

TEACHER SELF-EFFICACY, DISPOSITIONAL OPTIMISM, RESILIENCY, AND CLASSROOM MANAGEMENT IN HIGH SCHOOLS IN PUERTO RICO

LA AUTOEFICACIA DE DOCENTES, OPTIMISMO DISPOSICIONAL, RESILIENCIA Y MANEJO DEL AULA EN LAS ESCUELAS SECUNDARIAS DE PUERTO RICO

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ABSTRACT

This study evaluated whether self-efficacy, dispositional optimism, and resilience affected teachers' classroom management in high school classrooms in Puerto Rico. A quantitative research design was adopted which utilized multiple regression analyses of four Likert-scale questionnaires. The sample was comprised of high school teachers ($N = 58$) from seven public high schools. Responses to the Behavior and Instructional Management Scale (BIMS) subscale of behavior management indicated that each variable was significantly associated with the dependent variable of behavior management in the classroom, but not with the subscale of instructional management. Significant associations between the scales and their associated subscales of the above measures are explored with implications for teachers and the learning environment. The study concludes with suggestions for future research, in particular on teacher resilience in relation to hope and zest, as well as ways to maintain teacher optimism and how an understanding of these variables may assist school psychologists in the Puerto Rican context.

KEYWORDS: Classroom management, resiliency, self-efficacy, social cognitive theory.

RESUMEN

Este estudio evaluó si la autoeficacia, el optimismo disposicional y la resiliencia afectaron el manejo del aula de docentes en las aulas de las escuelas secundarias en Puerto Rico. Se adoptó un diseño de investigación cuantitativa que utilizó análisis de regresión múltiple de cuatro cuestionarios en escala Likert. La muestra estuvo compuesta por docentes de secundaria ($N = 58$) de siete escuelas secundarias públicas. Las respuestas a la subescala de "behavior management" y "instructional management" (BIMS) indicaron que cada variable estaba significativamente asociada con la variable dependiente de "behavior management", pero no con la subescala de "instructional management". Se exploran asociaciones significativas entre las escalas y sus subescalas asociadas de las medidas anteriores con implicaciones para los profesores y el entorno de aprendizaje. El estudio establece sugerencias para futuras investigaciones, en particular sobre la resiliencia de docentes en relación con la esperanza y el entusiasmo, así como las formas de mantener el optimismo de docentes y cómo la comprensión de estas variables puede ayudar a profesionales de la psicología escolar en el contexto puertorriqueño.

PALABRAS CLAVE: Manejo del aula, resiliencia, autoeficacia, teoría social cognitiva.

Teaching is challenging and requires many competencies. These include pedagogical and curriculum knowledge, and strategies that facilitate the transfer of knowledge to students. A challenge to developing these skills is managing classroom behavior. In fact, poor student behavior and discipline problems within the classroom are among the most cited concerns for both preservice and practicing teachers (Hong, 2012).

Typically, behavior management strategies are taught in teacher education programs and then refined in the classroom context. However, it is problematic that novice teachers report a lack of adequate classroom management preparation. In most cases, classroom behavior is monitored by school administration, which contributes to teacher stress and burnout. Teacher burnout is associated with sustained feelings of dissatisfaction and negativity leading to emotional exhaustion and a lower sense of personal accomplishment and is an issue as, at worst, it can result in teachers leaving the profession. Student misbehavior and a real or perceived inability to manage it is a leading cause of teacher burnout (Aloe et al., 2014; Reeves, 2012).

Teachers experiencing high stress and burnout with low coping abilities are frequently negatively associated with poor student outcomes (Herman et al., 2018). Thus, it is helpful to consider relevant concepts from psychology in terms of their potential to mediate concerns around behavior management. Specifically, these include the notions of perceived self-efficacy, dispositional optimism, and resilience in the context of Bandura's (1996) Social Cognitive Theory (SCT). To the best of our knowledge, no study explores the relationships among them in relation to classroom management. Further, it has been shown previously that teacher gender plays a role in perceived levels of teacher self-efficacy (Lesha, 2017) and overall approach to classroom management, so this is taken into consideration in the current study.

