tiredness, emotional health
Student Well-Being	27 Studies	
Psychological Distress	13 (48%)	sadness, stress, irritation, attempted suicide, mental health difficulties, mental health needs, mental and emotional problems, traumatic stress, discipline problems, psychological distress, depressive symptoms, externalizing problems, stress, nervousness, study burnout, mental health needs
Health	8 (30%)	physical health, tiredness, subjective health complaints, emotional health, mental health
Well-Being (General)	7 (26%)	well-being, emotional well-being, psychological well-being, psychological functioning, psychological safety
Satisfaction	3 (11%)	school satisfaction, class satisfaction, life satisfaction
Emotions	2 (4%)	positive and negative emotions

Notes. * Represents the total number of studies using the conceptualization divided by total number of studies in the construct area (i.e., teacher well-being, student well-being, and student learning).

Student Learning	49 Studies	
Academic Achievement	26 (53%)	academic achievement, student achievement, math achievement, math knowledge, reading achievement, literacy achievement, writing achievement, English achievement, French achievement, Hindi achievement, science achievement
Learning (General)	8 (16%)	student learning, spatial learning
Engagement	8 (16%)	engagement, interest in class
Academic Performance & Progress	7 (14%)	success, progress, growth, performance, math performance, academic performance
Academic Skills	6 (12%)	spatial skills, literacy skills, math skills, academic skills in reading and math, pre-reading skills, phonological awareness, and school readiness skills
Motivation	5 (10%)	motivation, learning motivation, improving academically, academic motivation, math motivation, autonomous motivation in physical education
Academic Issues	2 (4%)	academic issues; dropout rates

Figure 2.7 Conceptualizations of Student Well-being and Teacher Well-Being.



Psychological Distress. Of the 67 studies included in our scoping review, authors of 29 studies conceptualized teacher well-being in terms of "psychological distress" (i.e., anxiety, depression, sadness, irritation, stress, hopelessness, anger, stress, worry, helplessness, uncertainty, secondary traumatic stress, math anxiety, spatial anxiety, physiological stress, workload stress, depressive symptoms, coping). Of these studies, a total of 20 were quantitative and used a wide array of measures to capture the constructs of interest. In 11 studies, authors conceptualized teacher well-being using the term stress. Among these studies, authors of two of the studies (Adams, 2001; Ball & Anderson-Butcher, 2014) used Pettegrew and Wolf's (1982) *Teacher Stress Measure* (citation not provided), while the authors of two other studies (Jogi et al., 2022; Pakarinen et al., 2010) adapted Gerris et al.'s (1993) *Parental Stress Inventory*. Other measures used to capture teacher stress included the *Tennessee Stress Scale* (McWilliams, 1984; Schnorr & McWilliams, 1988), *Perceptions of Workload Stress* (citation not provided), the *Classroom Demands and Classroom Resources – Elementary Version* (CARD; Lambert et al., 2002), the *Perceived Stress Scale* (Cohen et al., 1983); and a daily reporting of stress, nervousness, and irritability (citation not provided). Jogi et al. (2022) were the only authors of a study that used a biological measure of teachers' stress obtained via salivary cortisol (6x/day).

In five studies, authors conceptualized teacher well-being in terms of depression or depressive symptoms. In two studies (McLean & Connor, 2015; 2018) depressive symptoms were measured with an adapted version of the *Center for Epidemiologic Studies Depression Scale* (Radloff, 1977). Harding et al. (2019) measured depressive symptoms with the *Patient Health Questionnaire* (Kroenke et al., 2009), while Peele et al. (2023) used the *Goldberg Depression Questionnaire* (Goldberg et al., 1988). Carroll et al. (2021) conceptualized teacher well-being in terms of depression, anxiety, and stress – and measured these constructs via the *Depression, Anxiety, and Stress Scale* (Lovibond & Lovibond, 1995). In four studies, teacher well-being was conceptualized in terms of math anxiety. For two of these studies (Gunderson et al., 2013; Schaeffer et al., 2021), the Math Anxiety Rating Scale was used (Alexander & Martay, 1989), while in the other two (Ramirez et al., 2018; Szczygiel, 2020) the authors created new measures to capture teachers' math anxiety.

Well-being (general). Researchers in 15 of the studies utilized a more positive psychological or assets-based conceptualization of teacher "well-being (general)" (i.e., well-being, subjective psychological well-being, subjective well-being, life satisfaction, psychological safety, resilience, meaning in work, self-efficacy, belonging, flourishing, self-care). In eight of these studies, quantitative measures were used to operationalize teacher well-being. In two studies the WHO-5 Well-Being Index (Henkel et al., 2003) was used to capture what the authors characterized as subjective psychological well-being and well-being, respectively (Bilz et al., 2022; Denny et al., 2011). Harding et al. (2019) used the Warwick-Edinburgh Mental Wellbeing Scale (Tennant et al., 2007). One study (Baeva & Bordovskaia, 2015) measured teachers' psychological safety, another study (Sherblom et al., 2006), measured teachers' feeling of belonging at school and another (Shoshani et al., 2021) measured teachers' meaning in work. Authors of two studies conceptualized teacher well-being as life satisfaction (Braun et al., 2020; Pap et al., 2023) and both used the *Satisfaction with Life Scale* (Diener et al., 1985).

Occupational burnout. In 14 studies, teacher well-being was conceptualized as "occupational burnout," 13 of which were quantitative studies that used a measure of teacher burnout. In 10 studies the *Maslach Burnout Inventory* (Maslach et al., 1996) or some version of this measure was used to assess teacher burnout (e.g., *Maslach Burnout Inventory for Educators*: Maslach et al., 2001). In three studies only the Emotional Exhaustion subscale of this measure was used (Bilz et al., 2022; Herman et al., 2020; Klusmann et al., 2016), while in other studies all three subscales of the measure were used. In one study, the *Maslach Burnout Inventory* was adapted (Oberle & Schonert-Reichl, 2016) and in three studies other measures

were used to assess teacher burnout – in two studies (Carroll et al., 2021; Denny et al., 2011) the *Copenhagen Burnout Inventory* (Kristensen et al., 2005) was used, and in another study (Tikkanen et al., 2021) the *Teacher Exhaustion Subscale of the Sociocontextual Teacher Burnout Scale* (Pietarinen et al., 2013) was used.

Job Satisfaction. For 14 studies teacher well-being was conceptualized as "job satisfaction" (i.e., job satisfaction, satisfaction in teaching, job happiness). For these studies, teacher job satisfaction was measured via quantitative assessments. It is noteworthy that none of the studies in our scoping review reported using the same scale to measure teachers' job satisfaction. In seven studies, authors did not report a citation for their job satisfaction measure. Regarding the other seven studies, authors used a range of measures. For instance, Shoshani et al. (2021) used the *Teaching Satisfaction Scale* (Ho & Au, 2006), while Tsai and Antoniou (2021) used the *Teacher Job Satisfaction Scale* (OECD, 2014).

Emotions. For a total of nine studies teacher well-being was conceptualized in terms of "emotions" (i.e., positive and negative emotions, mood, emotional authenticity, affect, emotion regulation efficacy). In four studies of these studies, quantitative measures were used to conceptualize teachers' emotions. For example, Shoshani et al. (2021) used a teacher-report measure of emotion regulation efficacy (Taylor et al., 2016).

Health. In five studies teacher well-being was conceptualized as "health" (i.e., mental, physical, and emotional). In only one of these studies a quantitative measure of teachers' health was used - teachers reported on their tiredness (Barrera-Osorio et al., 2020).

Conceptualization and emergent themes in student well-being

Similarly, we sought to examine the conceptualizations of student well-being across the included studies. The most common conceptualization was psychological distress (13 of the 27 studies that examined student well-being in relationship to teacher well-being; 48 percent). The next most common was well-being (8 studies; 30 percent), followed by health (8 studies; 30 percent), satisfaction (3 studies; 11 percent), and emotions (2 studies; 4 percent). See Figure 2.7 for a visualization of these categories.

Psychological distress. In 13 of the 27 studies that focused on the relationship between teacher well-being and student well-being, student well-being was conceptualized in terms of "psychological distress" (i.e., mental health needs, sadness, stress, irritation, attempted suicide, mental health difficulties, mental and emotional problems, traumatic stress, discipline problems or externalizing problems, psychological distress, depressive symptoms, nervousness, study burnout, math anxiety, 48 percent). Of these studies, nine were quantitative, whereby students' psychological distress was operationalized through a wide array of self- or teacher-report measures, with the exception of Oberle and Schonert-Reichl (2016), who collected diurnal salivary cortisol to measure students' physiological stress reactivity.

The other eight studies that collected self- or teacher-report data used a variety of different measures to assess student psychological distress. Although, Harding et al. (2019) and Carroll et al. (2021) both used the *Strengths and Difficulties Questionnaire* (SDQ; Goodman, 2001), Harding et al. (2019) employed the SDQ to measure students' psychological distress, while Carroll et al. (2021) used the SDQ to reportedly assess students' emotional well-being. Herman et al. (2020) conceptualized student psychological distress as depressive symptoms, while (Ball & Anderson-Butch, 2014) focused on student mental health needs. For two studies student psychological distress was conceptualized in terms of student externalizing problems (Hoglund et al., 2015) or disruptive behaviors (Herman et al., 2020), using the *Behavior Assessment System of Children II* (Reynolds & Kamphaus, 2004) and the *Disruptive Behaviors Subscale of the Teacher Observation of Classroom Adaptation Checklist* (Koth et al., 2009), respectively to capture these constructs.

Authors of two studies focused on students' psychological distress in more subject or school-specific ways. For example, Szczygiel (2020) focused on students' math anxiety using a measure developed for the study and Tikkanen et al. (2021) focused on students' burnout regarding their academic studying using the *Study Burnout Scale* (Salmela-Aro et al., 2009). Poon et al. (2019) and Barrera-Osorio et al. (2020) examined students' psychological distress through the lens of sadness, stress, irritation/irritability, and nervousness, using measures developed for their studies or measures without citation.

Health. Authors of eight studies conceptualized student well-being through the perspective of health (i.e., mental, emotional, and physical). In three studies student well-being was examined in terms of physical health and authors used different measures to do so. For example, Bilz et al. (2022) conceptualized physical health with regards to subjective health complaints *(BSC Symptom Checklist*: Haugland & Wold, 2001; Inchley et al., 2018), while Barrero-Osorio et al. (2020) focused on tiredness to capture this but did not provide a citation for the measure used. Pap et al. (2023) assessed students' physical health using the *General Health Scale from the SF-36 Survey* (Ware, 1999). In five studies, student well-being was conceptualized as mental health, two of which were quantitative studies (Denny et al., 2011; Pap et al., 2023). Denny et al. (2011) used a measure of depression – the shortened version of the *Reynolds Adolescent Depression Questionnaire* (Bovet et al., 2006) and Pap et al. (2023) used the *MHI-5 Screening Test* (Berwick et al., 1991).

Well-being (general). In seven studies, student well-being was conceptualized as "well-being (general)" (i.e., emotional well-being, psychological well-being, well-being, psychological functioning, well-being at school, and psychological safety). In five studies, quantitative data were used to assess students' well-being. For two of these five studies, the same measure was used (Carroll et al., 2021; Harding et al., 2019). Carroll et al. (2021) conceptualized student well-being as psychological functioning, while Harding et al. (2019) conceptualized it through the lens of general well-being. Both studies used the *Warwick-Edinburgh Mental Well-Being Scale* (Tennant et al., 2007). Additionally, Carroll et al. (2021) used the SDQ (Goodman, 1997) to measure students' emotional well-being. Braun et al. (2020) operationalized student well-being in terms of three dimensions: positive outlook, emotional distress, and prosocial behavior. Baeva and Bordovskaia (2015) conceptualized student well-being as psychological safety and used two measures: the *Scale of Subjective Well-being* (Tunik, 2002) and the *Life Orientation Test* (Leontiev, 2000). Finally, Van Petegem et al. (2007) measured well-being with the *Wellbeing Inventory Secondary Education*(Engels et al., 2000).

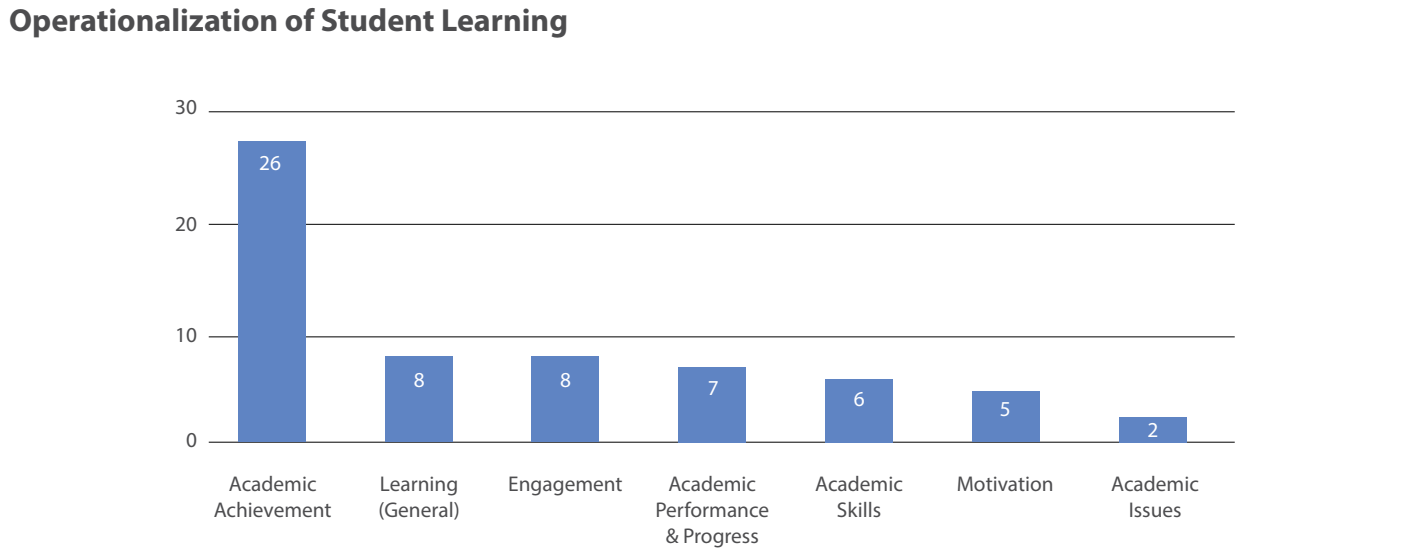
Satisfaction. In three studies in our scoping review, student well-being was conceptualized as satisfaction (i.e., school satisfaction, class satisfaction, life satisfaction). For instance, in two studies (Arens & Morin, 2016; Bilz et al., 2022), the authors conceptualized student well-being as school satisfaction, while Poon et al. (2019) conceptualized it as class satisfaction (Poon et al., 2019). In one study (Bilz et al., 2022), authors assessed general life satisfaction using the *Cantril Ladder* (Cantril, 1965).

Emotions. Authors of two quantitative studies examined student well-being from the lens of emotions. In their paper in which two studies were reported, Keller and Becker (2021) conceptualized student well-being as positive and negative emotions and used an adapted measure (no name provided) from Pekrun et al. (2011). In their second experimental sampling method study, Keller and Becker (2021) asked students to complete a one-item self-report measure several times over a two-week period.

Conceptualization and emergent themes in student learning

Finally, we explored the ways in which student learning was conceptualized. By far, the most common way that studies either conceptualized or operationalized student learning was by "academic achievement" (26 of the 49 studies that explored the relationships with teacher well-being; 53 percent). This was followed by the more general concept of "learning" (8 studies, 16 percent) and engagement (8 studies). The next most commonly extracted conceptualization was academic performance and progress (7 studies; 14 percent), followed next by academic skills (6 studies; 12 percent) and motivation (5 studies; 10 percent). Finally, two studies explored student learning through the lens of academic issues (4 percent) See Figure 2.8 for a visualization of these conceptualizations.

Figure 2.8 Conceptualizations of Student Learning.



Academic achievement. In 26 of the 49 studies that focused on the relationship between teacher well-being and student learning, student learning was defined as "academic achievement". In 23 of these studies, a quantitative measure (i.e., a measure that uses values or counts and are expressed as numbers) was used to operationalize and approach improved understandings of student achievement.

In 17 studies, a standardized, norm-referenced measure was used to assess student achievement. For instance, in five of the studies, various versions of the Woodcock-Johnson Tests of Achievement (Woodcock & Johnson, 1990; Woodcock et al., 2001) were used. For the other 12 studies, state, national, and international standardized assessments were used to assess student achievement. For example, Mahmoodi et al. (2022) used a national English test (no citation provided), while Wu et al., (2020) assessed achievement via the PISA Science Assessment (OECD, 2017). In four studies, academic achievement was assessed with student grades. For example, Arens and Morin (2016) collected grades in reading and writing, whereas Ramirez et al. (2018) measured achievement via math grades. Finally, in three studies, authors developed their own measures of student achievement. For instance, Szczygiel (2020) developed math tasks prepared using the books recommended by the government (no citation provided).

Learning (general). In eight studies student learning was conceptualized in broad or general terms (i.e., student learning, spatial learning). Six of these studies were qualitative in nature and

the authors did not collect data on specific measures of student learning. Two studies collected data using quantitative measures (Adams, 2001; Gunderson et al., 2013). Adams (2001) used the *Classroom Environment Scale* (Bacharach et al, 1986) to assess student learning, and Gunderson et al. (2013) used an adapted version of the *Mental Rotation Task* (Thurstone, 1974).

Engagement. In eight of the studies focusing on the relationship between teacher well-being and student learning, student learning was conceptualized in terms of "engagement" (i.e., student engagement, student interest in class). Authors in five of these studies utilized quantitative measures. For example, Hoglund et al. (2015) used the *Engagement Questionnaire* (Furrer & Skinner, 2003), and Haganauer et al. (2015) adapted the *Students' Engagement in the Classroom Scale* (Wellborn & Connell, n.d.).

Motivation. For five of the studies in our scoping review, student learning was conceptualized in terms of "motivation" (i.e., student motivation, learning motivation, improving academically, academic motivation, math motivation, and autonomous motivation in physical education). In four of these studies the authors used quantitative measures to assess student motivation. For example, Pakarinen et al. (2010) used the *Content Interest Rating Scale for Children* (Lerkkanen & Poikkeus, 2006), whereas Shen et al. (2015) adapted a measure for autonomous motivation in physical education from Ryan and Connell (1989). Poon et al. (2019) developed their own measure for student motivation and Reeves et al. (2017) did not provide a citation for their measure of student motivation.

Academic skills. In six studies, student learning was conceptualized in terms of specific academic skills (i.e., spatial skills, literacy skills, math skills, academic skills in reading and math, pre-reading skills, phonological awareness, and school readiness skills), all of which were quantitative assessments. For example, McLean and Connor (2015) assessed academic skills in reading and math via the Woodcock-Johnson III Tests of Achievement and Gates-MacGinitie Literacy Tests (Woodcock et al., 2001; MacGinitie et al., 2000). In a study by Jogi et al. (2022), math skills were measured using the Basic Arithmetic Test (Aunola & Räsänen, 2007). In another study, Peele et al. (2023) assessed school readiness skills with the International Development and Early Learning Assessment (Pisani et al., 2018).

Academic problems and dropout. In two studies in our scoping review, student learning was conceptualized in terms of academic problems and dropout (i.e., student academic issues, dropout rates). In one study, Shoshani (2021) assessed these constructs quantitatively where they examined dropout rates in advanced math classes. The other study was a qualitative study where academic issues surfaced as an emergent theme in relationship to teachers' stress (Froeschle & Crews. 2010).

Academic performance and progress. In seven studies, student learning was conceptualized in terms of academic performance and progress (i.e., performance, math performance, success, progress, growth, and success). In only two of these studies quantitative measures were utilized. Shoshani (2021) measured academic performance via math grades, whereas Dewberry and Briner (2007) assessed academic performance via students' scores on the SAT (a national standardized test common in the United States). The other four studies were qualitative in scope.

Chapter Three: Educator and Student Interviews – Background, Method, and Results

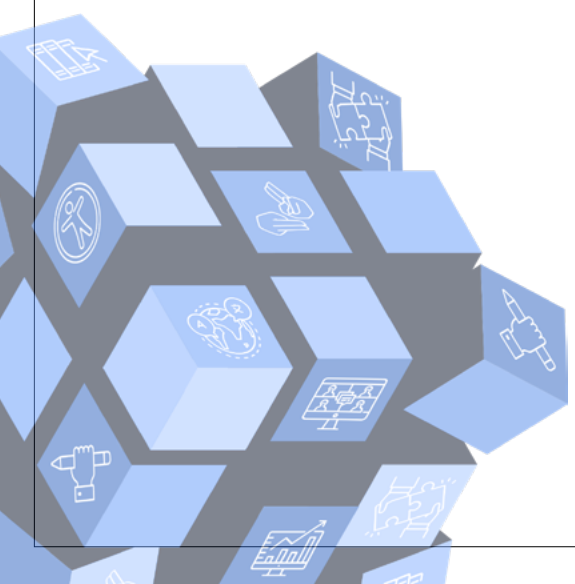
3.1. Educator and Student Interviews: Background and rationale

When conducting research across diverse communities, such as educators and students in various educational settings worldwide, it is crucial for researchers to actively engage with these community members. This collaborative involvement of students and educators in the research process is indispensable for gaining deeper insights into their lived experiences and realities. Without such collaboration, research outcomes may be insufficient and have limited practical implications, as noted by Ahmed and Palermo (2010).

To truly comprehend the link between educator and student well-being in teaching and learning, researchers should directly seek input from them, asking about their experiences, and perceptions. Neglecting to center the voices and lived experiences of educators and students can lead to research and knowledge that is overly generalized, especially when making cross-country comparisons, as highlighted by Rodoff et al. (2018).

Brasof and Levitan (2022) underscore the pivotal role of students and teachers in the research process, emphasizing the invaluable knowledge that emerges from such collaborative research approaches. Embracing more inclusive research practices provides a nuanced understanding of the beliefs and experiences of educators and students. This not only advances the existing body of research but, more importantly, contributes to fostering more equitable, just, and inclusive teaching and learning environments.

To that end, this study included interviews in five countries. Educators and students were interviewed in four countries, in addition to educator-only interviews in Qatar, with the goal of uncovering their perspectives on this important topic. Of interest was to understand the degree to which there were similar or different experiences across countries and between educators and students. Furthermore, these interviews provided a deeper understanding of how current research



included in the scoping review resonated across diverse educators and students. Finally, findings from the interviews provide valuable insights that inform future directions for research, practice, and policy to support educator and student well-being and learning.

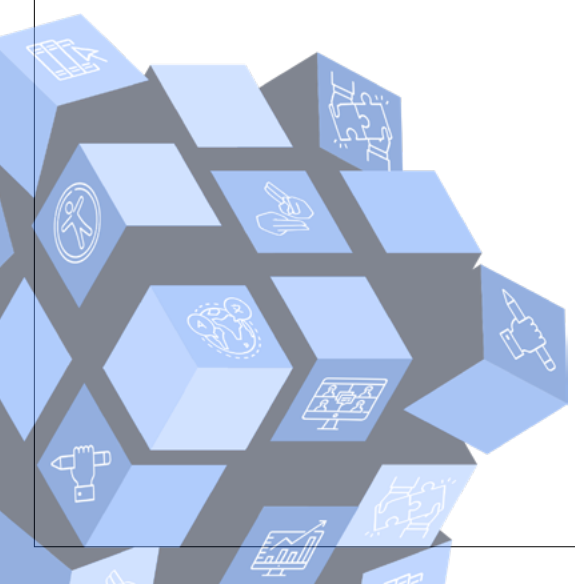
3.2 Educator and student interviews: Method

Setting and sampling

In the educator and student interviews, five countries spanning four continents were selected to gain an understanding of the diverse perspectives of educators and students regarding the intricate relationship between educator and student well-being in teaching and learning. These five countries represent a rich tapestry of cultural, ethnic, religious, political, and geographic contexts. The countries—Australia, Canada, Colombia, India, and Qatar—were chosen not only to ensure diversity but also with the knowledge that the team had valuable in-country connections that could facilitate introductions to educational institutions. Further to this, four of the five countries had research studies included in our scoping review. To be specific, the scoping review encompassed five studies from Australia, six from Canada, one from Colombia, and one from India. There were no studies from Qatar.

While there was a predetermined target number of interviews in each of these five countries, we remained receptive to the possibility that we might not reach what Hennink et al. (2017) refers to as 'data saturation.' This term denotes the point in data collection where no new insights or issues emerge, and data start to repeat, rendering further collection redundant.

We followed the suggestion of Weller et al. (2018), who argue that the depth of probing during interviews holds more significance than the sheer number of interviews. In essence, a small sample size (n = 10) with comprehensive probing can yield some of the most pertinent insights. In line with this perspective, our study employed extensive



probing to explore the answers to four overarching questions:

1. How does educator well-being impact student well-being?
2. How does educator well-being impact student learning?
3. How does student well-being impact educator well-being?
4. How does student well-being impact educator teaching?

Data analysis revealed a high level of saturation for the most salient themes within each of these four overarching questions. This suggests that key themes and issues through the interviews with educators and students provided us with confidence that we have a comprehensive understanding of current perspectives in these countries. Furthermore, these themes can now serve as a foundation for future research, where a more in-depth exploration can be undertaken to shed light on the nuanced links between educator well-being and student well-being and learning across a multitude of contexts.

Interviews with educators and students took place between June and September 2023. To ensure a systematic approach to participant recruitment, we collaborated with a designated school staff member who took on the role of study coordinator at each school/school district. Our participants were drawn from a single school in Australia, two schools in Colombia, several schools within a school district in Canada, one school in India, and two schools in Qatar. The target number of interviews was six student interviews in four countries for a total of 24 students, and six educators in five countries, for a total of 30 educators. In the end, our sample was comprised of 22 students and 32 educators.

