Teacher Self-efficacy Moderates the Relations between Imposed Pressure from Imposed Curriculum Changes and Teacher Stress

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Abstract

Based on the Job Demands-resources (RD-R) model, the aim of the current study was to examine how pressure arising from imposed curriculum changes and teacher self-efficacy relate to perceived stress in teachers. Participants (839 teachers working in English schools) completed an online survey that contained questions about demographics, self-reported pressure from imposed curriculum changes, teacher self-efficacy, and perceived stress. Pressure from imposed curriculum changes was positively, and teacher self-efficacy negatively, related to perceived stress. Teacher-self efficacy moderated relations between pressure from imposed curriculum changes and perceived stress. High teacher self-efficacy was associated with lower perceived stress, relative to low teacher self-efficacy, when pressure from imposed curriculum changes was low. The differential advantage offered by high self-efficacy declined as pressure from imposed curriculum changes increased.

Keywords. Job demands-resources theory, stress, pressure from curriculum changes, self-efficacy, curriculum reform

Introduction

Teaching has consistently been rated as one of the most stressful occupations (Johnson et al., 2005). Psychologists, policymakers and school administrators alike, have sought to understand the myriad influences on teacher wellbeing and stress over the last few decades. Understanding the influences of teacher stress has shown to be important to more effectively guide intervention and prevention efforts (e.g., Curby, Rimm-Kaurmann, & Arby, 2013). However, much remains unknown as to the specific sources of teacher stress, as well as potential moderators of said relations. In the present study, we build on research conducted in the United States focusing on teacher stress associated with tests used for accountability purposes (von der Embse, Sandilos, Pendergast, & Mankin, 2016). Specifically, we examine how one source of stress that has hitherto not been examined in the literature, pressure arising from imposed curriculum changes, relates to perceived stress, and whether this relationship is moderated by teacher self-efficacy.

Teacher Stress and the Job Demands-resources Model

Kyriacou (2001) defined teacher stress as a negative emotional and affective experience directly related to an individual's capacity to cope with specific stressors. According to the job demands-resources model (JD-R) the stress associated with various professions can be classified into two general categories; these are job demands and job resources (Bakker & Demerouti, 2007, 2014). Job demands refer to inherent physical, psychological, social or organisational aspects, of a job context that require sustained physical and/ or psychological (cognitive and emotional) effort from the employee. For teachers, job demands include, but are not limited to, disruptive pupils/ maintaining discipline (Clunies-Ross, Little, & Kienhuis, 2008; Hakanen, Bakker, & Schaufeli, 2006), time pressures/ workload (Klassen & Chiu, 2010), and imposed changes due to educational reform (Gu & Day, 2007; Kelchtermans, 2005), accountability pressures (Perryman, Ball, Maguire,

& Braun, 2011; Shernoff, Mehta, Atkins, Torf, & Spencer, 2011), and a lack of support from colleagues and school leadership (Chaplain, 2008; Grayson, & Alvarez, 2008).

Job resources refer to alterable elements of the job that assist the employee in meeting work-related goals, reducing demands or their associated costs, or providing developmental opportunities. For teachers, personal resources can include teacher self-efficacy (e.g., Dick et al., 2014; Klassen & Durksen, 2014) and social resources can include supportive school leadership (e.g., Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Hakanen, et al., 2006) and positive relationships with colleagues and parents (e.g., Skaalvik & Skaalvik, 2009, 2011). According to JD-R model, the relationship between demands and stress differs according to ones' level of resource (Bakker & Demerouti, 2007, 2014). As demands increase, a higher level of stress is experienced by persons with low resources relative to those with more. That is, resource offers a buffer against increasing demands.

Imposed Changes Arising from Curricular Reform

One of the job demands faced by teachers are the pressures arising from changes to the content and assessment of the curriculum. Such changes can result in an increased workload for teachers as they prepare new programmes of study, lesson plans, materials, forms of assessment, and additional administrative burdens (Ballet & Kelchtermans, 2009; Butt & Lance, 2005). When curriculum changes are imposed on teachers by policy makers, as part of educational reform, the pressure from curriculum changes can be exacerbated. Changes are perceived to be politically motivated (Docking, 2000; Gu & Day, 2007), clash with educational values of teachers (Day, Eliot, & Kington, 2005; Kelchtermans, 2005), and erode teachers sense of professionalism (Day & Smethem, 2009; Day, Flores, & Viana, 2007). In England, where the present study was located, the content and assessment of the National Curriculum has undergone extensive reform at both primary and secondary levels between 2013 and 2017 (for details see Department of Education, 2015). In line with the JD-

R model, we expected that greater pressures arising from imposed curriculum reform would be related to greater perceived stress.