The contextual focus of this study is Puerto Rico, which is faced with its own set of unique social and cultural issues that impact both the ongoing work of teachers—inclusive of issues related to classroom management—and teacher retention. To situate this study, it is necessary to have an understanding of the educational system in Puerto Rico and Puerto Rican students' characteristics and needs within the broader context of Puerto Rico's social issues. This research considers how self-efficacy, dispositional optimism, and resilience can be nurtured in teachers in Puerto Rico (and other contexts) to enhance job satisfaction and reduce teacher burnout.

Puerto Rico has been a US territory since 1898, thus establishing a colonial relationship, meaning the island is treated differently to continental states. For example, when Hurricane Maria struck in 2017, federal aid was slow to arrive and insufficient. A similar situation emerged in 2020 after earthquakes hit. The differences in aid that the island has received vs. the continental states has worsened disparities in areas such as education and healthcare (Peón, 2020). Puerto Rico has also failed to launch an economic recovery, further increasing the gap between wages and the cost of living and accelerating migration. Furthermore, the decade-long financial crisis is driven by its massive, unpayable debts, which is relevant given the youth unemployment rate in 2018 in Puerto Rico was 25.82%; this statistic refers to the proportion of the labor force aged 15-24 that is without work but are actively seeking employment. Puerto Rico also had an overall unemployment rate of 11.44% in 2018. This compares to a US unemployment rate of 3.93% in the same year (MacroTrends, 2020).

In Puerto Rico, there are 1120 public schools serving 345,815 students (Puerto Rico Department of Education School District, 2021) and over 700 private schools (Calderón Soto, 2013) for a 2021 population of approximately 2,824,790 (World Population Review, 2021). As in continental US, education is compulsory for Puerto Ricans for 13 years, from kindergarten until age 18 (Vivian

& Rullán, 2010). According to the Instituto de Desarrollo de la Juventud [the Institute of Youth Development] (2017), 56.8% of children live in poverty in Puerto Rico. Some municipalities have poverty rates of 83%. Furthermore, only 51% or 22,251 of boys and girls between 3-4 are enrolled in school compared to 69% of minors living in households above the level of poverty. Using the most recent available data from the 2010/2011 school year, Therriault et al. (2017) found that out of students who were enrolled in school in tenth grade, 68% graduated three years later. However, for many students in Puerto Rican schools, academic performance may not be related to future success. In Puerto Rico today, a young person who finishes high school and obtains a degree in higher education has little guarantee of obtaining adequately paid employment due to factors such as student loan debt (Marcus, 2019). Additionally, according to Milligan (2018), those in many skilled professions end up leaving the island due to insufficient pay and high living costs.

Poverty is connected to behavioral problems and lower educational attainment (Guo & Harris, 2000; McLeod & Nonnemaker, 2000). Thus, the reality of the economic challenges in Puerto Rico bleed into the educational context and magnify the issues of students from low socioeconomic backgrounds and may necessitate increased strategies to demonstrate higher levels of teacher self-efficacy to successfully educate these students. Relatedly, high dropout rates also play a role in teachers' abilities to demonstrate classroom self-efficacy as it may indicate problems in student behavior and/or at school sites. Irizarry and Quintero (2005) stated that the high dropout rate may be due to conflict with teachers and poor behavior management skills, lack of support from school personnel, academic difficulties, absenteeism, truancy, classes not relating to student interests, falling behind, school suspensions and discipline problems.

This information suggests there are benefits to be gained from investigating the

challenges of classroom management. For instance, when teachers feel confident with their classroom and behavior, they tend to feel less stressed and can develop more productive and engaged relationships. Brown (2019) found that having students' respect and feeling less exhausted were effective ways for teachers to increase their professional self-efficacy. This benefits students through stronger student-teacher relationships, which can lead to more effective student support. With these factors already in play in addition to other hardships, students' ability to attain quality education is difficult and teachers' tasks are intensified (Brown, 2019). Such uncertainties impact student engagement and require teachers to possess or develop an array of strategies to demonstrate higher levels of self-efficacy. In fact, a significant negative correlation has been found between personal self-efficacy and teacher burnout (Malinen & Savolainen, 2016).

Research has shown that a teacher demonstrating high self-efficacy is rated as being less involved in modifying student behavior with students who have a significant influence in the classroom (noninterventionist) (Cerit, 2011). However, Cerit (2011) also found that teachers with higher levels of personal and general teaching efficacy scored as more interventionist in their management orientations. Comparing this discrepancy to the current research examining Puerto Rican teachers will be explored in more depth in the discussion section.

