

THE ASSOCIATION BETWEEN TEACHER-STUDENT RELATIONSHIPS (TSR) AND PUERTO RICAN TEACHERS' WELL-BEING

LA ASOCIACIÓN ENTRE LA RELACIÓN DOCENTE-ESTUDIANTE Y EL BIENESTAR DEL MAGISTERIO PUERTORRIQUEÑO

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RESUMEN

Hay escasas investigaciones sobre la Relación Docente-Estudiante (RDE) y sus efectos en el bienestar del magisterio. Usando como base el Modelo de Demandas y Recursos, el objetivo de este estudio fue examinar la relación entre la RDE y la salud mental del magisterio a través del bienestar relacionado con el trabajo. Analizamos la mediación que el compromiso laboral (*work engagement*) en el trabajo y el agotamiento emocional tienen en la relación entre la RDE y síntomas de ansiedad y depresión. La muestra incluyó 179 docentes en escuelas intermedias y secundarias en PR. Los resultados del análisis de mediación basado en regresión indicaron una relación indirecta significativa entre la RDE y los síntomas de ansiedad y depresión a través del compromiso laboral (*work engagement*) y el agotamiento emocional. Estos resultados tienen implicaciones teóricas y prácticas. Resaltan el rol de la RDE como un recurso social importante dentro el modelo de Demandas y Recursos laborales y reivindican la necesidad de desarrollar RDE positivas para mejorar el bienestar emocional y laboral del magisterio.

PALABRAS CLAVE: Relación docente-estudiante, compromiso laboral (*work engagement*), agotamiento emocional, ansiedad, depresión, Teoría de Demandas y Recursos.

ABSTRACT

Very little research has investigated the effect of Teacher-Student Relationships (TSR) on teachers' well-being. Based on the Job Demands-Resources (JD-R) Model, this study aimed to examine the relationship between TSR and teachers' mental health through work-related well-being. We analyzed the mediation role of work engagement and emotional exhaustion in the relationship between TSR and anxiety and depression symptoms. The sample included 179 educators across middle and high schools in Puerto Rico (PR). The results of regression-based mediation analyses indicated that TSRs have a significant indirect relationship with anxiety and depression symptoms through work engagement and emotional exhaustion. Our findings have theoretical and practical implications. TSR becomes evidently relevant within the JDR Model as a social resource and revindicates the need to develop positive TSR to improve educators' emotional and work-related well-being.

KEYWORDS: teacher-student relationships, work engagement, emotional exhaustion, anxiety, depression, Job Demands-Resources (JDR) theory.

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Teachers face many responsibilities and demands. As a result, they experience high levels of job burnout, emotional exhaustion, low levels of work engagement, and high levels of anxiety and depression, among other behavioral health concerns (Hagenauer et al., 2015; Hakanen et al., 2006; Yin et al., 2018). Puerto Rican teachers often face job demands related to economic disparities, exacerbated by the heavy debt that the Island has accumulated over the years and the fiscal austerity measures imposed by the Fiscal Oversight and Management Board (Brusi, 2022). Ayala and Mazzei (2022) state the base pay of educators in (PR) is around \$1,750 a month. Other external factors impact teachers' work, including natural disasters, which alter their teaching environment (Ayala & Mazzei, 2022; Solano, 2023). The negative effect of these job demands emphasizes the importance of finding possible ways to minimize their impact on Puerto Rican teachers' health and well-being. Resources are important in addressing these challenges (Milatz et al., 2015; Soini et al., 2010). For example, Teacher-Student Relationships (TSR) have been found to be a beneficial and crucial resource in protecting educators against reduced well-being and mental health (Doménech-Betoret et al., 2015; Rodríguez-Camejo et al., 2019; Yee et al., 2022).

