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Examining Teacher Well-Being: An Analysis of Resources Needs

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Abstract: This quantitative research explores the resource needs, challenges, and strengths of teachers and their influence on teacher well-being. Adopting a descriptive design with surveys as the primary instrument, the study aims to shed light on teacher well-being from a strengths-based perspective, a departure from the prevailing focus on stress and burnout in existing literature. Teachers operate in environments characterized by high stress and potential burnout, stemming from the demanding nature of their profession and encountering stressors across interpersonal, organizational, and institutional levels. Despite these challenges, most teachers demonstrate resilience and commitment to their work. However, there is a noticeable gap in research focusing on how teachers thrive and experience positivity within their school environments. Utilizing the Job Demands-Resources (JD-R) model as a theoretical framework, this study examines the relationship between resources and teacher well-being. The findings offer valuable insights into teacher resource needs and their overall well-being, which have practical implications for teacher training, professional development programs, and policy-making. These implications are aimed at mitigating teacher attrition, stress, and burnout while fostering resilience and well-being among educators. Furthermore, the study contributes to the refinement of the JD-R model and the broader understanding of teacher well-being. By providing a deeper insight into the mechanisms underlying teacher resilience, the findings serve as a foundational basis for future research in this critical domain.

Keywords: teacher well-being, resilience, positive psychology

1. Introduction

Teachers play a pivotal role in shaping the future, making their well-being crucial for both themselves and society. However, teaching ranks among the most stressful professions worldwide, with many educators facing significant stress and burnout [1, 2]. Stress levels among teachers vary widely, with up to 80% reporting high stress levels [2] and over 90% experiencing work-related stress in the United States [3].

Persistent stress in teachers correlates with decreased well-being and adverse outcomes for both educators and students, impacting physical and emotional health, engagement, and performance [4]. Moreover, increased stress leads to reduced job satisfaction and commitment, and higher rates of burnout and attrition [5, 6], affecting both the physical and psychological health of educators [7].

High levels of teacher stress negatively affect student achievement and performance [3]. Research demonstrates that teacher well-being, encompassing both positive (e.g., work engagement) and negative (e.g., work stress) factors, influences their ability to form strong relationships with students, impacting academic achievement and behavioral outcomes [8]. Individual teacher characteristics play a more significant role in student progress than school characteristics [9], highlighting the importance of prioritizing teacher well-being for student success.

While studies on burnout, stress, and attrition shed light on the challenges of teacher well-being, they do not capture its full scope. Understanding the experiences of committed teachers who remain in the profession offers valuable insights [10, 11]. Research indicates that positive indicators of teacher well-being differ from negative ones [12], emphasizing the need to consider both stress reduction and positive factors like job satisfaction and engagement [13].

The Job Demands-Resources (JD-R) model provides a framework for understanding employee well-being, integrating stress and motivation theories. According to the JD-R model, burnout and engagement result from the interaction between job demands and available resources [14]. Job demands contribute to stress and burnout, while resources promote motivation and engagement, with both factors interacting to influence well-being.

Further research is needed to refine the JD-R model and identify specific job resource needs for teachers [15]. Understanding how resources interact with stress and job satisfaction is crucial for improving teacher well-being and retention [16]. As job demands and policies change over time, ongoing research is essential to adapt strategies that enhance teacher well-being and mitigate stressors.

The objective of the current study is to investigate the association between identified job resources and teacher well-being outcomes to answer the following questions: (1) To what extent are psychological

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(optimism and self-efficacy), social (social support), physical (instructional resources and safety), organizational (school culture), and institutional (political support and diversity climate) resources related to measures of positive and negative teacher well-being (work stress, burnout, work engagement, and job satisfaction)?; (2) How do resources and well-being vary across demographic variables (e.g., type of school, teaching position, years of experience)?; and (3) What is the relative contribution of different resources in predicting teacher well-being?

2. Literature Review

A significant portion of research on teacher well-being has historically focused on negative factors such as burnout and stress, overlooking positive experiences and factors that contribute to teachers' overall well-being. To comprehensively understand teacher well-being, it is essential to examine both positive and negative aspects that enable teachers to thrive and find fulfillment in their work. This study delves into positive teacher well-being, encompassing job satisfaction and engagement, as well as negative aspects, such as stress and burnout. The following sections discuss the contributors to teacher well-being.

While many studies have centered on the challenges teachers face, some educators manage to find engagement and satisfaction in their roles despite high stress levels [17, 18].

Work engagement and job satisfaction stand out as key components of positive workplace well-being. Work engagement reflects voluntary involvement and activity in job-related tasks rooted in dimensions of energy and involvement [19, 20]. Job satisfaction, on the other hand, pertains to contentment and happiness in one's work and the fulfillment of work-related goals [21], which is crucial for a teacher's emotional reaction to their profession [6].

Although less extensive than research on negative factors, recent studies have explored positive contributors to teacher well-being [12]. The JD-R model identifies resources as vital elements that enhance positive well-being factors and mitigate stressors [14]. These resources encompass psychological, social, organizational, and physical dimensions [14], detailed below.

Several psychological factors promote teacher well-being, including positive self-efficacy beliefs, optimism, autonomy, work-life balance, purpose, self-care, and emotional boundaries [22]. Teacher self-efficacy, defined as belief in one's abilities, significantly impacts confidence and various work-related outcomes [23, 24]. Optimism, an expectation of positive outcomes, correlates with reduced stress and better health among teachers [22]. Autonomy in decision-making fosters job satisfaction and engagement [25], indicating its importance in teacher well-being.

Social resources, including supportive leadership, mentorship, and positive relationships within the school community, significantly influence teacher well-being [26–28]. Administrative support and respectful, supportive relationships enhance job satisfaction and retention [29, 30]. Colleague support also plays a crucial role in alleviating stress and fostering satisfaction among teachers [11, 31]. Leadership style and school culture contribute to positive teacher outcomes. Transformational leadership, characterized by shared visions and motivation, positively impacts job satisfaction [32]. A strong school culture, marked by shared values and norms, enhances teacher well-being [33], aiding in problem-solving and adaptation to challenges [34].

