

4-30-2018

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RUNNING HEAD: TEACHER JOB SAT, STRESS, EFFICACY & SRL

Teachers' Job Satisfaction, Stress, Self-Efficacy and Beliefs about Self-Regulated Learning

by

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Honors Thesis

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April 2018

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Abstract

Self-regulated learning (SRL) refers to independent adaptive learning strategies involving, metacognition, motivation for learning, and strategic action (Zimmerman, 2008). SRL has been linked to long-term academic achievement and can be supported by teachers in school (Nota, Soresi & Zimmerman, 2004; Schunk, 2005). Studies have indicated that teacher efficacy, stress and job satisfaction can influence the extent to which teachers promote SRL (Caprara, Barbaranelli, Steca, & Malone, 2006; Klassen & Chiu, 2010; Serratore & Hutchinson, 2015). To date, very few studies have examined how teacher demographic variables influence teachers' efficacy, stress, and job satisfaction, and beliefs about SRL. The present study explored associations between teachers' years of experience, demographics of the teacher and classroom, as well as ratings of their job satisfaction, stress, self-efficacy, and how these factors impact the teachers' beliefs about SRL. Data were collected from 58 elementary school teachers (51 females; Mean age = 39.93 years; $SD = 9.77$ years) who, on average, had 13.08 years of teaching experience ($SD = 7.82$ years). Teacher participants completed an electronic questionnaire containing demographic items, plus items measuring teacher stress, job satisfaction, teacher efficacy and beliefs about SRL. Results from a series of linear regression analyses indicated that years of experience was a statistically significant predictor of teacher's self-efficacy and job satisfaction. Additionally, age was a statistically significant predictor of teacher's beliefs about SRL, and teachers' level of education had an effect on their perceived stress. The implications of these findings are discussed, including a better understanding of demographic factors that an effect on the various teacher factors that promote SRL development in students, as well as findings that may point to an improvement of policy and programming for the current education system.

Teachers' Job Satisfaction, Stress, Self-Efficacy and Beliefs about Self-Regulated Learning.

In the current society, there has been an increase in the number of demands put on teachers. Specifically, teachers are expected to foster the academic skills needed for success in a large number of students. Emerging research has been focused on what factors and learning habits are likely to support learners do develop the academic skills needed for 21st Century Learning. Additionally, there has been an increase in the studies looking at the importance of what professionals need to have in order to foster these important learning strategies and practices in their students. This study examined how teacher factors influence their ratings of self-efficacy, job satisfaction, perceived stress, and their beliefs about SRL.

Self-Regulated Learning

In general, self-regulation (SR) describes how individuals respond to environmental demands and achieve goals using adaptive patterns of cognition and behaviour (Zimmerman, 2008). Studies in educational psychology describe self-regulated learning (SRL) as students' application of metacognition, motivation, and strategic action to manage learning in school (Muis, 2007). Metacognition refers to learners' abilities to understand and remember information, and to learn effectively (Schraw, Crippen, & Hartley, 2006). Students are metacognitive when they analyze the demands of a task and plan how to accomplish it. Motivation for learning describes learners' self-efficacy, values, and attributions for academic learning (Mega, Ronconi & De Beni, 2014; Schraw, et al., 2006). Motivation for learning is apparent when students adopt learning beliefs that favor effort and perseverance as factors that influence their academic success. Additionally, students who engage in strategic action behave in ways that reflect their metacognition and motivation for learning (Cheng, 2011; Paris & Paris, 2001; Perry, Nordby, & VandeKamp, 2003). Self-regulating learners choose from a developing

repertoire of strategies support learning and achievement in school (Perry, Nordby, & VandeKamp, 2003).

Students' development of and engagement in SRL has been associated with a wide range of academic advantages at all levels of education and schooling. For example, Mega, Ronconi, and De Beni (2014), employed self-report questionnaire data from 6000 undergraduate students to examine the role of SRL on the established relationship between students' emotions and academic achievement. Results demonstrated that students who developed more positive emotions pertaining school, also needed self-regulated practices as well as motivation to achieve. Therefore, the individual would be unable to achieve academically without all three interrelating (Mega et al., 2014). These findings emphasize the role of teachers can have in promoting both positive emotions in the classroom, as well as developing practices and strategies that promote SRL in their students.

Research has demonstrated that self-regulating learners are characterized as motivated students who understand concepts such as record keeping, goal-setting, organizing information, and memorizing material (Nota, Soresi & Zimmerman, 2004). Moreover, students who show more self-regulation for learning in school, are likely to be motivated to learn and use strategies that can enhance their understanding of the material and lead to academic achievement (Schunk, 2005). These individuals tend to view learning as a process, so they set goals, plan for the future, monitor their progress, and appraise their strategies so they can learn effectively (Mega, Ronconi & De Beni, 2014). Rather than simply following the teacher's instructions, these students tend to engage in their own learning and understand what cognitive strategies are effective in doing so (Nota, Soresi & Zimmerman, 2004).