In this study, we examine how TSR relates to the mental health of educators in PR through work-related well-being. Prior studies on the Island suggest that a school climate that emphasizes positive relationship between teacher and students is a key factor for school success (Quintero, 2011). We draw on the Job Demands-Resources Theory (JD-R) assumptions that resources foster work engagement and reduce negative consequences such as emotional exhaustion, leading to improved performance and well-being (Bakker et al., 2023). We conceptualized TSR as a social resource that improves educators' work-related and emotional well-being (Milatz et al., 2015). Based on this, our aim is to investigate how TSR is related to levels of anxiety and depression of educators in PR when mediated by work engagement and emotional

exhaustion by applying the theoretical framework of the JD-R model.

Teachers' Well-Being in the Puerto Rico Context

Currently, the PR education public system employs 22,205 teachers (Puerto Rico Department of Education, 2023). Their work context is characterized by a precarious infrastructure, lack of resources, excessive bureaucracy, pay inequality, high workloads, insufficient time, and high levels of threats, bullying, and harassment at work, particularly from students (Agosto-Maldonado, 2021; American Federation of Teachers and Badass Teachers Association, 2017; Hernández, 2022). The compound effect of school closings, followed by natural disasters and COVID-19 exacerbated the precarious conditions of schools on the Island affecting the quality of education and the quality of life of its constituents (Agosto-Maldonado, 2021). Although the focus of this paper is not to delve into these factors, it is important to mention the numerous "forces that are behind the radical transformation of public schools and colleges in Puerto Rico" (Brusi, 2022, p. 825). As a result, educators in PR show higher levels of burnout and emotional exhaustion (González-Sánchez, 2018). Soto Santiago (2020) demonstrated that educators' burnout is negatively associated with work engagement (WE) and psychological well-being, and work engagement is positively related to psychological well-being. Moreover, a recent study conducted after Hurricane María with a sample of 8,167 teachers in PR found that the rates of likely significant symptoms of anxiety, depression, and post-traumatic stress disorder (PTSD) were 13.1%, 8.7%, and 5.4%, respectively (Sackey et al., 2023).

How can we improve the mental health of educators? Research has shown that educators show a deep sense of vocation and social commitment to their profession and that the relationship with their students is one of the main factors that motivates them to continue teaching and it is a source of emotional well-being (Rodríguez-Camejo et al., 2019). Successful schools in PR exhibit,

among other factors, a school climate that supports personnel learning and development (Quintero, 2011). This is relevant since school climate encompasses the quality of the relationship between students and the school's personnel as an important resource to promote learning and development (Quintero, 2011).

Teacher-Student Relationships

TSR are multi-dimensional, intricate, and interpersonal interactions between educators and their students (Hagenauer et al., 2015). It is crucial to understand how TSR influences the academic environment since 'interactions' are the most critical component of teaching and learning. Furthermore, interactions with students constitute the core of a teacher's pedagogical well-being (Soini et al., 2010).

To develop TSR, teachers must foster a caring, trustful, mutually respectful, interactive, well-structured, and academically excellent environment (Mosley et al., 2021). Spilt et al. (2011), based on different interpersonal theories argued that teachers who meet such conditions are likely driven by a physiological need for fulfillment through a sense of connection and emotional involvement with their students. Thus, a teacher's happiness and life satisfaction derive from securing a positive TSR (Milatz et al., 2015).

TSR is a significant source of a teacher's emotions which in turn positively affects the teacher's well-being (Rodríguez-Camejo et al., 2019; Yee et al., 2022). Lavy and Bocker (2017) discovered that an increase in meaning was positively related to TSR, which helped improve an educator's job satisfaction. TSR holds particular significance in PR, reflecting teachers' emphasis on community and relationships, making it an essential factor for successful schools (Camejo-Rodríguez et al., 2019; Quintero, 2011).

There is scarce research investigating the impact of TSR on educators (Spilt et al., 2011). Even more concerning is the lack of

literature on the effects of TSR on teachers in PR. We aim to investigate the relationship between TSR and Puerto Rican educator's well-being, focusing on work engagement, emotional exhaustion, and how these factors may influence the relationship between TSR and symptoms of anxiety and depression.