This study examined classroom management using the Behavior and Instructional Management Scale (BIMS). A high BIMS score indicates a more controlling, interventionist approach, while a lower score shows the opposite. Development of the BIMS held the idea that classroom management style is a multi-faceted construct of two components: behavior management and instructional management. Behavior management might include establishment of an effective reward structure (e.g., creating rules) and encouraging student input, which can prevent misbehavior and maintain classroom order.

Instructional management includes teachers' duties (e.g., overseeing classwork), classroom management styles, and the effect of the instructional approach on the general classroom atmosphere (Martin & Sass, 2010).

Although the present study is indeed situated in Puerto Rico, at its core the focus is of relevance to teachers in any context, as behavior management is an unavoidable and critical aspect of the job of any teacher. Thus, although we aim to develop strategies to help Puerto Rican teachers develop behavior management through self-efficacy, dispositional optimism, and resilience, we also hope that the findings can be helpful to teaching colleagues around the globe.

Theoretical Framework: Social Cognitive Theory

Utilizing Bandura's (1986) social cognitive theory (SCT), this study explored the relationship between self-efficacy, dispositional optimism, and resiliency in high school teachers' behavior management skills in Puerto Rican public schools. SCT explains human cognition, motivation, and emotions impacting the ability to self-reflect and self-regulate and holds that people are not passive in their environments but actively shape them.

Within SCT, Bandura (1986) proposed a triadic model of human functioning. This involves interaction between an individual's behavior, environment, and intrapersonal aspects of the individual's life. Bandura (1977) explains that self-efficacy develops through four avenues, namely when individuals (a) experience success (mastery experiences), (b) see their peers succeeding (vicarious experience), (c) are encouraged to try new practices (social persuasion), and (d) experience less stressful teaching situations, over which they feel they have more control (physiological factors). While SCT has been explored extensively, a gap exists concerning the connection between the constructs of teacher self-efficacy, dispositional optimism, and resilience. This is significant as each variable is a potential component of a teacher's perceived self-efficacy (Taylor,

2013). It follows that a better understanding of these variables is important due to the positive impact on teacher behavior that fosters a positive learning environment for students and, subsequently, better behavior management in the classroom.

Michael Ungar (About Resilience, 2021, para. 2) defines resilience as, "In the context of exposure to significant adversity, resilience is both the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being, and their capacity individually and collectively to negotiate for these resources to be provided in culturally meaningful ways." Ungar et al. (2020) describe resilience in relationship to the environment one is in and put forth the idea that resilience is measured in one's ability to adapt to the environment even when under stress and open to vulnerability, and ultimately to overcome such situations when they arise. These perceptions of resilience apply Bandura's (2007) model of reciprocal determinism by interweaving personal, environmental, and behavioral factors to shape people's behaviors. SCT may play a key role in explaining how teachers demonstrate resilience. Few studies indicate how these constructs impact Puerto Rican teachers' classroom behavior management.

In positive psychology, dispositional optimism is described as one's general expectation of good outcomes in life (Scheier et al., 1994) and plays a major role in educational achievement and attitudes. For example, Huan et al. (2006) found a significant negative relationship between dispositional optimism and academic stress in students, meaning optimistic adolescents tended to report less academic stress and vice versa. Teachers' academic optimism is a similar construct (Beard et al., 2010). Fahy et al. (2010) define academic optimism as the collection of "teacher beliefs about behaviors, personal factors, and environmental factors" (p. 215) that predict student success. Academic optimism underscores teachers' sense of efficacy, trust in students and parents, and academic emphasis forming teachers' sense

of their ability to succeed. Similarly, Beard et al. (2010) found that the greater a teacher's sense of personal optimism, the greater the teacher's academic optimism. This work relates to the current study by highlighting the degree to which external factors influence a teacher's sense of academic optimism and how academic optimism influences teachers' resiliency, self-efficacy, and ability to manage behavior.