Ethical approval

The research process adhered to a rigorous ethical framework, with approval granted by the University of Illinois Chicago Institutional Review Board (IRB). Prior to any engagement with the schools or district, the IRB reviewed and approved the study materials as well as each site. Subsequently, the research team shared the necessary information with the educational institutions, outlining the procedures for educators and students who wished to take part in the interviews.

To ensure full compliance with ethical standards, the researchers acquired written informed consent from each participating educator. For students, this process involved obtaining written consent from their parent or legal guardian, accompanied by the student's own assent to be part of the study. This dual-layered consent approach ensured that all parties involved were fully informed and willingly engaged in the research process.

In addition, during the informed consent phase, participants were specifically asked to provide separate consent for the recording of the interviews via Zoom. All but one participant consented to recording; in the exceptional case, the researcher took comprehensive notes during the interview.

School and participant selection

The research team enlisted the support of in-country contacts to establish connections with potential school sites. Researcher initiated contact with a school/district administrator to provide them with details about the research study, ensuring that the school's consent for participation was obtained. It is essential to note that one of the inclusion criteria for both educators and students was the ability to conduct interviews in English. In cases where English was not the primary language, namely Colombia, India, and Qatar, the chosen sites were private schools that offered bilingual education (Colombia and India) or curriculum delivery solely in English (Qatar).

Once schools agreed to participate, they were asked to distribute an information flyer so that educators and students could consider their interest in participating in the interview. Students and educators expressed their willingness to be interviewed either by directly reaching out to the

researcher or through the school's designated study coordinator, who compiled a list of interested individuals.

The researchers contacted educators interested in participating by email to provide them an opportunity to learn more about the study before signing the consent form and with the interview. In all cases, educators indicated they had enough information from reading the consent form to make their decision to participate. up a time with the educator to conduct the interview.

In obtaining parental/legal guardian consent for student interviews, contact was established with the parents or legal guardians, either by email, text messaging, or directly through the school. Parents/ legal guardians were also invited to request an information session to learn more about the study or to ask additional questions. In one case, an online information session was was requested by a parent to provide a more comprehensive understanding of the study. Once the parent/legal guardian had signed the online consent form, the researcher collaborated with the student, the parent/legal guardian, or the school-based study coordinator to arrange the interview. Regardless of whether the student had previously signed the online assent form, student assent was reaffirmed at the outset of each interview.

In this research, the term "educators" encompassed a broad spectrum of professionals who directly engaged with students within the school setting. This category included teachers, counselors, teaching assistants, and administrators. Moreover, students who participated in the study were required to fall within the age range of ten to 18. This age band was chosen to best align with the interview approach, which relied on verbal interviews conducted through an online platform. All individuals who expressed interest in participating in an interview were eligible to participate in the study.

Procedure

Every interview was conducted on the Zoom platform by one of three researchers with extensive experience in qualitative interviewing, following the approved procedures and structured protocol for the study. Except for a singular case, interviews were systematically recorded, yielding transcripts downloaded directly from the Zoom platform.

Each interview began with a review of the research study, followed by an explanation of the informed consent procedure. This setup afforded the interview participant an opportunity to seek further clarification or pose any questions pertaining to the study. Subsequently, the interviewer began by collecting basic demographic information from the participant. For educators, this included gender, years in the education profession, years at the current educational institution, and grades/years and subjects taught. For students, demographics included gender, age, grade/year, and length of time at the current school.

The interview then unfolded as the participants engaged with the researcher following a detailed interview protocol, designed to address the study's key questions. Upon the interview's conclusion, a review of the Zoom-generated transcript was undertaken, simultaneously synchronized with the audio recording. This dual review process allowed the interviewer to manually rectify any inaccuracies or discrepancies in the text.

Interview guide development

To gain a comprehensive understanding of the viewpoints held by both educators and students, our research devised two distinct interview protocols. These protocols were crafted with a focus on alignment, enabling us to facilitate meaningful comparisons between the responses of educators and students. The development of these interview guides underwent multiple iterations, incorporating valuable feedback from various sources.

The educator interview guide, for instance, underwent review by our study team, which notably included five former teachers. Their insights and experiences were invaluable in refining the guide. Similarly, the student interview guide evolved through multiple iterations, with substantial input gathered from six youths aged nine to 17, representing two different countries. This collaborative effort was instrumental in ensuring that the questions within the guide were not only understandable to a diverse range of participants but also framed in a manner that effectively addressed the overarching study questions. For example, students agreed that asking about educator enjoyment of teaching was a way for a wide range of students to talk about how educator well-being manifested in the classroom by supporting students to think about how educators in the classroom expressed emotions and engaged in behaviors that are linked to well-being. In both interview guides, a series of probing questions were integrated to delve deeper into each overarching question.

To explore educators' perceptions of the relationship between educator well-being and student well-being and learning, the interview guide started with a broad introductory question asking educators their perspectives on the concept of educator well-being before moving on to the three overarching questions in the study. Educators were prompted to reflect on how educator well-being manifests in the classroom, encompassing both periods of heightened well-being and those characterized by lower levels of well-being. Following this, educators were asked to contemplate the influence of well-being on student well-being and learning. The interview was concluded by inviting educators to consider the reciprocal impact of student well-being on their own well-being.

Similarly, in understanding student perspectives on the connection between educator well-being and student well-being and learning, the interview guide commenced with an overarching question exploring what well-being looks like in a classroom. It was then complemented by three additional questions, all tailored to delve into more specific aspects of well-being and learning. The questions employed a unique approach, prompting students to reflect on their observations, feelings, and behaviors within a classroom context in relation to their perceptions of a teacher's enjoyment or lack thereof in their role as an educator. Similar to the educator interviews, the student interviews included several probes to explore the interplay between educator and student well-being and learning, as well as the impact of student well-being on educator well-being.

Data analysis

Data analysis was an iterative process conducted by two graduate-level researchers, who employed the Rigorous and Accelerated Data Reduction (RADaR) technique—an approach developed by Watkins (2017). This technique hinges on refining spreadsheets through multiple iterations to distill data into more concise and manageable tables, conducive to efficient analysis. This approach allowed the researchers to handle the data in more digestible segments, facilitating coding and interpretation.

In this study, data reduction unfolded across three systematic steps, each aligned with the research study questions. During these phases, the researchers sifted through the text to extract relevant portions addressing the interview questions.

For data coding, an open coding approach, in accordance with the constant comparison method proposed by Glaser and Strauss (1976), was adopted. Initially, each of the two data coders embarked on coding one educator interview and one student interview, for a total of four interviews. This collaborative effort enabled them to scrutinize and synthesize detailed codes into broader thematic areas, which inherently mirrored the granular codes. Subsequently, the coders realigned their coding of themes to reflect the revised coding guide. With this framework in place, the coders continued to code subsequent interviews.

To ensure the reliability of the coding process, intercoder reliability was assessed, with ten percent of the data from both the student and educator participant groups. This assessment encompassed two vital aspects: first, the extent to which both coders concurred on the valence of the response, that is, determining whether the code represented a positive or negative contribution to well-being and learning. Second, the assessment indicated the degree to which the themes were captured by the codes.

During this process, the coders systematically categorized the codes into eleven broad themes for educators, and twelve broad themes for students. Educator themes were subsequently collapsed into nine themes, and student themes were collapsed into 10 themes. Within each theme was a positive or negative impact on student well-being and learning or teacher well-being. Table 3.1 provides an overview of the themes used in the coding of the interviews.

Table 3.1: Educator and Student Interview Themes

Educator and student interviews were analyzed by coding responses using ten broad categories as described below. Each theme comprised positive and negative perceptions.

Theme	Positive Perception Description	Negative Perception Description
Student Learning	Students are highly engaged in learning activities. They are open, curious, ask questions and have an interest in exploring the subject more in depth.	Students disengage from learning (e.g., opting to distract themselves with other activities such as talking to classmates, engaging with technology, or just tuning out) and report not learning a lot and achieving lower grades.
Student Well-being	Students appear happy and ready to learn. They actively engage in both the academic and social aspects of school life. They experience positive relationships with educators and peers.	Students appear distressed or disengaged from school life. They experience poorer relationships with educators and peers.
Student Emotions	Students experience or express positive emotions such as happiness, joy, and excitement.	Students experience or express negative emotions such as fear, anxiety, anger, boredom, and sadness.
Student Behaviors	Students engage in positive behaviors such as paying attention, following directions, helping others, expressing concern for others.	Students exhibit negative behaviors such as disengagement, avoidance, anger outbursts, and defiance.
Educator Well-being	Educators feel well rested and look forward to spending time in the classroom. They are able to be flexible and proactive in order to meet the needs of students, both academically and emotionally. They are more likely to have the energy to go above and beyond beyond the required tasks.	Educators experience low satisfaction in their role as an educator. For example, they struggle to get through the day due to circumstances such as fatigue, illness, job or personal stress, and mental health challenges. They are more likely to only complete the minimum requirements in their role as a teacher.
Educator Emotions	Educators experience or express positive emotions such as happiness, joy, and excitement.	Educators experience or express negative emotions such as anger, distress, frustration, apathy.

Theme	Positive Perception Description	Negative Perception Description
Educator Behavior	Educators engage in positive behaviors when interacting with others in the school environment. This includes using positive communication skills, encouraging students, expressing empathy and compassion for others, exhibiting patience when working with students.	Educators engage in negative behaviors when interacting with others in the school environment. This includes using a harsh tone of voice, shaming students, yelling at students, limiting interactions by focusing on tasks at their desk, and refusing to provide academic assistance.
Classroom Climate and Environment	The classroom feels safe, warm, and responsive to student needs. There is a focus on building community in the classroom. The physical space is visually pleasing, often with a display of student work.	The classroom feels tense and emotionally unsafe. Students are more likely to work quietly at their desk. The physical environment is often dull with little or no display of student work.
Energy Contagion	The positive feelings about being in the school and learning in the classroom ignite passion in others.	The negative feelings about being in the school and learning dampen or extinguish passion in others.
Feelings about the Educator (students only)	Students feel positive about their educators. They respect and like them and enjoy spending time in the classroom with them.	Students feel negative toward their educators commenting that they do not like them, or they do not respect them. In a few instances, older students questioned the reasons for the educator to be in the profession.

In our research, we encountered a challenge when coding data segments (sections of text), as the themes related to well-being and learning were highly intertwined. Understanding the context was crucial, especially when considering the perspectives of educators and students. This complexity sometimes resulted in dense data segments, particularly for educators. Although there was a high level of agreement regarding the overall valence (whether the text related to a positive or negative contribution to well-being or learning), there were variations in agreement on specific codes due to the multiple interconnected aspects of well-being.

To address this, we established criteria for agreement. Full agreement occurred when both coders assigned codes that indicated agreement on an entire segment, which often included multiple themes. Partial agreement was reached when the two coders had at least one code in common for a data segment. In cases where there were no similar codes for a data segment, we recorded these instances as disagreements. To resolve these discrepancies, the coders held discussions and made adjustments to the codes until a consensus was reached for as many codes as possible.

Our intercoder reliability assessment yielded the following results:

- For educators, there was a 95.2 percent agreement on valence, with 74.6 percent of data segments achieving full agreement on all themes. In addition, 14.9 percent of data segments had partial theme agreement.

- For students, there was 100 percent agreement on valence, and 83.8 percent of data segments had full agreement on all themes. Additionally, 12 percent of the data segments achieved partial theme agreement.

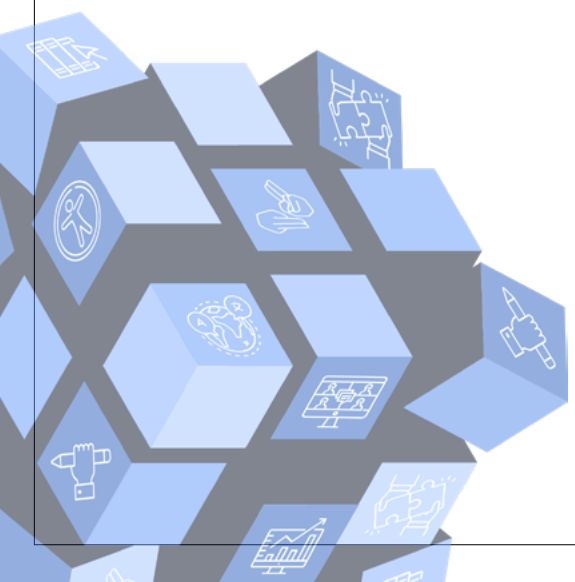
3.3 Educator and student interviews: Results

In our interviews, we engaged with a total of 32 educators, in five countries: six in Australia, seven in Canada, seven in Colombia, six in India, and six in Qatar. Within this educator cohort, 65.6 percent identified as women. Their collective experience in the field of education reflected an average of 13.4 years, with an average of 9.4 years spent at their current educational institution. These educators worked with students spanning from year/grade one to year/grade twelve, highlighting the diversity of their teaching experience. Except for Canadian educators, all participants were employed by private schools where English served as one of the primary languages of instruction, or in the case of Qatar, English was the main language of instruction.

Likewise, our interviews comprised 22 students, from four of the five countries, specifically: five in Australia, four in Canada, seven in Colombia, and six in India. Among this student group, 52.4 percent identified as girls. These participants ranged in age from ten to 17 years, with an average age of 13.9 years, with an average of 5.5 years spent at their current educational institution. Appendix H outlines the demographics for educators and students.

In our interview methodology, we employed a semi-structured approach that commenced with initial introductory questions. These questions aimed to draw out participants' viewpoints on the contrasting dynamics within classrooms led by teachers with differing levels of well-being, i.e., higher vs. lower well-being. Subsequently, we posed two additional questions concerning the influence of teacher well-being on student well-being and the learning process. Finally, we included a question about how student well-being affects teacher well-being.

Data analysis uncovered a strong interconnectedness among student well-being, student learning, and educator well-being, emphasizing the complex relationships at play in the classroom environment. To that end,



results are presented in five sections to highlight the interactions among several elements that contribute to well-being and learning among educators and students. The five sections are as follows.

1. The impact of educator well-being on student well-being
2. The impact of educator well-being on student learning
3. The reciprocal nature of energy contagion
4. The impact of educator well-being on student feelings about the educator
5. The impact of student well-being on educator well-being

In presenting the results, we use the term educator to refer to the interviewees; some of the participants were not classroom teachers but worked in support roles in the school. In interviews with students, the term 'teacher' was used.

Although not a focus in the following presentation of the results, educators were asked how they defined educator well-being. As found in the scoping review findings, there was not one definition; educators noted various elements of positive well-being, most notably positive emotions, the absence of distress and stress and job satisfaction. This included satisfaction with their role as a teacher and the school environment. Some educators talked about resilience and physical health as key factors in well-being.

In each of the following sections, findings for educators and students, as well as any significant differences that emerged between these two groups, are presented. It is important to note that in the four countries where both educators and students were interviewed, responses were highly aligned in the relationship between educator well-being and student well-being and learning. There were no striking differences reported across the countries, a finding that is in itself interesting. The Qatari educators were very aligned with the educator findings in the other countries. This alignment across five countries in response to the research questions highlighted the shared experience within this group of educators.

The Impact of Educator Well-Being on Student Well-Being

The impact of educator well-being on student well-being included several dimensions, such as student experience regarding classroom climate, their emotions and subsequent behaviors that appeared to influence their well-being in the classroom. Results are presented by weaving in these elements to better understand this critical link.

Higher educator well-being and the impact on student well-being: Educators and students extensively discussed numerous advantages of elevated levels of well-being among educators. Both groups talked about how a teacher's positive energy resulting from higher levels of teacher well-being, positively influences the mood of the classroom and the strength of connections between the teacher and students. A teacher was seen to have tremendous power to set a certain tone in the classroom, forming the foundation for strong well-being and learning. One educator commented on this pivotal role of a teacher and how their well-being supported them in creating a positive classroom climate that fostered student well-being.

> ***From what I've seen, it's a teacher who is ... very attuned to their environment, attuned to their own emotional state, their own mental state, and therefore to their students' well-being. If a teacher is motivated and presents that environment and that kind of experience for a class, then it will... transcend the students as well. I've seen it so much where you know somebody is enjoying their role. It doesn't have to be a teacher necessarily, but the people around them will... learn that. And they'll see that enjoyment, and that pride and taking care of their self-awareness and goals, and everything that goes along with their well-being.***

Another educator shared:

> ***Actually, if you look at how the teachers' well-being is, let's say, a teacher is coming from his house and is prepared, in a good positive frame of mind, ... comfortable and emotionally and physically well... when he comes to the class quite confident, that attitude actually reflects onto the students as well. As a teacher, I can create a safe environment for my students.***

Another educator talked about how well-being supports creating a safe environment that allows students to be themselves.

> ***If you have a teacher who's really engaged, they've got a really strong sense of well-being and social and emotional connection to themselves and others, then I think that's when students feel safe, and they are able to be themselves.***

Another educator echoed this perspective.

> ***If the teacher has a very good well-being and she's able to form a supportive and caring relationship with his or her students, then the students will automatically be happy and satisfied. They feel like, 'Oh, this teacher is always there. She is always going to take care of me with empathy and patience.'***

Students talked about this connection in terms of trust, safety, and being able to count on their teacher. A 12-year-old boy shared his perspective on trust with his teacher.

> ***I feel safe in the classroom. I feel that if anything bad would happen, my teacher would always have my back and not only in learning but like in other problems. He could help me, and it would be like a person to look up to, like a guardian almost.***

These relationships went beyond academic content, as teachers offered valuable emotional support to their students, fostering an atmosphere where learners felt secure enough to embrace educational challenges. Students commented on what such interactions looked like in a classroom where a teacher had strong connections with students.

> ***They would try to have connections with their students and get to know them better so that the students could feel more comfortable opening up to them and sharing their thoughts and ideas with the teacher. Just try to like to connect with them. (12-year-old boy)***

> ***I think that the words that the teacher uses are like a friend. They talk to you like a friend, and it's a familiarity between students and teachers. (16-year-old boy)***

Students also talked about how students were more easily able to build a relationship with their teacher if the teacher had higher levels of well-being. Again, this positive teacher-student relationship was seen as critical for engagement in the classroom. One 15-year-old girl commented about forming a relationship with a teacher who exhibited positive emotions.

> ***It's easier to build a relationship with a teacher who enjoys teaching due to their attitude. They are teaching as something they want to do, not just as a job. If you're friends with your teacher, you're more likely to listen to your teacher compared to if there's no relationship.***

Another 17-year-old girl shared these sentiments on the importance of the teacher-student relationships on behavior.

> ***And I think that liking your teacher can be very important because that means that you respect your teacher and that you will behave. And, of course, not everyone will always like their teacher, but I think that when a student likes the teacher, it just makes things a lot easier.***

In classrooms where educators had high well-being, they were more able to adapt to meet varying student needs. One educator commented on seeing flexibility among teachers.

> ***[Flexibility is] being able to respond to the needs of students as you go. To be able to deal with those little curveballs that are thrown. Whether... it's that student who is not behaving or not performing at their best and being able to sort of ride that… and not be frustrated.***

Students were encouraged to take risks and feel that they could access help when needed. A 16-year-old girl shared her thoughts on what this looked like in a classroom.

> ***They're patient with the students. They want to help them when they don't understand, and they're always willing to give you like extra help when you need it. You feel that they want to teach you. They don't do it because they have to. They do it because they want to.***

Lower educator well-being and the impact on student well-being: Educators and students painted a picture of a classroom led by a teacher with lower well-being as one with fewer positive interactions, more harsh interactions, and a greater focus on just getting through the day. Students described these teachers as exhibiting emotions and behaviors that made students think they were grumpy, stressed, sad, bored or angry. One 12-year-old boy described what this experience looked like in the classroom.

> ***Well, they wouldn't really be opening up to their students. They wouldn't want to talk to them as much. Maybe they're just doing it for their job, and they just want to get it done and over with. And maybe they're like, 'I just don't want to be here. I wish it would end.' Maybe she's just doing it for the money and like they would show no emotion to their students and wouldn't try to encourage them to do their work or anything like that. They would just want them to follow the rules and be always right.***

These types of classrooms showed less flexibility, fun and spontaneity. An educator gave the following description of a classroom environment led by a teacher who struggled with lower levels of well-being.

> ***It can be a very toxic environment when a teacher themselves, as the leader, is not in a great place, either mentally, emotionally. You'll notice it. They might have less resilience for their emotional control and self-awareness in certain states where they will react potentially harshly and in very ineffective ways [in their effort] to produce a safe environment for students to learn and grow.***

An 11-year-old girl shared her experience with a student teacher who was in this lower state of resilience.

> ***There was one class this year where the class was really being like loud and noisy and wasn't really paying attention. This is actually our student teacher that had come in. But she wasn't happy, and she actually started crying. And then it just made the class go a bit more crazy.***

An educator related how a teacher with lower well-being sometimes focuses on delivering content rather than first creating a dynamic space to engage with students .

> ***So, no student voice, no student agency. Teacher – just up front, delivering, delivering, delivering. And just that. You know that sense of somebody's always on edge. And it's in a situation like that in my mind, like an emotional kind of razor blade.***

Students discussed their off-task behavior, such as talking to friends, doing work for other classes, or going online because they felt bored and disengaged in the classroom. When asked what that looked like in the classroom, a 17-year-old boy commented:

> ***Well, probably… definitely, you know, students that aren't engaged - probably playing games on their laptops, and that sort of disconnectedness in a classroom where a message isn't getting across to the students, and lots of confusion and lots of, you know, unsettlement in the classroom because if a teacher doesn't want to be there, then the students wouldn't want to be there either.***

Teachers were more likely to lose their patience with students when they were experiencing lower levels of well-being, and this was seen in the classroom, as exemplified in the following comments from educators.

> *Well, the most common sign [of teacher lower well-being] for me is when teachers lose their temper, or it seems to play out in classroom management issues.*

> *[Lower well-being is] not having that patience. It's then becoming more tunnel vision around 'This is what I've set up to achieve today, and I'm not prepared to be flexible. I'm not prepared to give any sort of leniency around there. I'm not prepared to take any consideration of that point of view.... ' --something that would be different – a little bit, you know, out of left field. I think because once you're lacking that energy and lacking in that hope and optimism and empathy, then so much of your teaching suffers.*

Another educator talked about the harsher tone that they have heard or been engaged in with students when they were struggling with their well-being.

> *You sometimes hear those voices across the hallway of a teacher kind of chewing out their kids, right? We've kind of experienced that at school, either ourselves or students. Maybe, unfortunately, some of us [are] doing that.*

Other interesting insights shared by educators and students: Although not a key theme a small number of educators noted that it was challenging to put aside their personal stress when they entered the classroom. As one educator commented:

> *I mean if you come to the classroom and you're feeling down, and you're stressed and not okay, you are going to show that, no matter what. ... we always try to separate our personal life from our work life. But it's impossible. We're human beings. And if we are not feeling okay and we are down, I think that is going to be reflected in ourselves and in our students, because, well, maybe you're not going to treat them as well as you usually do, for example, or you're not going to feel compassionate about them.*

Another educator talked about the responsibility to recognize how their well-being created a more positive or negative classroom environment.

> *I would say honestly, 90 to 95 percent of my bigger behaviors this year have been on days when I am not me 100 percent. Right? So, then I look at that, and I don't say, 'Oh, what did you guys do?' I'm looking at that and saying, 'OK, like, they're feeding off of me. I'm not penalizing them for that. I wasn't me that day.' I'm projecting that onto my students who look to me as the kind of beacon of how to handle, you know, emotions. So, I would think, we have a responsibility to be self-aware and understand ourselves.*

Finally, some students talked about how they adjusted their reactions to a teacher who was struggling in the classroom by making sure they did not exhibit any disruptive behaviors for the teacher to make the day easier for the teacher. One 16-year-old boy commented on his changes in behavior when he observed that his teacher was having a harder day.

> ***Yeah, my behavior will change because she's having a hard day. So not to disturb her, not to interrupt her. I would just be quiet at that particular time, or I will just ask, 'What had happened to you? Why are you so harsh today?'***

Only a small number of students commented that they may sometimes try to push the teacher's patience when they sense the teacher is struggling in the classroom.

Summary: The impact of educator well-being on student well-being encompassed various dimensions, including classroom atmosphere, emotions, and behavior. Interviews with educators and students highlighted the positive effects of elevated educator well-being, which influenced the classroom environment and student emotions and behaviors. Educators' positive energy, stemming from their well-being, set a positive tone in the classroom and fostered student well-being and learning. Trust, safety, and supportive relationships between teachers and students created an environment where students felt secure and respected, thus facilitating academic engagement.

Conversely, lower educator well-being led to less interaction and more negative emotions and behaviors in the classroom. These classrooms lacked flexibility, fun, and spontaneity. Teachers with lower well-being often exhibited grumpiness, stress, sadness, or anger, which affected students' engagement and behavior. Students reported off-task behavior, such as chatting with friends, doing unrelated work, or going online, when teachers seemed disengaged or uninterested. Patience was in short supply in these situations, impacting classroom management and creating an unsettled environment. Interestingly, students had various reactions to teachers who were exhibiting lower well-being. Some students talked about how they worked hard to regulate their behavior so that the day was easier to manage for the educator. In contrast, a small number of students chose to engage in behaviors to see how far they could push the educator before the educator lost emotional or behavioral control.

Some educators acknowledged the challenge of separating personal stress from their professional lives, recognizing the potential impact on their teaching and student interactions. They emphasized the importance of self-awareness and understanding their role as emotional models for students.