The Job Demands-Resources Theory

Teachers' well-being has been studied from multiple theoretical perspectives, including the JD-R Theory (Cabezas et al., 2022; Corso-de-Zúñiga et al., 2020). The JD-R theory distinguished two specific categories that characterized various work environments, job demands, and job resources. Job demands are "those physical, social or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs" (Demerouti et al., 2001, p. 501). Meanwhile, job resources are defined as "physical, social, or organizational aspects of the job that may do any of the following: be functional in achieving work goals; reduce job demands and the associated physiological and psychological costs; stimulate personal growth and development" (Demerouti et al., 2001, p. 501).

According to the JD-R model, challenging or increasing job demands could cause health impairments to the individual since it is positively associated with strain (job burnout) and negative health outcomes (Demerouti et al., 2001). This could be prevented if the workers have job, social and personal resources, to balance their job demands, which initiates a process leading to positive well-being outcomes (Bakker et al., 2023).

The JD-R theory has been effective in recognizing necessary tools to balance challenging job demands. Workers who meet challenging/rising demands with ample resources are more likely to experience positive well-being. Bakker et al. (2007) demonstrated this in a study of Finnish educators who were highly engaged despite

having high job demands, due to access to job resources like social support, appreciation from their supervisor, and a positive school climate. When a worker's job demands increase with limited resources, they are more likely to experience negative well-being outcomes. The model predicts that the frequency and or severity of job demands leads to increased effort, which in turn depletes employees' physical, emotional, and cognitive resources and may lead to exhaustion and health problems (Bakker et al., 2023). Consequently, exhaustion is associated with poor health and turnover intention (Huynh et al., 2014; Rodríguez Ramírez et al., 2017). Resources help improve the well-being of teachers. Engaged teachers show more job and personal resources (e.g., control and resilience), while teachers who experience burnout report more anxiety and depression (Yin et al., 2018).

TSR is a resource for teacher's well-being and can have long-lasting effects (Hascher & Waber, 2021; Milatz et al., 2015; Spilt et al., 2011). Rodríguez-Camejo et al. (2019) found among teachers in PR that the relationship with their students is one of the main factors that motivates them to continue teaching and it is also a source of emotional well-being. In this study, we identified TSR as a social resource that could improve the emotional and work-related well-being of educators. Social resources are "interpersonal interactions and interdependencies that are related to the group-level work context" (Hu et al., 2016, p. 128). Following the JD-R theory, we suggest that TSR, as an interpersonal interaction, satisfies basic psychological needs and fosters work engagement, which consequently leads to better well-being (Bakker et al., 2023).

TSR and Work Engagement

WE is "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli et al., 2002, p. 74). Enthusiasm, excitement, and energy are effective measures against job

demands (Bakker et al., 2007; Bakker et al., 2023). The JD-R model claims that when resources are used adequately, they can initiate a motivational process that will lead to an increase in individuals' well-being (Bakker et al., 2023).

TSR are social interactions teachers deal with every day. Thus, we believe that a positive TSR, as a social resource in the school context, predicts WE. When teachers experience positive TSR they show more enthusiasm, motivation, and effort (Mosley et al., 2021). Educators who found their interaction with students motivating were more likely to report an increase in WE (Runhaar et al., 2013). Furthermore, the need for relatedness among their students encourages educators to form a relationship with their students, which predicts higher levels of WE among teachers (Klassen et al., 2012). We hypothesized (H1) that TSR is positively related to WE.

TSR and Emotional Exhaustion

Emotional exhaustion (EE) affects an individual when they experience feelings of exhaustion, tiredness, and fatigue because of high workloads and loss of emotional resources (Demerouti et al., 2001). EE is one of the core elements of burnout along with depersonalization and lower personal achievement. Consequently, it makes it a usual sign of an educator's well-being (Doménech-Betoret et al., 2015).

Teachers are constantly interacting with their students and maintaining such relationships requires intense use of emotions that lead to teachers' EE. In a longitudinal study, Aldrup et al. (2018) found that student misbehavior was associated with a poorer quality of TSR, which led to a decrease in work enthusiasm and an increase in EE. Taxer et al. (2018) reported an indirect influence between TSR and EE through enjoyment and anger. Given this previous evidence, we hypothesized (H2) that TSR is negatively related to EE.