Access to material resources and conducive physical environments also influence teacher well-being. Well-equipped schools with adequate resources correlate with higher job satisfaction [35]. Physical surroundings, including classroom space and instructional materials, affect teachers' perceptions of their job and overall satisfaction [36].

2.1. Demographic differences in teacher well-being and resources

Understanding variations in teacher well-being across demographic characteristics such as experience, school location, and school type informs targeted support strategies and highlights exemplars for promoting well-being.

Schools serving marginalized communities experience heightened teacher turnover due to poor working conditions [37, 38]. Urban teachers face more significant stressors, including limited resources and policy pressures [39, 40]. While urban schools suffer from stressors like student discipline, rural teachers grapple with time demands and resource limitations [41]. Understanding these differences aids in tailoring support interventions to specific contexts. Charter school teachers report higher satisfaction and higher turnover rates compared to their public school counterparts [42, 43]. Transformational leadership and supportive school culture contribute to teacher satisfaction across school types [44], emphasizing the role of organizational factors in teacher well-being.

Novice teachers experience higher burnout and stress, attributed to lower self-efficacy and resource support [45, 46]. Experience enhances self-efficacy and access to support networks, mitigating stress and promoting well-being [46]. High school teachers report higher burnout and stress compared to their elementary counterparts [47, 48]. Female teachers may experience higher stress levels, reflecting broader workplace trends [49, 50]. Limited research exists on racial differences in teacher well-being [51], warranting further investigation.

3. Research Methodology

3.1. Research design

This quantitative study utilized an online survey that included questionnaires on resources, workplace well-being measures, and demographic information. A unique link to the survey was posted on Instagram to collect information from a diverse sample of teachers. Researchers have been using social media to recruit research participants and have found these methods to be helpful in reaching samples of people that are representative of the population [52, 53]. For this study, teachers were invited to participate in a study on teachers' working lives and were notified of the exclusion criteria through statements like, "We are recruiting full-time teachers who are working in a K-12 position to participate in our online survey. Ten teachers will be randomly selected to receive an Amazon gift card of $50."

Once teachers clicked on the link to participate in the study, they were presented with a consent form that described the scope of the

project and informed participants that they could stop the survey at any time. They were asked to complete the survey in one sitting and were informed that their responses were anonymous. Next, they were screened for eligibility. To be qualified to participate in the study, teachers had to report that they had more than 1 year of teaching experience and were teaching at a private, public, or charter school in the United States. If they fulfilled the prerequisites, they were asked to respond to questions regarding their status of resources, well-being, and demographic information. The survey took approximately 20 min to complete. Once the survey closed, ten participants were randomly selected and sent a gift card.

3.2. Participants

Teachers were recruited via Instagram for a survey during the 2019–2020 academic year, with 1,929 full-time K-12 teachers participating. They had a minimum of 1 year teaching experience and worked in private, public, or charter schools across the United States. A sample size of 280 was set to detect small effects using multiple regression analysis. The average participant had 8.72 years of teaching experience and was aged 25–34. Most teachers worked in public schools (82.9%), followed by charter (9.2%) and private (7.7%) schools. Regarding grade levels, 52.3% taught Kindergarten–5th grade, 24.2% taught 6th–9th grade, and 20.5% taught 9th–12th grade. Teachers from all 50 states participated, with 17.7% in rural areas, 32.6% in urban areas, and 49.4% in suburban areas. Additionally, 61.2% held a master's degree. The majority identified as White (89%), followed by Hispanic/Latinx (7.8%), Black/African American (2.9%), Asian/Asian American (2%), and other races. Most identified as women (98.6%), with a small percentage identifying as men or genderqueer/non-binary.

3.3. Instruments

From the literature on teacher well-being, eight key resources were identified for measurement, covering various dimensions essential for understanding the holistic state of teachers. These resources represent all four original JD-R categories and an additional category of institutional resources.

3.3.1. Measures of resources

Self-efficacy. Tschannen-Moran and Hoy's [24] Teacher Self-Efficacy scale was used to measure self-efficacy. Klassen et al. [54] reported that Cronbach's alpha coefficients for the scale ranged from 0.71 to 0.94. Researchers have investigated the scale to measure teacher self-efficacy in various settings and have concluded that it has adequate validity and reliability [54, 55]. The 12-item scale includes three subdomains: (1) efficacy for instructional strategies (e.g., "To what extent can you use a variety of assessment strategies?"), (2) efficacy for classroom management (e.g., "How much can you do to control disruptive behavior in the classroom?"), and (3) efficacy for student engagement (e.g., "How much can you do to help your students value learning?"). Teachers responded to each item using a Likert-type scale from 1 (nothing) to 9 (a great deal).

Optimism. Optimism was measured using five Life Orientation Test-Revised (LOT-R) items. The LOT-R has good reliability and validity ($\alpha = 0.78$ [56]). This scale measures optimism with statements such as, "In uncertain times, I usually expect the best." Participants were asked to rate the extent to which they agreed with each item using a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree).

Social Support. Skaalvik and Skaalvik's methods [6] were adopted to measure overall social support with two subscales: colleague support and supervisory support. Colleague support was measured via three items (e.g., "In educational matters, I can always get good help from my colleagues"). Cronbach's alpha was 0.84 for this three-item scale [6]. Supervisory support was also measured with three items (e.g., "In educational matters, I can always get help and advice from the school leadership"). The Cronbach's alpha for this three-item scale is 0.86 [6]. For both three-item scales, teachers were asked to indicate the extent to which they agreed with the items by choosing an option from a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree).

School Culture. Three items from Skaalvik and Skaalvik's [15] tool were adopted to measure school culture. These items focused on common goals, values, and practices (e.g., "The teachers and the school administration at this school have a common understanding of the direction in which the school should be developed"). Cronbach's alpha for the scale was 0.78. For these items, teachers indicated the extent to which they agreed with the items by choosing an option from 1 (strongly disagree) to 5 (strongly agree) on a Likert-type scale.

