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Teacher stress, teaching-efficacy, and job satisfaction in response to test-based educational accountability policies☆

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ABSTRACT

Educator stress has been linked to decreased job satisfaction, negative instructional practices, and poor student outcomes. However, it is unknown whether educators with high teaching efficacy may better cope with the test stress. As such, the primary purpose of the present investigation was to examine the complex relationship between teacher self-efficacy, teacher stress related to testing, and job satisfaction. Structural equation modeling was used to evaluate the hypothesized relationships within a sample of 1242 teachers in one state in the Southeastern United States. Results indicated a significant influence of self-efficacy in student engagement and self-efficacy in classroom management on the relationship between sources of stress and job satisfaction, as well as efficacy in classroom management on the relationship between manifestations of stress and job satisfaction was also identified. These initial findings underscore the importance of supporting teacher self-efficacy to reduce stress associated with high-stakes accountability policies and increase job satisfaction. Implications and directions for future research will be discussed.

1. Introduction

Test-based accountability policies have fundamentally changed how schools use test performance to determine student achievement and teacher effectiveness. These policies have been associated with increased pressure to teach to the test, reduced instructional depth, and instruction targeted primarily toward students whose test scores are likely to improve in hopes of improving overall test performance – perhaps at the expense of very high or very low performing students (Menken, 2006). In the United States, schools that do not meet annual test performance goals can be subject to whole staff restructuring resulting in administrators and teachers losing their jobs (Cucchiara, Rooney, & Robertson-Kraft, 2015). In addition, some states have eliminated teacher tenure and now place a greater emphasis on student test scores in evaluating teacher effectiveness (Helms, 2013). However, teaching effectiveness may not be accurately reflected in student test performance (Baker et al., 2010) given susceptibility to outside variables such as student attendance and psychosocial variables (Corcoran, 2010). In addition, the increased use of student test performance within evaluations of teacher quality may increase teacher stress (von der Embse, Kilgus, Solomon, Bowler, & Curtiss, 2015) leading to counterproductive instructional practices and lower student achievement (Putwain & Best, 2012).

While accountability polices have been associated with a number of positive outcomes for teachers, including improved work conditions and clarity of expectations (Grissom, Kalogrides, & Loeb, 2014), little *empirical* research has examined the influence of test-based accountability policies on teacher stress and instructional practices (Saeki, Pendergast, Segool, & Nathaniel, 2015). Stress from test-based accountability policies and subsequent increases in counterproductive teaching could have unintended and deleterious effects on student achievement on high-stakes tests (Klassen & Chiu, 2010; Putwain & Roberts, 2009). Moreover, teacher stress has been linked to lower job satisfaction over time (Schwarzer & Hallum, 2008). Ingersoll and Smith (2003) noted that teachers with low job satisfaction are much more likely to leave the profession—a problem with an estimated cost between $2.2 billion and $4.9 billion per year (Kersaint, 2005). However, teacher efficacy may help to explain the link between stress and later job satisfaction (Klassen & Chiu, 2010). Thus, research is necessary to examine the unique stressors brought forth by test-based accountability policies, the resulting influence on overall job satisfaction, and the potential influence of self-efficacy.

1.1. Teacher stress

Teacher stress has been defined within the literature as a negative affective experience that is related to one's ability to cope with job-

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related stressors (Kyriacou, 2001). Similar to social-cognitive theories of stress (see Lazarus & Folkman, 1984), teachers experience stress when a situation is appraised as threatening (e.g., job evaluation via student test performance) relative to the ability to change or improve the said situation (e.g., improving student test performance and thus job evaluation). Teacher stress may result from inadequate time and resources to prepare for the annual, high-stakes test (Berryhill, Linney, & Fromewick, 2009), insufficient administrative support (Barksdale-Ladd & Thomas, 2000), and unrealistic expectations of student test performance from parents (von der Embse et al., 2015). Researchers have asserted that teacher stress consists of emotional manifestations, physical manifestations, and work-related pressures (Fimian & Fastenau, 1990). Consequently, teacher stress has been measured in a variety of ways including assessments of "global" teacher stress (e.g., 49 item *Teacher Stress Inventory* [TSI]; Fimian & Fastenau, 1990), uncomfortable subjective experiences in the workplace (Schwarzer & Hallum, 2008), appraisals of classroom resources and needs (Lambert, McCarthy, & Abbott-Shim, 2001), and physiological symptoms (e.g., cortisol levels and resting heart rate; Roeser et al., 2013). Each of these assessment methods may be limited by usability (e.g., measuring heart rate or salivary cortisol levels with all teachers), or length and time necessary to administer (e.g., TSI). Moreover, a context-specific instrument is advantageous due to the precision of measurement to the presenting situation and stimuli, and targeting of intervention to the source of the stressor (Curby, Rimm-Kaufman, & Abry, 2013). Given the significant changes in teacher expectations and roles linked to test-based accountability policies (Koretz & Hamilton, 2006), it may be beneficial to measure educator stress explicitly tied to high-stakes testing.