Work Engagement and Emotional Exhaustion as mediators

The JD-R theory proposes two processes initiated by the balance between job demands and resources. When resources are low, and demands are high, a health impairment process is initiated, leading to burnout and stress. Job demands exhaust workers' mental and physical resources, and this depletion may lead to health problems. When TSR is lacking, teachers become emotionally exhausted, which then predicts a further lack of well-being (Aldrup et al., 2018; Bakker et al., 2007; Taxer et al., 2018).

Evidence among educators indicates that school-level emotional job demands of teaching are positively related to teachers' anxiety and depression (Yin et al., 2018). Feelings of loss of control combined with low resources and students' lack of discipline are significant predictors of anxiety among educators (Hagenauer et al., 2015). Moreover, teachers with high burnout levels report higher levels of negative emotions toward students and more psychopathological symptoms over time (Burić et al., 2019). Negative emotional states, like anxiety and depression, can be reduced if educators develop a positive relationship with students (Klassen et al., 2012).

If given adequate resources, an individual in any given job context will positively initiate a motivation process that will lead to positive well-being outcomes (Bakker et al., 2023). Job resources motivate individuals and lead to higher WE, low burnout, and better performance and health outcomes (Bakker et al., 2023). For example, Torp et al. (2012) found negative correlations between job resources and depression and WE and depression. Additionally, WE mediated the relationship between job resources and depression. We believe that positive TSR serves as a social resource initiating a motivational process, identified as WE, that will help reduce negative psychological experiences (e.g., anxiety and depression symptoms) experienced by the educator. This

is why we have hypothesized, (H3) that WE mediates the relationship between TSR and anxiety, and in addition, (H4) WE mediates the relationship between TSR and depression, (H5) EE mediates the relationship between TSR and anxiety, and (H6) EE mediates the relationship between TSR and depression.

METHOD

Sample

The sample consisted of 179 teachers from five public middle and high schools in PR. Most participants were female (82.1%), with ages ranging from 24 to 70 years old ($M = 45.01$, $SD = 10.39$). Regarding education level, 46.9% completed a bachelor's and 36.3% completed a graduate degree. Most of the participants had a permanent position (69.3%) and, on average, worked 7.15 years in the school ($SD = 6.87$). Participants reported a mean of 14.10 years ($SD = 8.69$) working at the Department of Education (DE). Most of the participants (67%) reported not having received psychological services for emotional health concerns. However, 20.7% of teachers reported moderate to severe anxiety symptoms, and 17% reported moderate to severe depression symptoms (Table 1). Participants were required to be workers in the schools to take part in the study. Teachers with three months or less working in the school were excluded.

TABLE 1.
Sociodemographic characteristics of the sample.

Variable	<i>f</i>	%
Gender		
Female	147	82.1
Male	30	16.8
No answer	2	1.1
Educational Level		
High School	4	2.2
University credits but not degree	6	3.4
Technical degree or associate degree	8	4.5
Bachelor's degree	84	46.9
Graduate degree	65	36.3
Other	2	1.1
No answer	10	5.6
Received psychological services in the past		
Permanent	124	69.3
Transitory	31	17.3
Contract	23	12.8
No answer	1	0.6
Received psychological services in the past		
Yes	59	33.0
No	120	67.0
No answer	6	2.3
Anxiety symptoms		
None	83	46.4
Mild	51	28.5
Moderate	27	15.1
Severe	10	5.6
No answer	8	4.5
Depression symptoms		
None	102	57.0
Mild	40	22.3
Moderate	18	10.1
Moderate/Severe	9	5.2
Severe	3	1.7
No answer	7	3.9

Procedure

We used secondary data from a service program which aimed to provide culturally sensitive services to students, families, and personnel in public schools in PR to strengthen the health and well-being of the community through promotion, prevention, and treatment (De Pedro Serbia et al., 2022). School personnel were invited to an orientation meeting conducted in the five participating schools in the Cataño, Toa Baja and Aibonito municipalities of the Island to present the services geared towards students,

caregivers, and school personnel. During the meeting, the consent form was explained, and participants signed it and returned it in a sealed envelope to the research team. Once the orientation was completed, participants were asked to voluntarily and anonymously complete an organizational health questionnaire. All questionnaires were in Spanish. The assessment was intended to collect data regarding school personnel's job resources and demands, as well as mental and work-related well-being to identify and design prevention services. Participants received a \$30.00 gift card as an incentive for

their participation in the assessment. We received IRB approval from Kennesaw State University (IRB-FY24-271).