Safety. The Workplace Safety Climate Survey [57] was adapted to fit teachers' workplaces and used to measure the degree to which teachers feel safe at school. Items such as "The safety of teachers and students is a high priority for my school" and "Formal drills are regularly done to see if teachers are following safety plans" seek to measure this construct. Cronbach's alpha for the original scale is very high (0.94). For these items, teachers were asked to indicate the extent to which they agreed with the items by choosing an option on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree).

Instructional Resources. To measure whether teachers feel like they have the materials needed to do their job, teachers were asked questions from a subscale from the Working Conditions Survey [58]. This scale has good consistency when used in teacher populations [58, 59] and includes a subscale that measures *facilities* and *resources*. Two items measure resources and were selected to be used in the current study (e.g., "I have sufficient access to appropriate instructional materials and resources"). For these items, teachers indicated the extent to which they agreed with the items by choosing an option from a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree).

Political Support. The Political Attitudes subscale [60] was adapted to measure the degree to which teachers believe political structures support them and their students. The original scale includes seven items: three items that ask about attitudes toward local officials and four items that ask about attitudes toward government officials. Cronbach's alpha for the original subscale was good (0.83–0.90). From these items, six were adapted to measure political support attitudes of teachers regarding support for educators and students (e.g., "My local government does a good job advancing the interests of educators" and "The federal government does a good job advancing the interests of students"). For these items, teachers were asked to indicate the extent to which they agreed with the items by choosing an option from a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree).

Diversity Climate. To measure teachers' perception of the diversity climate in their school, four items developed by McKay et al. [61] were modified slightly and presented to participants. These items were created to measure the equal and fair treatment of employees, leadership support for diversity, and recognition of diverse perspectives. These items have good internal consistency

($\alpha = 0.82$ [61]). For items measuring this construct (e.g., "My school maintains a diversity-friendly work environment" and "The administration demonstrates a visible commitment to diversity"), teachers indicated the extent to which they agreed with the items by choosing an option from a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree).

3.3.2. Measures of teacher well-being

Job Satisfaction. One item, "Taking everything into consideration, how do you feel about your job as a whole?", was used to measure job satisfaction. Teachers answered this question on a Likert-type scale from 1 (extremely dissatisfied) to 7 (extremely satisfied). This approach is recommended by Dolbier et al. [62], who reported that the psychometric properties of the single-item overall job satisfaction measure are strong.

Burnout. A 16-item scale, the Oldenburg Burnout Inventory, was used to measure this concept. The two subscales, disengagement and exhaustion, have reported Cronbach's alpha coefficient ranges of 0.73 and 0.83, respectively [63]. This measure has been used in samples of teachers to measure teacher burnout [64, 65]. Three items were selected with the highest factor loadings to measure disengagement, which refers to distancing oneself from their work and is measured with items such as "I always find new and interesting aspects in my work" and "I feel more and more engaged in my work." Three of the eight items with the highest factor loadings were selected to measure exhaustion, which refers to the consequences of strain from work (physical, affective, and cognitive) and captured through items such as "After my work, I usually feel worn out and weary" and "After work, I tend to need more time than in the past in order to relax and feel better." Teachers were asked to indicate the extent to which they agreed with the items by choosing an option on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree).

Work Engagement. The Utrecht Work Engagement Scale [66] has 17 items and three subscales: vigor, dedication, and absorption. Schaufeli et al. [66] report that Cronbach's alpha coefficients range from 0.85 to 0.92. This measure needed no adaptions as it has been used as written in various samples of teachers to measure teacher work engagement [67–69]. Six items measure vigor, but only the two items with the highest factor loadings were used for this study. Vigor refers to high energy levels and mental resilience during work and is measured with items such as "At my work, I feel that I am bursting with energy." The two items with the highest factor loadings were selected to measure dedication and absorption. Dedication refers to finding a sense of significance and enthusiasm at work and is measured with items such as "My job inspires me" while *absorption* refers to the feeling that time is passing fast when one is at work—being immersed in work—and is measured with items such as "I am immersed in my work." For all three subscales, teachers were asked to indicate how often they have this feeling (if ever) by choosing an answer on a Likert-type scale from 1 (never) to 7 (always/every day).

Work Stress. The concept of *work stress* was measured using one item, "I find my teaching job to be very stressful," which researchers have determined is reliable and valid [70]. Teachers responded to this item on a Likert-type scale from 1 (strongly disagree) to 7 (strongly agree). This approach has been commonly used in studies on teacher stress [71–73].

3.3.3. Demographic information

After responding to questions about well-being, teachers were asked a series of questions about their demographics. These questions included where they teach (e.g., school location and type), what they teach, how long they have been teaching, and an estimated percentage of students at their school who receive free or reduced lunch. They also responded to personal demographic information such as education level, race/ethnicity, age, and gender identity.

3.3.4. Data analysis

Composite scores for positive (engagement and satisfaction) and negative (stress and burnout) teacher well-being were generated, followed by an examination of correlations among study variables to understand their associations. The hypothesis positing positive relationships between resources and positive well-being measures, and negative relationships with negative well-being measures, was tested using these correlations. Variance across demographic variables in resources and teacher well-being was then explored, analyzing differences in school type, location, grade level, student socioeconomic status, race/ethnicity, experience, and gender using MANOVAs. Continuous variables like years of experience and student socioeconomic status were categorized for analysis. Multiple regressions were conducted to determine the unique contribution of resources in predicting teacher well-being, with significance set at $p < 0.05$. Multicollinearity was assessed due to strong correlations and no issues were detected.

