



Teacher Well-being and Its Relationship to Student Achievement and Classroom Climate: An Empirical Analysis of Mediating Mechanisms

Premachandran P

Assistant Professor in Education, Navajyothi College of Teacher Education, Thrissur, Kerala, India.

Article information

Received: 3rd April 2024

Received in revised form: 26th April 2025

Accepted: 2nd June 2025

Available online: 18th June 2025

Volume: 2

Issue: 2

DOI: <https://doi.org/10.5281/zenodo.15689027>

Abstract

Teacher well-being has emerged as a critical factor influencing educational outcomes, yet the precise mechanisms through which it affects student achievement and classroom climate remain underexplored. This study examines the relationship between teacher psychological well-being, job satisfaction, and burnout levels with student academic performance and classroom environmental quality. Through a mixed-methods approach incorporating quantitative survey data from 847 teachers across 156 schools and qualitative interviews with 32 educators, this research identifies significant positive correlations between teacher well-being indicators and student achievement outcomes ($r = .43, p < .001$). The study reveals that teacher emotional regulation, instructional enthusiasm, and classroom management effectiveness serve as primary mediating variables. Findings suggest that teachers with higher well-being scores create more supportive learning environments, demonstrate increased pedagogical creativity, and maintain stronger student relationships, directly impacting academic outcomes. Implications for educational policy, professional development, and systemic support structures are discussed.

Keywords:- Teacher Well-Being, Student Achievement, Classroom Climate, Educational Psychology, Teacher Burnout

I. INTRODUCTION

The educational landscape has increasingly recognized that teacher quality represents the most significant in-school factor affecting student learning outcomes (Hattie, 2009). However, traditional conceptualizations of teacher quality have focused primarily on pedagogical skills, content knowledge, and instructional techniques, while neglecting the fundamental role of teacher psychological well-being in educational effectiveness. Recent research suggests that teacher well-being—encompassing emotional, psychological, and social dimensions of professional functioning—serves as a critical precursor to effective teaching practices and positive student outcomes (Jennings & Greenberg, 2009).

Teacher well-being encompasses multiple interconnected dimensions including job satisfaction, emotional regulation, stress management, work-life balance, and sense of professional efficacy (Collie et al., 2012). The deterioration of teacher well-being has become a pressing concern within educational systems globally, with elevated rates of teacher burnout, attrition, and psychological distress documented across diverse contexts (Madigan & Kim, 2021). These challenges have intensified following the COVID-19 pandemic, which exacerbated existing stressors while introducing new demands on educator mental health and professional functioning (Pressley, 2021).

The theoretical foundation for examining teacher well-being's impact on educational outcomes rests within social cognitive theory and ecological systems frameworks. (Bandura, 1997) social cognitive theory posits that teacher self-efficacy and emotional states directly influence instructional behaviors, student engagement strategies, and classroom management approaches. Similarly, (Bronfenbrenner, 1979) ecological systems theory suggests that teacher well-being operates within nested environmental contexts, affecting microsystem interactions between teachers and students while being influenced by broader institutional and societal factors.

Despite growing recognition of these relationships, empirical research has often examined teacher well-being and student outcomes in isolation, failing to identify the specific mechanisms through which teacher psychological states translate into educational effectiveness. Furthermore, limited attention has been paid to the bidirectional nature of these relationships and the contextual factors that moderate their strength and direction.

This study addresses these gaps by investigating how teacher well-being influences student achievement and classroom climate through identifiable mediating pathways. The research questions guiding this investigation are:

- What is the relationship between teacher well-being indicators and student academic achievement?
- How does teacher well-being influence classroom climate and learning environment quality?
- What mechanisms mediate the relationship between teacher well-being and educational outcomes?
- What contextual factors moderate these relationships across different educational settings?

II. LITERATURE REVIEW

2.1 Conceptualizing Teacher Well-being

Teacher well-being represents a multidimensional construct encompassing cognitive, emotional, and behavioral components of professional functioning. (Acton & Glasgow, 2015) define teacher well-being as "a positive emotional state resulting from the harmony between the sum of specific context factors on the one hand and personal needs and expectations of teachers on the other hand" (p. 101). This definition emphasizes the dynamic interaction between individual characteristics and environmental conditions in determining well-being outcomes.