Measures

Teacher-Student Relations. We used the *Students Relations* subscale of the *Revised School Level Environment Questionnaire* (R-SLEQ; Johnson et al., 2007) translated into Spanish to measure the perception of teachers regarding their relationship with students. Some item examples are: “*Most students are well mannered or respectful of the school staff*”; “*Most students are helpful and cooperative with teachers*”. Participants responded to the items with a 5-point Likert Scale (1=Never; 5=Always). Cronbach's alpha reliability estimate (α) was .84.

Work Engagement. We used the ultra-short version of the Utrecht Work Engagement Scale in Spanish (Sánchez-Cardona et al., 2023; Schaufeli et al., 2019). This abbreviated version presents psychometric properties comparable to the 9-item version in several languages, including Spanish. It includes an item belonging to each of the dimensions of work engagement: “*In my work, I feel full of energy*” (vigor); “*I am excited about the work I do*” (dedication); “*I am immersed in my work*” (absorption). The items were answered using a 7-point Likert scale (0= Never; 6= Everyday). This scale showed good internal consistency ($\alpha = .80$).

Emotional Exhaustion. We used the 5-item sub-scale of the Spanish version of the Maslach Burnout Inventory (MBI) General Survey (Salanova et al., 2000) to measure emotional exhaustion. Participants used a 5-point Likert scale to answer all items (1= Never; 5=Constantly). Cronbach's alpha reliability estimate (α) was .92.

Anxiety. We used the Generalized Anxiety Disorder scale (GAD-7), a brief self-administered 7-item scale designed to assess symptoms of anxiety (Spitzer et al., 2006). Participants responded to the items with a four-point scale describing the frequency of

symptoms in the last two weeks (0 days; 1-6 days; 7-12 days; 12-14 days). A total score of 0-4 corresponds to no symptoms, 5-9 to mild symptoms, 10-14 to moderate symptoms, and 15-21 to severe symptoms of anxiety. The internal consistency of the scale is excellent, resulting in a Cronbach (α) of .92 (Spitzer et al., 2006). The Spanish translation of the instrument has also presented favorable psychometric properties among Hispanic samples (Merino-Soto et al., 2023; Mills et al., 2014). Cronbach's alpha reliability estimate (α) was .92.

Depression. We used the Patient Health Questionnaire-8 (PHQ-8). The scale consists of eight items for the assessment of depression symptoms based on the criteria of the Diagnostic and Statistical Manual for Mental Disorders, Fourth Edition (DSM-IV; Dhingra et al., 2011). Participants responded to the items with a four-point scale describing the frequency of symptoms in the last two weeks (0 days; 1-6 days/several days; 7-12 days/more than half of the days; 12-14 days/nearly every day). The lowest total score is zero and the highest score is 24, where a score between 0 to 9 indicates mild depression symptoms, 10 to 14 is a moderate degree of depression, 15 to 19 is moderate to severe, and 20-24 is severe (Dhingra et al., 2011; Kroenke et al., 2009). Cronbach's alpha reliability estimate (α) was .91.

Control variables. We decided to control for age and years working in the Department of Education in the analysis. Evidence suggests that age and tenure, although correlated, have different effects on health-related work outcomes (Dobrow et al., 2018; Guzzo et al., 2023; Ramos et al., 2016). Among teachers, well-being (e.g., burnout) differed when comparing groups with different years of experience (i.e. 0–5, 5–10, 10–20, and more than 20 years of experience; Alverio-Ortiz, 2022; Royer & Moreau, 2016). Also, young workers with high job tenure have shown vulnerability to job demands and the lack of certain job resources (Ramos et al., 2016).