4. Results

4.1. Correlations

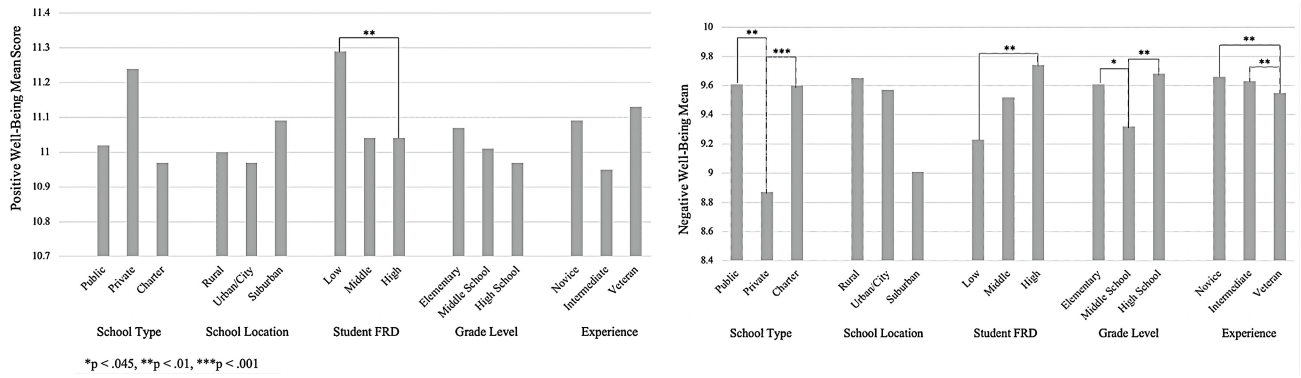
The correlations among the study variables (resources and well-being outcomes) were examined to assess the strength and direction of the existing associations. The hypothesis was supported such that all resources had positive correlations with positive well-being and had negative correlations with negative well-being (for all correlations, $p < 0.001$). Increases in resources for teachers were associated with increases in positive well-being and decreases in negative well-being. Additionally, all resource variables showed significant negative correlations with burnout and stress separately, and all resource variables showed significant positive correlations with work engagement and job satisfaction separately. Thus, resources showed significant relations with positive well-being and negative well-being compositely, and the factors of well-being separately.

For positive well-being, the resources that demonstrated the strongest positive relationships included social support ($r = 0.41$, $p < 0.001$), diversity climate ($r = 0.39$, $p < 0.001$), and self-efficacy ($r = 0.35$, $p < 0.001$). For negative well-being, the resources that demonstrated the strongest negative relationships included optimism ($r = -0.32$, $p < 0.001$), social support ($r = -0.28$, $p < 0.001$), and safety ($r = -0.27$, $p < 0.001$).

4.2. Resources and well-being across demographics

The variation of resources and teacher well-being among demographic variables was examined to answer the question of how resources and well-being may vary across teacher and school demographics. To examine differences in resources and well-being in terms of the type of school, school location, grade level position, student socioeconomic status (percentage of students that qualify for free/reduced lunch), race/ethnicity, experience, and gender, MANOVAs and subsequent ANOVAs and post hoc tests (Tukey's) were run to identify mean differences. A Bonferroni correction was

Figure 1
Demographic differences by well-being



used in the follow-up ANOVAs to control for Type I error (0.5/11 = 0.045; $p < 0.045$ was used to determine significance). Means and standard deviations based on the demographic group are reported below and summarized in Figures 1 and 2.

4.2.1. School type

There was a significant effect of school type on resources and teacher well-being, *Wilks'* $\Lambda = 0.96$, F (2, 1919) = 3.54, $p < 0.001$, partial $\eta^2 = 0.02$. There was a significant difference of self-efficacy, F(2, 1919) = 3.24, $p < 0.045$, social support, F(2, 1919) = 3.12, $p < 0.045$, instructional resources, F(2, 1919) = 12.51, $p < 0.001$, school culture, F(2, 1919) = 5.65, $p < 0.01$, political support, F(2, 1919) = 3.74, $p < 0.045$, diversity climate, F(2, 1919) = 5.52, $p < 0.045$, and negative well-being F(2, 1919) = 12.13, $p < 0.001$, by school type.

In terms of negative well-being, private school teachers demonstrated lower levels of negative well-being ($M = 8.87$, $SD = 2.01$) than both public school teachers ($M = 9.61$, $SD = 1.74$, $p < 0.01$) and charter school teachers ($M = 9.60$, $SD = 1.73$, $p < 0.001$). Private school teachers reported greater perceived political support ($M = 2.14$, $SD = 0.60$) when compared to charter school teachers ($M = 1.94$, $SD = 0.56$, $p < 0.01$), and greater access to instructional resources ($M = 4.01$, $SD = 0.83$) when compared to public school teachers ($M = 3.73$, $SD = 0.91$, $p < 0.01$). Charter school teachers ($M = 3.77$, $SD = 0.88$) reported higher school culture scores when compared to public school teachers ($M = 3.30$, $SD = 0.91$, $p < 0.045$). Lastly, charter school teachers ($M = 3.63$, $SD = 0.79$) reported greater diversity climate ratings when compared to public school teachers ($M = 3.42$, $SD = 0.87$, $p < 0.01$). While self-efficacy and social support MANOVA results demonstrated a significant difference by school type, no individual differences met the threshold of significance.

4.2.2. School location

There was a significant effect of school locations on resources and teacher well-being, *Wilks'* $\Lambda = 0.88$, F (2, 1922) = 7.56, $p < 0.001$, partial $\eta^2 = 0.04$. There was a significant difference in diversity climate, F(2, 1922) = 15.40, $p < 0.01$, political support, F(2, 1922) = 10.64, $p < 0.001$, instructional resources, F(2, 1922) = 50.26, $p < 0.001$, safety, F(2, 1922) = 17.44, $p < 0.001$, and social support, F(2, 1922) = 3.10, $p < 0.045$, by school location.