Teacher Self-efficacy

Teacher self-efficacy is a job-specific form of self-efficacy defined as a personal ability judgment to facilitate desirable student outcomes including learning and engagement (Tschannen-Moran & Woolkfolk Hoy, 2001). Teacher self-efficacy is conceptualized as having three primary components: efficacy for student engagement, instructional strategies, and classroom management (see *Teachers' Sense of Efficacy Scale* [TSES]; Tschannen-Moran & Woolkfolk Hoy, 2001). Studies have shown the three components of teacher self-efficacy are strongly related (e.g., *r*s .44 - .85: Klassen et al., 2009) and can be combined to form a combined score for global teacher self-efficacy (Goddard, Hoy, & Hoy, 2000; Klassen et al., 2009; Tschannen-Moran & Woolkfolk Hoy, 2001). From the perspective of the JD-R model, teacher self-efficacy is a personal job resource that would be expected to result in lower stress. Many empirical studies have supported this link using measures of stress (e.g., Klassen, 2010; Klassen & Chiu, 2010) and cognate constructs including burnout (e.g., Parker, Martin, Colmar, & Liem, 2012; Skaalvik & Skaalvik, 2007) and wellbeing (Egyed & Short, 2006). In line with the JD-R model, we expected that higher teacher self-efficacy would be related to lower perceived stress.

Interactions between Demands and Resources

Studies examining the demand-resource factors for stress in samples of teachers have examined demand-resource factors as additive (e.g., Bermejo, Hernández-Franco, & Prieto-Ursúa, 2013; Hakanen et al., 2006), rather than interactive as would be predicted by the JD-R. Two studies, however, have examined how demand-resource factors interacted using constructs related to that of stress. Bakker et al. (2007) showed how job engagement could be protected against demands of managing student misbehaviour with various types of resources

(e.g., support and appreciation). Dicke et al. (2014) showed that higher teacher self-efficacy buffered emotional exhaustion against the student disruption of classes. Studies have yet to examine how pressure from imposed curricular changes relate to perceived stress either separately or in combination with resources such as teacher self-efficacy. In the present study, we addressed this gap in the literature, by examining how pressure from imposed curricular changes, and teacher self-efficacy, predicted teacher stress uniquely and interactively in a sample of primary and secondary school teachers. In line with the JD-R model, we expected that higher teacher self-efficacy would buffer perceived stress against the pressure of imposed curriculum demands.

Aims of The Present Study

The research questions in this study were twofold. First, we examined the unique roles of two factors in the role of perceived stress: Pressure arising from imposed changes to curricular reform (demands) and teacher self-efficacy (resources). We hypothesised that higher perceived pressure from imposed changes to curricular reform would be positively related to perceived stress whereas higher teacher self-efficacy would be negatively related to perceived stress (*H1*). Second, we examined whether the relationship between the pressure from curriculum changes and perceived stress interacted with teacher self-efficacy. The JD-R model suggests that personal resources, such as teacher self-efficacy, protect against increasing perceived stress in face of increasing demands. We hypothesised that pressure from curriculum changes and teacher self-efficacy would interact to predict perceived stress; stress may be lower for persons with higher teacher self-efficacy, when pressure from curriculum changes is also high (*H2*).

We did not offer differential hypotheses for the three elements of teacher self-efficacy (engagement, instructional strategies, and classroom management). This was partly as all three components empirically relate strongly and partly as we did not expect any single

component to differentally offer a greater resource in managing the pressures from imposed curriculum changes over any other component. Rather than measuring a general form of perceived stress, we measured the stress perceived by teachers specifically relating to the use of tests and examinations used for accountability purposes. In England, scores on tested National Curriculum outcomes are used in school inspections, to inform decisions over teacher pay and promotion, and to rank schools within a particular locality on the basis of student performance (Department of Education, 2016; Perryman et al., 2011; Roberts & Abreu, 2016). Accordingly, pressure relating to imposed changes to National Curriculum assessment and curriculum is of greater relevance to the perceived stress relating to the use of tested National Curriculum outcomes than stress in general.