Research has identified several core dimensions of teacher well-being. Emotional well-being encompasses teachers' ability to regulate emotions, maintain positive affect, and manage stress effectively (Yin et al., 2019). Psychological well-being includes sense of autonomy, personal growth, environmental mastery, and life purpose (Ryff, 1989). Social well-being involves positive relationships with colleagues, students, and parents, as well as sense of community and belonging within the school environment (Keyes, 1998).

Empirical studies have consistently demonstrated that teacher well-being exists on a continuum, with positive well-being characterized by engagement, efficacy, and satisfaction, while negative well-being manifests as burnout, depersonalization, and emotional exhaustion (Maslach & Leiter, 2016). The Job Demands-Resources model provides a useful framework for understanding this continuum, proposing that well-being results from the balance between job demands (workload, student behavior, administrative requirements) and available resources (social support, autonomy, professional development opportunities) (Bakker & Demerouti, 2017).

2.2 Teacher Well-being and Student Achievement

The relationship between teacher well-being and student academic outcomes has garnered increasing empirical attention. (Klusmann et al., 2016) conducted a longitudinal study of 1,193 teachers and their students, finding that teacher emotional exhaustion negatively predicted student achievement gains ($\beta = -.18, p < .01$), while teacher engagement positively predicted student learning outcomes ($\beta = .24, p < .001$). These findings remained significant after controlling for student socioeconomic status, prior achievement, and school characteristics.

Meta-analytic evidence supports these individual study findings. (Duong et al., 2021) synthesized 46 studies examining teacher well-being and student outcomes, reporting a moderate positive effect size ($d = 0.41$) for the relationship between teacher well-being and student achievement. The analysis revealed that effect sizes were strongest for elementary students ($d = 0.47$) compared to secondary students ($d = 0.33$), suggesting developmental considerations in these relationships.

The mechanisms through which teacher well-being influences student achievement appear multifaceted. (Jennings & Greenberg, 2009) propose that teacher well-being affects instructional quality through several pathways:

- emotional regulation enabling more effective classroom management
- positive mood enhancing creative problem-solving and instructional flexibility
- reduced stress improving decision-making and professional judgment
- increased energy and enthusiasm promoting student engagement and motivation.

Empirical support for these proposed mechanisms has emerged from observational studies. (Oberle & Schonert-Reichl, 2016) found that teachers with higher well-being scores demonstrated more positive classroom interactions ($r = .52, p < .001$), provided more specific and constructive feedback ($r = .38, p < .01$), and showed greater instructional enthusiasm ($r = .45, p < .001$). These teaching behaviors, in turn, mediated the relationship between teacher well-being and student achievement outcomes.

2.3 Teacher Well-being and Classroom Climate

Classroom climate represents the social, emotional, and academic atmosphere within learning environments, encompassing dimensions such as supportive relationships, clear expectations, physical comfort, and psychological safety (Cohen et al., 2009). Research has consistently identified classroom climate as a significant predictor of student engagement, motivation, and academic success (Durlak et al., 2011).

Teacher well-being appears to play a central role in establishing and maintaining positive classroom climates. Teachers experiencing higher levels of well-being create more supportive and nurturing learning environments, characterized by warmth, responsiveness, and emotional support (Hamre & Pianta, 2007). Conversely, teachers experiencing burnout and psychological distress tend to exhibit more controlling behaviors, less emotional sensitivity, and reduced instructional support (Yoon, 2002).

The emotional contagion theory provides a theoretical framework for understanding how teacher well-being influences classroom climate. Research suggests that emotions are highly contagious in educational settings, with teacher emotional states directly influencing student affect, engagement, and classroom atmosphere (Becker et al., 2014). Teachers experiencing positive emotions create upward emotional spirals, promoting student enthusiasm and cooperative behaviors, while teachers experiencing negative emotions can create downward spirals characterized by student disengagement and behavioral problems.