In conclusion, educator well-being played a significant role in shaping the classroom environment, student emotions, and behavior – all critical to student well-being. Positive well-being among educators fostered a conducive learning atmosphere and engaged students, while lower well-being led to disengagement and negative classroom dynamics. These findings underscore the need for educators to be aware of their emotional state and its potential influence on students' experiences.

The Impact of Educator Well-Being on Student Learning

Higher educator well-being and the impact on student learning: The shared perspective of educators and students underscored the substantial role that educator well-being has in shaping the student learning experience. When educators were seen to enjoy or reported enjoying a heightened sense of well-being, educators and students reported a cascade of positive effects in the classroom, including more enthusiasm for the subject matter, the use of innovative pedagogical techniques, a commitment to integrating student input, a focus on cultivating advanced cognitive skills, increased interaction, consistent and constructive feedback, and a readiness to adapt instructional materials and methods to cater to the diverse learning needs of their students. Educators conveyed this multifaceted approach to teaching through the following two descriptions of what teaching looked like when teacher well-being was higher. They noted:

> ***You'll see a lot of creativity going on in those classrooms in terms of learning. It's not just going to be. … 'Here's a projector. Let's look at the notes or here's a book.' It's going to be, 'Let's go outside and learn this and be active or let's put this to music.' The whole experience is more cohesive, and I believe you feel it when you walk in the room.***

> ***The children also feel that if they are given a safe space where they can innovate, and they're not being judged, I think that students feel more comfortable innovating and using creativity. And if you talk about creativity with the teachers, yes, their well-being would kind of encourage them to find new lesson plans or find creative ways of teaching, maybe using some videos, some audio-visual cues and maybe focus on different kinds of intelligence a student can have, the student possesses.***

A 16-year-old girl echoed these sentiments in experiencing a more dynamic classroom when a teacher enjoys teaching.

> ***I would say the way they move is kind of like energetic and stuff. They seem to be moving a lot more, I guess, and then explaining things more thoroughly. They're also more likely to be using visuals and stuff like, let's say, for example, if they're like an anatomy teacher, they would point it out and stuff and then explain it.***

Consequently, students reported becoming more actively engaged and, at times, discovering an enthusiasm for previously undervalued subject areas. A 15-year-old girl commented on this new appreciation.

> ***You can have some long-winded talks because you're both so passionate about the subject, so you learn more, and you remember it more. For example, I was never interested in religion class, but then I had some amazing teachers, and now I'm totally interested in it.***

Students who have distinct interests commented on their experience of feeling more engaged in a classroom with a teacher who shared their passion for a subject.

> ***It honestly makes me feel really motivated. I especially experienced this in a class … related to my dream career, and it's honestly like motivating me and making me happy to go in that classroom because she's so happy about it, so excited about it. She's so excited to talk about this; that it also makes me excited, which influences me in a way. (16-year-old girl)***

Finally, one student talked about how his memory of class material was impacted as a result of the mood of the teacher.

> ***I think that we improve in our learnings because in a class like that, I think that the teacher explains better… doesn't like just say ….'Today, we are going to say this and that.' Instead of that, he seems like happy of being there. And when we compare to the other classes, like the happy one and the sad one, I think that in the happy one, we are going to remember.(17-year-old boy)***

Lower educator well-being and student learning: Conversely, when educators struggled with their well-being, both educators and students acknowledged a detrimental impact on the learning process. Under such circumstances, the focus shifted towards getting through the required content, at the cost of student engagement. One educator commented on their experience of teaching when not feeling well.

> ***If I'm in a low spot, I'm just trying to get through the day. I think the quality of the learning goes down. If you look at it - like we use a kind of four-level scale to grade. If my well-being is not a good place, I'm providing students with level 2 work instead of level 4 kind of work. So, it's, you know, just do this to get it done so I have evidence of something was done. Move on to the next thing.***

Students described being in such classrooms as monotonous and purely task-oriented. Although students appreciated different teaching mediums, some students talked about teachers' over-reliance on PowerPoint and videos as teaching tools when teachers did not seem to want to interact with students, which further alienated students from active learning. A 17-year-old girl described her perspective on teachers' use of video in the classroom.

> ***I had a friend who had one teacher, and they didn't really like the teacher because he didn't actually like teaching. He didn't teach them directly, but instead, he put videos or stuff like that which you can use - both videos and lectures, but it shows that if you only use videos and you don't actually teach directly, it shows less effort. Like he didn't actually do a lot of activities.***

One 11-year-old boy talked about the focus on getting through content and how this negatively impacted his joy of learning.

> ***It just kind of wasn't really fun. It was just like timetables for like an hour, and then you move on to something else. You never had breaks to do anything. It was just learning, learning, learning.***

Educators spoke about their lack of patience when their well-being was low, which often resulted in frustration with student questions and less time spent helping students understand the content. One educator commented:

> ***Sometimes it does happen that whenever we are... not in a better state of mind, or having something at the back of our mind. We tend to get a little bit irritated because of it. And if a child asks the questions again, we might think, 'Why is he asking that again and again?'***

Another teacher commented on the difference in feedback to students depending on how they were feeling.

> ***When you have high well-being, first you can adapt so you can prioritize your students, and besides that, we can help them more. I mean... if you are feeling okay and you know what you want to do, you can adapt, you can answer their questions politely, and be compassionate. And for example... something very important for me is giving feedback. When you are well, when you are okay, you can give totally different feedback than when you're not okay. Your responses vary according to what you feel.***

Students described the negative impact on their learning in a classroom where the teacher didn't seem to enjoy teaching.

> ***What I feel about my learning is that it's pretty much forced. It's not me being excited to do something. It's just me forcing myself to get the tasks done and get that credit. It's only just that. There's nothing more - like there's no excitement. There's not that rushing feeling that 'Oh, I have to learn about this. That's so interesting.' There's nothing like that. (16-year-old girl)***

> ***If the teacher is in hard time, then it would be quite boring for us to learn because the teacher will explain it in a boring way. (11-year-old boy)***

Other interesting insights shared by educators and students: Although both educators and students shared a common belief that lower educator well-being adversely affected student learning, there were a small number of comments that indicated that the impact may not be as great in some situations. For example, one educator mentioned that even when struggling with well-being issues, an educator might still effectively plan a lesson but might struggle in the delivery phase due to their lower well-being. Another educator indicated that, in their opinion, higher levels of educator well-being had more of an impact on students than lower levels of well-being. They commented:

> ***I don't think it's as impactful because I think at the end of the day, students who want to learn are probably going to find a way to learn, regardless of the teacher. And I think the kids who, you know, are going to do the minimum, will probably still get the minimum from the teacher whose well-being is being [negatively] impacted.***

This was an interesting perspective as a small number of students commented that when they were in situations in which a teacher did not seem to enjoy teaching, they found other strategies to learn the material, such as seeking out support from friends, parents, or outside tutors. One 12-year-old boy commented on such a strategy.

> ***I looked up to my friends other than my teachers. My classmates really helped me with my work. If I was stuck on a problem, I wouldn't go to my teacher. I'd go to my friends, and they would help me on my notes and my homework and stuff like that. (12-year-old boy)***

These students commented that they were highly motivated, and they recognized that their grades were critical to their future plans; however, the majority of students indicated that they just tried to get through the class, putting in less effort due to the lack of engagement they felt from the teacher.

Summary: The impact of educator well-being on student learning is shown in the perspectives and experiences of both educators and students. Elevated levels of educator well-being was perceived to lead to a multitude of positive effects in the classroom, including increased enthusiasm for subject matter, innovative teaching techniques, a commitment to student input, advanced cognitive skill development, enhanced interaction, constructive feedback, and adaptability to diverse learning needs. In such environments, classrooms became dynamic and engaging spaces where students developed a newfound appreciation for their studies, driven by enthusiastic and creative teaching methods. Students felt motivated and excited about learning, fostering a positive impact on their educational experiences.

Conversely, when educators experienced lower well-being, both educators and students acknowledged a detrimental effect on the learning process. These classrooms became task-oriented, with educators often focusing on delivering content rather than actively engaging students. Overreliance on passive teaching methods such as videos and a lack of interaction with students contributed to disengagement and reduced enthusiasm for learning. Students often described such experiences as forced, lacking excitement, and leading to minimal interest in the subject matter.

Educators' lower well-being also led to impatience, affecting teachers abilities to respond to student questions and provide constructive feedback. This frustration further hindered the learning process and created a less supportive and engaging classroom environment. Students resorted to seeking alternative sources of support, such as friends or external tutors, when they felt their teacher was disengaged.

While most educators and students emphasized the negative impact of lower educator well-being, some argued that highly motivated students could still find ways to learn even in less engaging classrooms. However, this perspective underscores the significance of educators' well-being in shaping the overall learning experience and highlights the importance of fostering positive and engaging teaching environments.

Contagious Energy

Higher educator well-being and the impact of energy contagion: The theme of energy contagion immediately emerged from the interviews with educators and students. Both groups talked about how either positive energy (sometimes called passion, enthusiasm, vibes or an aura) or negative energy flowed between the students and educators and had a profound impact on the experience of educators and students in promoting well-being and learning. As one educator stated, *"If we have... bosses or people... who are leading us, who are passionate about something, we're going to have that passion, too."*

Another educator shared their experience of energy contagion:

> ***So for me, when I come in, if I'm happy, I'm excited, I'm energetic. I'm greeting them at the door. Kids already come into that learning space in a better place. And then, if I'm moving around the classroom cause I'm feeling energetic. I'm feeling healthy. I'm feeling good physically, mentally. And I bring that positive energy that energy gets picked up by the students.***

An 11-year-old girl explained this cycle that students and teachers are constantly engaged in as they spend time together.

> ***It's like a cycle. So, if the teacher, again using my magic word 'energy', if the teacher gives off their energy to the students, the students will be excited and will want to go to their class, and that energy from the students will get transmitted to the teacher, and it'll just be a cycle over and over again.***

A 15-year-old girl visualized this energy as bouncing between the teachers and students.

> ***The energy bounces between the teacher and the students and causes a more positive learning environment.***

This positive cycle was seen to have a tremendous impact on educators who clearly described how their passion, resulting from higher levels of well-being, supported their work with students. One educator commented:

> ***I've also noticed that sometimes there are children who are picky about a particular subject. Let's say maths -the most common subject they are picky about. They might find it not very interesting and boring, or they might have fear... for that subject. So here, the teacher's role comes into play. If she is passionate about that subject, she'll be able to instill that passion amongst the students. And the child will be able to overcome challenges. If I am well, if I am feeling happy, I will spread positive vibes around my students. If I'm feeling happy, I will get positive the moment I enter into this classroom. So, the children will be excited and enthusiastic about learning: 'Oh, the teacher was quite happy today. Are we going to learn something new today?' She can evaluate their strengths and weaknesses more positively and then diagnose their learning gaps.***

Another educator said:

> ***When teachers are happy and energetic and enthusiastic because they're in a good place... well-being is high. It reflects on the students. There's no doubt - enthusiastic, passionate educators make a much bigger impact than an educator who doesn't really want to be there. Kids pick up on that immediately. And they know if a teacher is interested in them and interested in their own subject matter. So, I think there's a big impact on learning when teachers are happy and enthusiastic and feel heard, feel listened to, and their well-being is high. The kids feel it.***

A 17-year-old girl described how this energy opened her up to learning and the development of a joy of learning.

> ***I think it sort of puts me as a student in a position where you feel as though you can ask anything about the subject, and a clear message can be brought across. And it sort of reminds me that I do have a love for learning, and I do want to be there.***

A 14-year-old boy described how this energy from the teacher moves to the students.

> ***They come to that fully prepared with high energy to help us learn - a more enthusiastic way of learning for children. So, children also use it to learn in a very positive way. The learning is very high at the time.***

Lower educator well-being and the impact on energy contagion: While higher educator well-being had many positive benefits for students, lower educator well-being had the opposite effect on student well-being. One educator described this stress contagion:

> ***If we are stressed or even overburdened, have too much work or burdened with lots of work, it actually reflects when you are in the classroom. It actually contributes to student stress as well. It's not only on the teachers, it also reflects on the students' stress and anxiety as well.***

One educator talked about the spiraling effects of negative mood and how the resulting negative energy was particularly detrimental to students who were struggling with their own well-being. The resulting negative interactions had consequences for the educator as well as the student.

> ***It's that ability to be able to catch yourself in a moment and be mindful of that frustration you could be feeling and not let that frustration take over because that student's anxiety, for example, is coming out in a behavior that is, is not productive or is disengaged. And being able to catch that frustration and being able to turn it into something that's more productive. And again, that's, you know, that connection between that student's well-being... if you're not experiencing well-being and that student is not experiencing well-being, then the danger... is there's more likely to be a clash. As a teacher, you leave class feeling negative because you had a clash with the student, and that never feels good. That student leaves feeling negative and goes to the next class really negative, and so everything compounds.***

One 16-year-old boy described how when the energy was bad, "It's not comfortable for the students." In the face of being in a classroom where the energy felt bad, students were left to find ways to cope with teachers who were struggling with their well-being. One 11-year-old girl described her strategy for dealing with negative energy in the classroom.

> ***Well, if the teacher's energy is really bad, I as well would like to get out of the classroom. And even if it's so bad, I might ask to go to the bathroom a few extra times, just to get out of there like, breathe. And it's just….. it doesn't feel right. It doesn't feel good to be in that space with that teacher.***

Educators felt the same way. One educator shared:

> ***When kids come into school, and they're really not energetic, it makes it harder as a teacher to have that same energy. ...if you're giving that ton of energy, but you're getting nothing back from the students, it kind of sucks your soul out a little bit.***

A 14-year-old boy described the impact of a negative aura and what students do to get through the class.

> ***There was no interaction between us. So, teachers also do not give extra effort for us. There was not energy and a positive aura around us. And teacher just go on talking about the lectures, and there was no interactive session and interesting kind of things at that time. Teachers just come, give the lecture and goes. And students just chit-chat and strike jokes on the teacher.***

Summary: The impact of educator well-being on student learning is strongly influenced by energy contagion, which emerged as a central theme from interviews with educators and students. Contagious energy could be experienced as either positive or negative, affecting the entire classroom dynamic, well-being and learning. Positive energy, often described as passion, enthusiasm, or aura, flowed between educators and students and created a profound impact on the educational experience. This positive cycle of energy exchange fostered creativity, innovation, and a passion for learning in the classroom.

Educators who experienced higher well-being often exhibited this positive energy, which, in turn, influenced their students. The enthusiasm of such educators inspired students, leading to heightened engagement and a deeper appreciation of the subject matter. The energy shared between educators and students created a dynamic and interactive learning environment where questions were encouraged, and a love of learning was nurtured.

Conversely, lower educator well-being resulted in negative energy, leading to detrimental effects on student well-being and learning. This negative mood spiraled into negative interactions and behaviors, particularly affecting students who were already struggling with their own well-being. This clash between educator and student well-being compounded the negative atmosphere in the classroom, leaving both parties feeling negatively affected.

Student experiences in classrooms with educators experiencing lower well-being ranged from discomfort to a desire to escape. Students resorted to coping strategies to deal with the negative energy in the classroom. Additionally, students described a lack of interaction, interest, and engagement when the energy was negative, impacting their overall learning experience.

In summary, we found the concept of energy contagion played a pivotal role in the impact of educator well-being on student well-being and learning. Positive energy fostered enthusiasm, engagement, and a love of learning, while negative energy eroded the learning environment and led to disengagement and discomfort. The shared space of the classroom was reported to hold immense power to either promote or hinder positive student well-being and the joy of learning.

The Impact of Educator Well-being on Student Feelings about the Educator

Higher educator well-being and the impact on student feelings about the educator: Students expressed their feelings about their teachers both when they observed that their teacher was happy in the classroom, and then when they appeared to have negative feelings in the classroom. When students perceived that an educator enjoyed their role as a teacher, they reported experiencing more positive feelings about the educator. In response to the question about how a student feels about a teacher who enjoys being in the classroom, one 12-year-old boy replied, *"I usually like them as a teacher, I enjoy them."* a 16-year-old boy commented, *"My teachers enjoy teaching, and there is a warm connection between us."*
Students also talked about having more respect for teachers who appeared to enjoy teaching.

> ***Well, I feel a lot of respect for the teacher. I also feel like, I appreciate what they're doing and like, their character. (17-year-old girl)***

> ***Definitely like a lot more like respect for them, I guess. I like them a lot more if they're engaged. (16-year-old boy)***

Lower educator well-being and its impact on student feelings about the educator: Some students expressed negative feelings toward a teacher who did not seem to enjoy teaching. One 11-year-old boy talked about what he thought his feelings would be if he had a teacher who didn't seem to enjoy teaching.

> ***If I had a teacher like that, I would just want to go home and [not] be with him. I would want to change from my class.***

A 17-year-old girl described a class where the students did not have respect for the teacher.

> ***They didn't respect the teacher as much, so they didn't like really behave very well. They also didn't have the proper attitude to learn. So, most of the time, they didn't really pay attention or participate in class, because they didn't feel like the teacher was like doing the teaching right.***

A small number of students expressed frustration and questioned why the teacher had entered the field though appearing not to enjoy working with students. One 15-year-old girl commented. *"I question why they chose to teach that subject. I feel like they create more of a negative environment because they are not into it."*

At the same time, there were several students who expressed compassion for teachers who struggled with what they perceived to be lower levels of well-being. A 16-year-old boy expressed his feelings about teachers, both in times when teachers were enjoying their role but also when teachers were having a harder time in the classroom.

> ***I think teachers are a great human being. They teach us everything in our life. If the teacher is enjoying the teaching the student also enjoy the teaching. If she's harsh towards somebody, we should understand. She might be uncomfortable. She might not be in a good mood. And we should be gentle to our teacher, and not make her pissed off, and we should carry on our studies regarding that…. keeping that in mind.***

Another 17-year-old boy talked about directly asking the teacher the source of their distress, emphasizing the importance of compassion and empathy.

> ***Okay, this class is not going really well, but then you will think, 'Okay, something is happening to the teacher', and we can ask him …if he has any problem and I think that it is like the best situation that we could have in that moment. ...I don't think that all [the students] will ask 'Okay, what happened to you, teacher?' ... but there are students that will ask a teacher with empathy or compassion. We'll ask them, 'Okay, something is happening to you. What happened? Can you tell us what's happened?' In that kind of situation, I think that we must use compassion and empathy."***

Other: For other students, being in a classroom where the teacher does not seem to enjoy teaching resulted in more focus on the negative feelings the students believed the teacher had towards them. One 11-year-old girl's observation led her to question the teacher's feelings about student efforts in their learning.

> ***Some of my teachers like to have their space like, with lots of little drawings on the wall ... to show the work that students have been doing during the year. But I think that if they are a negative teacher, maybe he doesn't like to show what the students are doing in the year, [and] doesn't feel and doesn't show that he's proud of the students. It will be like an environment that is black or white.***

Summary: The impact of educator well-being on students' feelings about their teachers was seen to be a significant aspect of the educational experience. When students perceived that an educator enjoyed their role as a teacher, it generally led to more positive feelings and attitudes toward that educator. These positive emotions included liking the teacher, feeling a warm connection, and having a deep sense of respect for them. Students appreciated and valued teachers who genuinely enjoyed teaching, recognizing the passion and dedication they brought to the classroom.

Conversely, when educators did not seem to enjoy teaching, it had a detrimental effect on students' feelings about them. Some students reported negative emotions, including a lack of respect, disengagement, and a desire to avoid such teachers or classrooms altogether. This negative impact on students' attitudes and behavior in the classroom created an environment that felt unwelcoming and unproductive.

However, it's important to note that some students expressed compassion and empathy for educators who might be struggling with their well-being. They emphasized the need to understand and support teachers during challenging times, and recognized that educators are human beings with their own emotions and difficulties. In such situations, students commented that they were more likely to ask the teacher about the source of their distress and offer their understanding and support.

Overall, student feelings about their educators were strongly influenced by the educators' well-being and their perceived enjoyment of teaching. Positive feelings fostered a more conducive and positive learning environment, while negative feelings led to disengagement and challenges in the classroom. The role of empathy and compassion by students toward teachers experiencing difficulties in their roles was also highlighted as an important aspect of the educational dynamic.

The Impact of Student Well-being on Educator Well-being

Higher student well-being and the impact on educator well-being: To better understand perspectives on the impact of student well-being on educator's well-being, students were asked to reflect on how a teacher might feel in a classroom where the students enjoyed learning, an indicator of well-being. Educators were asked how they would feel in a classroom in which students had high levels of well-being. Overlapping with the theme of energy contagion, educators indicated that when students have higher levels of well-being, they are able to build off that energy. One educator commented:

> ***I think [as] teachers in our school we build off when students are feeling good in class, and it translates into more of a desire to learn and to be ... present. Then we feel more motivated to do group activities, to do different styles of learning, right?***

One educator elaborated on the cascade of benefits that come from working with students who have higher levels of well-being. This educator talked about not only the benefits of seeing students excel in the classroom, but also how this impacts their well-being.

> ***I'm going home a lot happier because I'm actually seeing my students thrive in the classroom; they are thriving academically; they are thriving socially. And this is very rewarding for me, and this has an impact on my well-being because I'm motivated to give them more. I'm motivated to take it to the next level with them. Seeing my students successful and have a high level of well-being actually, if I can say, it makes me excited to go to that classroom.***

The idea that when educators were with students who exhibited higher levels of well-being, they were more likely to plan more engaging activities, was common throughout the interviews. One educator shared an observation of another teacher to highlight this experience.

> ***I just see the joy and the happiness that she has, and I'm not saying I don't, but I just see it with her, because most of her students are in a very good place, and so like I see she brings in more engaging lessons. So, students with great well-being definitely, it impacts you."***

Two educators talked about an increase in creativity when they worked with students who were highly engaged and exhibiting higher levels of well-being.

> ***[Higher student well-being] enables you to be creative, you know. You can do things in a more interesting way. You're not as worried about just getting the kids over the line. You're sort of thinking. 'Okay, we can do some stuff here.'***

> ***As a teacher, if I'm feeling comfortable that students are having higher levels of well-being, I will try to create much more interactive activities. As a teacher, I will also be more comfortable with the students. When I create my action plans, I would be thinking of how I can make them better in their studies; how they can indulge into much more creative activities.***

However, it was not necessarily all focused on higher levels of academic achievement. One educator recounted a situation in which he was coaching a team comprised of students who were not highly skilled, but their enthusiasm was infectious. As a result of their strong commitment to the sport, they played more games with other schools than normally would be the case; that was a huge motivator for the educator to give them as many opportunities as possible to play.

In working with students with high well-being, educators described how they experienced high levels of job satisfaction.

> ***And that motivates me as a teacher - being challenged. Being like …. they're going beyond, that's amazing. And their well-being motivates me as a teacher because you see worth in your work, and you see that there is fruit when you plant those seeds. So, it's just so enriching. And it just makes the day better - this is why I do this.***

> *If the students have high levels of well-being, they will meet and achieve their learning objectives, meet their learning outcomes successfully. And I think, as a teacher, I see that they have achieved what I intended for them to achieve, [and] it gives me a certain level of satisfaction. It gives me a certain level of fulfillment.*

Similarly, students also saw the benefits for teachers when they were engaged in the classroom. Students used words such as happy, proud, and fulfilled when describing teachers who are in classrooms with students who enjoy learning. One 16-year-old-boy commented:

> *The teacher is probably happy because the students are enjoying what they're teaching. And they're doing a good job. It's kind of like….. it's a much better relationship because the teacher knows that the students are doing well, and is happy that they're doing well.*

Other students had similar perspectives:

> *I think it would make them feel happy and filled with joy because they would know that their lessons that they're teaching are actually improving the student's knowledge and their learning skills. (12-year-old boy)*

> *I think they would feel fulfilled because, as you see, as a teacher their primary objective, I would say, is to teach students successfully, and if they do that successfully, then there's that sense of fulfillment and success and happiness that would come into them. (16-year-old-girl)*

Students also commented on the benefits for them as learners when they were highly engaged in the classroom. They indicated that the teaching and learning were more fun, and the atmosphere was more positive. As two boys expressed:

> *Well, they probably try to make the work more fun because if they already enjoy it, then they will make it more enjoyable. (12-year-old boy)*

> *The atmosphere is really good because everyone's like laughing and [...joking] every now and then, and wanna learn. (ten-year-old boy)*

A 16-year-old girl talked about how the teaching would be better when students are in a good place with respect to their well-being.

> *I would say her teaching would be a lot more smooth. I think that her thoughts would be more clear. I would say, if I was a teacher, and I was in her place, I [would] honestly be more comfortable in the classroom because everyone wants to learn.*

Lower student well-being and the impact on educator well-being:

Educators have varying levels of well-being, and gave various responses to supporting students with lower levels of well-being. This included taking time to understand the causes of lower well-being, and implementing strategies and approaches to support the student. One educator said:

> *If a child is not able to concentrate well, there might be something behind that. There might be some reason. He might feel demotivated. He might have low self-esteem, or he might be having some social breakdown or emotional breakdown at home.*

Another educator echoed this effort to better understand what was underlying the student's challenges:

> ***Personally, I deal with students. They come from a different background over here. It's a bit different, because they're all not from a healthy family, or they come from a broken family. So, they will be a bit more hyperactive in class, because at home they don't have much. They don't see a good relationship with their parents at home. According to that, they come here, and they start [mis]behaving, or they start showing signs of hyper-activeness. They'd be more like attention seekers, because at home there is no one to pay attention to them.***

Another educator talked about the importance of providing support to students who were struggling but, at the same time, acknowledged that lower student well-being can take a toll on the educator's well-being.