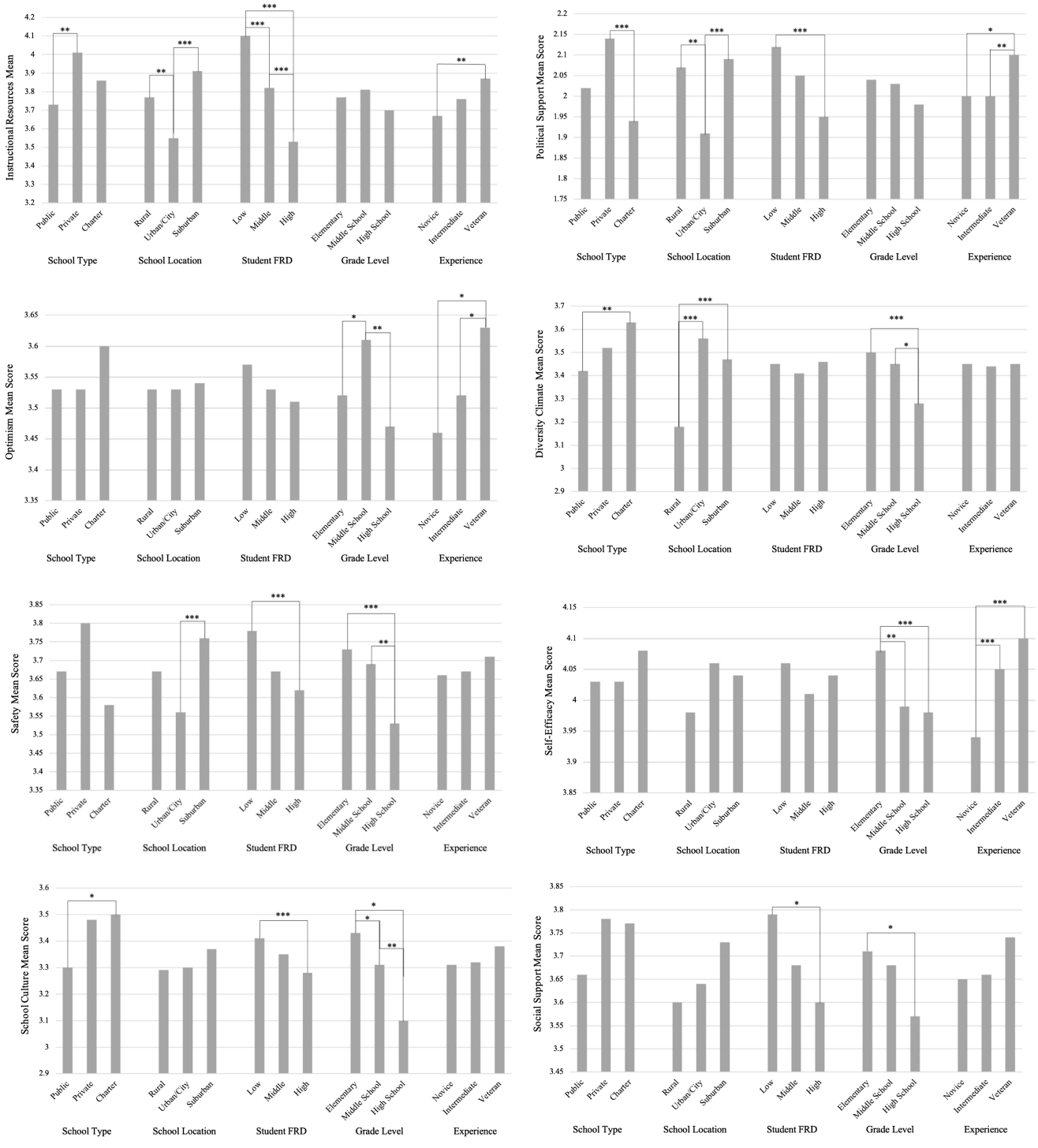
Rural teachers reported lower scores of diversity climate ($M = 3.18$, $SD = 0.91$) than both urban/city teachers ($M = 3.56$, $SD = 0.84$, $p < 0.001$) and suburban teachers ($M = 3.47$, $SD = 0.85$, $p < 0.001$). Urban/city teachers reported lower perceived political support ($M = 1.91$, $SD = 0.63$) when compared to rural teachers ($M = 2.07$, $SD = 0.70$, $p < 0.01$) and suburban teachers ($M = 2.09$, $SD = 0.66$, $p < 0.001$). Urban/city teachers reported fewer instructional resources ($M = 3.55$, $SD = 0.97$) when compared to suburban teachers ($M = 3.91$, $SD = 0.85$, $p < 0.001$) and rural teachers ($M = 3.77$, $SD = 0.85$, $p < 0.01$); urban/city teachers also reported lower perceived safety ($M = 3.56$, $SD = 0.79$) in comparison to suburban teachers ($M = 3.76$, $SD = 0.69$, $p < 0.001$).

4.2.3. Socioeconomic status

There was a significant effect of student socioeconomic status (as operationalized by the percentage of students on free or reduced lunch [FRD]) on resources and teacher well-being, *Wilks'* $\Lambda = 0.90$, F (2, 1920) = 8.87, $p < 0.001$, partial $\eta^2 = 0.05$. There was a significant difference of positive well-being, F(2, 1920) = 7.06, $p < 0.01$, negative well-being, F(2, 1920) = 11.08, $p < 0.001$, instructional resources, F(2, 1920) = 105.44, $p < 0.001$, school culture, F(2, 1920) = 3.56, $p < 0.045$, safety, F(2, 1920) = 8.41, $p < 0.001$, political support, F(2, 1920) = 10.83, $p < 0.001$, and social support F(2, 1920) = 9.35, $p < 0.001$, by student socioeconomic status.