Data Analysis

We conducted descriptive and correlation analyses with all variables. A series of regression-based mediation analysis using PROCESS macro for SPSS (Hayes, 2018) were conducted to test the association between TSR and anxiety, and depression symptoms through WE and EE. In all analysis we controlled for age and years working in the agency. A 1000-sample bootstrap procedure with heteroscedasticity-consistent standard errors was used to estimate bias-corrected confidence intervals (BaCIs) to test the indirect effect. If CIs do not contain 0, indirect effects are considered meaningful to support mediation. All analyses were conducted using IBM SPSS v. 28.

RESULTS

Descriptive and Correlation Analysis

Table 2 shows the descriptive statistics and correlation analysis of the study variables. TSR was positively related to WE ($r = .347, p < .01$), and negatively related to EE ($r = -.284, p < .01$), anxiety symptoms ($r = -.153, p < .05$) and depression symptoms ($r = -.184, p < .05$). We also examined the correlation of age and years working in the DE with variables in the study. Age was related to TSR and wellbeing indicators in the study, while years working in the DE was related to TSR as expected (Alverio-Ortiz, 2022; Royer & Moreau, 2016). We decided to include these variables as control variables in the subsequent regression analysis.

TABLE 2.
Descriptive statistics, reliability, and correlations of the study variables.

Variables	M	SD	α	1	2	3	4	5	6
1. Teacher-Student Relationship	3.02	.700	.84	-					
2. Work engagement	3.86	.806	.80	.347**	-				
3. Emotional Exhaustion	2.88	.943	.92	-.284**	-.639**	-			
4. Anxiety Symptoms	5.86	4.90	.92	-.153*	-.241**	.396**	-		
5. Depression Symptoms	5.00	5.08	.91	-.184*	-.344*	.427**	.838**	-	
6. Age	45.01	10.39	-	.254**	.189*	-.228**	-.310**	-.192*	-
7. Years working in the Department of Education	14.10	8.69	-	.318**	-.012	.045	-.063	.026	.609**

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Hypothesis Testing

We conducted four regression-based simple mediation analyses including anxiety and depression symptoms as outcome variables and WE and EE as mediators. Table 3 shows the results of the model, including WE as a mediator. When considering anxiety as an outcome, results show no significant relationship between TSR and anxiety ($\beta = -.045, p = .614$). TSR is positively related to WE ($\beta = .375, p < .001$), and WE is negatively related to anxiety ($\beta = -.177, p = .045$). TSR

showed an indirect relationship with anxiety through WE (Indirect effect = $-.066, SE = .035$; 95% BaCI $[-.143, -.005]$). The second model included depression symptoms as the outcome variable. No significant relationship between TSR and depression was found ($\beta = -.133, p = .170$). TSR was positively related to WE ($\beta = .388, p < .001$), and WE was negatively related to depression ($\beta = -.288, p = .007$). TSR showed an indirect relationship with depression through WE (Indirect effect = $-.111, SE = .038$; 95% BaCI $[-.195, -.044]$).

TABLE 3.

Regression-based mediation of work engagement in the relationship between TSR, anxiety and depression symptoms.

Mediation Model 1				Work engagement (M)				Anxiety Symptoms (Y)			
Predictor	β	SE	p	BaCI	β	SE	p	BaCI			
TSR	.375	.114	.000	[-.229, .684]	.020	.680	.827	[-1.197, 1.495]			
Work engagement	-	-	-	-	-.177	.515	.045	[-2.060, -.012]			
Age	.264	.007	.006	[.006, .036]	-.287	.054	.013	[-.243, -.028]			
Year working in DE	-.254	.009	.014	[-.042, .004]	.103	.070	.428	[-.083, .196]			
R ² = .184				R ² = .104							
F(3,134) = 11.598, p < .001				F(4,133) = 4.633, p = .001							
Mediation Model 2				Work engagement (M)				Depression Symptoms (Y)			
Predictor	β	SE	p	BaCI	β	SE	p	BaCI			
TSR	.388	.108	.000	[.251, .679]	-.021	.701	.828	[-1.539, 1.234]			
Work engagement	-	-	-	-	-.288	.497	.007	[-2.707, -.739]			
Age	.254	.006	.003	[.006, .033]	-.123	.042	.179	[-.141, .026]			
Year working in DE	-.242	.009	.014	[-.040, .004]	.102	.060	.353	[-.063, .177]			
R ² = .19				R ² = .11							
F(3,133) = 11.405, p < .001				F(4,135) = 4.854, p = .001							