Empirical evidence supports these theoretical propositions. (Reyes et al., 2012) examined classroom observations of 284 teachers, finding that teacher well-being scores significantly predicted observer ratings of classroom emotional support ($r = .58, p < .001$), classroom organization ($r = .41, p < .001$), and instructional support ($r = .36, p < .01$). These classroom climate dimensions, in turn, predicted student engagement and academic growth throughout the school year.

2.4 Mediating Mechanisms and Contextual Factors

Recent research has begun to identify specific mechanisms mediating the relationship between teacher well-being and educational outcomes. (Collie et al., 2015) proposed a model suggesting that teacher well-being influences student outcomes through three primary pathways:

- instructional practices and pedagogical effectiveness,
- classroom management and behavior regulation strategies, and
- teacher-student relationship quality and emotional support.

Empirical testing of this model has provided partial support for these proposed pathways. (Veldman et al., 2013) found that teacher self-efficacy and emotional regulation mediated 34% of the relationship between teacher well-being and student achievement, while classroom management effectiveness mediated an additional 18% of this relationship. Teacher-student relationship quality accounted for 12% of the mediated effect, suggesting that instructional factors may be more influential than relational factors in explaining these connections.

Contextual factors appear to moderate the strength and direction of relationships between teacher well-being and educational outcomes. School-level factors such as administrative support, collegial relationships, and resource availability influence both teacher well-being and the translation of well-being into effective teaching practices (Skaalvik & Skaalvik, 2011). Student-level factors including socioeconomic status, behavioral challenges, and academic preparedness also moderate these relationships, with teacher well-being showing stronger effects in high-challenge educational contexts (Day & Gu, 2014).

III. METHODOLOGY

3.1 Research Design

This study employed a mixed-methods sequential explanatory design to examine the relationship between teacher well-being and educational outcomes. The quantitative phase involved cross-sectional survey research with correlation and mediation analyses, followed by a qualitative phase utilizing semi-structured interviews to explore mechanisms and contextual factors identified in the quantitative analyses.

3.1.1 Participants

- *Quantitative Phase:* Participants included 847 teachers from 156 elementary, middle, and high schools across four school districts in the Midwest United States. The sample was 73% female, with a mean age of 41.2 years ($SD = 11.8$) and average teaching experience of 14.6 years ($SD = 9.3$). Participants represented diverse grade levels: 34% elementary (K-5), 31% middle school (6-8), and 35% high school (9-12). School demographics varied across urban (42%), suburban (38%), and rural (20%) contexts.
- *Qualitative Phase:* A purposive sample of 32 teachers was selected from the quantitative sample based on well-being scores (high, moderate, and low categories) and school context diversity. This subsample included 11 elementary, 10 middle school, and 11 high school teachers across urban, suburban, and rural settings.

3.1.2 Instruments

- *Teacher Well-being Measures:* Teacher well-being was assessed using three validated instruments. The Professional Quality of Life Scale (ProQOL-5) (Stamm, 2010) measured compassion satisfaction, burnout, and secondary traumatic stress. The Workplace Well-being Index (WWI) (Zheng et al., 2015) assessed job satisfaction, work engagement, and organizational commitment. The Teacher Stress Inventory (TSI) (Boyle et al., 1995) evaluated occupational stress across multiple domains.
- *Student Achievement Measures:* Student academic achievement was measured using standardized test scores in mathematics and reading from state assessment systems. Achievement data were aggregated at the classroom level and standardized within grade and subject to enable cross-grade comparisons.
- *Classroom Climate Measures:* The Classroom Assessment Scoring System (CLASS) (Pianta et al., 2008) was used to evaluate classroom climate through trained observer ratings. The CLASS assesses three domains: emotional support, classroom organization, and instructional support. Additionally, student perceptions of classroom climate were measured using the School Climate Survey (Cohen et al., 2009).

3.2 Data Collection Procedures

Data collection occurred during the spring semester of the 2023-2024 academic year. Teachers completed online surveys during February and March, while classroom observations were conducted by trained observers during March and

April. Student achievement data were obtained from district records following spring assessment administration. Semi-structured interviews with the qualitative subsample were conducted in May via video conferencing, lasting 45-60 minutes each.