Teachers who taught in a school with a high percentage of students on free or reduced lunch reported lower positive well-being ($M = 11.04$, $SD = 1.7$) when compared to the low percentage group ($M = 11.29$, $SD = 1.58$, $p < 0.01$), and greater negative well-being ($M = 9.74$, $SD = 1.73$) when compared to teachers in the low percentage group ($M = 9.23$, $SD = 1.84$, $p < 0.001$). Teachers in the high percentage group also reported less perceived political support ($M = 1.95$, $SD = 0.67$) when compared to the low percentage group ($M = 2.12$, $SD = 0.63$, $p < 0.001$), and lower perceived safety ($M = 3.62$, $SD = 0.78$) when compared to the low percentage group ($M = 3.78$, $SD = 0.69$, $p < 0.001$). Teachers in the high percentage group reported fewer instructional resources ($M = 3.53$, $SD = 0.95$) when compared to the low percentage group ($M = 4.10$, $SD = 0.75$, $p < 0.001$) and middle percentage group ($M = 3.82$, $SD = 0.84$, $p < 0.001$); moreover, the difference between teachers in the middle and low group was also significant ($p < 0.001$), such that teacher in the low percentage group reported fewer instructional resources and the middle percentage group. Lastly, teachers who taught in a school with a high percentage of students on free or reduced lunch reported less social support ($M = 3.60$, $SD = 0.82$) when compared to the low percentage group ($M = 3.79$, $SD = 0.74$, $p < 0.045$), and lower

Figure 2
Demographic differences by resource



*p < .045, **p < .01, ***p < .001

school culture scores ($M = 3.28$, $SD = 0.93$) when compared to teachers in the low percentage group ($M = 3.41$, $SD = 0.90$, $p < 0.001$).

4.2.4. Grade level position

There was a significant effect of grade level position on resources and teacher well-being, *Wilks'* $\Lambda = 0.95$, F (2, 1922) = 4.50, $p < 0.001$, partial $\eta^2 = 0.02$. There was a significant difference of negative well-being, $F(2, 1922) = 5.44$, $p < 0.01$, diversity climate, $F(2, 1922) = 9.66$, $p < 0.001$, safety, $F(2, 1922) = 10.75$, $p < 0.001$, school culture, $F(2, 1922) = 19.41$, $p < 0.001$, social support $F(2, 1922) = 4.33$, $p < 0.045$, self-efficacy $F(2, 1922) = 10.36$, $p < 0.001$, and optimism, $F(2, 1922) = 6.28$, $p < 0.01$, by grade level position (elementary: PreK-5th grade; middle: 6th–8th grade; and high school: 9th–12th grade).

First, middle school teachers reported lower negative well-being ($M = 9.32$, $SD = 1.93$) than elementary ($M = 9.61$, $SD = 1.71$, $p < 0.045$) and high school teachers ($M = 9.68$, $SD = 1.75$, $p < 0.01$). In terms of the resources, there were several significant differences by grade level. High school teachers reported lower diversity climate scores ($M = 3.28$, $SD = 0.93$) than both elementary ($M = 3.50$, $SD = .84$, $p < 0.001$) and middle school teachers ($M = 3.45$, $SD = 0.87$, $p < 0.045$). Elementary school teachers reported greater perceived safety ($M = 3.73$, $SD = 0.73$) than high school teachers ($M = 3.53$, $SD = 0.75$, $p < 0.001$), and middle school teachers also reported greater perceived safety ($M = 3.69$, $SD = 0.73$) than high school teachers, $p < 0.001$. Elementary school teachers reported greater school culture scores ($M = 3.43$, $SD = 0.89$) than middle school teachers ($M = 3.31$, $SD = 0.91$, $p < 0.045$) and high school teachers ($M = 3.10$, $SD = 0.95$, $p < 0.001$). The difference between middle school and high school teachers was also significant, $p < 0.01$. Elementary school teachers reported greater social support ($M = 3.71$, $SD = 0.78$) than high school teachers ($M = 3.57$, $SD = 0.85$, $p < 0.045$). Elementary school teachers reported greater self-efficacy ($M = 4.08$, $SD = 0.78$) than middle school teachers ($M = 3.99$, $SD = 0.80$, $p < 0.01$) and high school teachers ($M = 3.98$, $SD = 0.85$, $p < 0.001$). Lastly, middle school reported higher optimism levels ($M = 3.61$, $SD = 0.59$) than elementary school teachers ($M = 3.52$, $SD = 0.61$, $p < 0.045$) and high school teachers ($M = 3.47$, $SD = 0.66$, $p < 0.01$).

4.2.5. Years of experience

There was a significant effect of years of experience on resources and teacher well-being, *Wilks'* $\Lambda = 0.94$, F (2, 1923) = 5.48, $p < 0.001$, partial $\eta^2 = 0.03$. Age was controlled for in this analysis. There was a significant difference in negative well-being, $F(2, 1923) = 7.14$, $p < 0.01$, political support, $F(2, 1923) = 4.81$, $p < 0.01$, instructional resources, $F(2, 1923) = 6.47$, $p < 0.01$, self-efficacy, $F(2, 1923) = 18.39$, $p < 0.001$, $p < 0.01$, and optimism $F(2, 1923) = 9.21$, $p < 0.001$.

In terms of well-being, novice teachers ($M = 9.66$, $SD = 1.77$) and intermediate teachers ($M = 9.63$, $SD = 1.73$) showed greater negative well-being than veteran teachers ($M = 9.55$, $SD = 1.84$, $p < 0.01$; $p < 0.01$). In terms of resources, there were several differences based on experience groups. Veteran teachers ($M = 2.10$, $SD = 0.68$) reported greater perceived political support than both novice teachers ($M = 2.00$, $SD = 0.64$, $p < 0.045$) and intermediate teachers ($M = 2.00$, $SD = 0.65$, $p < 0.01$). Veteran teachers ($M = 3.87$, $SD = 0.90$) reported more access to instructional resources when compared to novice teachers ($M = 3.67$, $SD = 0.92$, $p < 0.01$). Veteran ($M = 4.10$, $SD = 0.43$) and intermediate ($M = 4.05$, $SD = 0.44$) teachers reported higher self-efficacy than novice teachers ($M = 3.94$, $SD = 0.45$, $p < 0.001$; $p < 0.001$). Lastly, veteran ($M = 3.63$, $SD = 0.62$) teachers reported higher optimism level than both novice ($M = 3.46$, $SD = 0.63$, $p < 0.045$) and intermediate ($M = 3.52$, $SD = 0.58$, $p < 0.045$) teachers.