Method

Participants

The sample for this study consisted of 839 teachers located in English schools; 447 worked in primary schools, 366 worked in secondary schools, and 23 worked in alternative settings such as pre-school (n = 3 missing). The breakdown of sample characteristics by gender, age (n = 2 missing), years of teaching experience (n = 2 missing), and ethnic heritage (n = 3 missing), for primary, secondary and alternate settings is shown in Table 1.

[Table 1 here]

Measures

Pressure from imposed curriculum changes was measured using three items adapted from von der Embse, Pendergast, Segool, Saeki, and Ryan (2016), for the English Context (‘I have felt increased stress as a result of recent changes to the National Curriculum/ GCSE specifications’, ‘I am worried about how the recent changes to the National Curriculum/ GCSE specifications have changed my teaching’, and ‘I feel pressure as a result of recent changes to the National Curriculum/ GCSE specifications’). Participants responded on a five-

point scale (1 = Strongly disagree, 3 = Neither, 5 = Strongly agree) such that a higher score would indicate a higher degree of perceived pressure. The internal consistency of the original measure was reported as .84 (von der Embse et al., 2016). In the present study a good level of internal consistency was also achieved for the adapted measure (see Table 2).

Teacher self-efficacy was measured using the twelve-item *Teachers' Sense of Efficacy Scale* (Tschannen-Moran & Woolkfolk Hoy, 2001) that provides scores for three dimensions: self-efficacy for engagement, instruction, and classroom management. Four items each pertain to efficacy for engagement (e.g., 'How much can you do to motivate students who show low interest in school work?'), instruction (e.g., 'To what extent can you provide an alternative explanation or example when students are confused'), and classroom management (e.g., 'How much can you do to get students to follow classroom rules?). In the original study, participants responded on a 9-point scale (1 = Nothing, 5 = Some influence, 9 = A great deal). The metric was changed in the present study to allow for a common five-point response format across all scales used (data were also collected for scales not reported in these analyses). This may be advantageous in facilitating accurate responses to items by preventing participants from moving across differing response metrics without limiting scale sensitivity or distribution (Dawes, 2007; Leung, 2011). In the five-point scale used in the present study (1 = Nothing, 3 = Some influence, and 5 = A great deal) a higher score would indicate higher self-efficacy. Tschannen-Moran and Woolkfolk Hoy (2001) reported the internal consistency of the combined teacher self-efficacy scale as .90. In the present study a good level level of internal consistency was also achieved (see Table 2).

Stress was measured using the manifestations of stress scale from the Educator Test Stress Inventory (von der Embse, Kilgus, Solomon, Bowler, & Curtiss, 2015). This instrument contains six items (e.g., 'I experience a pounding heart/ chest pain during the GCSE/ NCT testing period') that were adapted for the English context by referring

specifically to NCTs and GCSEs. Participants responded on a five-point scale (1 = Strongly disagree, 3 = Neither, 5 = Strongly agree) such that a higher score would indicate a higher degree of stress. In the original measure, the internal consistency was reported as .85 (von der Embse et al., 2015). The adapted scale also showed a good level of internal consistency in the present study (see Table 2).

Procedure

An email invitation to participate in the study was sent to the Head or Principal at partnership schools at the institution where the first author was based in January 2016. The invitation email contained a link to the survey questions, emphasized that participation was anonymous, and requested the Head or Principal to forward to the link to staff. As emails were sent to the general school office it was not possible to gauge the response rate as some emails may not have been forwarded to the Head or Principal, and some Heads or Principals may not chosen not to send the link onto teaching staff. For ethical reasons the survey was split into two parts. The first part of the survey contained demographic questions and the second part of the study items corresponding to the substantive constructs (this included constructs pertaining to teaching practices that were unrelated to the analyses presented in this paper). Each section of the survey was completed anonymously and uploaded to a separate database. Advantageously, this would reassure participants that there was no possible chance of data being identified, and lead to more accurate and honest responses. The disadvantage of this approach, however, was that it was not possible to examine demographic differences in, or control for, pressure from curriculum changes, teacher, self-efficacy or stress. The entire survey took approximately twenty minutes to complete.