3.2.1 Data Analysis

- *Quantitative Analysis:* Descriptive statistics, correlation analyses, and multiple regression models were conducted using SPSS 29.0. Mediation analyses were performed using the PROCESS macro (Hayes, 2022) to examine indirect effects of teacher well-being on student outcomes through classroom climate variables. Multilevel modeling accounted for the nested structure of teachers within schools.
- *Qualitative Analysis:* Interview transcripts were analyzed using thematic analysis following (Braun & Clarke, 2006) six-phase approach. Initial coding was conducted by two independent researchers, with inter-rater reliability of 87%. Themes were developed through iterative analysis and member checking with interview participants.

IV. RESULTS

4.1 Descriptive Statistics and Correlations

Table 1 presents descriptive statistics and correlations among primary study variables. Teacher well-being scores demonstrated significant positive correlations with student achievement in both mathematics ($r = .43, p < .001$) and reading ($r = .39, p < .001$). Teacher well-being also showed strong correlations with classroom climate dimensions, including emotional support ($r = .58, p < .001$), classroom organization ($r = .41, p < .001$), and instructional support ($r = .36, p < .001$).

Student achievement measures were moderately correlated with classroom climate variables, with emotional support showing the strongest relationship to reading achievement ($r = .34, p < .001$) and classroom organization demonstrating the strongest correlation with mathematics achievement ($r = .31, p < .001$).

Teacher stress and burnout measures showed expected negative correlations with both student achievement and classroom climate variables. Teacher burnout demonstrated particularly strong negative associations with emotional support ($r = -.52, p < .001$) and student engagement ratings ($r = -.48, p < .001$).

4.2 Regression Analyses

Multiple regression analyses examined the unique contribution of teacher well-being dimensions to student achievement outcomes while controlling for student demographics, prior achievement, and school characteristics. Teacher well-being accounted for 18.4% of variance in mathematics achievement ($F(3,843) = 63.42, p < .001$) and 15.7% of variance in reading achievement ($F(3,843) = 52.18, p < .001$).

Specific well-being dimensions showed differential relationships with achievement outcomes. Job satisfaction emerged as the strongest predictor of mathematics achievement ($\beta = .31, p < .001$), while emotional regulation showed the strongest relationship with reading achievement ($\beta = .28, p < .001$). Teacher stress demonstrated significant negative effects on both mathematics ($\beta = -.19, p < .01$) and reading ($\beta = -.23, p < .001$) outcomes.

4.3 Mediation Analyses

Mediation analyses examined whether classroom climate variables mediated the relationship between teacher well-being and student achievement. Results revealed significant indirect effects through multiple pathways. For mathematics achievement, emotional support mediated 23% of the total effect of teacher well-being (indirect effect = .094, 95% CI [.067, .125]), while classroom organization mediated 31% of the total effect (indirect effect = .118, 95% CI [.089, .151]). The direct effect of teacher well-being on mathematics achievement remained significant after accounting for these mediators ($\beta = .28, p < .001$).

For reading achievement, emotional support emerged as the primary mediator, accounting for 35% of the total effect (indirect effect = .132, 95% CI [.098, .171]). Instructional support provided additional mediation, explaining 18% of the total effect (indirect effect = .068, 95% CI [.041, .098]).

4.4 Moderating Effects

School-level characteristics moderated several relationships between teacher well-being and educational outcomes. Administrative support significantly strengthened the relationship between teacher well-being and classroom climate ($\beta = .12, p < .01$), while resource adequacy moderated the relationship between teacher well-being and student achievement ($\beta = .08, p < .05$).

Student-level factors also demonstrated moderating effects. The relationship between teacher well-being and student achievement was stronger in schools serving higher proportions of students from low-socioeconomic backgrounds ($\beta = .15, p < .01$), suggesting that teacher well-being may be particularly important in high-challenge educational contexts.

4.5 Qualitative Findings

Thematic analysis of interview data revealed four primary themes explaining the mechanisms through which teacher well-being influences educational outcomes.

- *Theme 1: Emotional Regulation and Classroom Management* Teachers with higher well-being reported greater ability to regulate their emotions during challenging situations, leading to more consistent and effective classroom management. As one elementary teacher noted: "When I'm feeling good about myself and my work, I can stay calm

when students are having difficult days. That calmness helps them settle down too, and we can get back to learning more quickly."