Research Question and Aims

This study aimed to explain how teachers' perceived self-efficacy, dispositional optimism, and resilience account for the variability in teachers' perceived behavior management in Puerto Rican public school classrooms. The study followed a quantitative research design to explore self-efficacy, dispositional optimism, and resilience. To achieve the stated aims, the study was guided by the following primary research question:

RQ: To what extent do the variables of perceived teacher self-efficacy, dispositional optimism, and resilience explain teachers' classroom management in public high schools in Puerto Rico?

It is hoped that responding to this question will provide significant insights for teacher development in Puerto Rico and beyond in relation to classroom management.

METHOD

Data were collected through questionnaires using a correlational design. Prior to data collection, the four questionnaires were validated to ensure their reliability for use among teachers in Puerto Rico. The following steps were observed: 1) The Teacher Sense of Efficacy Scale long-form (TSES) and the Behavior and Instructional Management Scale (BIMS) questionnaires were translated from English into Spanish by a professional translator; 2) Four native Spanish-speakers ($N = 4$) also fluent in English and familiar with the variables utilized for this study judged the validity of the Spanish translation of these four

scales. Their feedback was integrated into these scales to ensure an accurate translation and back-translation; 3) The four questionnaires were piloted with 17 participants ($N = 17$) who differed from those in the second phase of the translation and validation process. These participants were similar to the target population (i.e., teachers in public schools in Puerto Rico). The goal of this pilot study was to gauge if the participants understood the items, to obtain the variability of the items asked, and to obtain their general feedback about the items. A space was made available alongside each question in the four questionnaires for participant feedback, which was integrated into the final questionnaires. The psychometric properties of these instruments were examined through the statistical package SPSS. Upon completion, the instruments were used for the 58 educators in this study. This study was conducted in 2016, prior to the COVID-19 pandemic.

A review and approval of each phase of this research with human participants was granted by the IRB of the University of Puerto Rico, as well as the Puerto Rican Department of Education. Consent for participation in this study was collected by presenting each teacher with a consent form prior to administering the questionnaires. Teachers were briefed on the aims of the study as well as the procedures, benefits and risks. All teachers who agreed to participate in the study either filled out the questionnaires at the time the consent form was signed, or at another future time. Confidentiality was ensured by using numbers in lieu of teachers' names.

The overall research design was driven by the following hypothesis:

H1. Higher levels of perceived self-efficacy, resilience, and dispositional optimism will explain the variability in teachers' perceived classroom management for public high school teachers in Puerto Rico using the subscales of behavior management and instructional management of the Behavior and Instructional Management Scale (BIMS).

Participants

Convenience sampling was utilized to recruit for the study. Participants for this study were Puerto Rican public high school teachers of the core subjects of English, Science, Mathematics, History, Physical Education, and Spanish. The sample was comprised of high school teachers ($N = 58$) from seven public high schools. A total of 190 teachers were contacted with the aim of 110 teachers completing the questionnaires. It took 45-60 minutes to complete the four questionnaires. Effort was made to get as much participation as possible, including follow-up calls and multiple visits to the school sites. Teachers who agreed to participate were given a welcome letter to the study as well as the consent form to fill out.

The majority of respondents were female ($N = 36$), with males included as well ($N = 10$). The remainder did not disclose gender. Subject areas were relatively evenly spread, ranging from Physical Education ($N = 3$) to social sciences and math (both $N = 8$). Grades taught ranged from nine to 12 and the number of participants ranged from eight teaching grade nine up to 18 teaching grade 11.

Instruments

Self-Efficacy

TSES (Tschannen-Moran & Hoy, 2001) examined teacher self-efficacy. The TSES includes 24 items on a 9-point Likert scale, which this study adapted to a 5-point scale in Puerto Rican Spanish for more focus (.93 Cronbach's alpha) to cover the dimensions of student engagement, instructional strategies, and classroom management. No Spanish version of this measure existed previously.

Dispositional Optimism

The Life Orientation Test-Revised (LOT-R; Scheier et al., 1994) scale examined dispositional optimism. It consists of 10 items phrased both positively and negatively—six scale and four filler items. The scores for the

three positively worded items and the three negatively worded items were summed. This questionnaire used a 4-point scale ranging from strongly agree to strongly disagree and a one-factor structure that measures pessimism and optimism on a continuum. A study of the Spanish version of the LOT-R found that internal consistency using a Cronbach's alpha coefficient was .73 (Cano-García, 2015). For the further validation of this scale for use in Puerto Rico for the current sample, the significance level was set at .05 and the validated questionnaire found a reliability alpha of .77.