Results

Descriptive Statistics and Bivariate Correlations

A measurement model including all substantive variables was examined using a confirmatory factor analysis (CFA) to examine the measurement properties of latent constructs and estimate bivariate correlations. The confirmatory factor analysis was examined using the M*plus* 7.4 software (Muthén & Muthén, 2013). The CFA was estimated using maximum likelihood, with robust standard errors, to account for the non-normal distribution of pressure from imposed curriculum changes, and full-information maximum likelihood to handle missing data. Pressure from imposed curriculum changes was specified using three items, perceived stress using six items, and teacher self-efficacy using a single higher order factor, based on the three lower order scales (engagement, instruction, and classroom management) comprising four items each.

Model fit was evaluated using a combination of the following indices: Root Mean Square Error of Approximation (RMSEA), Standardised Root Mean Squared Residual (SRMR), Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI). Good fitting models are indicated by RMSEA and SRMR values ≤.06 and CFI and TLI values ≥ .95 (Marsh, Hau, & Grayson 2005). On this basis, the CFA for the measurement model showed a good fit: $\chi^2(183) = 401.99$, $p < .001$, RMSEA = .050, SRMR = .051, CFI = .955, and TLI = .948.

Decsriptive statistics and latent bivariate correlations are shown in Table 2. Perceived stress and teacher self-efficacy were normally distributed (skewness and kurtosis ±1). Perceived pressure from curriculum changes, however, showed a positively skewed (-1.61), leptokurtic (2.91), distribution. All variables showed good levels of internal consistency (Cronbach's $\alpha > .7$) and factor loadings ($\lambda > .60$). Pressure from imposed curriculum changes positively correlated with, and teacher self-efficacy negatively correlated with, perceived stress. Pressure from curriculum changes was unrelated to teacher self-efficacy.

[Table 2 here]

Latent Interaction Structural Equation Modelling

Interactions between pressure from imposed curriculum changes and teacher self-efficacy, on perceived stress, were estimated in a latent interaction structural equation model (LI-SEM) using the unconstrained approach (Marsh, Wen, & Hau, 2006). A latent interaction term was created from the product of the three indicators of pressure from imposed curriculum changes with three indicators of teacher self-efficacy. The three indicators of teacher self-efficacy were created by randomly assigning the twelve teacher self-efficacy items to three parcels. Pressure from imposed curriculum changes and self-efficacy indicators were z-standardised and matched randomly. The means of pressure from imposed curriculum changes and teacher self-efficacy were set to zero and the mean of the latent interaction term fixed to equal the covariance of the pressure from curriculum changes and teacher self-efficacy.

The LI-SEM showed a good fit to the data: $\chi^2(84) = 197.40$, $p < .001$, RMSEA = .053, SRMR = .047, CFI = .963, and TLI = .953 (see Figure 1). Perceived stress was uniquely predicted by pressure from curriculum changes ($\beta = .449$, $p < .001$) and teacher self-efficacy ($\beta = -.178$, $p < .001$). The interaction was statistically significant ($\beta = .150$, $p = .005$) and so we proceeded to probe simple slopes at ±1SD. At low (-1SD) self-efficacy, a positive relationship was observed between pressure from imposed curriculum changes and perceived stress ($B = .345$, $p < .001$). This positive relationship was amplified at mean ($B = .446$, $p < .001$) and high (+1SD) self-efficacy ($B = .548$, $p < .001$). The pressure from imposed curriculum changes × self-efficacy for engagement interaction is graphed in Figure 2 (as pressure from curriculum changes showed a positive skew with a high mean this was plotted at ±.5SD.

[Figure 1 here]

[Figure 2 here]

Discussion

The aim of the present investigation was to examine whether the between pressure arising from imposed curriculum changes (a job demand) interacted with teacher self-efficacy (a resource) to predict perceived stress. According to the JD-R model (Bakker & Demerouti, 2007, 2014) demands are positively related to, and resources, negatively related to stress. Furthermore, resources interact with demands, to buffer against higher stress. Results from this study showed that, as anticipated, pressure from imposed curriculum changes was positively related to, and teacher self-efficacy, negatively related to perceived stress associated with tests used for accountability purposes. Although pressure from curriculum changes and teacher self-efficacy did interact to predict perceived stress, it differed as would be predicted by the JD-R model. When the pressure from imposed curriculum changes was low, teachers with higher self-efficacy reported lower stress relative to those with lower self-efficacy. As pressure from imposed curriculum changes increased, the differential advantage offered by higher self-efficacy diminished.