4.3. The relative contribution of resource in predicting teacher well-being

Overall, all resources were predictors of both positive and negative well-being on their own. However, one of the study's goals was to investigate the unique contribution that the resources had in predicting positive and negative well-being. Multiple regressions were used to predict positive and negative well-being from the eight resource variables entered simultaneously (See Table 1). To detect the potential for multicollinearity among the independent variables, a diagnostic check based on the assessment of variance inflation factors was performed [74]. The results suggested that multicollinearity was not a concern. In both analyses, demographic variables (years of teaching experience, school type and location, grade level, % of students on free/reduced lunch, age, gender, and race) were controlled for.

The model for resources predicting negative well-being was significant, $F(16, 1902) = 33.78$, $p < 0.001$, $R^2 = 0.19$. When entered simultaneously, an increase in optimism $b = -0.59$, $SE = 0.06$, $p < 0.001$, self-efficacy, $b = -0.61$, $SE = 0.09$, $p < 0.001$, social support, $b = -0.14$, $SE = 0.07$, $p < 0.05$, instructional resources, $b = -0.10$, $SE = 0.05$, $p < 0.05$, and political support, $b = -0.30$, $SE = 0.06$, $p < 0.001$ predicted a decrease in negative well-being. When entered simultaneously, safety, school culture, and diversity climate were not associated with a significant decrease in negative well-being.

The model for resources predicting positive well-being was significant, $F(16, 1902) = 62.32$, $p < 0.001$, $R^2 = 0.31$. When entered simultaneously, an increase in optimism, $b = 0.43$, $SE = 0.04$, $p < 0.001$, self-efficacy, $b = 0.94$, $SE = 0.08$, $p < 0.001$, social support, $b = 0.36$, $SE = 0.06$, $p < 0.001$, instructional resources, $b = 0.17$, $SE = 0.04$, $p < 0.001$, political support, $b = 0.12$, $SE = 0.05$, $p < 0.05$, and diversity climate, $b = 0.30$, $SE = 0.05$, $p < 0.001$, predicted an increase in positive well-being. When entered simultaneously, school culture and safety were not associated with a significant increase in positive well-being.

Table 1
Multiple regressions predicting negative and positive teacher well-being

	Negative well-being			Positive well-being		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Optimism	−0.59	0.06	−0.21***	0.43	0.06	0.16***
Self-efficacy	−0.61	0.09	−0.15***	0.94	0.08	0.25***
Social support	−0.14	0.07	−0.07*	0.36	0.06	0.17***
School culture	−0.10	0.06	−0.05*	0.00	0.05	0.00
Safety	−0.04	0.02	−0.02	0.03	0.05	0.01
Instructional resources	−0.10	0.05	−0.05*	0.17	0.04	0.09***
Political support	−0.30	0.06	−0.11***	0.12	0.05	0.05*
Diversity climate	−0.10	0.06	−0.05	0.30	0.05	0.15***
R^2		0.19			0.31	
F		33.78***			62.32***	

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

5. Discussion

Although research has investigated teacher well-being using the JD-R model, few studies have examined the contribution of these resources and demographic differences in the reported resources. The current study investigated the extent to which psychological, social, physical, organizational, and instructional resources related to measures of positive and negative teacher well-being and the relative contribution of these resources. Additionally, the current study investigated demographic differences in resources and well-being.

Based on the JD-R model and past findings in the literature on teacher well-being, it was hypothesized that resources would be positively associated with positive well-being and negatively associated with negative well-being. Results supported this hypothesis, such that increases in resources were associated with increases in positive well-being and decreases in negative well-being. These relations confirm the associations found in previous studies on teacher well-being focused on optimism, self-efficacy, social support, school culture, and instructional resources with teacher well-being [11, 22, 25, 32, 36, 75, 76]. These relations also confirm the associations found in previous studies on workplace well-being focused on safety, political support, and diversity climate among populations other than teachers [61, 77–81]. However, the current study supports these associations among teachers. Importantly, this provides confirmatory evidence for findings in previous research that safety, political support, and diversity climate are important resources for teachers. These significant associations between resources and well-being measures have important theoretical implications.

First, they confirm that institutional resources (e.g., political support and diversity climate) may play a role in teacher well-being. As a discussed addition to the JD-R model, this study confirms these relations and suggests that these resources are relevant in understanding, studying, and improving teacher well-being. Practical implications of the novel associations of these resources include improving diversity climate in schools and advocating for political support for teachers. For example, diversity, equity, and inclusion efforts in schools may have a direct impact on teacher well-being. Additionally, community groups that advocate on behalf of teacher needs in political arenas may also have this positive effect. Moreover, resources had different degrees of strength in association with positive and negative well-being. For example, diversity climate had a stronger relationship with positive well-being than it did with negative well-being. Diversity climate was a significant predictor of positive well-being but not of negative well-being. Further, diversity climate had a stronger relationship with job satisfaction than it did with work engagement. This provides support for the study of both positive and negative factors of well-being—and the addition of different components for each. The JD-R model uses work engagement as the primary positive factor of well-being, but a model of employee well-being that also includes job satisfaction may be a more comprehensive approach in studying well-being for teachers.

Next, while some demographic characteristics (race/ethnicity and gender) did not show any significant variance, other characteristics varied (e.g., school type, years of experience, and the percentage of students on free or reduced lunch). In terms of the socioeconomic status of students and school location, the results confirmed that teachers with a higher percentage of students receiving free or reduced lunch exhibited greater negative well-being and lower positive well-being. These findings are consistent with previous findings in the literature [37, 82]. However, contradictory to past research, the results did not show a difference in the well-being of teachers by location, while past research has shown that urban/city school teachers exhibit greater stress than suburban teachers [83]. Teachers with a high percentage of students receiving free or reduced lunch reported less instructional resources, social support, political support, less perceived safety, and lower school culture, and this may explain the reason for their lower positive and higher negative well-being. This also confirms past research that teachers in lower socioeconomic status schools leave due to poor working conditions, relationships with their colleagues, and school culture [84]. Though this study did not show differences in positive well-being by school type, which contradicts past research that suggests that charter school teachers are more satisfied than public school teachers [42], charter school teachers and public school teachers did have higher rates of negative well-being when compared to private school teachers. Private school teachers demonstrated the highest access to instructional resources and political support, which might account for these differences in well-being. Moreover, results show that charter schools had the highest diversity climate and school culture. It might be of interest to understand if these patterns repeat in future studies, and if so, what these schools do differently (beyond funding alone) to foster these resources.