Resilience

The Resilience Scale (RS; Wagnild & Young, 1993) is used to identify the degree of individual resilience. Though developed with a sample of older women, the RS is broadly applicable across ages and genders. All items on the RS are worded positively and ranked on a 7-point Likert scale from disagree to agree. Internal consistency reliability was estimated with Cronbach's alpha ($\alpha = 0.93$) for the original Spanish version of the RS (Heilemann, et al., 2003). The further validation of this scale for use in Puerto Rico for this sample was set at .05 and the validated questionnaire found a reliability alpha of .92.

Classroom Management

For the dependent variable of classroom management, a separate instrument was used. The BIMS is a derivative of the Attitudes and Beliefs on Classroom Control revised scale (ABCC-R; Martin et al., 1998). In the current study, the significance level was set at .05 and the BIMS showed internal consistency among the correlation coefficients on its subscales that all exceeded .70, resulting in a Cronbach's alpha value of .82. The scale comprises two 6-point Likert subscales for the construct of behavior management with 12 items each for behavior management and instructional management. Martin and Sass (2010) found that teachers with higher levels of efficacy were less likely to use a directive

approach in implementing instructional management tactics. No Spanish version of this measure existed previously.

Analysis

Pearson correlations were calculated to examine relationships between all key variables. The first multiple regression analysis explored the effect of the key variables on the variability in teachers' perceived behavior management. Gender was controlled for in these regression

analyses, as studies show that teachers' gender impacts their levels of teacher self-efficacy (Lesha, 2017). The second multiple regression model explored the effect of the key variables on the variability in teachers' perceived instructional management, also controlling for gender.

RESULTS

The descriptive statistics and reliability analysis of participant results are displayed in Table 1.

TABLE 1.
Descriptive statistics and reliability analysis of participant results.

Scale	Items	Total # Items	Cronbach's alpha	Mean	SD
Teacher Sense of Efficacy Score*	All items	24	.91	100.15	10.30
	Subscale: Efficacy in Instructional Strategies	8	.82	34.04	3.78
	Subscale: Efficacy in Classroom Management	8	.90	33.50	4.90
	Subscale: Efficacy in Student Engagement	8	.77	32.70	3.63
Behavior and Instructional Management Scale**	All items	24	.61	71.27	7.72
	Subscale: Behavior Management	12	.70	26	6.32
	Subscale: Instructional Management	12	.46	45	4.31
Life Orientation Test– Revised***	All items	9	.43	21.35	3.27
Resilience Scale****	All items	25	.60	148.85	23.95

Notes. *Measured on a 5-point scale with response categories ranging from (1) Nothing/Nada to (5) A great deal/Mucho. **Measured on a 6-point scale with response categories ranging from (1) Strongly agree/Totalmente de acuerdo to (6) Strongly disagree/Totalmente en desacuerdo. Items 4, 6, 9–12, 14, 18, and 24 were coded as reversed. ***Measured on a 4-point scale with response categories ranging from (1) strongly agree/Estoy completamente de acuerdo to (4) Strongly disagree/Estoy completamente en desacuerdo. Upon approval from the original author of this questionnaire, the neutral category of "I neither agree nor disagree" was removed in order to make a forced response. Items 5 and 7 were coded as reversed. ****Measured on a 7-point scale with response categories ranging from (1) Does not describe me/No me describe to (7) Completely describes me/Me describe completamente. Items 11 and 22 were coded as reversed.

Regression Results

Correlation analyses of independent and dependent variable associations are displayed in Table 2. A significant negative correlation was found between the TSES sum and the BIMS subscore of behavior management. A significant positive correlation was found between resilience and the TSES sum. The first regression model examined the influence of the primary variables on the behavior management BIMS subscale (see Table 3). Teachers' self-efficacy, dispositional optimism, and resilience significantly predicted performance on this BIMS subscale, explaining 31% of the variance. Post-hoc power analysis revealed the observed power

for each model. In the first regression model with the R^2 of .31, the observed statistical power was exceptional at .977.