> ***I think that if my well-being is good and it's high, I try to help my students or I can do it better. If my student is sad because ….. [for example] the pets died, I have to be the support to help them and…. say good words or help with some strategies - how to improve or how to face this situation. But when most of the students are in a well-being not so good, I think that the teacher feels the same.***

Faced with students who struggle with well-being which impacts their engagement in school, educators and students indicated that the teacher may feel a variety of emotions; the teacher may feel discouraged and not motivated to put in as much effort to engage students, or the teacher may try harder to engage students. One educator described working with students who were experiencing low well-being:

> ***Because they are not in the right state of mind and when they are not responding back to you, you get very demotivated because maybe you plan like an hour of activities and it took you two or three hours and you were very motivated and very, very excited about that lesson. But when you go in the class and a student is disturbed, [or] not physically present, not emotionally, or mentally present in the class, or a student is being bullied or he's facing some problems, you can… see [this in] their faces. It shows in their face that they are lost somewhere else. And when you see such kind of students sitting in your class… not responding to you… not that enthusiastic about something that you are teaching, [then] the whole … motivation that you build up, it just goes down.***

Students shared their thoughts as to how they perceived the struggles of teachers who were in a classroom where the students were not engaging in learning. According to one 14-year-old girl, *"The worst thing that can happen with the teacher is, you know, when you put in effort, and you do not get something in return from the students."* Some students expressed an understanding that teachers had limited internal resources and could become exhausted in their efforts to engage students.

Students shared their experiences with teachers in classrooms where students were not engaged.

> ***I would see that they would be sometimes in a bad mood. Sometimes you would know if they're stressed or not, and sometimes they tend to be snappy, I guess. And for some cases, mad and definitely sad and yeah, unmotivated to teach. (16-year-old girl)***

> ***Maybe they could be like very hard on themselves, like hard on themselves, but you know badly, negatively - they will be very nervous and sad. (11-year-old girl)***

From the perspective of students, this low mood might then impact the teacher's efforts with the class. As one 16-year-old boy expressed:

> ***I feel like they would try... like at the start, and then they would just be like... Well, I don't care. I'm just gonna give them worksheets every day and just give them like the bare minimum for them to pass... [They would show a] general lack of care. I guess it's like, I'm not gonna waste my time on these students.***

Other students suggested that teachers might try harder to engage students. This point was shared by a 12-year-old boy, reflecting on the feelings of a teacher in a class where the students did not enjoy learning: *"[The teacher was] probably upset, but also wanting to help them enjoy learning. They probably would be more dedicated to trying to help them enjoy it.*

In the face of challenges, an educator described how this effort looked as they worked to engage students struggling with lower well-being.

> ***This semester, I had it in my class, and it was tough. It was a tough group... one of the tougher ones I've had, and it was a few students that were kind of bringing that unwellness negativity into the classroom, and it... spread. And I really had to focus and focus not on the whole group relationship, but the one-on-one relationships, and by the end of the semester, I got almost everybody on board working with one-on-one relationships. I found there were a lot of times you can have some big gains in terms of student-teacher relationships just by doing fun activities. Or, you know, giving them an activity where it's meant to, you know, count as marks, but it's meant to pump their tires and just build their confidence, and you know, it's kind of like you're strategically giving them these, not low-level activities necessarily, but like you're designing it so they're going to be successful, regardless.***

Another educator, noting that some students have high levels of adversity and stress in their lives, talked about the struggles students face. This educator talked about their focus on supporting such students.

> ***I think that's where social-emotional activities and understanding our students and creating an environment where students feel open and comfortable, chatting to safe adults and having safe spaces is really important.***

At the same time, supporting students with lower levels of well-being had a price for some educators. Educators talked about how hard it was to not internalize the pain that some of their students were experiencing.

> ***You go home exhausted at night. You can't sleep at night because you're constantly replaying this script in your head of this is what happened today. 'Wow! I should have done this differently', or 'I should have handled that differently', or 'I should have called this person in to help' or yeah, you second guessed yourself, right? And it's sort of a vicious circle, unless you can find a way out, or unless you have a solid support network, and you do things for you to re-energize at night after work, too.***

Other interesting insights shared by educators: A small number of educators explicitly mentioned that spending time supporting students with lower well-being often came at a cost to other students. There was only so much time in the day, they noted. The effort to balance the needs of all students was an issue they were keenly aware of. One educator commented:

> ***I think we try to engage everyone in the in the same way. But those students with higher levels of well-being - we tend to, I think, focus in different ways. Right? So they're the ones that tend to... take on the opportunities for leadership ... in the school, or running school events. They're generally your first volunteers, right? And so, I think teachers continue to provide those types of opportunities for them. I think sometimes they get the short end of the stick too, you know, because if I have to go in the hallway to talk to a student about something to do with well-being or behavior, then you know, the other students also don't have my attention.***

Summary: The impact of student well-being on educator well-being is a complex interplay that significantly influences the dynamics of the classroom environment. When students exhibit higher levels of well-being and engagement, educators often found themselves to be more motivated, inspired, and creative in their teaching approaches. The positive energy and enthusiasm radiated by engaged students encouraged educators to plan more engaging activities, focus on individual relationships, and seek ways to make learning enjoyable and interactive. Educators also experienced a sense of fulfillment and worth in their work when they witnessed students thriving and enjoying the learning process.

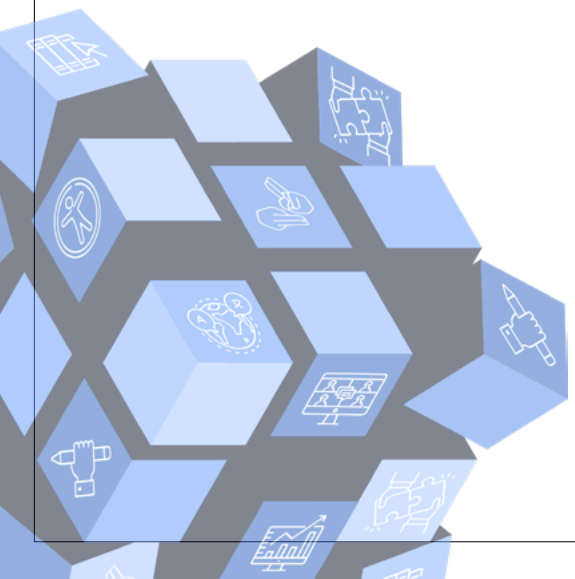
However, when students struggled with their well-being and engagement, educators experienced a range of challenges and emotions. The level of motivation and effort put forth by educators varied based on their own well-being and their perceptions of students' struggles. Some educators felt discouraged and unmotivated to engage students, while others redoubled their efforts to support and motivate students who were facing difficulties. In such situations, the classroom environment became more challenging, impacting both educators and students.

Students recognized the impact of their well-being on educators. They understood that when they were engaged and enjoyed learning, educators were likely to feel happy, fulfilled, and motivated. Conversely, when students were disengaged, teachers experienced negative emotions, including sadness, frustration, and demotivation. The relationship between student well-being and educator well-being was understood to be reciprocal, with each group influencing the other's experiences and emotions in the classroom.

Educators strove to provide support to students who were struggling with their well-being, recognizing the importance of social-emotional activities and creating safe spaces for students to express themselves. However, for some educators, supporting students with lower well-being was emotionally taxing, leading to exhaustion, as they reflected on their efforts and interactions with students.

Balancing the needs of all students, especially those with varying levels of well-being, was challenging for educators. Educators acknowledged that some students facing greater difficulties received more attention and support, sometimes negatively affecting the experiences of other students in the classroom. Educators grappled with finding ways to engage and support all students, with the limited time and resources available.

Student well-being significantly influenced educator well-being and the overall classroom environment. The interplay between the two highlighted the importance of fostering positive relationships, understanding individual needs, and creating a supportive and inclusive learning environment that benefits both students and educators.



Chapter Four: Conclusions and Recommendations

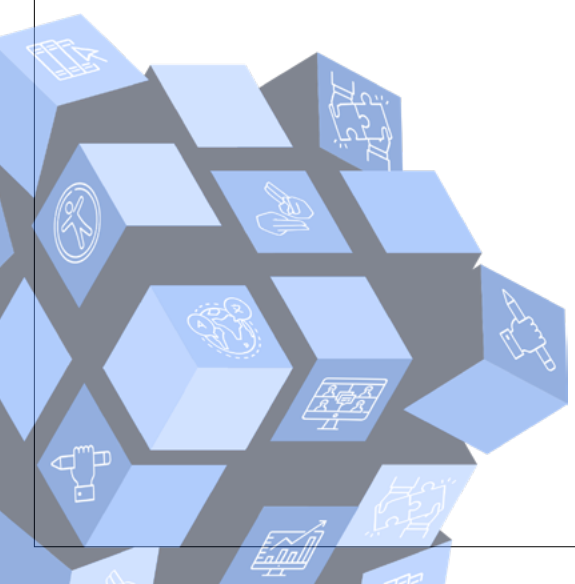
This research offers two substantial contributions to the fields of educator well-being and student well-being and learning (1) a comprehensive scoping review and (2) interviews conducted with educators in five countries and students in four countries. In this chapter, we outline conclusions from these components, offer insights, and acknowledging strengths and limitations of the study.

4.1 Scoping review

The scoping review results provide valuable insights into the complex landscape of research on the relationship between teacher and student well-being and learning. The trends observed in the studies over recent years reveal the growing interest and significance of this field --particularly demonstrated in a surge of research in 2020 and 2021. The geographical distribution of studies indicates global interest, with the United States leading in the number of studies conducted, followed by Canada, Australia, and the United Kingdom.

In examining the study designs, it becomes clear that a diverse range of methods have been employed to explore the relationships between teacher and student well-being in student well-being and learning. Cross-sectional designs, qualitative approaches, and longitudinal studies have all contributed to our understanding of these intricate connections.

As for the findings, the majority of studies reveal positive associations between teacher and student well-being and learning.
This consistent trend underscores the critical role teachers play in fostering positive outcomes for students. A small percentage of studies did not find such associations, or reported negative associations in specific contexts. These variations highlight the need for a nuanced understanding of the factors at play.



The variety of definitions of teacher and student well-being adds depth to the discussion. The recognition of teacher psychological distress, occupational burnout, job satisfaction, emotions, and health as distinct facets of well-being contributes to a comprehensive understanding of this complex construct. Similarly, student well-being encompasses psychological distress, general well-being, health, satisfaction, and emotions, shedding light on the multifaceted nature of students' experiences.

In student learning, academic achievement emerged in the scoping review as the predominant conceptualization of learning and not well-being, with a strong emphasis on quantitative measures such as standardized assessments and grades. However, it is evident that learning is not confined to academic achievement alone, as other dimensions like engagement, motivation, academic skills, and academic performance also have been explored.

In summary, this scoping review offers a panoramic view of the research landscape in the realm of teacher and student well-being and learning. It demonstrates the dynamism and global reach of this field, acknowledges the complexity of these relationships, and highlights the need for further exploration and understanding. This knowledge is instrumental in informing policies and practices that promote the well-being of educators and students and enhance the educational experience for all.

Strengths and limitations of the scoping review

Strengths of the scoping literature review

The scoping literature review helps to provides a more comprehensive understanding of the landscape of research on the relationship between teacher and tudents well-being and learning. Two prior reviews that examined these relationships excluded a significant portion of the existing literature, namely qualitative and mixed-methods studies. The current review examined studies from the full spectrum of research designs, ranging from qualitative, mixed-method, longitudinal, cross-sectional, and randomized controlled trial studies. Additionally, previous reviews have failed to explore several grey literature sources such as white reports. Thus, this scoping review contributed to our understanding about these relationships by including these sources. This scoping review identified and outlined the range of definitions used to explore teacher and student well-being. As such, the current review provides a clearer understanding about how researchers have defined and measured well-being, thereby supporting the synthesis of findings and the conclusions that can be drawn about these relationships. Furthermore, this fuller understanding can help to guide future research, supporting greater consistency in how well-being in defined and measured so that research can be replicated in order to advance both science and practice. Finally, the scoping review was pre-registered (following the most up to date PRISMA) guidelines and all steps in the research process were supported by consultation with a university librarian.

Limitations

There were limitations to the present scoping review. For one, we did not review master's theses and dissertations, as was the case with prior reviews on this topic. Additionally, due to the language limitations of the research team, only records written in English were reviewed and included – potentially preferencing Western conceptualizations and frameworks of well-being. Lastly, we only explored studies after 2000, excluding any understanding of the research before.

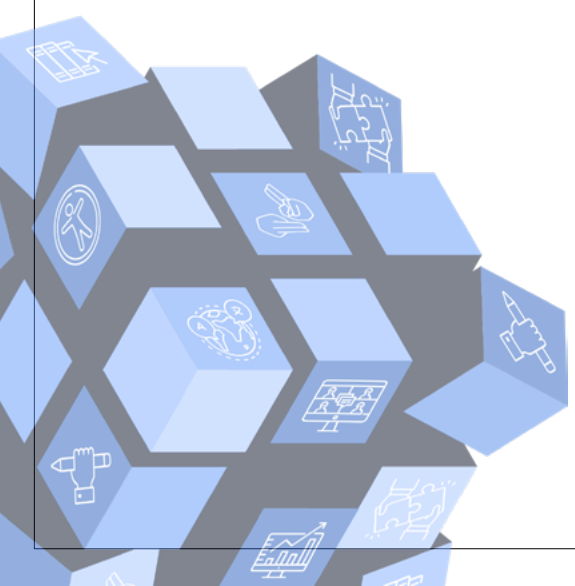
4.2 Interviews across five countries

The exploration of the intricate relationship between educator and student well-being in learning and teaching uncovered a tapestry of insights, both positive and negative, that underscore the vital importance of considering the voices of educators and students in research. Without the inclusion of these voices, understanding is limited and lacks the deeper nuances that reflect the lived experiences of those with firsthand knowledge of the day-to-day realities of schools. Striking in these interviews was the alignment among students, among educators, and between students and educators.

Positive findings illuminate the transformative power of higher educator well-being in influencing student well-being, and on the educational landscape as a whole. When educators radiate positivity and well-being, classrooms become vibrant hubs of learning, characterized by heightened enthusiasm, innovative teaching methods, and a genuine commitment to student success. Trust, safety, and supportive relationships flourish, creating an environment where academic engagement thrives. These positive effects extend to students, fostering a newfound appreciation for their studies and kindling a passion for learning. The ripple effect of this positivity enhances the overall educational experience.

Conversely, the negative impact of lower educator well-being casts a shadow over the educational journey. In such classrooms, interactions diminish, negative emotions prevail, and disruptive behaviors disrupt the learning process. Educators grappling with stress or disengagement inadvertently affect student engagement and motivation. The absence of spontaneity and enthusiasm leaves students disenchanted with their studies. This downturn in the educational experience underscores the significance of educator well-being in shaping the quality of learning environments.

The role of contagious energy, whether positive or negative, emerged as a central theme in this exploration. Positive energy, characterized by enthusiasm and passion, fosters creativity, innovation, and a love of learning, benefiting



both educators and students. Conversely, lower educator well-being can result in negative energy that hinders the learning process and creates a challenging classroom environment.

Furthermore, the emotional connection between students and educators is deeply intertwined with the educators' enjoyment of their roles. When educators genuinely find fulfillment in teaching, students respond with positive feelings, respect, and a strong connection. Conversely, when educators appear disinterested, students may experience negative emotions, disengagement, and a desire to avoid such classrooms.

The reciprocal relationship between student well-being and educator well-being cannot be overlooked. When students exhibit higher levels of well-being and engagement, educators feel motivated and creative in their teaching approaches. However, challenges arise when students struggle with their well-being, affecting educators' experiences and emotions in the classroom. Balancing the needs of all students, particularly those with varying well-being levels, presents a complex task for educators.

In essence, this research underscores the pivotal role of educator well-being in shaping the educational experience. It emphasizes the need for proactive efforts to foster positive relationships, create supportive and inclusive learning environments, and prioritize educator well-being. Ultimately, by acknowledging the voices of educators and students, educational institutions can work toward creating environments where positivity and well-being thrive, benefiting both those who teach and those who learn.

Strengths and limitations of the interviews

These findings serve as valuable initial insights into the multifaceted links between educator and student well-being in learning and teaching. The interviews, conducted with educators in five countries and students in four countries, offer a nuanced glimpse into the commonalities and distinctions present within diverse educational landscapes. By delving into these narratives, we gain a deeper understanding of how the themes identified in the scoping review resonate with those immersed in real-world school environments.

Furthermore, these interviews have not only provided insights but have also uncovered potential avenues for future research, promising a more profound exploration of the intricate connection between well-being and learning. It is important to acknowledge that, at present, the body of research in this area is still in its early stages, albeit with varying degrees of development across the five countries examined.

However, it is essential to note certain limitations inherent in these interviews. They predominantly featured participants from private school settings (four of the five countries) and necessitated proficiency in English for interviews. Further, interview sites in three of the five countries in this study reported being involved in significant work using approaches that focused on student well-being, and to some degree educator well-being. The other two sites can be characterized as more in the beginning phases of this work. Given that three of five countries had a strong focus on student well-being, and to some degree, educator well-being, schools involved in the interviews may not reflect the typical education settings.

Additionally, educators who participated in this study exhibited a predisposed interest in educator well-being, as evident in their expressed motivations for participating. For students, the involvement of an unfamiliar researcher and using an online platform may have limited the range of student voices. In addition, the ability, among some students who spoke English as a second language, to fully express themselves may have been impacted.

In spite of these limitations, it is crucial to recognize that these interviews have enriched our understanding of the relationship between educator and student well-being in learning and teaching. The findings from these interviews have pointed to numerous avenues for future research.

4.3 Conclusions from the integration of the scoping review and interviews

The results of these two distinct pieces of research, the scoping review and interviews, have resulted in a deeper understanding that can serve as a foundation for future research. The two approaches that were designed to offer a more complete understanding of the relationship between teacher and student well-being in teaching and learning also brought together similar themes to inform both practice and policy. [1]

Both the scoping review and interviews highlighted the many definitions that are used to describe educator well-being. The scoping review identified that researchers use a variety of terms to define teacher well-being using both positive and negative terms such as psychological distress, general well-being, occupational burnout, job satisfaction, emotions, and health. When asked to share their definitions of well-being in the interviews educators provided such diversity in their conceptualizations of well-being, just as was found in the scoping review results. In both bodies of work, job satisfaction, emotions, and resilience were dominant components of well-being.

With few exceptions, the scoping review and interviews consistently highlight the positive association between teacher well-being and student well-being. Both bodies of work highlight that when teachers have higher well-being, it is associated with higher well-being in their students. In the scoping review, 93 percent of articles reviewed found this positive association between teacher and student well-being. In the interviews, all educators and students indicated that there was a strong link. Of interest is the very small number of educators indicating a less robust link in cases in which the educator was experiencing lower levels of well-being, noting that it may have a slight impact on the students, unless the students were also vulnerable, in which case, the impact would be greater. Descriptions of what students experienced when not feeling connected in school were similar between the scoping review and the interviews. This was often characterized by the term 'disengagement' and at times included feelings of frustration and anger. Notably, the interviews afforded an opportunity to delve into the feelings experienced by educators and students related to the impact of being in environments characterized by higher and lower well-being.

[1] See Appendix I to view included scoping review articles by research question area used in the interviews.

Further, the scoping review and interviews emphasize the impact of teacher well-being on student learning outcomes. In the interviews, students and educators were not specifically asked about grades, an aspect that was a focus in the scoping review articles. However, the issue of lower grades did emerge as students talked about doing the minimum to get through a class where they experienced the teacher as disengaged. Both bodies of work considered learning to encompass dimensions of motivation and engagement. Eighty four percent of the articles included in the scoping review reported a positive association between teacher well-being and student learning. Mirroring this finding was the same overwhelming strong theme in the student interviews. They agreed that higher teacher well-being was associated with more effective teahcing practices, inccreased student engagement, and better academic achievement. The scoping review identified eight studies which found no association between teacher well-being and student learning. In the interviews, this theme was also noted by a small number of individuals who noted that there will always be students who will learn despite the quality of teaching to which they are exposed. This finding points to the need for further study on the various strategies that students use to compensate for lower teaching quality.

Unique to the interviews is the exploration of educators' views and experiences on the impact of student well-being on educator well-being and teaching. This overlapped with the idea of energy contagion, that is, the idea that positive and negative energy continually flows between the teacher and students. Although the educator's role in taking the lead on setting a positive tone is critical, student well-being can also have positive or negative impacts on the educator well-being. Beyond emotions, student well-being can impact the actions that educators take, with some educators working harder to engage students who are struggling and, in some cases, particularly when educators are experiencing lower levels of well-being, having less energy to engage struggling students.

In summary, both the scoping review and interview findings are very much aligned on the positive association between teacher and student well-being and learning outcomes. The interviews add richness to a greater understanding of classroom dynamics and the subsequent emotions and behaviors of both educators and students.

Stepping back and reflecting on these findings, it becomes evident that students stand to benefit and flourish significantly in classrooms led by educators with higher levels of well-being. However, it is crucial to remember that educators are more than just teachers. As emphasized by several interviewees, educators are multifaceted individuals who play various roles in addition to their teaching duties; they are colleagues, partners, parents, children, and much more. When educators experience well-being, it not only positively influences their interactions within the classroom with their students but also ripples out to impact various facets of their lives outside the school environment.

This insight underscores the importance of seeking ways to support educators in their personal development and well-being. Such efforts extend far beyond the classroom and the school, as they carry the potential for a cascading effect on multiple aspects of an educator's life, all of which in turn impacts their ability to be teachers who inspire and nurture the next generation.

4.4. Recommendations

Based on the scoping review and interviews, the critical impact of teacher and student well-being in learning and teaching has far-reaching implications. Several recommendations are put forward in the areas of research, practice, and policy to strengthen the focus on and student well-being with the goal of creating school systems that are characterized by wellness, engagement and flourishing.

1. Recommendation for Research

1.1. Explore the Concept of Well-Being: Given the diverse definitions of well-being, further research should aim to create a comprehensive understanding of well-being in the field of education.

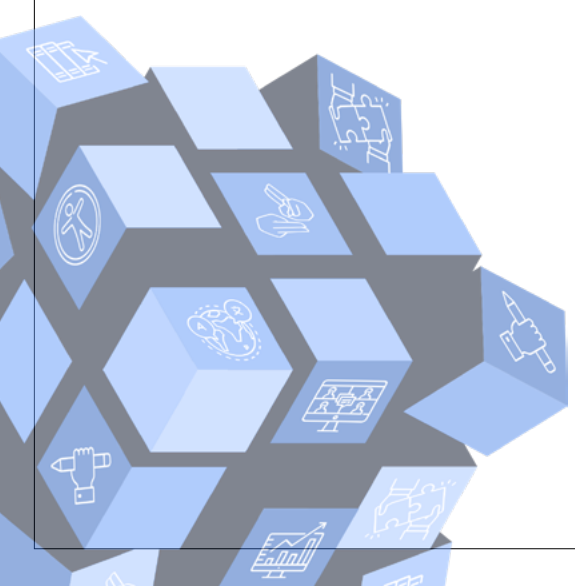
1.2. Deepen Research Efforts to Include Greater Diversity: Expanding research into different cultural contexts and educational systems can offer fresh perspectives and enrich the existing knowledge base.

1.3. Include Youth Voice in Research: Actively involving youth as participants or contributors in studies exploring the relationship between educator well-being and student well-being and learning can provide invaluable insights.

1.4. Conduct More Research that Includes Mixed-Methods: Combining quantitative and qualitative approaches can provide deeper insights into the dynamics at play.

1.5. Investigate the Causal Relationships of Teacher Well-being to Student Well-being and Learning: Further research should explore causality and directionality to understand the mechanisms influencing these relationships.

1.6. Examine Differential Impacts of Educator Well-Being on Student Well-Being: Research should explore whether teacher well-being has a disproportionate impact on students with varying well-being levels.



1.7. Conduct More Research That Focuses On Educator Well-Being From A Positive Psychological Perspective: Studying teacher well-being from a positive perspective could provide promising insights for future research.

1.8. Investigate the Power of Energy Contagion: Further investigations should delve into the significance of positive "energy" contagion within classroom environments.

2. Recommendations for Practice

2.1. Disseminate the Current Body of Knowledge: Practitioners and educational stakeholders should actively disseminate the existing knowledge regarding the relationship between educator well-being and student well-being and learning.

2.2. Disseminate Evidence-Based Approaches to Mitigate Educator Burnout: Identifying and disseminating evidence-based approaches to reduce burnout among educators is crucial.

2.3. Provide Comprehensive Wellness Education to Educators: Equipping educators with tools to recognize signs of burnout and stress is essential for their well-being and the well-being of students.

2.4. Implement Evidence-Based Classroom and School-based Social and Emotional Learning (SEL) Programs that Promote Student Well-being. To promote student well-being evidence-based program and practices that draw from the field of social and emotional learning to promote student well-being and school success need to be implemented and monitored.

3. Recommendations for Policy

3.1. Implement Systematic Approaches to Monitor Educator Well-Being: Policymakers should establish mechanisms to measure and monitor educator's well-being to facilitate timely interventions that can promote a healthier educational workforce and high-quality teaching.

3.2. Implement Systematic Approaches to Monitor Student Well-Being: Policymakers should also establish mechanisms to monitor student well-being at the population level in order to identify students' strengths and challenges and to implement and monitor evidence-based interventions that promote student well-being and learning.

3.3. Promote the Establishment of Well-being Teams in schools to Focus on Supporting the Mental and Emotional Well-being of Educators and Students. These teams would be charged with fostering a positive school environment, implementing wellbeing practices that are culturally appropriate and evidence-based.