Results supported *H1*. Pressure from imposed curriculum changes was positively related to, and teacher self-efficacy, negatively related to, perceived stress associated with tests used for accountability purposes. These findings are in accordance with the JD-R model (Bakker & Demerouti, 2007, 2014) and supports our theorisation that pressure from imposed curriculum changes constitutes a job demand and teacher self-efficacy a job resource. Previous studies have shown how teacher stress is increased when educational reform is imposed on teachers (Gu & Day, 2007; Kelchtermans, 2005). Curriculum changes implemented by teachers in the present study were imposed top-down by central government and link to accountability systems (pay, school inspections, and performance tables). Those teachers who perceived greater pressure from imposed curriculum changes experienced greater stress negative emotions around the testing period. This could be due to uncertainty

surrounding the new curriculum and its assessment (e.g., Ryder, 2015) exacerbated by fear of negative accountability-based evaluation (see von der Embse, Sandilos, et al., 2016).

Our results are also consistent with the prior body of work showing that teacher self-efficacy is associated with lower stress and associated constructs such as wellbeing and job satisfaction (Klassen et al., 2009; Klassen & Chiu, 2010; Parker et al., 2012; von der Embse, Pendergast, et al., 2016). Our study extends the teacher self-efficacy and stress link specifically to the test-based stress associated with accountability measures. That is, teachers who believe they are more effectively able to instruct, engage, and control, their classes experience fewer negative emotions around the testing period (e.g., Frenzel, Goetz, Lüdtke, Pekrun, & Sutton, 2009). This could be due to highly self-efficacious teachers being more confident in their students performing to expected standards in their tests, thus reducing the fear of negative accountability-based evaluation.

In relation to *H2*, results showed that the relationship between pressure from imposed curriculum changes and stress differs at varying levels of teacher self-efficacy. In accordance with the JD-R model, self-efficacy was a personal resource that moderated the level of stress experienced with the pressure from curriculum changes. The advantage offered by high self-efficacy diminished as pressure from imposed curriculum changes became stronger and did not support *H2*. The critical question posed by our findings is why the differences in stress occurred between persons with high and low teacher self-efficacy when pressure from imposed curriculum changes was *low* rather than when it was *high*. Dicke et al. (2014) found the gains offered by teacher self-efficacy in reducing emotional exhaustion were only found in low self-efficacy teachers. As teacher self-efficacy increased beyond a certain level gains disappeared. This was likened to the economic principle of diminishing marginal returns. Similar patterns of diminishing returns have also been reported in the organisational literature

where gains offered by resources in challenging work experiences are negligible beyond a certain level (DeRue & Wellman, 2009).

It is quite possible that a similar principle is at work here due to the accountability features associated with curriculum reform. When accountability pressures are high, teachers' attention is directed away from instruction and learning process and onto their own performance (Saultz, Murphy, & Aronson, 2016; Valli & Buese, 2007). According to cognitive load theory, once resources are directed away from task-based processes and onto anxieties concerning evaluation and possible failure, the buffering effect of resources on performance diminishes (e.g., Sweller, 2012; Sweller, Ayres, & Kalyuga, 2011). While the JD-R model offers flexibility in relation to the demands made by specific occupations, the basic premise of the job demand and resource interaction (a buffering effect at higher job demands) remains. The implication of our findings for the JD-R model is that not all job demands may interact in the same way with resources. Specifically for those demands, such as pressure from imposed curriculum changes that can focus attention onto performance-evaluation anxieties, when conjoined with accountability, resources might show diminishing returns.

Implications and Limitations

A number of limitations should be considered when interpreting findings. As we note above, due to ethical constraints on the study design, it was not possible to include sample characteristics as either covariates or substantive variables. Future research may evaluate whether the moderating role of teacher self-efficacy changes depending on gender, school characteristics (especially schools given notice of improvement by the school inspectorate), and level of schooling (primary vs. secondary). Methodologically speaking, as data were collected via self-report it is possible that relations may have been influenced by common-method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Future research could

include behavioural data (e.g., sickness absence) to supplement self-report data. Furthermore, our method of contacting teachers via an email invitation sent to schools may not have been an efficient method of recruitment. It is likely that some emails were not passed on by school administrators. It may be more productive in future research to work with engaged stakeholders (e.g., teaching unions) or a more limited number of research-engaged schools. As research examining how job demands and resources interact in samples of teachers, we would also call for studies to examine such interactions using a broader range of stressors germane to the teaching profession and also consider the role of collective teacher self-efficacy.