The second regression model examined teachers' self-efficacy, dispositional optimism, and resilience on the instructional management subscale of the BIMS. The adjusted R^2 of 2.5%, was not significant ($p = .32$). The first model was the best fit. In the second model with the R^2 of .025, the observed statistical power was .116. A negative association was found between the instructional strategies and classroom management TSES subscales and the behavior management BIMS subscale.

TABLE 2.
Pearson correlations of independent and dependent variables.

Variables	1	2	3	4	5	6	7	8	9	10
1. Sex	—									
2. TSES– Sum ^a	.10	—								
3. BIMS– Sum	-.071	.13	—							
4. LOT-R	-.04	-.27	-.11	—						
5. RS	.11	.50**	.06	-.21	—					
6. TSES– Efficacy in Student Engagement	.17	.79**	.22	-.30*	.44**	—				
7. TSES– Efficacy in Instructional Strategies	.05	.88**	.10	-.17	.41**	.60**	—			
8. TSES– Efficacy in Classroom Management	.09	.89**	.08	-.28*	.30*	.50**	.69**	—		
9. BIMS– Behavior Management	-.05	-.36**	.05	.15	-.28*	-.20	-.40**	-.30*	—	
10. BIMS– Instructional Management	.05	.11	-.22	-.30*	.10	.20	.01	.08	.02	—

Notes. Sum^a indicates the summed scores of the participants. ** $p < .05$. * $p < .01$. *** $p < .001$.

TSES: Teacher Sense of Efficacy Scale, BIMS: Behavior and Instructional Management Scale, LOT-R: Life Orientation Test-Revised, RS: Resilience Scale

TABLE 3.
Summary of regression analysis for variables predicting BIMS ($N = 58$).

Predictor	BIMS: Efficacy for Behavior Management		95% CI Behavior Management	BIMS: Efficacy for Instructional Management		95% CI Instructional Management
	<i>B</i>	<i>SE</i>		<i>B</i>	<i>SE</i>	
Intercept	62.40	11.60	[39.13, 85.70]	44.49	10.02	[24.31, 64.70]
Sex	-.01	.02	[-.04, .03]	.00	.02	[.03, .03]
TSES– Efficacy In Student Engagement	2.32	2.0	[-1.71, 6.35]	2.2	1.7	[-1.33, 5.65]
TSES– Efficacy In instructional Strategies	-5.2*	2.2	[-9.60, 7.14]	-1.9	1.9	[-5.80, 2.0]
TSES– Efficacy In Classroom Management	-.46*	.21	[-.89, -.04]	.00	.18	[-.37, .37]
LOT-R	.05	.25	[-.44, .54]	-.37	.21	[-.80, .06]
RS	-.06	.07	[-.20, .09]	.03	.06	[-.10, .15]

Notes. * $p < .05$

TSES: Teacher Sense of Efficacy Scale, BIMS: Behavior and Instructional Management Scale, LOT-R: Life Orientation Test-Revised, RS: Resilience Scale

DISCUSSION

The findings of the study emerged in response to the proposed hypothesis. To reiterate, the hypothesis was that higher levels of perceived self-efficacy, resilience, and dispositional optimism will explain the variability in teachers' perceived classroom management for public high school teachers in Puerto Rico using the subscales of behavior management and instructional management of the BIMS. In the context of SCT and classroom and behavior management, the findings of the study point to the need for all teachers to develop the ability to nurture feelings of self-efficacy, dispositional optimism, and resilience in their teaching practice.

The first significant finding emerged from the regression model that included all predictors, thus indicating a relationship to the behavior management subscale of the BIMS,

but not the instructional management subscale. A negative association was found between the TSES subscales of instructional and classroom management and the BIMS subscale of behavior management. In addition, a significant negative correlation was found between the TSES sum and the BIMS subscore of "behavior management". On the BIMS, a more controlling, interventionist approach to classroom management was indicated by a high subscale score, while a lower score indicated a less controlling belief in that dimension of classroom management style (Martin & Sass, 2010). Overall, research has shown that teachers demonstrating high self-efficacy rate as noninterventionist (Cerit, 2011). Thus, an explanation for this negative association may be that a teacher who is higher in the instructional and classroom management subscales of the TSES may score low on the behavior management subscale of the BIMS. This difference may

mean that the pedagogical skills and teaching strategies of teachers can reduce the need for a more interventionist approach to behavior management. However, more research is needed to adequately explore the relationship between these subscales; for example, developing professional learning programs or modules that equip teachers with a wider array of strategies might increase feelings of self-efficacy and improve behavior management. Research has shown that increased teacher self-efficacy is negatively associated with imposed changes to the teaching curriculum. In fact, teacher-self efficacy moderated the relationship between pressure from imposed curriculum changes and perceived stress (Putwain et al., 2019). Thus, further research may capitalize on the impact of self-efficacy in mitigating this pressure.