3.4. Establish National/Ministry-Level Policy Standards for Teacher Certification that Include a Focus on Teacher and Student Well-being: As we look ahead to the future of education, there should be national/ministry level standards for teacher certification requirements so that teacher preparation programs include the most recent research and pedagogy on ways to promote the well-being and social and emotional competence (SEC) of students and teachers.

About the authors

Dr. Kimberly A. Schonert-Reichl

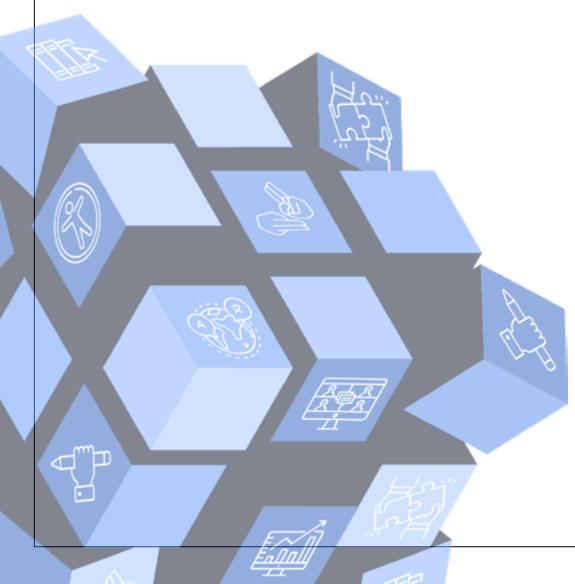
NoVo Foundation Endowed Chair in Social and Emotional Learning and Professor at the University of Illinois Chicago

Dr. Kimberly A. Schonert-Reichl is the NoVo Foundation Endowed Chair in Social and Emotional Learning and Professor at the University of Illinois Chicago. She is a prominent educator and renowned researcher in the field of social and emotional learning (SEL). With a focus on promoting empathy, compassion, altruism, and resiliency, she has extensively explored topics like SEL and mindfulness interventions in educational settings. She is known for her innovative work in promoting well-being and resilience among children, adolescents, and teachers. Dr. Schonert-Reichl's expertise has significantly contributed to the advancement of policies for mental health support and SEL. Her numerous publications, awards, keynote speeches, and national and international collaborations underline her dedication to enhancing the social and emotional aspects of education to create a better world for all children.

Dr. Denise Buote

Researcher and evaluator, with a focus on mental health and well-being and resilience in school and community settings.

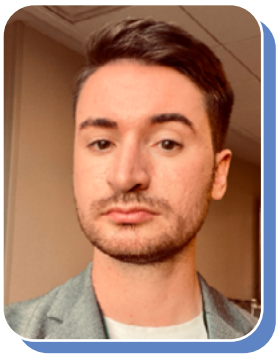
Dr. Denise Buote is a researcher and evaluator, with a focus on mental health and well-being and resilience in school and community settings. Her interest in this work was born out of her direct practice as a teacher and therapist, supporting a wide range of children and youth. She has worked as an instructor in the Faculty of Education at the University of British Columbia (UBC) and has provided numerous workshops in Canada and abroad in the areas of youth development, educational practices, and evaluation. She completed her Masters in Clinical Social Work at the University of Chicago and her PhD in education at UBC.



Dr. Rebecca Baelen

Postdoctoral Research Associate for Dr. Kimberly Schonert-Reichl at the University of Illinois Chicago and an adjunct professor at Teachers College, Columbia University.

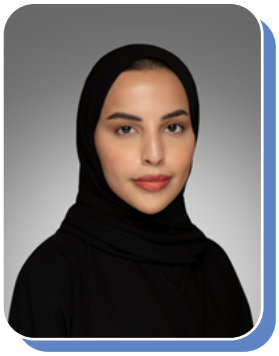
Dr. Rebecca Baelen is a Postdoctoral Research Associate for Dr. Kimberly Schonert-Reichl at the University of Illinois Chicago and an adjunct professor at Teachers College, Columbia University. Her research focuses on social-emotional learning and mindfulness-based programs for students and teachers. In addition, she is interested in the development, implementation, and testing of innovative ways to support early career teacher well-being. In 2020, Rebecca graduated from the University of Pennsylvania's Education Policy PhD program, where she conducted a field experiment of a brief self-compassion intervention designed to support beginning teachers' adaptive mindsets and well-being in the transition to teaching.



Joshua Lovett

PhD student in the Community & Applied Developmental Psychology Program at the University of Illinois Chicago (UIC).

Joshua Lovett is a doctoral student in the Community & Applied Developmental Psychology Program at the University of Illinois at Chicago (UIC). Josh received his BA in Psychology from Duke University and served as a Fulbright Scholar and English teacher in South Korea before attending graduate school. His research interests broadly include teacher well-being and teacher adaptations of social and emotional learning programs. He has a particular interest in teaching and pedagogy.



Maryam Al-Khalaf

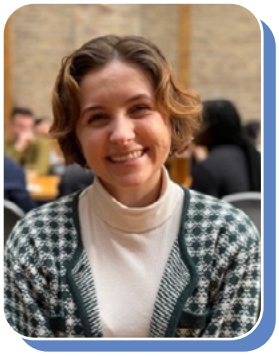
Research Associate at the World Innovation Summit for Education (WISE), an initiative of Qatar Foundation.

Maryam Al-Khalaf is a Research Associate at the World Innovation Summit for Education (WISE), an initiative of Qatar Foundation. Maryam's main research focus areas include educational leadership, higher education, entrepreneurship education, wellbeing and learning sciences and social and emotional learning. Prior to WISE, she worked in the corporate sector and managed special projects, new business, and bilateral agreements with multiple global corporates. Maryam completed her Bachelor's Degree from King's College London and holds a Master's Degree from HEC Paris.

Kay Thursby Bourke

Doctoral student at the University of Illinois Chicago in the Applied Community & Developmental Psychology program.

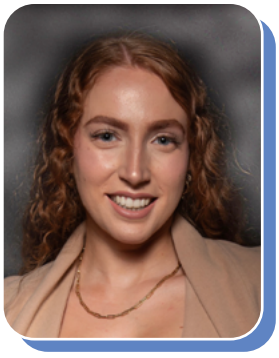
Kay Thursby Bourke is a doctoral student at the University of Illinois Chicago in the Applied Community & Developmental Psychology program. Before starting graduate school, Kay was a high school special education teacher in New York City. Her research primarily focuses on mentoring relationships, particularly the ways in which mentoring programs can best support their mentors in best supporting their mentees. She draws on work rooted in social-emotional learning and community psychology to guide her program of research.



Claire Galloway

Doctoral student in the Community and Applied Developmental Psychology program at the University of Illinois Chicago.

Claire Galloway is a second-year doctoral student in the Community and Applied Developmental Psychology program at the University of Illinois at Chicago. She graduated from DePaul University with a Bachelors of Arts in community psychology while researching nervous behavior around police and coping for children in pain. Prior to UIC, she worked for a workforce development non-profit for survivors of human trafficking. Her current research interests include the inclusion of disabled and queer students in the classroom.



Aynsley Parker

Doctoral student in occupational therapy at Rush University, cherishing her formative experiences during UIC's post-baccalaureate program.

Aynsley Parker is presently working towards her doctorate in occupational therapy at Rush University, cherishing her formative experiences during UIC's post-baccalaureate program. Her previous role as a research assistant in UIC's Social Emotional Learning Lab, under the guidance of Dr. Schonert-Reichl and her dedicated team, has deepened her appreciation for meaningful and impactful research. Through her experiences in the SEL lab, Aynsley has come to believe that the realm of social and emotional learning is a truly transformative and invaluable journey towards nurturing holistic well-being and personal growth.

Dr. Ahmed Baghdady

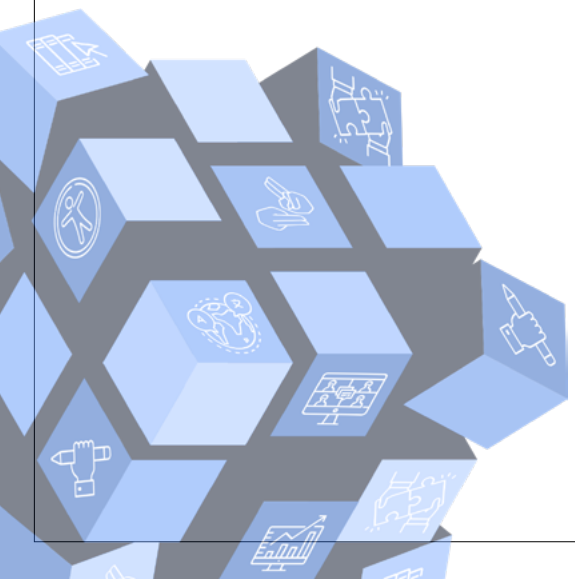
An education and research leadership professional with over 25 years' experience.

Dr. Ahmed Baghdady is an education and research leadership professional with over 25 years' experience. Before moving to Canada in 2022, he was Research Manager at WISE, an initiative of Qatar Foundation and adjunct faculty member at the Doha Institute for Graduate Studies. Ahmed has previously held research and program leadership positions in RAND Corporation, the Institute of International Education (IIE), and AMIDEAST, and has taught at higher education institutions including the American University in Cairo. Ahmed has Master's and Doctor of Education degrees in educational leadership from the University of Leicester in the UK. His research focuses on educational leadership and governance and higher education internationalization. Ahmed is currently Manager, International Agreements at the University of Waterloo.

About WISE

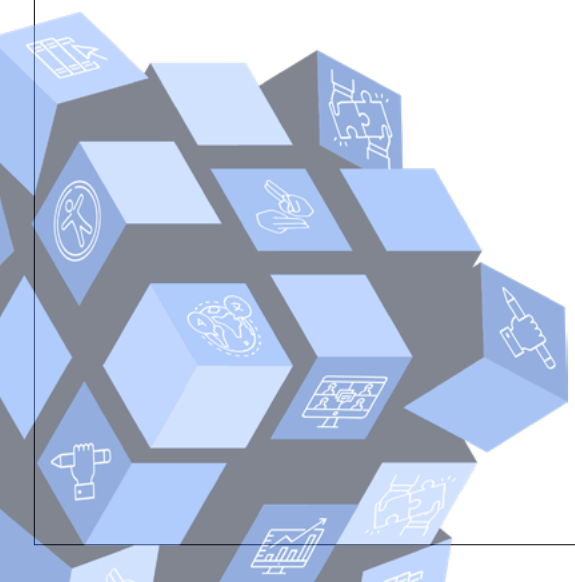
The World Innovation Summit for Education was established by Qatar Foundation in 2009 under the leadership of its Chairperson, Her Highness Sheikha Moza bint Nasser. WISE is an international, multi-sectoral platform for creative, evidence-based thinking, debate, and purposeful action toward building the future of education. Through the biennial summit, collaborative research and a range of on-going programs, WISE is a global reference in new approaches to education.

The WISE Research series, produced in collaboration with experts from around the world, addresses key education issues that are globally relevant and reflect the priorities of the Qatar National Research Strategy. Presenting the latest knowledge, these comprehensive reports examine a range of education challenges faced in diverse contexts around the globe, offering action-oriented recommendations and policy guidance for all education stakeholders. Past WISE Research publications have addressed a wide range of issues including access, quality, financing, teacher training and motivation, school systems leadership, education in conflict areas, entrepreneurship, early-childhood education, twenty first century skills, design thinking, and apprenticeship, among others.



About the SEL Research Lab at the University of Illinois Chicago

The Social and Emotional Learning (SEL) Research Lab is located in the Community and Applied Developmental Psychology Program in the Department of Psychology at the University of Illinois Chicago. Directed by Dr. Kimberly Schonert-Reichl, Professor of Psychology and NoVo Foundation Endowed Chair in Social and Emotional Learning (SEL), the members of the lab focuses on school, family, and community approaches to promote students' social, emotional, and academic learning and teacher well-being. Our projects advance SEL research, school practice, educator preparation, and state/federal/international policy development. The SEL Research Lab includes both undergraduate and graduate students from UIC and other universities and has a staff of researchers who collaborate with educators and researchers around topics of importance to SEL. Our goal is to foster research on SEL and provide local, state, national, and worldwide leadership to the SEL field. We have collaborators including UIC faculty, students, and research staff, as well as partners from the Collaborative for Academic, Social, and Emotional Learning (CASEL) and from many countries around the world who collaborate to enhance their SEL research and professional expertise.



About the Wellbeing Project

The Wellbeing Project

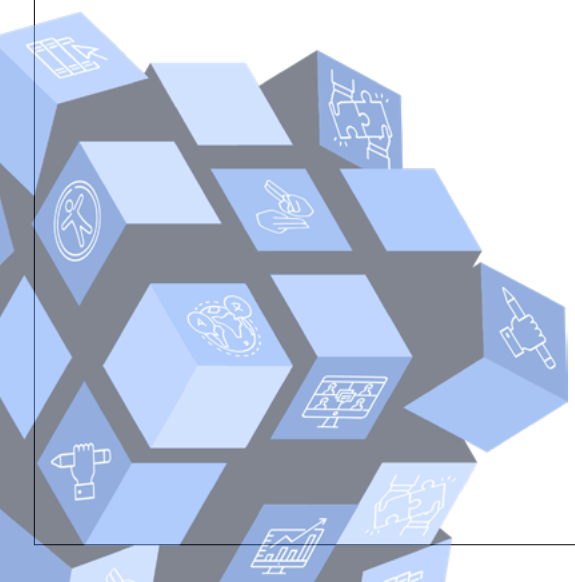
The Wellbeing Project is a global initiative co-created with Ashoka, Georgetown University, Impact Hub, Porticus, the Skoll Foundation and Synergos. Our work catalyzes a culture of inner wellbeing for all changemakers. We do this through model individual and organizational programs, credible research, global and regional learning communities, and storytelling. We are enabling a more human-centered social change culture to unlock the extraordinary collaboration and innovation needed to address the pressing social and environmental challenges we face, and to build a better world for us all.

Acknowledgements

The authors would like to thank Her Highness Sheikha Moza bint Nasser, Chairperson of Qatar Foundation, and Her Excellency Sheikha Hind bint Hamad Al-Thani, Vice Chairperson and Chief Executive Officer of Qatar Foundation, whose vision and guidance have supported WISE. They continue to believe in the power of education to create better lives for people around the world.

Thank you to the school and district staff who assisted us with sharing the information about this study with educators and students and to all of the educators and students who participated in an interview to share their perspectives on the link between educator well-being and student well-being and learning. Thank you to Annie R. Armstrong, Associate Professor & Liaison Librarian for Education & Psychology, University of Illinois Chicago for all of her guidance for the scoping literature review.

Additionally, the authors would like to thank the Ministry of Education and Higher Education in Qatar for their cooperation and support. We would also like to thank members of the WISE team for their invaluable assistance in the various stages of producing this report. Thank you to the Frazil House for Advertising (Freezil) for the design and layout formatting of the report.



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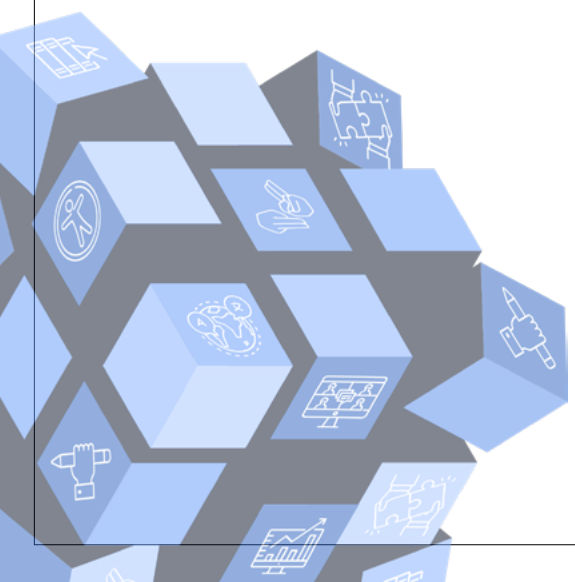
The views and opinions in this publication are solely those of the authors. Errors and omissions remain the responsibility of the authors.



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Appendices

Appendix A. Database Searches

A1. ERIC on EBSCOhost Search

Search Run on: April 26th, 2023 (JL)

Line	Search String	# Records
Concept 1: Teacher Well-Being		
S1	TI "teacher*" OR TI "educator*" OR TI "school-teacher*" OR TI "schoolteacher" OR AB "teacher*" OR AB "educator*" OR AB "school-teacher*" OR AB "schoolteacher*" OR DE "teachers"	**498,710**
S2	TI "well-being" OR TI "wellbeing" OR TI "well being" or TI "wellness" OR TI "mental health" OR TI "flourish*" OR TI "job satisfaction" OR TI "happiness" OR TI "thriv*" OR TI "life satisfaction" OR TI "positive emotion*" OR TI "stress" OR TI "burnout" OR TI "emotional distress" OR TI "anxiety" OR TI "negative emotion*" OR TI "depression" OR AB "well-being" OR AB "wellbeing" OR AB "well being" or AB "wellness" OR AB "mental health" OR AB "flourish*" OR AB "job satisfaction" OR AB "happiness" OR AB "thriv*" OR AB "life satisfaction" OR AB "positive emotion*" OR AB "stress" OR AB "burnout" OR AB "emotional distress" OR AB "anxiety" OR AB "negative emotion*" OR AB "depression" OR DE "well being" OR DE "wellness" OR DE "mental health" OR DE "job satisfaction" OR DE "teacher welfare" OR DE "teacher burnout" OR DE "life satisfaction"	**104,133**
Concept 2: Student Wellbeing + Learning		
S3	TI "student*" OR TI "youth" OR TI "child*" OR TI "learner*" OR TI "pupil*" OR TI "adolescen*" OR AB "student*" OR AB "youth" OR AB "child*" OR AB "learner*" OR AB "pupil*" OR AB "adolescen*" OR DE "students" OR DE "youth" OR DE "children" OR DE "adolescents" OR DE "early adolescents" OR DE "preadolescents"	**1,104,777**
S4	TI "well-being" OR TI "wellbeing" OR TI "well being" or TI "wellness" OR TI "mental health" OR TI "flourish*" OR TI "happiness" OR TI "thriv*" OR TI "life satisfaction" OR TI "positive emotion*" OR TI "stress" OR TI "emotional distress" OR TI "anxiety" OR TI "negative emotion*" OR TI "depression" OR AB "well-being" OR AB "wellbeing" OR AB "well being" or AB "wellness" OR AB "mental health" OR AB "flourish*" OR AB "happiness" OR AB "thriv*" OR AB "life satisfaction" OR AB "positive emotion*" OR AB "stress" OR AB "emotional distress" OR AB "anxiety" OR AB "negative emotion*" OR AB "depression" OR DE "well being" OR DE "wellness" OR DE "mental health" OR DE "student welfare" OR DE "life satisfaction"	**93,615**
S5	TI "academic outcome*" OR TI "learning" OR TI "academic achievement" OR TI "academic failure" OR TI "academic performance" OR TI "academic success" OR TI "academic engagement" OR AB "academic outcome*" OR AB "learning" OR AB "academic achievement" OR AB "academic failure" OR AB "academic performance" OR AB "academic success" OR AB "academic engagement" OR DE "academic achievement" OR DE "academic failure" OR DE "reading achievement" OR DE "mathematics achievement" OR DE "science achievement" OR DE "learning" OR DE "learner engagement"	**499,269**

Concept 3: School/Classroom		
S6	TI "school*" OR TI "classroom*" OR AB "school*" OR AB "classroom*" OR DE "schools" OR DE "classrooms"	**690,121**
ALL CONCEPTS		
S7	**FINAL: (S1 AND S2) AND (S3 AND (S4 OR S5)) AND S6**	**11,211**
	Limit to January 2000 to April 2023	**8,114**
	Limit to English language only	**8,070**
	Limit to Peer-Reviewed Journal Articles Only	**5,328**

A2. PubMed Search

Search Run on: April 26, 2023 (JL)

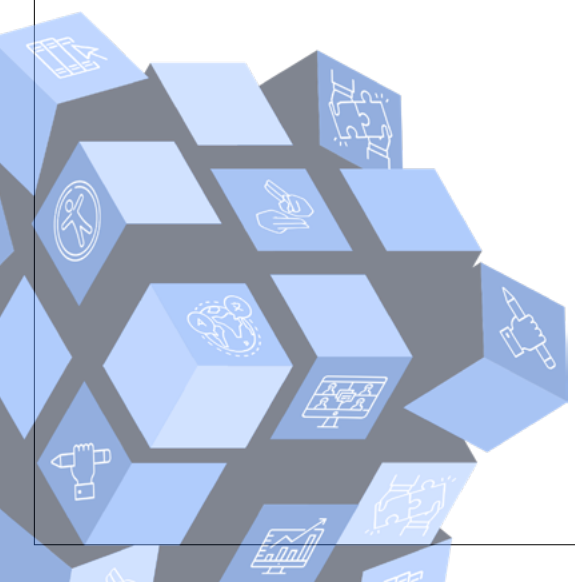
Line	Search String	# Records
Concept 1: Teacher Well-Being		
#1	**teacher*[tiab]** OR **educator***[tiab] OR **school-teacher***[tiab] OR **schoolteacher*** [tiab] OR **school teachers**[mesh]	**90,248**
#2	**well-being**[tiab] OR **wellbeing**[tiab] OR **"well being"**[tiab] OR **wellness**[tiab] OR **"mental health"**[tiab] OR **flourish***[tiab] OR **"job satisfaction"**[tiab] OR **thriv***[tiab] OR **"life satisfaction"**[tiab] OR **"positive emotion*"**[tiab] OR **burnout**[tiab] OR **"emotional distress"**[tiab] OR **anxiety**[tiab] OR **"negative emotion*"**[tiab] OR **depression**[tiab] OR **stress**[tiab] OR **"Psychological Well-Being"**[mesh] OR **Anxiety**[mesh] OR **Depression**[mesh] OR **"Mental Health"**[mesh] OR **"Job Satisfaction"**[mesh] OR **Happiness**[mesh] OR **"Stress, Psychological"**[mesh] OR **"Occupational Stress"**[mesh] OR **"Burnout, Psychological"**[mesh] OR **"Burnout, Professional"**[mesh] OR **"Psychological Distress"**[mesh]	**1,877,801**
Concept 2: Student Wellbeing + Learning		
#3	**student***[tiab] OR **child***[tiab] OR **learner***[tiab] OR **pupil***[tiab] OR **youth**[tiab] OR **adolescen***[tiab] OR **Students**[mesh] OR **Adolescent**[mesh] OR **Child**[mesh]	**4,201,796**

#4	**well-being**[tiab] OR **wellbeing**[tiab] OR **"well being"**[tiab] OR **wellness**[tiab] OR **"mental health"**[tiab] OR **flourish***[tiab] OR **"life satisfaction"**[tiab] OR **happiness**[tiab] OR **thriv***[tiab] OR **"emotional distress"**[tiab] OR **anxiety**[tiab] OR **depression**[tiab] OR **"negative emotion*"**[tiab] OR **"positive emotion*"**[tiab] OR **stress**[tiab] OR **"Psychological Well-Being"**[mesh] OR **"Mental Health"**[mesh] OR **Happiness**[mesh] OR **"Stress, Psychological"**[mesh] OR **"Psychological Distress"**[mesh] OR **Anxiety**[mesh] OR **Depression**[mesh]	**1,856,838**
#5	**learning**[tiab] OR **"academic achievement"**[tiab] OR **"academic outcome*"**[tiab] OR **"academic failure*"**[tiab] OR **"academic performance"**[tiab] OR **"academic success"**[tiab] OR **"academic engagement"**[tiab] OR **Learning**[mesh] OR **"Academic Failure"**[mesh] OR **"Academic Success"**[mesh] OR **"Academic Performance"**[mesh]	**788,217**
Concept 3: School/Classroom		
#6	school*[tiab] OR classroom*[tiab] OR Schools[mesh]	**427,228**
ALL CONCEPTS		
#7	**FINAL: (#1 AND #2) AND (#3 AND (#4 OR #5)) AND #6**	**5,282**
	Limit to January 2000 to April 2023	**4,761**
	Limit to English language only	**4,600**
	Limit to Peer-Reviewed Journal Articles Only, specifically: • Case reports • Classical Article • Clinical Study • Clinical trials (Phase I – IV) • Comparative Study • Controlled Clinical Trial • Corrected and Republished Article • Evaluation Study • Historical Article • Observational Study • Pragmatic Clinical Trial • Validation Study • Clinical Trial • Randomized Control Trial	**596**

A3. PsychINFO on ProQuest Search

Search Run on: April 26th, 2023 (JL)