1.2. Teacher job satisfaction

Although many educators report a high level of job satisfaction, teachers also consistently report relatively high levels of job stress (Chaplain, 2008; Schwarzer & Hallum, 2008). Job-related stressors are the strongest predictor of poor job satisfaction for teachers (Liu & Ramsey, 2008). Job satisfaction, defined as the enjoyment and fulfillment derived from work activities (Locke, 1969), is predictive of higher levels of job performance (Judge, Thoresen, Bono, & Patton, 2001) and a greater commitment to school and students (Jennett, Harris, & Mesibov, 2003; Caprara, Barbaranelli, Borgogni, & Steca, 2003). Low job satisfaction is associated with an increased likelihood of absenteeism and illness (Billingsley & Cross, 1992), low morale (Collie, Shapka, & Perry, 2012) and intent to leave the profession (Ingersoll, 2001). Teachers are the greatest human capital resource in a school. However, teacher recruitment and professional development in the early years can be costly, and when teachers leave the profession prematurely, schools are unable to obtain a return on those investments (Perie & Baker, 1997). Given the high cost of teacher burnout and attrition, it is essential to understand predictors of job satisfaction. A wealth of research has demonstrated that teachers are satisfied with the aspects of their jobs that involve instruction and direct interactions with students. However, teachers often appear to be dissatisfied with other conditions (e.g., poor climate, annual evaluations based upon test performance) and this seems to influence job performance (Crossman & Harris, 2006; von der Embse et al., 2015). High teacher efficacy has been found to be an important link between job-related stressors and job satisfaction (Caprara, Barbaranelli, Steca, & Malone, 2006; Klassen & Chiu, 2010). Yet, additional research is necessary to replicate and extend prior work due to changing work conditions (Grissom et al., 2014) and expectations for student test performance tied to accountability policies.

1.3. Teaching efficacy

Self-efficacy is defined as the belief of one's capacity to complete a task successfully (Bandura, 1997). Self-efficacy is typically understood to be domain specific, yet is often measured as a general ability applicable across a wide range of situations (Schwarzer & Jerusalem, 1995). Teacher efficacy is a job-specific extension of self-efficacy, and is delineated by the judgment of an ability to "bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated" (Tschannen-Moran & Woolkfolk Hoy, 2001, p. 783). Tschannen-Moran and Woolkfolk Hoy (2001) created the *Teachers' Self-Efficacy Scale* (TSES) that adheres closely to the theoretical underpinnings of Bandura (2006) by measuring capabilities rather than global abilities. The authors conceptualized teaching efficacy to consist of *efficacy for student engagement* (i.e., capability to promote student understanding and motivation to learn), *efficacy for classroom management* (i.e., capability to manage disruptive behaviors and encourage following of classroom rules), and *efficacy for instructional strategies* (i.e., capability to use effective instructional strategies). The three factors of teaching efficacy, as identified by Tschannen-Moran and Woolfolk Hoy, have been linked to a variety of positive outcomes including higher job satisfaction (Klassen & Chiu, 2010), use of effective teaching strategies (Woolkfolk Hoy & Spero, 2005), and greater well-being (Egyed & Short, 2006). Teacher efficacy represents a promising area for new research to guide future intervention selection and support teachers in coping with the demands of high-stakes testing (Curby et al., 2013).

1.4. Theoretical underpinning and aims of the present study

The *job demands-resources model* purports that stress is a function of the authority and responsibility of a job relative to available resources that are specific to both the job (e.g., autonomy) and individual (e.g., self-efficacy; Bakker & Demerouti, 2007). Thus, jobs that are highly stressful are those with limited decisional opportunity and increased responsibilities (e.g., requiring to prepare students for high-stakes test). The enactment of test-based accountability policies has significantly changed requirements for teachers and schools, by measuring the effectiveness of both based upon student test performance. These external requirements may significantly alter job related stressors (i.e., test stress), and the mechanisms (i.e., self-efficacy of teaching practices) which may then lead to workplace satisfaction (or job satisfaction).

A social-contextual approach (von der Embse, Pendergast, Segool, Saeki, & Ryan, in press; von der Embse & Putwain, 2015) is necessary to understand the multifaceted influence of macro level variables (i.e., accountability policy) on individual variables (e.g., instructional practices and teacher stress). Given the significance of teacher effectiveness on student learning (Nye, Konstantopoulos, & Hedges, 2004; Raudenbush, 2004), the increasing reliance on student test performance as a proxy for teacher effectiveness, and the concomitant increases in pressure on educators, there is a clear need for empirical research to examine (1) the nature of stress related to high stakes testing, (2) the resulting impacts (e.g., job satisfaction), and (3) potential mediating variables. As such, the present investigation builds upon a growing literature (Collie et al., 2012; Klassen & Chiu, 2010; Schwarzer & Hallum, 2008) by examining the influence of *test-related* stress on educator job satisfaction, as well as the potential indirect effect of teaching efficacy (test stress → teaching efficacy → job satisfaction). The research questions were twofold. First, does teaching efficacy influence the relationship between test-related stressors and teacher job satisfaction across the school year? Second, how do the aforementioned relationships differ by type of teaching efficacy and test stress?

2. Method

2.1. Participants

Participants in the present study ($N = 1242$) were public school teachers from 100 school districts within one state in the southeastern United States. The state's accountability system was one of the first in the United States to evaluate teachers based upon student test

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