Another important finding was a significant positive correlation between resilience and the TSES sum. This indicates that teachers displaying higher efficacy in relation to (1) student engagement, (2) instructional management, and (3) classroom management on the TSES also rate higher in resiliency. This has also been supported in other literature. In fact, Razmjoo and Ayoobiyan (2019) found teachers' self-efficacy to be a predictor of resilience. This same study found a significant positive correlation between resilience and the TSES subscale of efficacy for classroom management. Exploring practices to successfully build respect and rapport with students and reduce teachers' personal exhaustion, both indicators of higher teacher self-efficacy by some Puerto Rican teachers (Brown, 2019), may help to increase resilience.

However, as Homrich-Knieling (2019) explains, building rapport should be considered more broadly to building meaningfully centered relationships in our classrooms, in our pedagogy, and in our practices not only as a classroom management technique but also as a means to foster an "empathetic, democratic and supportive community" (p. 1). This practice leads to a sense of justice and liberation that can be brought into relation-

ships and communities outside of the classroom and may be especially pertinent to students in Puerto Rico in decreasing the dropout rate if learning is made more meaningful to Puerto Rican students in this way. Additionally, (Arcelay-Rojas, 2019) found Puerto Rican teachers in educator preparation programs (EEP's) desired additional topics and training on resilience development in their EPP curriculum. This is especially so considering that teaching in Puerto Rico is a challenging task and includes factors that put a teacher's commitment at risk, such as low salaries and lack of resources.

The second regression model examined teachers' self-efficacy, dispositional optimism, and resilience on the "instructional management" subscale of the BIMS. This model with all the predictors in it regressed upon the "instructional management" subscale of the BIMS was found not to be significant. The instructional management subscale of the BIMS focuses on a teachers' instructional aims and methodologies (Martin & Sass, 2010), which include activities such as monitoring seatwork, structuring daily routines, and a teacher's approach to delivering daily instruction. This subscale also includes the extent to which a teacher considers the nature of student interests, needs, and backgrounds. Given that the student engagement subscale of the TSES involves the ability of an educator to encourage a student to value learning and motivate an atmosphere of learning (Tschannen-Moran & Woolfolk Hoy, 2001), there is likely overlap between these two scales in terms of the pedagogical decisions teachers make.

However, Carlson (2018) explored the relationship between school status (an elementary or secondary educational setting), among other variables, and found that being in a secondary school setting will decrease a teacher's student engagement self-efficacy on the TSES. The fact that the current study involved secondary educators may explain

the reason for the non-significance among the predictor variables, particularly TSES, and the BIMS subscale of instructional management. Further, Allinder (1994) found that teachers with a higher sense of self-efficacy are likely to incorporate high levels of instructional strategies, student engagement, and classroom management strategies. This contradicts our findings as we expected self-efficacy to be positively associated with the BIMS subscale of instructional management.

In terms of the research hypothesis, there was evidence of success in confirming H1. The first regression model examined the influence of teachers' self-efficacy, dispositional optimism, and resilience on the "behavior management" BIMS subscale and was found to be significant. However, the second regression model examining teachers' self-efficacy, dispositional optimism, and resilience on the "instructional management" subscale of the BIMS was not found to be significant.

No study is free of limitations and this research is no exception. The sample size may have influenced the somewhat contradictory associations emerging from the study. A larger sample size would have permitted for greater amounts of variability in our data. However, other literature indicates our sample size for the regression analysis was, in fact, large enough to meet the minimal requirements to carry out a regression analysis. Evidence suggests that 10 participants per predictor variable is sufficient (Wilson VanVoorhis, 2007).

Second, a series of phases was carried out to examine the validity of the scales for use among Spanish-speaking participants in Puerto Rico. While successful, this process fell short of fully validating these scales for use in Puerto Rico given we were unable to administer these questionnaires to a larger sample. Utilizing a questionnaire that has not been fully validated in another language and culture presents threats to its validity and reliability.