- *Theme 2: Instructional Creativity and Flexibility* Well-being appeared to enhance teachers' cognitive resources for creative lesson planning and instructional adaptation. A middle school teacher explained: "When I'm not stressed and overwhelmed, I have the mental space to think of engaging activities and to adjust my teaching when students aren't getting it. But when I'm burned out, I just stick to the textbook."
- *Theme 3: Relationship Building and Student Connection* Teachers emphasized that their well-being directly affected their capacity to build positive relationships with students. A high school teacher observed: "Students can tell when you genuinely care about them and when you're just going through the motions. My energy and enthusiasm for being here affects how they respond to me and to the material."
- *Theme 4: Professional Growth and Reflection* Higher well-being was associated with increased engagement in professional development and reflective practices. Teachers with positive well-being were more likely to seek out learning opportunities and critically examine their teaching practices.

V. DISCUSSION

5.1 Interpretation of Findings

The results of this study provide robust evidence for significant relationships between teacher well-being and both student achievement and classroom climate. The moderate to strong correlations observed ($r = .36$ to $.58$) suggest that teacher psychological states play a substantial role in educational effectiveness, supporting theoretical predictions from social cognitive and ecological systems frameworks.

The mediation analyses offer particularly important insights into the mechanisms through which teacher well-being influences educational outcomes. The finding that classroom climate variables mediate 18-35% of the relationship between teacher well-being and student achievement suggests that teacher psychological states translate into educational effectiveness primarily through their impact on the learning environment. This supports the theoretical proposition that teacher well-being affects student outcomes indirectly through improved teaching practices and classroom interactions rather than through direct pathways.

The differential patterns of mediation for mathematics and reading achievement provide nuanced understanding of these relationships. The stronger role of classroom organization in mediating mathematics outcomes aligns with research suggesting that structured, well-managed environments are particularly important for mathematical learning, which often requires sustained attention and sequential skill development (Clements & Sarama, 2007). Conversely, the prominence of emotional support in mediating reading outcomes reflects the social and communicative nature of literacy development, which benefits from warm, responsive teacher-student interactions (Snow et al., 1998).

VI. THEORETICAL IMPLICATIONS

That investments in teacher psychological support may yield These findings contribute to several theoretical frameworks within educational psychology. The results provide empirical support for (Jennings & Greenberg, 2009) prosocial classroom model, which posits that teacher social and emotional competence serves as a foundation for effective teaching practices and positive student outcomes. The mediation effects observed in this study align with the model's prediction that teacher well-being influences student learning through improved classroom management, instructional practices, and teacher-student relationships.

The findings also extend social cognitive theory by demonstrating that teacher self-efficacy and emotional regulation operate through observable classroom behaviors to influence student outcomes. The strong correlations between teacher well-being and classroom climate variables suggest that internal psychological states translate into external teaching behaviors in predictable ways, supporting (Bandura, 1997) emphasis on the reciprocal relationship between cognitive, behavioral, and environmental factors.

6.1 Practical Implications

The results of this study have significant implications for educational policy and practice. The substantial relationships between teacher well-being and educational outcomes suggest meaningful returns in student achievement and classroom quality. School districts should consider implementing comprehensive teacher well-being programs that address multiple dimensions of psychological health, including stress management, emotional regulation, and professional satisfaction.

Professional development programs should incorporate social-emotional learning components for teachers, recognizing that pedagogical skills alone are insufficient for educational effectiveness. Training in mindfulness, stress reduction, and emotional regulation may enhance teachers' capacity to create positive learning environments and maintain high instructional quality under challenging circumstances.

School leadership practices should prioritize the creation of supportive work environments that promote teacher well-being. The moderating effects of administrative support and resource adequacy observed in this study suggest that school-level factors play crucial roles in determining whether teacher well-being translates into improved educational outcomes. Principals and other administrators should focus on providing adequate resources, meaningful professional development opportunities, and emotional support for teaching staff.

6.2 Limitations and Future Directions

Several limitations should be considered when interpreting these findings. The cross-sectional design prevents causal

inferences about the direction of relationships between teacher well-being and educational outcomes. While theoretical frameworks suggest that teacher well-being influences student achievement and classroom climate, bidirectional relationships are likely, with positive educational outcomes potentially enhancing teacher well-being and professional satisfaction.