In terms of experience level, results showed that novice teachers experienced the highest negative well-being, which confirms other studies that find that this group of teachers experiences greater stress and burnout [45]. Novice teachers reported less optimism, self-efficacy, access to instructional resources, and political support than experienced teachers. Even still, they displayed the greatest levels of negative well-being. These results confirm findings related to self-efficacy [46] and suggest that training that bolsters self-efficacy may be beneficial for novice teachers. Few studies have examined well-being differences between grade levels. However, the current results confirm evidence that high school teachers show higher negative well-being when compared to elementary school teachers [48]. High school teachers reported less social support, lower school culture, lower perceived safety, and lower diversity climate, which might account for their higher negative well-being. Future studies could investigate these resource differences and what high schools could do to increase school culture to improve teacher well-being. Finally, while past research has been mixed on the topic [45, 50], no race/ethnicity or gender differences were identified within the designs of this study. However, several demographic differences merit attention from both researchers and interventionists. These differences can direct those interested in improving teacher well-being toward a starting point (e.g., focusing on novice teacher self-efficacy).

Lastly, the uniqueness of these resources in predicting measures of well-being was assessed exploratorily. Results confirmed that certain resources were stronger predictors of positive well-being and negative well-being. For positive well-being, in order of strongest to weakest: self-efficacy, social support, optimism, diversity climate, instructional resources, and political support were all significant predictors. School culture and safety were not significant predictors. For negative well-being, in order of strongest to weakest: optimism, self-efficacy, political support, social support, school culture, and instructional resources were all significant predictors. Safety and diversity climate were not significant predictors. These results also provide further support for the study of positive and negative components of well-being. For example, improving school culture may be more important for decreasing stress and burnout than for increasing job satisfaction and engagement.

Approaching these resources to target different features of well-being could bolster teacher well-being overall. Safety and diversity climate did show relationships with well-being factors for teachers so they should still be considered and measured as resources in studies

that replicate these findings. This research showed that they were not significant predictors; however, different models or future studies could yield different results given the significant correlations. For example, safety may be more of an important factor in schools where safety is more of a threat.

Currently, many school interventions that aim to improve teacher well-being focus on one factor or resource. While this type of study is done as such to study the individual effects without confounding variables, future studies could include groups that receive more than one intervention to see if the combined effect of resources has a compounding positive impact on teacher well-being. For example, a school intervention focusing on improving social support or increasing access to instructional resources might increase positive well-being but not decrease teacher stress. A similar intervention could also work on improving the school culture or advocate for political support to decrease negative well-being.

Though the current study showed many important results among a diverse and large subset of teachers, it was not without limitations. First, all analyses are correlations, and no variables were manipulated. Thus, there can be no causal interpretations, such that it cannot be confirmed from this research that any of the resources cause increases or decreases in well-being. Future research can measure teacher resources across time to assess causality. Moreover, the list of resources in this study was not all-encompassing. There are several resources that were not measured (e.g., autonomy, school building resources). As more resources are identified in the literature, future work can measure these different resources to identify their unique importance to teacher well-being. Next, though the internet provides an opportunity for a large sample size, collecting data from one social media platform could limit the representativeness of teachers given that the participants all share unique commonalities such as Instagram users, or followers of the same Instagram accounts.

The context of the pandemic should not be ignored when interpreting the results of this date. It is important to note that teacher well-being was largely affected by the sudden switch to remote learning. A study on the working conditions of the pandemic found that teachers reported challenges related to engaging students in remote learning (e.g., student internet access, struggle to motivate students virtually, and increased inequities for students) and managing their responsibilities at school and home [85, 86]. Moreover, the level of impact that resources may have on well-being could be exacerbated due to this context. For example, a survey of pre- and post-data found that emergency changes had a large negative impact on teachers' self-efficacy—but teachers who reported satisfaction with their school and district leadership were least likely to experience declines in self-efficacy [85, 87]. In the current study, there was a positive relationship between support and self-efficacy. A portion of this relationship could be explained by the high-stakes teaching environment. Though this is one example, all the results of this survey should be interpreted through this context, and this research should be repeated to confirm patterns of findings in post-pandemic teaching. Additionally, the data were collected at the beginning stages of the pandemic before teachers had experienced a full academic year with adjustments. Research done in later stages of the pandemic may yield different results.

Finally, the analyses of the demographic differences were exploratory and should be interpreted as such. Although the significant differences that were found are confirmed in the literature, the findings that differ from the literature or are novel should be interpreted with caution. These results need to be confirmed through other samples, and future work can continue to measure and assess these demographic differences.

6. Conclusion

This study extends the literature of teacher well-being by confirming novel resource associations with teacher well-being outcomes, assessing the unique contribution of these resources, and analyzing demographic differences among resource and well-being outcomes. This study has important practical and theoretical contributions for teacher well-being and JD-R model research as it establishes a preliminary confirmation between institutional resource needs and well-being outcomes. Theories that address teacher well-being, and even JD-R model research of employee well-being, might consider adding, measuring, and discussing institutional resources. Moreover, this study addresses a large gap in the literature by assessing the unique prediction of several resources. The results have implications for which resources are most important in addressing positive and negative teacher well-being. Lastly, this study provides strong evidence for the importance of studying both positive and negative factors of well-being as they have a range of associations with resource needs. The current study assesses the relationship between resource needs and well-being, highlights important resource needs that could have the biggest impact on teacher well-being, and provides a range of demographic differences among well-being and these resource needs.

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Conflicts of Interest

The authors declare that they have no conflicts of interest to this work.

Data Availability Statement

Data sharing is not available due to IRB protection of confidentiality set at the time of data collection. If you are interested in viewing deidentified data, please contact the first author.

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