Finally, it is notable that in the present study where we moved from a nine-point scale to measure teacher self-efficacy to a five-point scale, that data for teacher self-efficacy was negatively skewed. Although the same descriptive anchors were used as for the nine-point scale (‘nothing’, ‘some influence’, and ‘a great deal’) it is possible that the scale sensitivity was reduced and at the upper end did not sufficiently differentiate between those with moderate and high teacher self-efficacy. Empirical studies show little impact on scaled mean, variability, distribution, and other psychometric properties (e.g., reliability, item-scale correlations, and factor loadings) of data collected using different scale lengths (Dawes, 2007; Leung, 2011). This might suggest that our change from a nine- to five-point scale did not adversely influence scale sensitivity, however, it would be prudent not to rule out this possibility exclusively. If it were the case that sensitivity was reduced at the higher end of the scale it could be possible that high teacher self-efficacy might have reduced stress when pressure from curriculum changes were also high. However, this point remains speculation and it is equally possible that the high mean level of teacher self-efficacy was a genuine characteristic of our sample.

As an environmental job demand, there might be little an individual can do to minimise the stress associated with pressure from imposed curriculum changes. That would require top-down, system-level reform lead by policy makers. There is a role, however, to be played by educational and school psychologists in helping schools and teaching staff to implement reforms, as well as whole school training and staff support for develop teacher self-efficacy (e.g., Tschannen-Moran & McMaster, 2009). Furthermore, supporting teacher emotional wellbeing early in the school year can lead to diminished stress and greater likelihood of engaging in high-quality instructional practices (e.g., Curby et al., 2013). As teachers face increased pressure to raise student test scores, school administrators and educational psychologists should consider evidenced-based interventions to reduce the impact of stress (e.g., mindfulness training; Roeser et al., 2013).

Conclusion

This study examined how the relation between pressure from imposed curriculum changes (a job demand) interacted with teacher self-efficacy (a personal resource) to predict perceived stress. Greater pressure from imposed curriculum changes was associated with greater, and teacher self-efficacy with lower, stress. Furthermore, pressure from imposed curriculum changes interacted with teacher self-efficacy. When pressure from imposed curriculum changes was low, higher teacher self-efficacy was associated with lower test-related stress. As pressure from imposed curriculum changes increased, the role of teacher self-efficacy in protecting against stress gradually diminished. We suggest this may be due to the accountability factors associated with curriculum reform focusing teachers' attention onto performance-evaluation anxieties. Under such circumstances, personal resources show diminishing returns.

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Table 1

Participant Characteristics by Gender, Age, Years of Teaching Experience and Ethnic Heritage

	Total	**Primary**	**Secondary**	**Other**	**Missing**
Gender:					
Male	214	74	131	8	3
Female	624	372	235	15	
Transgender	1	1	0	0	
Age:					
20-29 Years	168	98	69	1	
30-39 Years	240	125	106	8	
40-49 Years	219	112	98	8	
50-59 Years	175	91	78	5	
60 Years or greater	35	0	15	1	
Missing	2				
Years of Teaching Experience:					
<1	39	20	18	1	
1-5 Years	168	101	66	0	
6-10 Years	167	84	80	3	
11-15 Years	151	70	77	4	
16 Years or greater	312	172	123	15	
Missing	2				
Ethnic Heritage:					
Asian	15	9	6	0	
Black	6	2	4	0	
White	803	426	351	23	
Other	9	6	3	0	
Mixed	4	2	2	0	
Missing	2				

Table 2

Descriptive Statistics and Latent Bivariate Correlations for Pressure from Imposed Curriculum Changes, Perceived Stress, and Teacher Self-efficacy.