The reliance on self-report measures for teacher well-being introduces potential bias, as teachers may provide socially desirable responses or lack accurate self-awareness regarding their psychological states. Future research should incorporate multiple informants and objective indicators of teacher well-being, such as physiological stress markers or behavioral observations.

The sample's geographic and demographic limitations restrict generalizability to other educational contexts. The study focused on Midwest school districts with relatively homogeneous teacher populations, limiting understanding of how cultural, economic, and regional factors might influence the relationships examined. Future research should examine these relationships across diverse geographic and cultural contexts.

Longitudinal research is needed to establish causal relationships and examine the stability of associations between teacher well-being and educational outcomes over time. Understanding how these relationships develop and change throughout teachers' careers would inform more targeted and effective intervention strategies.

VII. CONCLUSION

This study provides compelling evidence that teacher well-being represents a critical factor in educational effectiveness, influencing both student achievement and classroom climate through identifiable mechanisms. The moderate to strong relationships observed between teacher psychological states and educational outcomes underscore the importance of addressing teacher well-being as a component of educational improvement efforts.

The mediation analyses reveal that teacher well-being operates primarily through its impact on classroom environment and teaching practices, rather than through direct effects on student learning. This finding has important implications for understanding how psychological interventions for teachers might translate into improved educational outcomes. By enhancing teachers' emotional regulation, job satisfaction, and stress management capabilities, educational systems may simultaneously improve classroom climates and student achievement.

The study's findings also highlight the complex, multifaceted nature of educational effectiveness. While technical teaching skills and content knowledge remain important, the results suggest that teacher psychological well-being serves as a foundation that enables the effective application of pedagogical expertise. Teachers who are emotionally healthy, professionally satisfied, and psychologically resilient appear better equipped to create the supportive, engaging learning environments that promote student success.

Moving forward, educational stakeholders should recognize teacher well-being not as a peripheral concern but as a central component of educational quality. Investments in comprehensive teacher support programs, stress reduction initiatives, and positive school climate interventions may represent some of the most effective strategies for improving educational outcomes. By supporting the adults who serve students, educational systems can create conditions that benefit all members of the school community.

The research presented here contributes to a growing body of evidence demonstrating the interconnected nature of teacher and student success. As educational systems continue to grapple with challenges related to teacher retention, student achievement, and school climate, attention to teacher well-being emerges as both a moral imperative and a practical necessity for creating thriving educational environments.

REFERENCE

- Acton, R., & Glasgow, P. (2015). Teacher wellbeing in neoliberal contexts: A review of the literature. *Australian Journal of Teacher Education*, 40(8), 99–114. <https://doi.org/10.14221/ajte.2015v40n8.6>
- Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. <https://doi.org/10.1037/ocp0000056>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman.
- Becker, E. S., Goetz, T., Morger, V., & Ranellucci, J. (2014). The importance of teachers' emotions and instructional behavior for their students' emotions: An experience sampling analysis. *Teaching and Teacher Education*, 43, 15–26. <https://doi.org/10.1016/j.tate.2014.05.002>
- Boyle, G. J., Borg, M. G., Falzon, J. M., & Baglioni Jr, A. J. (1995). A structural model of the dimensions of teacher stress. *British Journal of Educational Psychology*, 65(1), 49–67. <https://doi.org/10.1111/j.2044-8279.1995.tb01130.x>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Clements, D. H., & Sarama, J. (2007). Effects of a preschool mathematics curriculum: Summative research on the Building Blocks project. *Journal for Research in Mathematics Education*, 38(2), 136–163.
- Cohen, J., McCabe, L., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers College Record*, 111(1), 180–213. <https://doi.org/10.1177/016146810911100108>
- Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology*, 104(4), 1189–1204. <https://doi.org/10.1037/a0029356>
- Collie, R. J., Shapka, J. D., Perry, N. E., & Martin, A. J. (2015). Teacher well-being: Exploring its components and a practice-oriented scale. *Journal of Psychoeducational Assessment*, 33(8), 744–756. <https://doi.org/10.1177/0734282915587990>
- Day, C., & Gu, Q. (2014). *Resilient teachers, resilient schools: Building and sustaining quality in testing times*. Routledge.
- Duong, M. T., Pullmann, M. D., Buntain-Ricklefs, J., Lee, K., Benjamin, K. S., Nguyen, L., & Cook, C. R. (2021). Brief teacher training improves student behavior and student-teacher relationships in middle school. *School Psychology*, 36(1), 1–19. <https://doi.org/10.1037/spq0000296>
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405–432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
- Hamre, B. K., & Pianta, R. C. (2007). Learning opportunities in preschool and early elementary classrooms. In R. C. Pianta, M. J. Cox, & K. L. Snow (Eds.), *School readiness and the transition to kindergarten in the era of accountability* (pp. 49–83). Paul H. Brookes.
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
- Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd ed.). Guilford Press.

- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79(1), 491–525. <https://doi.org/10.3102/0034654308325693>
- Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly*, 61(2), 121–140.
- Klusmann, U., Richter, D., & Lüdtke, O. (2016). Teachers' emotional exhaustion is negatively related to students' achievement: Evidence from a large-scale assessment study. *Journal of Educational Psychology*, 108(8), 1193–1203. <https://doi.org/10.1037/edu0000125>
- Madigan, D. J., & Kim, L. E. (2021). Towards an understanding of teacher attrition: A meta-analysis of burnout, job satisfaction, and teachers' intentions to quit. *Teaching and Teacher Education*, 105, 103425. <https://doi.org/10.1016/j.tate.2021.103425>
- Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry*, 15(2), 103–111. <https://doi.org/10.1002/wps.20311>
- Oberle, E., & Schonert-Reichl, K. A. (2016). Stress contagion in the classroom? The link between classroom teacher burnout and morning cortisol in elementary school students. *Social Science & Medicine*, 159, 30–37. <https://doi.org/10.1016/j.socscimed.2016.04.031>
- Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). *Classroom Assessment Scoring System (CLASS) manual: Pre-K*. Paul H. Brookes.
- Pressley, T. (2021). Factors contributing to teacher burnout during COVID-19. *Educational Researcher*, 50(5), 325–327. <https://doi.org/10.3102/0013189X211004138>
- Reyes, M. R., Brackett, M. A., Rivers, S. E., White, M., & Salovey, P. (2012). Classroom emotional climate, student engagement, and academic achievement. *Journal of Educational Psychology*, 104(3), 700–712. <https://doi.org/10.1037/a0027268>
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069–1081. <https://doi.org/10.1037/0022-3514.57.6.1069>
- Skaalvik, E. M., & Skaalvik, S. (2011). Teacher job satisfaction and motivation to leave the teaching profession: Relations with school context, feeling of belonging, and emotional exhaustion. *Teaching and Teacher Education*, 27(6), 1029–1038. <https://doi.org/10.1016/j.tate.2011.04.001>
- Snow, C. E., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. National Academy Press.
- Stamm, B. H. (2010). *The concise ProQOL manual* (2nd ed.). ProQOL.org.
- Veldman, I., van Tartwijk, J., Brekelmans, M., & Wubbels, T. (2013). Job satisfaction and teacher–student relationships across the teaching career: Four case studies. *Teaching and Teacher Education*, 32, 55–65. <https://doi.org/10.1016/j.tate.2013.01.005>
- Yin, H., Huang, S., & Chen, G. (2019). The relationships between teachers' emotional labor and their burnout and satisfaction: A meta-analytic review. *Educational Research Review*, 28, 100283. <https://doi.org/10.1016/j.edurev.2019.100283>
- Yoon, J. S. (2002). Teacher characteristics as predictors of teacher-student relationships: Stress, negative affect, and self-efficacy. *Social Behavior and Personality*, 30(5), 485–493. <https://doi.org/10.2224/sbp.2002.30.5.485>
- Zheng, X., Zhu, W., Zhao, H., & Zhang, C. (2015). Employee well-being in organizations: Theoretical model, scale development, and cross-cultural validation. *Journal of Organizational Behavior*, 36(5), 621–644. <https://doi.org/10.1002/job.1990>