Line	Search String	# Records
	Concept 1: Teacher Well-Being	
S1	TITLE(**teacher***) OR TITLE(**educator***) OR TITLE(**school-teacher***) OR TITLE(**schoolteacher***) OR ABSTRACT(**teacher***) OR ABSTRACT(**educator***) OR ABSTRACT(**school-teacher***) OR ABSTRACT(**schoolteacher***) OR SU.EXACT(**Teachers**)	**234,607**
S2	TITLE(**well-being**) OR TITLE(**wellbeing**) OR TITLE(**"well being"**) OR TITLE(**wellness**) OR TITLE(**"mental health"**) OR TITLE(**flourish***) OR TITLE(**"job satisfaction"**) OR TITLE(**happiness**) OR TITLE(**thriv***) OR TITLE(**"life satisfaction"**) OR TITLE(**"positive emotion*"**) OR TITLE(**stress**) OR TITLE(**burnout**) OR TITLE(**"emotional distress"**) OR TITLE(**anxiety**) OR TITLE(**"negative emotion*"**) OR TITLE(**depression**) OR ABSTRACT(**well-being**) OR ABSTRACT(**wellbeing**) OR ABSTRACT(**"well being"**) or ABSTRACT(**wellness**) OR ABSTRACT(**"mental health"**) OR ABSTRACT(**flourish***) OR ABSTRACT(**"job satisfaction"**) OR ABSTRACT(**happiness**) OR ABSTRACT(**thriv***) OR ABSTRACT(**"life satisfaction"**) OR ABSTRACT(**"positive emotion*"**) OR ABSTRACT(**stress**) OR ABSTRACT(**burnout**) OR ABSTRACT(**"emotional distress"**) OR ABSTRACT(**anxiety**) OR ABSTRACT(**"negative emotion*"**) OR ABSTRACT(**depression**) OR SU.EXACT(**Well Being**) OR SU.EXACT(**Health**) OR SU.EXACT(**"Job Satisfaction"**) OR SU.EXACT(**Happiness**) OR SU.EXACT(**"Life Satisfaction"**) OR SU.EXACT(**Burnout**) OR SU.EXACT(**"Occupational Stress"**) OR SU.EXACT(**Anxiety**) OR SU.EXACT(**Stress**) OR SU.EXACT(**"Depression (Emotion)"**) OR SU.EXACT(**"Negative Emotions"**) OR SU.EXACT(**"Positive Emotions"**)	**944,217**
	Concept 2: Student Wellbeing + Learning	
S3	TITLE(**student***) OR TITLE(**youth***) OR TITLE(**child***) OR TITLE(**learner***) OR TITLE(**pupil***) OR TITLE(**adolescen***) OR ABSTRACT(**student***) OR ABSTRACT(**youth***) OR ABSTRACT(**child***) OR ABSTRACT(**learner***) OR ABSTRACT(**pupil***) OR ABSTRACT(**adolescen***) OR SU.EXACT(**Students**) OR SU.EXACT(**"Early Adolescence"**)	**1,375,180**



S4	TITLE(**well-being**) OR TITLE(**wellbeing**) OR TITLE(**"well being"**) or TITLE(**wellness**) OR TITLE(**"mental health"**) OR TITLE(**flourish***) OR TITLE(**"life satisfaction"**) OR TITLE(**happiness**) OR TITLE(**thriv***) OR TITLE(**"emotional distress"**) OR TITLE(**anxiety**) OR TITLE(**depression**) OR TITLE(**"negative emotion*"**) OR TITLE(**"positive emotion*"**) OR TITLE(**stress**) ABSTRACT(**well-being**) OR ABSTRACT(**wellbeing**) OR ABSTRACT(**"well being"**) or ABSTRACT(**wellness**) OR ABSTRACT(**"mental health"**) OR ABSTRACT(**flourish***) OR ABSTRACT(**"life satisfaction"**) OR ABSTRACT(**happiness**) OR ABSTRACT(**thriv***) OR ABSTRACT(**"emotional distress"**) OR ABSTRACT(**anxiety**) OR ABSTRACT(**depression**) OR ABSTRACT(**"negative emotion*"**) OR ABSTRACT(**"positive emotion*"**) OR ABSTRACT(**stress**) OR SU.EXACT(**"Well Being"**) OR SU.EXACT(**Happiness**) OR SU.EXACT(**Health**) OR SU.EXACT(**"Life Satisfaction"**) OR SU.EXACT(**"Negative Emotions"**) OR SU.EXACT(**"Academic Stress"**) OR SU.EXACT(**Anxiety**) OR SU.EXACT(**"Positive Emotions"**) OR SU.EXACT(**"Depression (Emotion)"**) OR SU.EXACT(**"Subjective Well being"**)	**893,364**
S5	TITLE(**learning**) OR TITLE(**"academic achievement"**) OR TITLE(**"academic outcome*"**) OR TITLE(**"academic failure*"**) OR TITLE(**"academic performance"**) OR TITLE(**"academic success"**) OR TITLE(**"academic engagement"**) OR ABSTRACT(**learning**) OR ABSTRACT(**"academic achievement"**) OR ABSTRACT(**"academic outcome*"**) OR ABSTRACT(**"academic failure*"**) OR ABSTRACT(**"academic performance"**) OR ABSTRACT(**"academic success"**) OR ABSTRACT(**"academic engagement"**) OR SU.EXACT(**Learning**) OR SU.EXACT(**"Academic Achievement Motivation"**) SU.EXACT(**"Academic Achievement"**) OR SU.EXACT(**"Academic Failure"**) OR SU.EXACT(**"Student Learning Outcomes"**) OR SU.EXACT(**"School Learning"**)	**450,067**
Concept 3: School/Classroom		
S6	TITLE(**school***) OR TITLE(**classroom***) OR SU.EXACT(**Schools**) OR SU.EXACT(**Classrooms**)	**192,317**
ALL CONCEPTS		
S7	**FINAL: (1 AND 2) AND (3 AND (4 OR 5)) AND 6**	**5,898**
	Limit to January 2000 to April 2023	**5,075**
	Limit to English language only	**4,824**
	Limit to Peer-Reviewed Journal Articles Only	**2,995**

Appendix B. Grey Literature

Google and Google Scholar Search String (Limited to 32 Words): (teacher OR educator) AND ("well-being" OR "wellbeing" OR "well being" OR "mental health" OR "job satisfaction" OR "stress" OR "burnout") AND ("student" OR "youth" OR "child") OR ("learning" OR "academic achievement")

Appendix C. Screening Manual

1. Report is an empirical study that presents data.

> **Include:** quantitative, qualitative, mixed-methods, quasi-experimental, non-randomized controlled trials, before and after studies, prospective and retrospective cohort studies, case-control studies, single case-study, analytical cross-sectional study, correlational, and longitudinal studies.
>
> **Exclude:** Meta-analyses, systematic reviews, reviews, editorials, commentaries, theoretical, conference abstracts and proceedings, books, or study protocols
>
> **FOR NEXT CRITERIA, MUST FULFILL CRITERIA 2a OR 2b TO MOVE FORWARD WITH DECISION**

2a. Report examines and/or reports results on the relations between teacher and student well-being, as conceptualized in our dictionary of search terms *(Abstract or text includes a focused examination of the relations between these two constructs based on the below terms or related terms that the authors use to operationalize well-being; qualitative studies should examine these relations as a main aim of the study or find that these relations emerged as a main theme when analyzing the data).*

> **Include for teacher well-being:** well-being, wellbeing, well being, wellness, mental health, flourishing, job satisfaction, happiness, thriving, life satisfaction, positive emotion, stress, burnout, emotional distress, anxiety, negative emotion, depression, teacher welfare, teacher burnout, psychological well-being, occupational stress, professional burnout, and psychological distress.
>
> **Include for student well-being:** well-being, wellbeing, well being, wellness, mental health, flourishing, life satisfaction, thriving, happiness, emotional distress, anxiety, depression, negative emotion, positive emotion, stress, academic stress, student welfare, psychological well-being, psychological stress, and subjective well-being.
>
> **Exclude:** reports that do not show a focus on the relation between teacher well-being and student well-being in the study aims and/or in the study measures or outcomes (for qualitative studies exclude if the study aims, guiding questions or main themes do not include this focus).

2b. Report examines and/or reports results on relations between teacher well-being and student learning, as conceptualized in our dictionary of search terms. *(Abstract or text includes a focused examination of the relations between these two constructs based on the below terms or related terms that the authors use to operationalize well-being or student learning; qualitative studies should examine these relations as a main aim of the study or find that these relations emerged as a main theme when analyzing the data)*

> **Include for teacher well-being:** well-being, wellbeing, well being, wellness, mental health, flourishing, job satisfaction, happiness, thriving, life satisfaction, positive emotion, stress, burnout, emotional distress, anxiety, negative emotion, depression, teacher welfare, teacher burnout, psychological well-being, occupational stress, professional burnout, and psychological distress.

Include for student learning: learning, academic achievement, academic performance, academic outcome, academic failure, academic success, reading achievement, mathematics achievement, science achievement, student learning outcomes, school learning, academic engagement and learner engagement, and academic achievement motivation.

Exclude: reports that do not show a focus on the relation between teacher well-being and student learning in the study aims and/or in the study measures or outcomes (for qualitative studies exclude if the study aims, guiding questions, or main themes do not include this focus).

3. Report includes data on, from, or about K-12 classroom teachers.

Include the following types of data: self-report, student reports of teachers, parent reports of teachers, evaluations, or observations, behavioral or performance task data

Include studies with data on, from, or about the following types of teachers: elementary teachers, primary school teachers, middle school teachers, high school teachers, junior high school teachers, secondary teachers. Note: If study includes preschool teachers AND includes students of other grades (K-12), include. Similarly, if the study includes data on high school teachers AND university teachers, include.

Exclude studies with data on, from, or about the following types of teachers: pre-service teachers, pre-school teachers, teacher assistants, student teachers, early childhood educators, adult educators, cooperating teachers, itinerant teachers, resource teachers, substitute teachers, teacher interns, and tutors.

4.Report includes data on, from, or about K-12 students.

Include studies with the following types of data: self-report, teacher-report, parent-report, evaluations or observations, grades, behavioral or performance task data

Include studies with data on, from, or about the following types of students elementary students, primary school students, middle school students, high school students, junior high school students, secondary students. Note: If study includes preschool students AND includes students of other grades (K-12), include. Similarly, if the study includes data on high school students AND university students, include.

Exclude studies with data on, from, or about the following types of students: medical students, nursing students, university students, college students, preschool, pre-school, preK, continuation students, evening students, and part-time students.

5. Report involves the collection and presentation of data about teachers and students who are operating in K-12 schools during established school hours.

Include: studies with data on, from, or about teachers and students who are operating in K-12 schools during the established school day.

Exclude: studies with data on, from, or about teachers and students who are operating in after-school programming, extended learning or extended-day programming, school activities conducted over the holidays or summers, pull out sessions or one-on-one tutoring sessions.

Appendix D. Reference List of Included Studies

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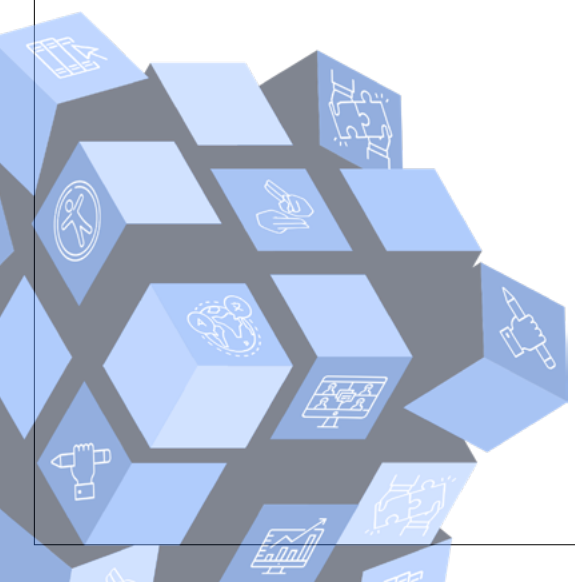

Appendix E. Extraction Form

Extraction Codes	Response Options
General Information	
Reviewer Name	Text
Covidence Record #	#
Report Title	Text
Last name of lead author	Text
Last names of other authors (e.g., Baelen, Lovett, & Bourke)	Text
Year study was published	#
Report Type	Journal Article; Report; Other
Source of Publication (i.e., Journal Name, University, Institution or Organization)	Text
Was the Study Peer Reviewed?	Yes; No; Unclear
Study Funding (select all that apply)	Federal; State; Private Foundation; University Grant; Not Stated; Other
State the Study Funding Source (if applicable)	Text
Study Setting	
Country in which the study conducted (select all that apply)	US; UK; Canada; Australia; China; Israel; Mexico; India; South Korea; Other
Type of Schools (select all that apply)	Public; Private; Charter; Alternative; Technical; Government; Community; Other
More Information about the School Setting (select all that apply)	Unknown, Urban (not otherwise clarified), Urban (inner-city, low-income area), Suburban, Rural, Combination of Settings
Describe any other important information about the study setting (e.g., International Baccalaureate School, French Immersion School)	Text
Study Aims and Overaching Approach to Ressearch	
Describe overarching aims and objectives of the study (can copy and paste text from article, just be sure to keep text in quotations)	Text
Was there a conceptual or theoretical framework provided?	Yes; No; Unclear

If a conceptual or theoretical framework is provided, please describe (e.g., Prosocial Classroom Model, PERMA model of well-being)	Text
Were there stated research questions? (be sure to check the abstract)	Yes; No; Unclear
State the research questions.	Text
Participants	
Mean age of the student population AND/OR age range of student population (if not reported, write NR)	#
School Level(s) in which Student Population Learns (select all that apply)	Elementary School: Kindergarten/ 5 yrs old – 5th grade/10 yrs old; Middle School: 6th grade / 11 yrs old-8th grade / 13 yrs old; High School: 9th grade / 14 yrs old 12th grade / 17 yrs old
Number of students in the study sample (if not reported, write NR)	#
Type of students in study sample	Majority of participants were typical students in regular classrooms; Majority of participants were special needs students in specialized classrooms; Majority of participants were high risk students (e.g., internalizing symptoms); Unclear; Other
Gender Composition of the Student Sample (if not reported, write NR) :	Girls % in sample; Boys % in the sample; Identifying as Other % in sample (if reported)
Describe any information about the socio-economic status of students in the sample (report %'s if provided)	Text
Describe any information about the racial/ethnic status of students in the sample (report %'s if provided)	Text
Describe any other important information about the student study sample (e.g., nationally representative sample, immigrant status, risk status)	Text
Mean age of the teacher population AND/OR age range of teacher population (if not reported, write NR)	#
School Level(s) in which Teacher Population Work (select all that apply)	Elementary School: Kindergarten/ 5 yrs old – 5th grade/10 yrs old; Middle School: 6th grade / 11 yrs old-8th grade / 13 yrs old; High School: 9th grade / 14 yrs old 12th grade / 17 yrs old
Number of teachers in the study sample (if not reported, write NR)	#
Gender Composition of Teacher Sample (if not reported, write NR) :	Females % in sample; Males % in the sample; Identifying as Other % in sample (if reported)
Describe any information about the racial/ethnic status of teachers in the sample (report %'s if provided)	Text

Describe any information about the content areas taught.	Text
Describe any information about the grade levels taught.	Text
Describe any information about the education levels of teachers in the sample (report %'s if provided)	Text
Provide the average years in teaching or other information relevant to teaching experience.	#
Describe any other important information about the teacher study sample	Text
Study Design	
Study design (refer to list of terms on resource guide)	Randomised controlled trial; Quasi-experimental study; Mixed-methods; Cohort study; Cross-sectional study; Longitudinal study; Case control study; Qualitative study; Case study; Other
If applicable, elaborate on study design (e.g., describe randomization procedures, process for waitlist or matching, if longitudinal note the number of waves)	Text
Was a follow-up conducted?	Yes; No; Not stated
If follow-up was conducted, describe when and elaborate on what the follow-up entailed.	Text
Did study report on implementation of a policy, program, intervention, or strategy?	Yes; No; Not applicable
If implementation data was collected, please describe (e.g., dosage, fidelity, responsiveness, acceptability - see list of terms on resource guide)	Text
Was quantitative data collected (if no, skip to the next section)	Yes; No; Unclear
Describe the quantitative data collected (e.g., teacher self-report surveys, performance tasks).	Text
Describe how teacher well-being was operationalized.	Text
List measures of teacher well-being used:	
Measure 1	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Measure 2	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Measure 3	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Measure 4	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)

Measure 5	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Was student well-being measured?	Yes; No; Unclear
If student well-being was measured, describe how it was operationalized.	Text
List measures of teacher well-being used:	
Measure 1	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Measure 2	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Measure 3	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Measure 4	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Measure 5	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Was student learning measured?	Yes; No; Unclear
If student learning was measured, describe how it was operationalized.	Text
List measures of student learning (if applicable):	
Measure 1	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Measure 2	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Measure 3	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Measure 4	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Measure 5	(Name of Measure; Last Name of Author, Year; Any Additional Information about the Measure)
Was qualitative data collected? (if no is selected, skip to the next section)	Yes; No; Unclear
Describe the qualitative data collected (e.g., interviews, focus groups).	Text
Describe how teacher well-being was operationalized.	Text
Describe the questions asked or approaches used to capture teachers' well-being.	Text

If student well-being was a focus, describe how student well-being was operationalized.	Text
If student well-being was a focus, describe the questions asked or approaches used to capture students' well-being.	Text
If student learning was a focus, describe how student learning was operationalized.	Text
If student learning was a focus, describe the questions asked or approaches used to capture students' learning.	Text
Results	
Finding 1	State finding, as well as follow-up findings (if applicable)
Finding 2	State finding, as well as follow-up findings (if applicable)
Finding 3	State finding, as well as follow-up findings (if applicable)
Finding 4	State finding, as well as follow-up findings (if applicable)
Finding 5	State finding, as well as follow-up findings (if applicable)
Finding 6	State finding, as well as follow-up findings (if applicable)
Any other findings that could not fit into the table or any explanations of the findings that you feel is helpful to share.	Text
If applicable, summarize the implementation outcomes and how they related to and/or informed the evaluation outcomes.	Text
Complete Only if an Intervention, Policy or Program was Tested	
Name (provide the name of the program, intervention, policy, or strategy tested)	State name
Provide a brief description of the program, intervention, policy, or strategy (e.g., mindfulness-based stress reduction program with social emotional learning focus)	Text
Describe the program activities.	Text
Were sub-groups created?	Yes; No; Unclear
Describe the different sub-groups (if applicable).	Text
If there was a control condition, please describe the control condition.	Text

Appendix F. Included Studies: Study Demographic Information

Reference	Geographic Location	Type of Schools (School Setting)[a]	Study Aims
Adams (2001)	United States	Vocational	Examine effects of school systems, teacher internal characteristics and students on vocational teacher stress using a causal model.
Alam (2012)	India	Public	Identify public school teachers' stress; Determine impact of stress on students' academic performance; Suggest strategies to reduce teacher stress levels and techniques to enhance students' academic performance.
Arens & Morin (2016)	Germany	Not reported	Examine relations between teacher emotional exhaustion and students' cognitive (i.e., achievement) and noncognitive (e.g., school satisfaction) outcomes.
Baeva & Bordovskaia (2015)	Russia	Not reported (U)	Identify psychological factors in educational environment influencing pupils' psychological well-being.
Ball & Anderson-Butcher (2014)	United States	Not reported	Examine predictive relationship between teachers' perceptions of student mental health needs and teachers' stress.
Banerjee et al. (2017)	United States	Public	Understand whether teacher job satisfaction improves student reading and match achievement; Discern whether advantages to students from having satisfied teachers varies with broader school culture.
Barrera-Osorio et al. (2020)	Colombia	Public (U)	Examine relationships between school processes and literacy in public schools serving low-income families.
Bilz et al. (2022)	Germany	Not reported	Investigate relationship between teachers' well-being and students' well-being; Examine mediating effect of teacher support on relationship between teachers' and students' well-being.
Braun et al. (2020)	Canada	Public (U; S)	Test the extent to which teachers' cognitive reappraisal, expressive suppression, occupational burnout, and life satisfaction are related to the level, and trajectory across the school year, of three indicators of students' positive outlook, emotional distress, and prosocial behavior.
Buchanan & Harris (2014)	Canada	Not reported	Identify teachers' individual needs when a student attempts suicide later returns to the classroom; Identify teachers' views on what they need to effectively help students feel connected, valued, and safe.

Reference	Geographic Location	Type of Schools (School Setting)[a]	Study Aims
Çaglar & Sarikaya (2022)	Turkey	Public	Examine high school students' class-related achievement emotions and their teachers' role in the class-related achievement emotions in geography lessons.
Caprara et al. (2006)	Italy	Not reported	Examine a conceptual model of the role of teacher's self-efficacy beliefs in their job satisfaction and student's academic achievement.
Carjuzaa & Williams (2021)	United States	Not reported	Identify challenges secondary in-service teachers confront as learners in a virtual context and the implications of their graduate synchronous coursework on their roles as classroom teachers.
Carroll et al. (2021)	Australia	Not reported (U)	Examine whether change in teachers' stress, cognition and well-being affected their students; Explore whether cognitive flexibility mediates relationship between teacher distress and burnout with student well-being, academic self-perceptions, and evaluation of classroom environment.
Covell et al. (2009)	Canada	Not reported	Examine effects of Rights, Respect, and Responsibility (RRR) on student engagement and teacher burnout over three years.
Denny et al. (2011)	Canada	Public; Private; Other* (U; R)	Examine effects of school climate and services on student health risk-taking behaviors and depressive symptoms.
Dewberry & Briner (2007)[b]	UK	Not reported	Examine relations between teacher well-being and SAT scores; Explore variables that might affect relations between well-being or SATs scores and explore relations for different SAT subjects; Examine predictive capacity of school climate measures on SAT scores and explore differences by secondary and primary school students.
Ekornes (2017)	Norway	Public (U)	Add to broader literature on teacher stress and school mental health, especially examining the relationship between teacher reported negative emotion, perceived responsibility, and perceived competence with student mental health promotion.
Fix et al. (2020)	Netherlands	Vocational	Investigate teachers' emotions experienced during classroom practice and how emotions were related to their perceived well-being.
Fleckman et al. (2022)	United States	Public (U)	Understand teacher reactions to working with students who have experienced trauma.

Reference	Geographic Location	Type of Schools (School Setting)[a]	Study Aims
Froeschle & Crews (2010)	United States	Not reported	Understand teachers' perspectives of a stress management technique incorporating the arts, mental imagery, and relaxation response.
Glazzard & Rose (2020)	UK	Not reported (U)	Examine pupils' perspectives on how their teachers' mental health affects them.
Graham et al. (2011)	Australia	Public; Private	Elicit views of teachers in relation to students' mental health and identify how teachers' confidence for supporting it.
Gunderson et al. (2013)	United States	Not reported	Explore whether teacher spatial anxiety predicts student achievement in the spatial domain.
Hagenauer et al. (2015)	Austria	Not reported	Examine extent to which perceived student behavior and interpersonal aspect of the teacher-student relationship predict teacher emotions during instruction.
Harding et al. (2019)	UK	Not reported	Understand association between teacher and student mental health and wellbeing.
Herman et al. (2018)	United States	Not reported (U)	Examine co-occurrence of teacher stress, burnout, coping, and self-efficacy; Examine association between patterns or profiles of their co-occurrence with student academic and behavioral outcomes.
Herman et al. (2020)	United States	Not reported (U)	Examine patterns of stress and coping in middle school teachers and association of these profiles with concurrent and prospective teacher and student level outcomes (i.e., student depressive symptoms, teacher ratings of family and student behavior).
Hoglund et al. (2015)	Canada	Public (U)	Investigate change and variability in teacher burnout and classroom quality over one school term and how these co-vary over time and how they covary with externalizing behaviors; Investigate how teacher burnout and classroom quality interact with externalizing behaviors to predict change in students' social and academic adjustment.
Iqbal et al. (2016)	Pakistan	Public	Explore relationship among indicators of job satisfaction of teachers; investigate relationship between teachers' job satisfaction and students' performance.
Jõgi et al. (2022)	Finland	Not reported	Examine relations among teachers' physiological and self-reported stress, their teaching practices and students' math outcomes.

Reference	Geographic Location	Type of Schools (School Setting)[a]	Study Aims
Keller & Becker (2020) – Study 1	Switzerland	Not reported	Explore extent to which teacher emotions and emotional authenticity influence student emotions, as well as explore the convergence between student perceptions of teacher emotions and emotional authenticity and teachers' own perceptions.
Keller & Becker (2020) – Study 2	Switzerland	Not reported	Explore role of teachers' emotions and emotional authenticity for students' emotional responses in classroom situations.
Kengatharan (2020)	Sri Lanka	Public	Establish nexus of teacher autonomy, student behavior, student engagement, and teacher job satisfaction.
Khan et al. (2022)	Pakistan	Public; Private	Determine relationship between job satisfaction of secondary school teachers, their dispositions, and students' academic achievement.
Kidger et al. (2009)	UK	Not reported	Examine emotional health and well-being activities in which school staff are involved.
Klusmann et al. (2016)	Germany	Not reported	Investigate association between teachers' emotional exhaustion and students' achievement.
Mahmoodi et al. (2022)	Iran	Public; Private	Explore role of teachers' characteristics (e.g., self-efficacy, personal accomplishment) and students' English achievement.
Mantzicopoulos (2005)	United States	Public (S)	Investigate children's reports of conflictual teacher-child relationships and their association with externalizing problem behaviors and academic achievement.
Martinez-Sierra et al. (2022)	Mexico	Not reported (R)	Identify discrete emotions experienced by secondary school mathematics teachers and the triggering situations of those emotions.
McLean & Connor (2015)	United States	Not reported	Explore associations among teachers' depressive symptoms, classroom-learning environment, and student academic achievement.
McLean & Connor (2018)	United States	Not reported	Preliminary investigation into psychometric properties of the Teacher Feedback Coding System (TFCS); Investigate potential relation between teachers' feedback and students' mathematics achievement; Investigate potential relation between teachers' self-reported depressive symptoms and types of feedback they provide to students.