Note. DE = Department of education; BaCI = Bias-corrected confidence intervals; TSR = Teacher-Student-Relationshipship.

The third and fourth models included EE as a mediator (Table 4). Results showed no significant relationship between TSR and anxiety symptoms ($\beta = -.0656$, $p = .4877$). TSR was negatively related to EE ($\beta = -.286$, $p = .001$), and EE was positively related to anxiety ($\beta = .312$, $p < .001$). TSR showed an indirect relationship with anxiety through EE (Indirect effect = $-.089$, SE = $.038$; 95% BaCI [-.172, -.024]). When considering depression

symptoms as an outcome, results showed no significant relationship between TSR and depression ($\beta = -.050$, $p = .591$). TSR was negatively related to EE ($\beta = -.301$, $p = .002$), and EE was positively related to depression ($\beta = .363$, $p < .001$). TSR showed an indirect relationship with depression through EE (indirect effect = $-.109$, SE = $.043$; 95% BaCI [-.204, -.034]).

TABLE 4.

Regression-based mediation of emotional exhaustion in the relationship between TSR, anxiety and depression symptoms.

Mediation Model 3				Emotional Exhaustion (M)				Anxiety Symptoms (Y)			
Predictor	β	SE	p	BaCI	β	SE	p	BaCI			
TSR	-.286	.137	.005	[-.659, -.113]	.024	.632	.781	[-1.074, 1.426]			
Emotional Exhaustion	-	-	-	-	.312	.485	.000	[.714, 2.672]			
Age	-.362	.009	.001	[-.052, -.013]	-.258	.052	.017	[-.230, -.022]			
Year working in DE	.317	.011	.002	[.012, .056]	.050	.072	.681	[-.113, .1732]			
R ² = .168				R ² = .184							
F(3,132) = 9.413, p < .001				F(4,131) = 5.957, p = .0002							
Mediation Model 4				Emotional Exhaustion (M)				Depression Symptoms (Y)			
Predictor	β	SE	p	BaCI	β	SE	p	BaCI			
TSR	-.302	.130	.002	[-.658, -.144]	-.050	.705	.591	[-.177, 1.015]			
Emotional Exhaustion	-	-	-	-	.363	.542	.000	[.980, 3.124]			
Age	-.325	.008	.001	[-.045, -.010]	-.139	.043	.120	[-.155, .014]			
Year working in DE	.299	.010	.003	[.011, .053]	.066	.065	.535	[-.089, .171]			
R ² = .157				R ² = .182							
F(3,133) = 8.490, p < .001				F(4,132) = 4.889, p = .001							

Note. DE = Department of Education; BaCI = Bias-corrected confidence intervals; TSR = Teacher-Student Relationshipship.

DISCUSSION

Drawing on the propositions of the JD-R Theory, we aimed to test the relationship of TSR with WE and EE and test their mediator role in the relationship between TSR and anxiety and depression. Results showed a significant and positive relationship between TSR and WE among Puerto Rican teachers (H1 supported). The findings are similar to what the JD-R theorizes, that social job resources can be used to initiate a motivational process characterized by WE to combat exceeding demands (Bakker et al., 2023). Fostering and maintaining a positive TSR promotes teachers' WE which is characterized by enthusiasm and effort and is related to better health outcomes and performance (Bakker et al., 2023; Runhaar et al., 2013).