Finally, the gender of the teacher was controlled for in this work. However, teachers' age and years of experience were not collected because these turned out to not be variables of interest. Furthermore, in a previous study examining self-efficacy of teachers in Puerto Rico, the results suggested that age and years of experience were not relevant to teachers' responses related to their ideas on self-efficacy and behavior management (Brown, 2019). Lastly, even if information on age and years of experience had been gathered, there were not enough participants to control for grade and subject area in the regression analysis. However, it is recognized that lacking the information on teachers' age and years of experience may be a limitation of this study as this information can be useful to control for in studies such as this one.

Conclusion

Effectively negotiating issues of classroom and behavior management is critical to becoming a successful teacher. Drawing on Bandura's (1986) social cognitive theory (SCT), this article has explored the relationships among the psychological constructs of self-efficacy, dispositional optimism, and resilience and how they impact classroom management. The key findings to emerge from this study were that teachers that rated high on levels of perceived teacher self-efficacy, dispositional optimism and resilience also rated high on displaying classroom management techniques that aim to prevent and respond to misbehavior. However, it could not be shown that teachers displaying high levels of the above predictor variables rated high on activities such as establishing everyday work routines, cultivating interaction among students, and enabling students to take an active role in learning.

The study has also established several avenues for future research, especially in relation to teacher resilience. Resilience has been shown to be positively correlated with the strengths of hope and zest (Botha, 2020). This work may build on the work of Sezgin and

Erdogan (2015), which explored the influence of hope and zest on teachers' sense of efficacy and of overcoming obstacles. In addition to Sezgin and Erdogan's (2015) work, Ungar et al.'s (2020) research demonstrating the importance of environment and context could be a future avenue to pursue, as teachers in Puerto Rico face social issues of student attrition due to poverty, social exclusion, and marginalization (Barrientos-Soto, 2016). In addition to the social issues, teachers also face environmental factors inclusive of funding and resource allocation and how these can affect the point from which teachers and students start (Ungar et al., 2020). Additional research would enhance understanding of Puerto Rican teachers' skills in classroom management, teacher/student relations, and confidence despite social and economic challenges. Knowledge of how teachers of any nationality keep their dispositional optimism high is of value in the domain of educational research into teacher education and practice.

The school atmosphere in Puerto Rico could also be of interest for future studies. The academic optimism dimension of teacher trust in students and parents, as well as Anderson et al.'s (2018) work on enabling school structures, could add to the discussion of classroom management in Puerto Rican classrooms. As these structures enhance teacher performance, it would be useful to observe any direct impact on the variables explored in this study. Applying Anderson et al.'s (2018) Alabama-based findings to Puerto Rican classrooms could be insightful, as budgets and financial supports differ significantly between these contexts. Ungar and colleagues' (2020) studies on resilience and the emphasis of place being created and assigned meaning by those who interact within the space may be an interesting perspective to study in Puerto Rico.

A final avenue for future research may attempt to connect the variables explored in this study to the role of psychologists in Puerto Rican schools. In Puerto Rico, the Department of Education implemented Law #85 in March

of 2018. The law is termed the "Law of Educational Reform" and has the purpose of establishing new public policy in education on the island. This law recognizes the need to teach social-emotional learning to students and aims to expand the role of mental health professionals within schools. A school psychologist was directed to run these efforts in regard to social-emotional learning (Rolón-Martínez, 2021).

Understanding and meeting students' psychological and social-emotional needs may assist teachers to utilize the most effective teaching strategies based on their students' needs. However, self-efficacy, dispositional optimism, and resilience in handling classroom behaviors are affected by emotional crisis, extreme work conditions with little remuneration, and inadequate and indirect psychological help at school (Brown, 2019). In these avenues for future research, the components Bandura (2007) explored as part of the triadic model of reciprocal determinism are capitalized on. Educators work in a specific school environment with various strengths and weaknesses. The behavior of these educators is affected by personal factors and environmental elements, and vice versa. It is the hope that this research may assist educators in gleaning a better understanding of the factors that play a role in classroom management. As seen, there are many avenues for continuing this research in Puerto Rico, such as academic optimism, hope and zest, and enabling structures.

Research Ethical Standards

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