Reference	Geographic Location	Type of Schools (School Setting)[a]	Study Aims
Michaelowa (2002)	Burkina Faso, Cameroon, Cote d'Ivoire, Madagascar and Senega (Sub-Saharan Africa)	Not reported	Analyze empirical links between policy measures (e.g., increasing teacher salaries) and teacher job satisfaction and primary education outcomes (e.g., student achievement).
O'Donnell et al. (2008)	United States	Public (U)	Examine relation of school and teacher characteristics to reported demands and resources in classroom.
Oberle & Schonert-Reichl (2016)	Canada	Public (U)	Investigate link between classroom teachers' burnout levels and students' cortisol levels as an indicator for stress and well-being.
Owen (2016)	Australia	Public	Explore connections between teacher professional learning communities (PLCs), teacher wellbeing, and teacher "flourishing" in innovative schools.
Pakarinen et al. (2010)	Finland	Public; Daycare Centers (U)	Examine extent to which observed teaching practices and teacher stress predict student learning motivation and phonological awareness.
Pap et al. (2023)	Romania	Public	Explore relations between teachers' subjective well-being, perceived teacher support, and students' subjective mental and physical health.
Peele et al. (2023)	Ghana	Public; Private (U)	Explore associations between teachers' depressive symptoms and development of children's school readiness over course of one school year.
Polly et al. (2022)	United States	Public	Examine relations of student, teacher, school, and district-level variables on students' mathematics achievement.
Poon et al. (2019)	China	Not reported	Explore impact of sleep on mood and on emotional crossover in the classroom and demonstrate their influence on student academic experience.
Ramirez et al. (2018)	United States	Public	Address role of teacher math anxiety on ninth-grade students' math achievement and explore mediating factors underlying this relationship.
Reeves et al. (2017)	United States; Japan	Not reported	Examine role of teacher collaboration on students' achievement and teacher's job satisfaction.

Reference	Geographic Location	Type of Schools (School Setting)[a]	Study Aims
Schaeffer et al. (2021)	United States	Public	Examine factors that influence children's math learning including the math content students are taught in school, quality of their instruction, and math attitudes of students' teachers.
Shen et al. (2015)	United States	Public (U)	Investigate relations between teachers' burnout and students' autonomous motivation over one-semester physical education classes.
Sherblom et al. (2006)	United States	Public (U)	Investigate relations of school climate and student achievement by examining student, teacher, staff, and parental perceptions of social dynamics regarding inclusion, concern, respect, collaboration, and belonging, and articulating their relationship to student proficiency in math and reading achievement.
Shoshani (2021)	Israel	Public (U)	Evaluate effects of a program designed to promote a growth mindset in math teachers to enhance teaching and learning outcomes in math classes.
Stauffer & Mason (2013)	United States	Public (U)	Examine qualitative data concerning elementary school teachers' stressors to explore and to better understand contextual nature of their stressors and to offer recommendations for addressing these stressors to school administrators.
Szczygiel (2020)	Poland	Public (U)	Verify the hypothesis regarding the importance of parents' and teachers' math anxiety in predicting the math anxiety and math results of early school children.
Tikkanen et al. (2021)	Finland	Public (U)	Explore crossover of burnout in classrooms between teachers and students.
Tolan et al. (2020)	United States	Public (U)	Assess impact of a teacher training program that combined two evidence-based programs (Good Behavior Game [GBG] and MyTeachingPartner [MTP]) on novice teachers and their students; Explore moderation of the program impacts by initial teacher distress and overall classroom level of misbehavior.
Torrington & Bower (2021)	Australia	Public (U)	Discover differences in delivery of lessons when using computer-based video instruction in a holistic sense, and the cognitive, affective and behavioral impact; Examine impact teacher-created video lessons has on the teachers and whether this mode of content delivery is beneficial to include.

Reference	Geographic Location	Type of Schools (School Setting)[a]	Study Aims
Tsai & Antoniou (2021)	Taiwan	Public	Examine relations between teacher attitudes to teaching mathematics, teacher self-efficacy, student achievement and teacher job satisfaction.
Turner & Theilking (2019)	Australia	Public	Report on teachers' experiences of how consciously using positive psychology strategies affects their teaching practice and student learning.
Van Petegem et al. (2007)	Belgium	Vocational	Explore how student wellbeing can be enhanced with a focus on student perceptions of interpersonal teacher behavior.
Weixler et al. (2018)	United States	Public (U)	Examine teachers' perspectives on the school reforms that occurred after Hurricane Katrina regarding learning and work environments and student and teacher outcomes.
Wu et al. (2020)	United States	Public	Examine relations among principal leadership, teacher-related factors, and student achievement in science.

Notes.

[a] School settings where studies took place are categorized as Rural (R), Suburban (S), or Urban (U), if reported in the original study.

[b] Study from a report, as opposed to a peer-reviewed journal article.

Appendix G. Included Studies: Study Design, Conceptualizations, and Findings

Reference	Design	School Levels	*N*	Conceptualization of Teacher Well-Being (Measures)	Conceptualization of Student Well-Being (Measures)	Conceptualization of Student Learning (Measures)	Relevant Findings
Adams (2001)	C/S	HS	S: None T: 235	Stress (Teacher Stress Measure: Pettegrew & Wolf, 1982; Tennessee Stress Scale-R: McWilliams, 1984; Schnorr & McWilliams, 1988)	Not Examined	Learning (Classroom Environment Scale - TR: Bacharach et al, 1986)	Student learning was not associated with teacher stress.
Alam (2012)	C/S	MS	S: 100 T: 100	Stress (Teacher Stress Inventory: Developed for study)	Not Examined	Math and Hindi Achievement (Math and Hindi Achievement tests - Developed for study)	Higher teacher stress (Job Demand facet) related to lower math achievement. Higher teacher stress (Change and Development facet; Responsibilities of Students facet) related to lower math and Hindi achievement.
Arens & Morin (2016)	C/S	ES	S: 7899 T: 380	Emotional Exhaustion (Developed for study)	School Satisfaction (Developed for study)	Reading & Writing Achievement (Grades; Standardized test scores: No citation); Competence self-perceptions (Developed for study)	Teacher emotional exhaustion negatively associated with students' school satisfaction and standardized test scores. No relation between teacher emotional exhaustion and students' competence self-perceptions regarding the academic domain.
Baeva & Bordovskaia (2015)	C/S	NR	S: 876 T: 172	Psychological Safety (Adapted from Baeva, 2002)	Psychological Safety (Scale of Subjective Well-Being: Tunik, 2002; Life Orientation Test: Adapted from Leontiev, 2000)	Not Examined	Students' psychological safety positively related to teachers' psychological safety.
Ball & Anderson-Butcher (2014)	C/S	ES, MS, & HS	S: None T: 318	Stress (School Stress Scale: Pettegrew & Wolf, 1982; Task Stress Scale; Pettegrew & Wolf, 1982)	Mental Health Needs (Perceptions of Student Internalizing & Externalizing Behaviors Scales - TR: Adapted from Anderson-Butcher, 2006 & Anderson-Butcher et al., 2007)	Not Examined	Teacher perceptions of students' externalizing and internalizing behaviors positively related to teachers' school and task stress, and predicted teachers' school and task stress (except perceptions of internalizing behaviors did not predict).

Reference	Design	School Levels	*N*	Conceptualization of Teacher Well-Being	Conceptualization of Student Well-Being	Conceptualization of Student Learning	Relevant Findings
Banerjee et al. (2017)	L: 4 waves	ES	S: 5850 T: NR	Job Satisfaction (Adapted from Lee et al., 1991 & Rensulli et al., 2011)	Not Examined	Math and Reading Achievement (Math & reading achievement scores: Item Response Theory, no citation)	Teacher job satisfaction and student math achievement not correlated. Teacher job satisfaction predicted reading achievement growth. Students taught by teachers who were high in job satisfaction had slightly higher achievement trajectories than those taught by teachers who were lower.
Barrera-Osorio et al. (2020)	C/S	ES & MS	S: 1486 T: 40	Tiredness; Sadness; Stress; Irritation (No citation)	Not Examined	Literacy Achievement (Core Academic Language Skills Instrument: Uccelli et al, 2015; Meneses et al., 2018)	No association between teacher well-being and literacy achievement.
Bilz et al. (2022)	C/S	ES, MS, & HS	S: 2686 T: 805	Subjective Psychological Well-Being (WHO-5 Well-being Index: Bech, 2004); Mental Health Limitations (MBI - Emotional Exhaustion: Maslach et al., 1996)	General Life Satisfaction (Cantril Ladder: Cantril, 1965); Satisfaction with School (Inchley et al., 2018); Subjective Health Complaints (BSC Symptom Checklist: Haugland & Wold, 2001; Inchley et al., 2018)	Not Examined	Teachers' subjective psychological well-being not related to students' general life satisfaction or health complaints, but positively related to students' satisfaction with school. Teachers' emotional exhaustion positively related to higher levels of student health complaints, but not to students' life satisfaction or satisfaction with school.
Braun et al. (2020)	C/S	ES	S: 320 T: 15	Burnout (MBI: Maslach et al., 1996) Life Satisfaction (Satisfaction with Life Scale: Diener et al., 1985)	Well-Being (Optimism subscale of Resilience Inventory: Noam & Goldstein, 1998; Happiness subscale of EPOCH measure of adolescent well-being: Kern et al., 2016; Anxiety & depression symptoms subscales of Seattle Personality Questionnaire: Kusche et al., 1998; Emotional control subscale of Resilience Inventory: Noam & Goldstein, 1998; Peer nominations of prosocial behavior: Wentzel, 1993)	Not Examined	Teacher burnout not a predictor of student well-being. Teacher life satisfaction not predictive of students' positive outlook or emotional distress, but predictive of students' prosocial behavior. Teacher burnout and life satisfaction not predictive of change in student well-being over year.

Reference	Design	School Levels	*N*	Conceptualization of Teacher Well-Being	Conceptualization of Student Well-Being	Conceptualization of Student Learning	Relevant Findings
Buchanan & Harris (2014)	Qual	MS & HS	S: None T:	Emotions; Mental Health; Coping[b]	Attempted Suicide[b]	Not Asked About or No Emergent Themes	Teacher roles and responsibilities assumed when working with students who attempted suicide seemed to contribute to feeling and thoughts (e.g., shock, sadness, uncertainty, anxiety). Teachers shared uncertainties they were experiencing when assuming various roles and worries about well-being of their students.
Çaglar & Sarikaya (2022)	Qual	HS	S: 376 T: 3	Anxiety Hopelessness Anger[b]	Not Asked About or No Emergent Themes	Success; Achievement[b]	One teacher stated that when students are at a higher academic level, the lesson feels more enjoyable and the teacher feels happier. When student success is low, one teacher experienced anxiety, hopelessness, and anger. For one teacher, teaching students with low achievement expectations who are not at the required readiness level makes him feel tired, demotivated, hopeless, and anxious.
Caprara et al. (2006)	L: 3 waves	MS & HS	S: NR T: 2184	Job Satisfaction (Adapted from Borgogni, 1999 - Italian version of Job Descriptive Index: Smith et al. 1969)	Not Examined	Academic Achievement (Italian year-end exams1: No citation)	Student achievement (at Time 1) did not predict teacher job satisfaction (at Time 2). Teacher job satisfaction (at Time 2) was not associated with student achievement (at Time 3).
Carjuzaa & Williams (2021)	Qual	MS & HS	S: None T: 34	Burnout; Stress; Anxiety; Self-care[b]	Well-being[b]	Not Asked About or No Emergent Themes	Teachers who practice self-care strategies reported being better at supporting the well-being of their students.
Carroll et al. (2021)	L: 2 waves	ES, MS, & HS	S: 226 T: 17	Depression, Anxiety, and Stress (Depression Anxiety Stress Scale: Lovibond & Lovibond, 1995); Psychological Distress (Copenhagen Burnout Inventory: Kristensen et al., 2005)	Emotional Well-Being (Strengths and Difficulties Questionnaire: Goodman, 1997); Psychological Functioning (Warwick-Edinburgh Mental Well-being Scale: Tennant et al., 2007)	Academic Self-Perception (Academic Self-Perception subscale of School Attitude Assessment Survey-R: McCoach & Siegle, 2003)	Greater reductions in teachers' personal and work-related burnout associated with greater increases in students' academic self-perception. Reductions in teacher stress and burnout not related to student well-being.

Covell et al. (2009)	L: 3 waves	ES & MS	S: None T: 296	Burnout (MBI: Evers et al., 2002)	Not Examined	Engagement (TR: No citation)	Student engagement positively predicted teachers' sense of personal accomplishment and negatively predicted teachers' depersonalization.
Reference	**Design**	**School Levels**	*N*	**Conceptualization of Teacher Well-Being**	**Conceptualization of Student Well-Being**	**Conceptualization of Student Learning**	**Relevant Findings**
Denny et al. (2011)	C/S	HS	S: 9056 T: 2901	Well-being (WHO-5 Well-Being Index: Henkel et al., 2003) Burnout (Copenhagen Burnout Inventory: Kristensen et al., 2005)	Depression: Bovet et al., 2006 – Adapted from Reynolds Adolescent Depression Questionnaire; Attempted suicide: Developed for study)	Not Examined	Schools with higher teacher well-being had lower rates of student depression. No other significant associations between teacher well-being or burnout observed regarding student risk-taking behaviors or symptoms.
Dewberry & Briner (2007) a	C/S	ES	S: NR T: NR	Job Satisfaction (items about feeling valued and cared for; overwhelm; job satisfaction, enjoyment)	Not Examined	Performance (Standardized test scores: SAT)	All dimensions of teacher job satisfaction positively related to all measures of student performance. Teacher well-being predicted student performance in 2004 but not in 2005.
Ekornes (2017)	Qual	ES, MS, & HS	S: None T: 15	Personal Emotions; Stress; Worry; Helplessness; Uncertainty[b]	Mental Health; Mental Health Difficulties[b]	Not Asked About or No Emergent Themes	High levels of teacher responsibility associated with student mental health needs identified as sources of teacher stress, worry, and helplessness.
Fix et al. (2020)	Qual	HS	S: None T: 14	Perceived Well-Being; Positive and Negative Emotions[b]	Mental and Emotional Problems[b]	Progress; Engagement; Disengagement; Learning; Learning Outcomes[b]	Teachers reported positive feelings (e.g., pride and joy) related to their students' progress and engagement (e.g., active and interested students) and negative feelings related to low levels of student progress and perseverating on students' problems.
Fleckman et al. (2022)	Qual	NR	S: None T: 275	Secondary Traumatic Stress[b]	Traumatic Stress[b]	Progress; Growth; Success[b]	Teachers showed symptoms of secondary traumatic stress and burnout when working with students who experienced trauma. Symptoms included intrusion, persistent, negative emotional states, internalizing symptoms, irritability and hypervigilance, and emotional exhaustion. Teachers identified student growth, progress, and success, as contributors to compassion satisfaction.

Froeschle & Crews (2010)	Qual	MS	S: None T: 15	Stress[b]	Mental Health and Discipline Problems[b]	Academic Issues[b]	Most teachers shared the belief that their stress and burnout had negative implications for students (i.e., contribute to mental health, discipline, and academic problems).
Reference	**Design**	**School Levels**	*N*	**Conceptualization of Teacher Well-Being**	**Conceptualization of Student Well-Being**	**Conceptualization of Student Learning**	**Relevant Findings**
Glazzard & Rose (2020)	Qual	ES & MS	S: 64 T: 21	Mental Health; Stress; Resilience; Mood[b]	Not Asked About or No Emergent Themes	Progress; Learning[b]	Pupils shared that when teachers were in a good mood, lessons were more creative, fun, relaxed, and interesting, and when they were in a bad mood it had detrimental effects on their learning.
Graham et al. (2011)	Qual	ES, MS, & HS	S: None T: 508	Mental Well-Being[b]	Mental Health[b]	Not Asked About or No Emergent Themes	Teachers found student mental health to be directly linked to their mental well-being.
Gunderson et al. (2013)	L: 2 waves	ES	S: 132 T: 19	Spatial Anxiety (Spatial Anxiety Questionnaire: Lawton, 1994) Math Anxiety (Math Anxiety Rating Scale: Alexander & Martay, 1989)	Not Examined	Spatial Learning & Skills (Mental Rotation Task - Adapted from Thurstone, 1974)	Teachers' spatial anxiety negatively associated with students' end-of-year mental rotation scores.
Hagenauer et al. (2015)	C/S	HS	S: None T: 132	Emotions (Achievement Emotions Questionnaire for Teachers: Frenzel et al., 2010)	Not Examined	Engagement (Engagement in the Classroom Scale - TR: Adapted from Wellborn & Connell n.d.)	Student engagement positive predicted teacher joy and a negatively predicted teacher anger and anxiety.
Harding et al. (2019)	C/S	MS	S: 3215 T: 1182	Well-being (Warwick Edinburgh Mental Wellbeing Scale: Tennant et al., 2007); Depressive Symptoms (Patient Health Questionnaire: Kroenke et al., 2009)	Well-being (Warwick Edinburgh Mental Wellbeing Scale: Tennant et al., 2007); Psychological Distress (Strengths and Difficulties Questionnaire: Goodman, 2001)	Not Examined	Teacher well-being positively associated with student well-being and negatively associated with student psychological distress. Teacher depressive symptoms negatively associated with student well-being and positively associated with student psychological distress. Associations disappeared when teacher presenteeism was included in models.

Herman et al. (2018)	C/S	ES	S: 1817 T: 121	Burnout (MBI: Maslach et al., 1996); Stress (Teacher Stress: Eddy et al., 2017); Coping (Coping: Eddy et al., 2017)	Not Examined	Academic Achievement (Woodcock-Johnson III Tests of Achievement - Reading & Math Subscales)	Students in classes with teachers who were stressed and low in coping were lower in math achievement relative to students in the classes with teachers who were highly stressed but had strong coping.
Reference	**Design**	**School Levels**	*N*	**Conceptualization of Teacher Well-Being**	**Conceptualization of Student Well-Being**	**Conceptualization of Student Learning**	**Relevant Findings**
Herman et al. (2020)	C/S	MS	S: 1450 T: 102	Stress (Stress & Coping Scale: Herman & Reinke, 2012); Burnout (MBI - Emotional Exhaustion Dimension: Maslach et al., 1986)	Depressive Symptoms (Patient Health Questionnaire: Johnson et al., 2002); Disruptive Behaviors (Disruptive behaviors subscale of Teacher Observation of Classroom Adaptation Checklist: Koth et al., 2009)	Not Examined	Teacher burnout at baseline positively associated with student depression at follow-up. Most common class profile characterized by high stress and high coping was associated with highest levels of baseline depression. Students in least adaptive coping classes (high stress and low coping) more likely to show disruptive behaviors and report depressive symptoms.
Hoglund et al. (2015)	C/S	ES	S: 461 T: 65	Burnout (MBI: Maslach et al., 1996)	Externalizing Problems (Behavior Assessment System for Children II: Reynolds & Kamphaus, 2004)	Engagement (School Engagement Questionnaire: Furrer & Skinner, 2003); Literacy Skills (Early Childhood Longitudinal Study, 3rd Grade Assessment - TR: National Center for Education Statistics, 2002)	Aggregate student externalizing behaviors covaried positively with teacher depersonalization but negatively with personal accomplishment. Teacher burnout predicted less growth in literacy skills. Interaction of teacher burnout and aggregate externalizing behaviors negatively predicted changes in engagement and literacy skills.
Iqbal et al. (2016)	C/S	MS	S: None T: 322	Job Satisfaction (Job Satisfaction Scale for Teachers: Developed for study)	Not Examined	Academic Achievement (Grades)	No significant correlation between student performance and teachers' job satisfaction.
Jõgi et al. (2022)	L: 2 waves	ES	S: 866 T: 53	Physiological Stress (Cortisol Sampling - 6x/day); Stress (Gerris Parental Stress Inventory: Adapted for teachers from Gerris et al. 1993)	Not Examined	Math Skills (Basic Arithmetic Test: Aunola & Räsänen, 2007)	No direct effect of teacher stress on student math skill gains. No indirect effect of teacher stress on math skills through teaching practices.

Reference	Design	School Levels	*N*	Conceptualization of Teacher Well-Being	Conceptualization of Student Well-Being	Conceptualization of Student Learning	Relevant Findings
Keller & Becker (2020) – Study 1	C/S	HS	S: 786 T: 81	Positive/Negative Emotions (TR: Adapted from Frenzel et al., 2016); Perceived Teacher Emotions (SR: No citation); Emotional Authenticity (TR: Adapted from Zapf et al., 1999); Teacher Emotional Authenticity (SR: Adapted from Zapf et al., 1999)	Positive/Negative Emotions (SR: Adapted from Pekrun et al., 2011)	Not Examined	Teacher self-reported and student perceived teacher enjoyment and anger were related to student enjoyment and anger (respectively) – no relation with anxiety. Student perceptions of teachers' emotional authenticity related to higher levels of student enjoyment and lower levels of anxiety and anger.
Keller & Becker (2020) – Study 2	L (ESM – 2 weeks)	HS	S: 128 T: None	Teacher Emotions (SR: Developed for study); Teacher Emotional Authenticity (SR: Developed for study)	Emotions (Developed for study)	Not Examined	Student perceptions of their teachers' anger, anxiety, and enjoyment related to their own anger, anxiety, and enjoyment. Higher teacher enjoyment, anger, and anxiety related to high levels of emotions (respectively) in students. More student perceived teacher emotional authenticity associated with more student enjoyment, and lower anxiety and anger.
Kengatharan (2020)	C/S	NR	S: None T: 703	Job Satisfaction (Michigan Organizational Assessment Questionnaire: Cammann et al., 1979)	Not Examined	Engagement (Student Engagement - TR: Thornberry et al., 1991)	Teacher job satisfaction positively related to student engagement. Engagement partially mediated effect of student behavior on teacher job satisfaction.
Khan et al. (2022)	C/S	HS	S: None T: 600	Job Satisfaction or Job Happiness (Adapted – no citation)	Not Examined	Achievement (Test scores: No citation)	Student achievement positively related to teacher job happiness.
Kidger et al. (2009)	Qual	HS	S: None T: 5	Emotional Health; Well-Being[b]	Emotional Health; Well-Beingb	Not Asked About or No Emergent Themes	Low teacher emotional health reduces a teacher's ability to support and respond to pupils, which leads to more emotional distress for pupils and teachers. The neglect of teachers' own emotional health needs makes them more unable or unwilling to consider the emotional health needs of pupils.

Reference	Design	School Levels	*N*	Conceptualization of Teacher Well-Being	Conceptualization of Student Well-Being	Conceptualization of Student Learning	Relevant Findings
Klusmann et al. (2016)	C/S	ES	S: 22002 T: 1102	Burnout (MBI - Emotional Exhaustion Subscale: Maslach et al., 1996)	Not Examined	Math Achievement (National Standardized Competencies Test in Mathematics - Grade 4: No citation)	Teacher emotional exhaustion negatively related to student math achievement. Association was moderated by class composition of language minority students.
Mahmoodi et al. (2022)	C/S	HS	S: 1932 T: 82	Burnout (MBI: Maslach et al., 1996)	Not Examined	English Achievement (National English Test: No citation)	No components of burnout correlated with English achievement.
Mantzicopoulos (2005)	C/S	ES	S: 103 T: 34	Workload Stress (Perceptions of workload stress: Developed for study)	Not Examined	Academic Achievement (Woodcock-Johnson Tests of Achievement-R - Reading & Math: Woodcock & Johnson, 1990)	No significant correlation between dimensions of teacher workload stress and student achievement.
Martinez-Sierra et al. (2022)	Qual	MS & HS	S: None T: 18	Emotionsb	Not Asked About or No Emergent Themes	Achievement Behavior; Learning; Engagement and Motivationb	Student academic achievement, interest, and academic improvement triggered positive emotions in teachers. Lack of student interest and knowledge, bad behavior, and low motivation triggered negative emotions in teachers.
McLean & Connor (2015)	C/S	ES	S: 523 T: 27	Depressive Symptoms (Adapted Center for Epidemiologic Studies Depression Scale: Radloff, 1977)	Not Examined	Academic Skills in Reading & Math (Woodcock-Johnson III Tests of Achievement: Woodcock et al., 2001; Gates-MacGinitie Literacy Tests: MacGinitie et al., 2000)	Teacher depressive symptoms in winter negatively predicted students' spring math achievement. Students with lower math skills at baseline and with teachers who reported greater depressive symptoms experienced smaller gains relative to students with teachers with fewer depressive symptoms. Teacher depressive symptoms negatively associated with quality of classroom-learning environment, which mediated association between depressive symptoms and student achievement.

Reference	Design	School Levels	*N*	Conceptualization of Teacher Well-Being	Conceptualization of Student Well-Being	Conceptualization of Student Learning	Relevant Findings
McLean & Connor (2018)	L: 2 waves	ES	S: 310 T: 32	Depressive Symptoms (Adapted Center for Epidemiologic Studies Depression Scale: Radloff, 1977)	Not Examined	Mathematics Achievement (Woodcock-Johnson III Math Fluency & Applied Problems subsets: Woodcock et al., 2001)	Teacher depression did not predict changes in student math scores over the year. Interaction effect between teacher depression and student baseline math skills on change in student math scores over the year (e.g., teacher depression had detrimental effects on gains in math scores for low achieving students).
Michaelowa (2002)	C/S	ES	S: NR T: NR	Job Satisfaction (Program on the Analysis of Education Systems Dataset)	Not Examined	Math and French Achievement (Standardized tests in Math & French: No citation)	Teacher job satisfaction positively related to student learning.
O'Donnell et al. (2008)	L: 2 waves	ES	S: None T: 521	Stress (Classroom Demands and Classroom Resources - Elementary Version: Lambert et al., 2002)	Not Examined	Achievement (State Accountability Measures: No citation)	Teacher stress (i.e., perceptions of demands related to availability of instructional resources) negatively related to student achievement.
Oberle & Schonert-Reichl (2016)	C/S	ES & MS	S: 406 T: 17	Burnout (Adapted from MBI: Grayson & Alvarez, 2008; Maslach et al., 1996; Maslach & Jackson, 1981)	Stress Reactivity (Cortisol Sampling 3x/day)	Not Examined	Higher levels of teacher burnout significantly predicted variability in students' morning cortisol levels. High levels of teacher burnout predicted higher cortisol levels in students.
Owen (2016)	Qual	ES, MS, & HS	S: None T: 15	Well-being Flourishingb	Not Asked About or No Emergent Themes	Learningb	Improvements in student learning outcomes contributed to teacher well-being.
Pakarinen et al. (2010)	MM & L: 2 waves	ES	S: 1268 T: 137	Stress (Gerris Parental Stress Inventory: Adapted for teachers: Gerris et al. 1993)	Not Examined	Pre-Reading Skills (Initial phoneme identification: Lerkkanen et al., 2006); Phonological Awareness (Letter knowledge: Lerkkanen et al., 2006); Learning Motivation (Content Interest Rating Scale for Children: Lerkkanen & Poikkeus, 2006)	Low teacher stress predicted high learning motivation. Learning motivation mediated the association between teacher stress, and phonological awareness.