	Mean	SD	α	1.	2.	3.
1. Pressure from Imposed Curriculum Changes	4.40	.80	.91	—	.46***	-.18**
2. Perceived Stress	2.91	.89	.84		—	.01
3. Teacher Self-efficacy	4.07	.54	.90			—

*** p <.001. ** p <.01.

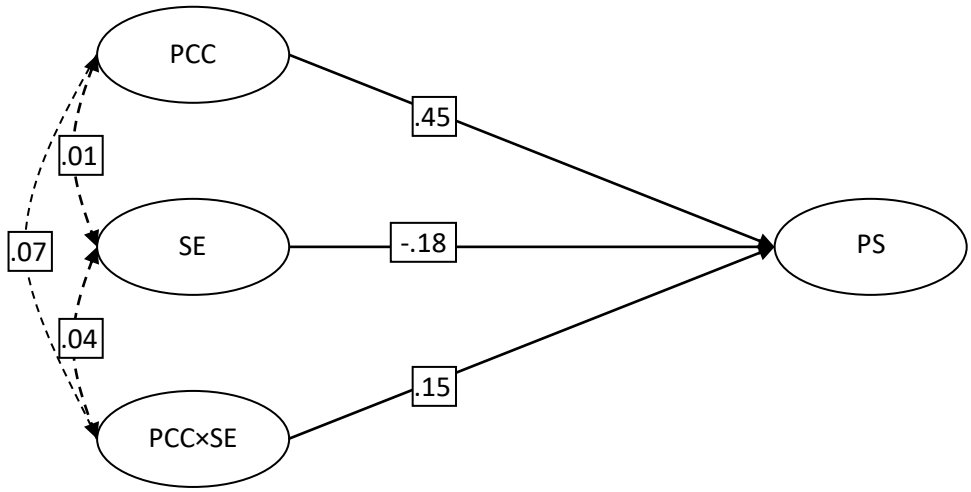

Figure 1. LISEM to examine how perceived stress (PS) was predicted from the interaction between pressure from imposed curriculum changes (PCC), self-efficacy (SE), and their interaction (solid lines represent structural paths and dashed lines represent covariances).

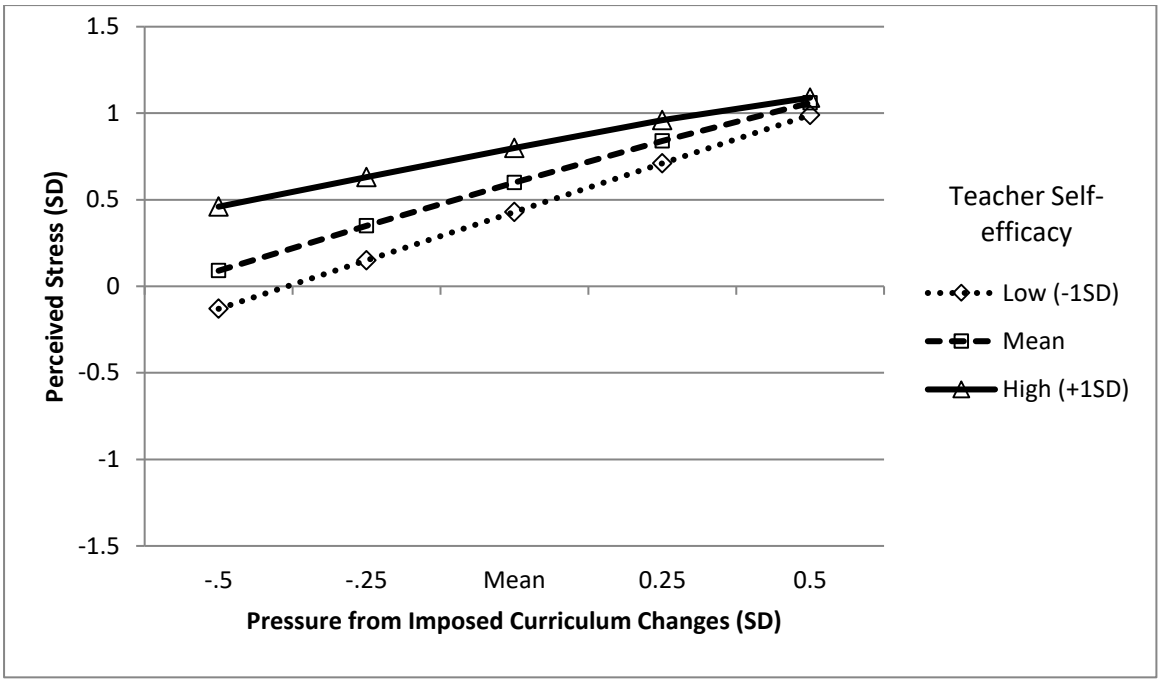

Figure 2. The model implied interaction between pressure from imposed curriculum changes and self-efficacy on perceived stress.