Our analysis also indicated a negative relationship between TSR and EE (H2 supported). As predicted by the JD-R Theory, inadequate resources (i.e., TSR), will predict EE. A poor relationship with students is a key source of stress (Spilt et al., 2011). It increases emotional demands leading to fatigue and draining emotional and cognitive resources.

Our results demonstrated that WE and EE mediate the relationship between TSR and anxiety. TSR is positively related to WE, which in turn is related to lower levels of anxiety and depression (H3 and H4 supported). If teachers form positive TSR, they will feel more energetic towards their job, therefore they will most likely avoid feeling exhausted and lessen the possibility of experiencing anxiety and depression symptoms. On the contrary, the negative relationship of TSR with EE indicates that poor relationship with students initiates a health impairment process characterized by EE, which in turn relates to higher levels of anxiety and depression (H5 and H6 supported). Previous research also supports the negative association of job resources with depression (Torp et al., 2012), indicating the relevance of promoting job and social resources to increase workers' mental health and well-being.

Theoretical Implications

Our results support and add to the existing JD-R theory in two distinct ways. Our results imply that TSR can be identified as a social resource through the JD-R model. Hu et al. (2016) argue the need to recognize the dimensionalities of job resources, specifically social resources. They believe social resources are unique and can indirectly influence wellbeing outcomes as well. Since TSR are social interactions related to the work context, they should be considered as a relevant social resource (Hu et al. 2016) that could be fostered and improved. This is in line with prior qualitative research in PR that found that the relationship with the students is one of the main drivers to continue teaching and a source of emotional well-being (Rodríguez-Camejo et al., 2019). Furthermore, our results support the notion that TSR as a social resource can indirectly predict anxiety and depression symptoms when mediated by WE or EE.

We also found that TSR indirectly relates to anxiety and depression symptoms. There is little research that proposes a direct relationship between TSR, depression, and anxiety. This could be because depression, for example, was seen as an extremely negative emotion unaffected by TSR alone (Huppert, 2009). WE and EE are relevant work-related well-being indicators underlying the motivation and health impairment process predicted by the JD-R model that mediates the relationship between TSR and anxiety and depression symptoms.

Practical Implications

The results presented in this study also have practical implications to educators and administrators in the field. Our results support the relevance of fostering and promoting positive school climates that enable quality TSR. As our results indicate, these positive relationships between students and teachers promote greater WE and less EE which in turn leads to better mental health and well-being. Teachers are bound to experience

challenging job demands as part of their daily job. An inherent part of an educator's job is the interaction with students. The lack of a positive TSR leaves teachers vulnerable to anxiety and depression symptoms. School systems should emphasize and promote TSR in the classrooms as not mere interactions but as the foundation for student success and more importantly teachers' wellbeing (Yee et al., 2022). For instance, counselors in schools are great resources that schools can utilize to educate teachers about how to develop successful TSR (Helker et al., 2007). Furthermore, additional strategies can be implemented in classrooms, such as getting to know their students better, providing meaningful feedback, and consistently praising good behavior (Rimm-Kaufman & Sandilos, 2015).

Lastly, previous literature has hinted at the limited efficiency of TSR in secondary schools. Blatchford et al. (2011) suggest teachers in primary schools invest more of their emotions in TSR than teachers in a high school setting. Cacciamani et al. (2022) also saw teachers in primary schools having more vigor and dedication, important components of WE, than teachers from secondary schools. Although prior literature suggests TSR are harder to develop in a secondary context, our study with secondary school educators demonstrates the benefits of TSR in enhancing work-related well-being and mental health.

Limitations and Future Directions

This study presents some limitations that must be considered. This study was cross-sectional which does not allow us to analyze any causal relationship. Future studies should evaluate the evolution of TSR and how it can influence more pervasive negative emotions such as depression and anxiety over time when mediated by EE and WE. The sample is small limiting its heterogeneity and representativeness; however, it represents educators from different schools located in different regions on the Island. Future studies should

conduct similar tests with a larger sample and with educators from other regions in Latin America and their educational systems to increase the generalizability of the results.

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