Reference	Design	School Levels	*N*	Conceptualization of Teacher Well-Being	Conceptualization of Student Well-Being	Conceptualization of Student Learning	Relevant Findings
Pap et al. (2023)	L: 3 waves	HS & U	S: 200 T: 40	Life Satisfaction (Satisfaction with Life Scale: Diener et al., 1985); Teacher Self-Efficacy (Teacher Efficacy Scale: Tschannen-Moran & Hoy, 2001)	Physical Health (General Health Scale from SF-36 Health Survey: Ware, 1999) Mental Health (MHI-5 screening test: Berwick et al., 1991)	Not Examined	No relation between teacher life satisfaction and student mental health. Positive relation between teacher self-efficacy and student mental health, as well as teacher life satisfaction and student physical health. Teacher self-efficacy positively predicted student mental health.
Peele et al. (2023)	L: 2 waves	ES	S: 1490 T: 208	Depressive Symptoms (Goldberg Depression Questionnaire: Goldberg et al., 1988)	Not Examined	School Readiness Skills (International Development and Early Learning Assessment: Pisani et al., 2018)	Teacher depressive symptoms in fall negatively predicted students' overall school readiness skills in spring. For children with higher fall school-readiness skills, teacher depressive symptoms predicted more negative overall school readiness skills in the spring.
Polly et al. (2022)	C/S	ES	S: 88567 T: 3507	Job Satisfaction (North Carolina Work Condition Survey: No citation)	Not Examined	Math Achievement (End of Grade Mathematics Assessment – North Carolina Statewide Assessment: No citation)	Job satisfaction positively related to students' math achievement.
Poon et al. (2019)	L: ESM for 2 weeks	HS	S: 437 T: 17	Stress (Perceived Stress Scale: Cohen et al., 1983; Daily reporting of stress, nervousness, and irritability: Developed for study)	Irritability; Nervousness; Class Satisfaction (Developed for study)	Academic Motivation (Developed for study)	Teacher nervousness (not irritability) positively associated with student nervousness and irritability. Student nervousness and irritability mediated association between teacher nervousness and student in-class satisfaction, and teacher nervousness and student academic motivation. No direct relation between teacher nervousness and irritability on student motivation or in-class satisfaction.
Ramirez et al. (2018)	C/S	HS	S: 1886 T: 60	Math Anxiety (Developed for study)	Not Examined	Math Achievement (Math grades)	Teacher math anxiety negatively related to math grades.

Reference	Design	School Levels	*N*	Conceptualization of Teacher Well-Being	Conceptualization of Student Well-Being	Conceptualization of Student Learning	Relevant Findings
Reeves et al. (2017)	C/S	MS	S: 4593 [Japan] 10477 [US] T: 181 [Japan] 559 [US]	Job Satisfaction (Developed for study)	Not Examined	Math Achievement (Trends in International Mathematics and Science Study, 2011); Math Motivation (Attitudes toward math; Confidence in Math; Valuing Math: Developed for study)	Teacher job satisfaction positively predicted student math achievement for Japanese students, but not for US students.
Schaeffer et al. (2021)	L: 2 waves	ES	S: 551 T: 38	Math Anxiety (Short Mathematics Rating Scale: Alexander & Martay, 1989)	Not Examined	Math Achievement (Applied Problems subtest of Woodcock-Johnson III Tests of Achievement: Woodcock et al., 2001)	No relation between teachers' math anxiety and student math achievement at beginning of the year. Teacher math anxiety negatively related to student math achievement at end of school year.
Shen et al. (2015)	L: 2 waves	HS	S: 1302 T: 33	Burnout (MBI for Educators: Maslach et al., 2001)	Not Examined	Autonomous Motivation in Physical Education (Autonomous Motivation: Adapted from Ryan & Connell, 1989)	Teacher emotional exhaustion negatively related to students' perceptions of teachers' autonomy support.
Sherblom et al. (2006)	C/S	ES	S: 5750 T: 1567	Feelings of Belonging at School (Developed for study)	Not Examined	Math & Reading Achievement (Missouri Assessment Program - Standardized tests for reading & math)	Teacher feelings of belonging positively related to proficiency in math or reading.
Shoshani (2021)	C/S	HS	S: None T: 155	Job Satisfaction (Teaching Satisfaction Scale: Ho & Au, 2006); Emotions (Positive and Negative Affect Schedule: Thompson, 2007); Meaning at Work (Steger et al., 2012); Emotion Regulation Efficacy (Taylor et al., 2016)	Not Examined	Math Performance (Math grades); Dropout Rates (Number of students who dropped out of advanced math classes)	Student dropout rates related to lower teacher job satisfaction and meaning at work. Teacher job satisfaction positively related to math grades. Higher teacher well-being related to higher student grades and lower dropout rates.

Reference	Design	School Levels	*N*	Conceptualization of Teacher Well-Being	Conceptualization of Student Well-Being	Conceptualization of Student Learning	Relevant Findings
Stauffer & Mason (2013)	Qual	ES	S: None T: 64	Stress[b]	Disruptive Behaviors[b]	Performance and Achievement[b]	Low student performance, behavioral problems, and poor attitudes were deemed sources of instructional stressors for teachers.
Szczygiel (2020)	C/S	ES	S: 241 T: 30	Math Anxiety (Math Anxiety Questionnaire for Adults: Developed for study)	Math Anxiety (Math Anxiety Questionnaire for Children: Developed for study)	Math Achievement (Math tasks: Developed for study)	No relation between teacher math anxiety and student math anxiety. An increase in teacher math anxiety was associated with a decrease in math achievement for third graders, but not for first or second graders.
Tikkanen et al. (2021)	C/S	ES	S: 1550 T: 104	Exhaustion (Teacher Exhaustion Subscale of Sociocontextual Teacher Burnout Scale: Pietarinen et al., 2013)	Study Burnout (Study Burnout Scale: Salmela-Aro et al., 2009)	Not Examined	Teacher exhaustion related to student cynicism (not association with student experiences of exhaustion or inadequacy).
Tolan et al. (2020)	E	ES	S: None T: 188	Distress (MBI: Maslach et al., 1996)	Not Asked About or No Emergent Themes	Reading and Math Achievement (Woodcock Johnson Tests of Achievement III - Reading fluency, reading comprehension, applied problems, & mathematic calculation: Woodcock et al., 2001)	Teacher distress at baseline not associated with reading or math achievement at baseline or post-test. Teacher distress moderated effects of intervention - students in highly disruptive classrooms and with highly distressed teachers experienced greater growth in reading achievement when in the intervention condition. Program impacts were greatest for students in the highest risk circumstances (i.e., high teacher stress and high challenging student behaviors).
Torrington & Bower (2021)	Qual	ES	S: 49 T: 3	Well-Being; Health; Stress; Pressureb	Not Examined	Learning; Engagement[b]	High student engagement with computer-based video instruction boosted teacher well-being (e.g., less vocal strain, feeling calmer, reductions in behavior management issues).

Reference	Design	School Levels	*N*	Conceptualization of Teacher Well-Being	Conceptualization of Student Well-Being	Conceptualization of Student Learning	Relevant Findings
Tsai & Antoniou (2021)	C/S	ES	S: 2334 T: 110	Job Satisfaction (Teacher Job Sastisfaction Scale: OECD TALIS, 2014); Attitudes Toward Teaching Mathematics (Teacher Attitudes to Mathematics: Nisbet, 1991)	Not Examined	Academic Achievement (Mathematics test: Developed for study)	No association between teacher job satisfaction or teacher attitudes toward math and student achievement. Student math achievement positively predicted teacher job satisfaction. Student achievement significantly predicted teacher job satisfaction.
Turner & Theilking (2019)	Qual	ES, MS, & HS	S: None T: 5	Well-Being[b]	Not Asked About or No Emergent Themes	Learning[b]	Teachers' use of positive psychological strategies to improve their well-being positively affected their well-being, their teaching practice, and their perceptions of student learning.
Van Petegem et al. (2007)	C/S	HS	S: 600 T: NR	Satisfaction in Teaching (Well-being of the Teacher: Aelterman et al., 2002); Student Perceptions of Teacher Well-Being (Questionnaire on Teacher Interaction: Wubbels et al., 1987)	Well-Being (Well-being Inventory, Secondary Education: Engels et al., 2000)	Not Examined	Negative association between satisfaction in teaching and well-being of students for teachers and students in academic subjects and no association for teachers and students in vocational subjects. Vocational students' perceptions of teachers' well-being moderated relations between teachers' own perceived well-being and student well-being.
Weixler et al. (2018)	C/S	NR	S: NR T: 771	Job Satisfaction (Developed for study)	Not Examined	Engagement (Developed for study)	Teacher job satisfaction positively related to student engagement.
Wu et al. (2020)	C/S	NR	S: 5712 T: 3680	Job satisfaction (Developed for study)	Not Examined	Science Achievement (PISA Science Assessment from OECD: OECD, 2017)	Teacher job satisfaction not related to student science achievement.

Note. [a] Study from a report, as opposed to a peer-reviewed journal article. [b] Questions asked or emergent themes from qualitative analysis.

C/S = Cross-Sectional. L = Longitudinal. Qual = Qualitative Research. E = Experimental. ESM = Experience Sampling Method. MM = Mixed-Method. ES = Elementary School (Kindergarten/5 years old – 5th grade/10 years old). MS = Middle School (6th grade/11 years old-8th grade/13 years old). HS = High School (9th grade /14 years old 12th grade /17 years old). U = University. S = Student. T = Teacher. NR = Not reported. TR = Teacher reports. SR = Student Reports. MBI = Maslach Burnout Inventory.

Appendix H: Demographics of educator and student interviewees

Demographics of educators

Country (n)	Australia (6)	Canada (7)	Colombia (7)	India (6)	Qatar (6)	Overall (32)
Gender, n (%)						
Man	2 (33%)	5 (71%)	2 (29%)	0 (%)	2 (33%)	11 (34.4%)
Woman	4 (67%)	2 (29%)	5 (71%)	6 (100%)	4 (67%)	21 (65.6%)
Years in Education						
Mean (SD)	23.8 (10.5)	15.4 (8.8)	15.9 (15.3)	3.7 (5.0)	6.3 (2.9)	13.4 (11.4)
Minimum	8	4	3	0.13	2	0.13
Maximum	39	25	45	11	10	45
Years at Current School [1]						
Mean (SD)	8.1 (8.5)	8.8 (8.9)	9.1 (15.9)	1.5 (1.5)	1.7 (0.7)	6.1 (9.4)
Minimum	1	1	2	0.13	0.17	0.13
Maximum	22	22	45	4	2	45
Years/Grades Taught						
Years/Grades 1-5	1 (20%)	0 (%)	2 (40%)	4 (40%)	0 (0%)	7 (21.2%)
Years/Grades 6-9	2 (40%)	4 (100%)	2 (40%)	2 (20%)	4 (44.4%)	14 (42.4%)
Years/Grades 10-12	2 (40%)	0 (%)	1 (20%)	4 (40%)	5 (55.6%)	12 (36.4%)
Position						
Administrative role [2]	1 (16.7%)	2 (28.6%)	2 (28.6%)	0 (%)	1 (16.7%)	6 (18.8%)
Teacher & Administrative role	0 (%)	0 (%)	0 (%)	1 (16.7%)	0 (%)	1 (3.1%)
Classroom Teacher	2 (33.3%)	4 (57.1%)	3 (42.9%)	4 (66.7%)	5 (83.3%)	18 (56.3%)
Teacher & In-School Support [3]	0 (%)	0 (%)	1 (14.3%)	1 (16.7%)	0 (%)	2 (6.3%)

[1] Several educators work with students at various grade levels.

[2] Administrative roles include head of school and head of school department.

[3] Dual role of teacher and counselor and/or guidance counselor

In-School Student Support [4]	1 (16.7%)	1 (14.3%)	1 (14.3%)	0 (%)	0 (%)	3 (9.4%)
Teacher & Out-of-School Support [5]	2 (33.3%)	0 (%)	0 (%)	0 (%)	0 (%)	2 (6.3%)
School Type						
Public or Private	Private	Public	Private	Private	Private	

Demographics of students

Country (n)	Australia (5)	Canada (4)	Colombia (7)	India (6)	Overall (22)
Gender, n (%)					
Boy	2 (40%)	2 (50%)	3 (42.9%)	3 (50%)	10 (47.6%)
Girl	3 (60%)	2 (50%)	4 (57.1%)	3 (50%)	11 (52.4%)
Age					
Mean (SD)	14 (3.2)	13.8 (2.1)	14.1 (3.0)	13.5 (2.1)	13.9 (2.5)
Minimum	10	12	11	11	11
Maximum	17	16	17	16	17
Years at Current School					
Mean (SD)	2.4 (1.1)	4.9 (3.8)	9.4 (4.4)	4.0 (4.8)	5.5 (4.6)
Minimum	1.5	0.5	3	0.25	0.25
Maximum	4	9	16	13	16
School Type					
Public or Private	Private	Public	Private	Private	

[4] In-school support includes counselor, guidance counselor.

[5] Some school staff have a dual role of both a classroom teacher and a role in which they provide direct student support during out-of-school hours, such as coaching, academic support etc.

Appendix I: Scoping Review Literature by Focus Area

Reference	Relevant Findings
Teacher Well-Being and Student Well-Being	
Baeva & Bordovskaia (2015)	Students' psychological safety positively related to teachers' psychological safety.
Ball & Anderson-Butcher (2014)	Teachers perceptions of student mental health needs, student support systems, and teacher stress predicted teachers' perception of stress (task and school stress). Note that the greatest predictor of teacher stress was the perceptions of the student support system.
Braun et al. (2020)	Teacher burnout not a predictor of student well-being. Teacher life satisfaction was not predictive of students' positive outlook or emotional distress, but predictive of students' prosocial behavior. Teacher burnout and life satisfaction was not predictive of change in student well-being over year.
Denny et al. (2011)	Schools with higher teacher well-being had lower rates of student depression. No other significant associations between teacher well-being or burnout observed regarding student risk-taking behaviors or symptoms.
Fleckman et al. (2022)	Teachers showed symptoms of secondary traumatic stress and burnout when working with students who experienced trauma. Symptoms included intrusion, persistent, negative emotional states, internalizing symptoms, irritability and hypervigilance, and emotional exhaustion. Teachers identified student growth, progress, and success, as contributors to compassion satisfaction.
Graham et al. (2011)	Teachers found student mental health to be directly linked to their mental well-being.
Harding et al. (2019)	Teacher well-being positively associated with student well-being and negatively associated with student psychological distress. Teacher depressive symptoms negatively associated with student well-being and positively associated with student psychological distress. Associations disappeared when teacher presenteeism was included in models.
Herman et al. (2020)	Teacher burnout at baseline positively associated with student depression at follow-up. Most common class profile characterized by high stress and high coping was associated with highest levels of baseline depression. Students in least adaptive coping classes (high stress and low coping) more likely to show disruptive behaviors and report depressive symptoms.
Keller & Becker (2020) – Study 1	Teacher self-reported and student perceived teacher enjoyment and anger were related to student enjoyment and anger (respectively) – no relation with anxiety. Student perceptions of teachers' emotional authenticity related to higher levels of student enjoyment and lower levels of anxiety and anger.
Keller & Becker (2020) – Study 2	Student perceptions of their teachers' anger, anxiety, and enjoyment related to their own anger, anxiety, and enjoyment. Higher teacher enjoyment, anger, and anxiety related to high levels of emotions (respectively) in students. More student perceived teacher emotional authenticity associated with more student enjoyment, and lower anxiety and anger.
Oberle & Schonert-Reichl (2016)	Higher levels of teacher burnout significantly predicted variability in students' morning cortisol levels. High levels of teacher burnout predicted higher cortisol levels in students.

Tikkanen et al. (2021)	Teacher exhaustion related to student cynicism (not association with student experiences of exhaustion or inadequacy).
Van Petegem et al. (2007)	Negative association between satisfaction in teaching and well-being of students for teachers and students in academic subjects and no association for teachers and students in vocational subjects. Vocational students' perceptions of teachers' well-being moderated relations between teachers' own perceived well-being and student well-being.
Teacher Well-Being and Student Learning	
Adams (2001)	Student learning was not associated with teacher stress.
Alam (2012)	Higher teacher stress (Job Demand facet) related to lower math achievement. Higher teacher stress (Change and Development facet; Responsibilities of Students facet) related to lower math and Hindi achievement.
Banerjee et al. (2017)	Teacher job satisfaction and student math achievement not correlated. Teacher job satisfaction predicted reading achievement growth. Students taught by teachers who were high in job satisfaction had slightly higher achievement trajectories than those taught by teachers who were lower.
Çaglar & Sarikaya (2022)	One teacher stated that when students are at a higher academic level, the lesson feels more enjoyable, and the teacher feels happier. When student success is low, one teacher experienced anxiety, hopelessness, and anger. For one teacher, teaching students with low achievement expectations who are not at the required readiness level makes him feel tired, demotivated, hopeless, and anxious.
Caprara et al. (2006)	Student achievement (at Time 1) did not predict teacher job satisfaction (at Time 2). Teacher job satisfaction (at Time 2) was not associated with student achievement (at Time 3).
Carroll et al. (2021)	Greater reductions in teachers' personal and work-related burnout associated with greater increases in students' academic self-perception. Reductions in teacher stress and burnout not related to student well-being.
Covell et al. (2009)	Student engagement positively predicted teachers' sense of personal accomplishment and negatively predicted teachers' depersonalization.
Dewberry & Briner (2007)a	All dimensions of teacher job satisfaction positively related to all measures of student performance. Teacher well-being predicted student performance in 2004 but not in 2005.
Fix et al. (2020)	Teachers reported positive feelings (e.g., pride and joy) related to their students' progress and engagement (e.g., active and interested students) and negative feelings related to low levels of student progress and perseverating on students' problems.
Glazzard & Rose (2020)	Pupils shared that when teachers were in a good mood, lessons were more creative, fun, relaxed, and interesting, and when they were in a bad mood it had detrimental effects on their learning.
Gunderson et al. (2013)	Teachers' spatial anxiety negatively associated with students' end-of-year mental rotation scores.
Hagenauer et al. (2015)	Student engagement positive predicted teacher joy and a negatively predicted teacher anger and anxiety.

Herman et al. (2018)	Students in classes with teachers who were stressed and low in coping were lower in math achievement relative to students in the classes with teachers who were highly stressed but had strong coping.
Hoglund et al. (2015)	Aggregate student externalizing behaviors covaried positively with teacher depersonalization but negatively with personal accomplishment. Teacher burnout predicted less growth in literacy skills. Interaction of teacher burnout and aggregate externalizing behaviors negatively predicted changes in engagement and literacy skills.
Kengatharan (2020)	Teacher job satisfaction positively related to student engagement. Engagement partially mediated effect of student behavior on teacher job satisfaction.
Khan et al. (2022)	Student achievement positively related to teacher job happiness.
Klusmann et al. (2016)	Teacher emotional exhaustion negatively related to student math achievement. Association was moderated by class composition of language minority students.
Martinez-Sierra et al. (2022)	Student academic achievement, interest, and academic improvement triggered positive emotions in teachers. Lack of student interest and knowledge, bad behavior, and low motivation triggered negative emotions in teachers.
McLean & Connor (2015)	Teacher depressive symptoms in winter negatively predicted students' spring math achievement. Students with lower math skills at baseline and with teachers who reported greater depressive symptoms experienced smaller gains relative to students with teachers with fewer depressive symptoms. Teacher depressive symptoms negatively associated with quality of classroom-learning environment, which mediated association between depressive symptoms and student achievement.
McLean & Connor (2018)	Teacher depression did not predict changes in student math scores over the year. Interaction effect between teacher depression and student baseline math skills on change in student math scores over the year (e.g., teacher depression had detrimental effects on gains in math scores for low achieving students).
Michaelowa (2002)	Teacher job satisfaction positively related to student learning.
O'Donnell et al. (2008)	Teacher stress (i.e., perceptions of demands related to availability of instructional resources) negatively related to student achievement.
Owen (2016)	Improvements in student learning outcomes contributed to teacher well-being.
Pakarinen et al. (2010)	Low teacher stress predicted high learning motivation. Learning motivation mediated the association between teacher stress and phonological awareness.
Pap et al. (2023)	No relation between teacher life satisfaction and student mental health. Positive relation between teacher self-efficacy and student mental health, as well as teacher life satisfaction and student physical health. Teacher self-efficacy positively predicted student mental health.
Peele et al. (2023)	Teacher depressive symptoms in fall negatively predicted students' overall school readiness skills in spring. For children with higher fall school-readiness skills, teacher depressive symptoms predicted more negative overall school readiness skills in the spring.
Polly et al. (2022)	Job satisfaction positively related to students' math achievement.

Ramirez et al. (2018)	Teacher math anxiety negatively related to math grades.
Reeves et al. (2017)	Teacher job satisfaction positively predicted student math achievement for Japanese students, but not for US students.
Schaeffer et al. (2021)	No relation between teachers' math anxiety and student math achievement at beginning of the year. Teacher math anxiety negatively related to student math achievement at end of school year.
Sherblom et al. (2006)	Teacher feelings of belonging positively related to proficiency in math or reading.
Shoshani (2021)	Student dropout rates related to lower teacher job satisfaction and meaning at work. Teacher job satisfaction positively related to math grades. Higher teacher well-being related to higher student grades and lower dropout rates.
Szczygiel (2020)	No relation between teacher math anxiety and student math anxiety. An increase in teacher math anxiety was associated with a decrease in math achievement for third graders, but not for first or second graders.
Tolan et al. (2020)	Teacher distress at baseline not associated with reading or math achievement at baseline or post-test. Teacher distress moderated effects of intervention - students in highly disruptive classrooms and with highly distressed teachers experienced greater growth in reading achievement when in the intervention condition. Program impacts were greatest for students in the highest risk circumstances (i.e., high teacher stress and high challenging student behaviors).
Torrington & Bower (2021)	High student engagement with computer-based video instruction boosted teacher well-being (e.g., less vocal strain, feeling calmer, reductions in behavior management issues).
Tsai & Antoniou (2021)	No association between teacher job satisfaction or teacher attitudes toward math and student achievement. Student math achievement positively predicted teacher job satisfaction. Student achievement significantly predicted teacher job satisfaction.
Turner & Theilking (2019)	Teachers' use of positive psychological strategies to improve their well-being positively affected their well-being, their teaching practice, and their perceptions of student learning.
Weixler et al. (2018)	Teacher job satisfaction positively related to student engagement.
Wu et al. (2020)	Teacher job satisfaction not related to student science achievement.
Teacher Well-Being and Student Learning AND Well-Being	
Arens & Morin (2016)	Teacher emotional exhaustion negatively associated with students' school satisfaction and standardized test scores.
Bilz et al. (2022)	Teachers' subjective psychological well-being not related to students' general life satisfaction or health complaints, but positively related to students' satisfaction with school. Teachers' emotional exhaustion positively related to higher levels of student health complaints, but not to students' life satisfaction or satisfaction with school.
Froeschle & Crews (2010)	Most teachers shared the belief that their stress and burnout had negative implications for students (i.e., contribute to mental health, discipline, and academic problems).

Poon et al. (2019)	Teacher nervousness (not irritability) positively associated with student nervousness and irritability. Student nervousness and irritability mediated association between teacher nervousness and student in-class satisfaction, and teacher nervousness and student academic motivation. No direct relation between teacher nervousness and irritability on student motivation or in-class satisfaction.
Stauffer & Mason (2013)	Low student performance, behavioral problems, and poor attitudes were deemed sources of instructional stressors for teachers.
Supporting Students	
Buchanan & Harris (2014)	Teacher roles and responsibilities assumed when working with students who attempted suicide seemed to contribute to feeling and thoughts (e.g., shock, sadness, uncertainty, anxiety). Teachers shared uncertainties they were experiencing when assuming various roles and worries about well-being of their students.
Carjuzaa & Williams (2021)	Teachers who practice self-care strategies reported being better at supporting the well-being of their students.
Ekornes (2017)	High levels of teacher responsibility associated with student mental health needs identified as sources of teacher stress, worry, and helplessness.
Kidger et al. (2009)	Low teacher emotional health reduces a teacher's ability to support and respond to pupils, which leads to more emotional distress for pupils and teachers. The neglect of teachers' own emotional health needs makes them more unable or unwilling to consider the emotional health needs of pupils.
Shen et al. (2015)	Teacher emotional exhaustion negatively related to students' perceptions of teachers' autonomy support.
No Relationship	
Barrera-Osorio et al. (2020)	No association between teacher well-being and literacy achievement.
Iqbal et al. (2016)	No significant correlation between student performance and teachers' job satisfaction.
Jõgi et al. (2022)	No direct effect of teacher stress on student math skill gains. No indirect effect of teacher stress on math skills through teaching practices.
Mahmoodi et al. (2022)	No components of burnout correlated with English achievement.
Mantzicopoulos (2005)	No significant correlation between dimensions of teacher workload stress and student achievement.


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