Furthermore, in their work, researchers have shown that children's development of SRL is a longitudinal predictor of their academic achievement, even when controlling for demographic factors such as gender and socioeconomic status (SES) (Nota, Soresi & Zimmerman, 2004). In this study, participants were roughly 80 high school students in Italy. At the start of the school year, they were asked to complete an interview about their self-regulation practices and learning strategies. After the year was over, a percentage was calculated of students who were accepted for further schooling and a set of scores were collected from their entrance exams. Researchers found that the learning strategies and self-regulation in their students significantly predicted higher exam scores and acceptance into further schooling. Taken together, findings from these studies emphasize the importance of teaching students these practices early in life.

However, not all students develop academically effective patterns of learning. Some students develop defensive patterns of learning that reflect academic self-handicapping (Schwinger, Wirthwein, Lemmer, & Steinmayr, 2014). Academic self-handicapping refers to individuals' adoption of patterns of thinking, emotion, motivation, and behavior that interfere with learning and academic engagement (Leondari & Gonida, 2007). Individuals' who engage in self-handicapping are more likely to experience unfavorable academic outcomes such as low motivation for challenging tasks and low self-efficacy (Perry, Vandekamp, Mercer & Nordby, 2002; Schwinger et al., 2014; Zuckerman, Kieffer, & Knee, 1998). These learners may avoid academically engaging tasks to preserve their self-esteem and status to others (Leondari & Gonida, 2007). Procrastination is a common self-handicapping technique where individuals delay work to an extent where the likelihood of effort and success is diminished (Covington, 1992).

Teacher and Classroom Factors That Influence SRL

A review of the literature has indicated that learners' development of and engagement in SRL is associated with the classroom tasks and practices teachers employ in their classrooms. Tasks that promote SRL are usually characterized as "open" tasks (Turner, 1995), problem-based tasks (Pasternak, Basilio & Whitebread, 2014), and those which are "complex by design" (Hutchinson, 2013; Perry, 1998; Perry, Hutchinson, Yee, & Maata, 2017). Moreover, researchers have found that classroom teaching practices such as making choices, controlling challenge, and engaging in self-evaluation are likely to support learners' SRL (Perry, Vandekamp, Mercer & Nordby, 2002). Opportunities for students to receive instrumental scaffolding and support from teachers and peers are also critical in fostering a community of learners and for implementing non-threatening evaluation practices that can be used to enhance students' engagement in learning while decreasing an emphasis on grades (Perry et al., 2017).

However, a growing body of research has indicated that additional classroom/teacher factors may play a role in teachers' implementation of tasks and practices associated with SRL. For example, Lombaerts et al. (2009), investigated teachers' beliefs regarding SRL, demographic factors, as well as, school and student characteristics. They also performed a confirmatory factor analysis to find what variables were strongest. Results demonstrated that teacher characteristics were the biggest predictor of their SRL beliefs (Lombaerts, Engels & van Braak, 2009). Teachers who held strong positive beliefs about students' SRL were more likely to employ lessons and practices that supported their students' development of it (Lombaerts et al., 2009). However, some research shows that a large number of teachers hold positive beliefs pertaining to SRL but cite external factors that inhibit their abilities to teach in ways that support it (Steinbach & Stoeger, 2016). The purpose of the present study was to examine whether and how factors such

stress, self-efficacy and job satisfaction were related to teachers' beliefs about teaching towards SRL.

Teachers' employment of SRL promoting teaching practices support learners to be active participants in their learning (Schunk, 2005). Self-regulation is seen to have a buffering effect in the case of negative personal factors that may affect the child's academic achievement (Schunk, 2005), showing the benefit the child to develop these strategies. For that reason, there has been research on the effectiveness of training sessions that aim to teach educators how they can promote SRL in classrooms. Research has found that teachers who engaged in training sessions pertaining to SRL, were seen to have an increase in their strategies and knowledge on the topic, as well as increasing their students understanding of self-regulation (Spruce & Bol, 2014). For example, Perry, Phillips, & Hutchinson (2006), found that pre-service teachers who received strong mentoring from practicing teachers during their teacher education program were effective in promoting SRL at the beginning of their career. Participants in this program consisted of 20 student teachers who were matched with experienced teachers in the community. Along with course work, student teachers completed the internship program where they engaged in seminars, observed teachers, and developed their own teaching skills. This program was seen to promote the benefits modelling has on learners and allowed for further integration of course work with experience. Additionally, the mentor teachers, who are experts in SLR, supported newer teachers in their implementation and promotion of SRL strategies in the classroom (Perry, Phillips & Hutchinson, 2006). However, to date, there has been few studies researching how demographic factors of the teachers influence their willingness or adoption of these SRL practices in the classroom.

Job Satisfaction

Job satisfaction refers to individuals' positive and negative evaluations of their job or career (Weiss, 2002). Ma and MacMillan (1999) describe three major contributors of job satisfaction in the teaching profession: teacher competence, administrative control, and organizational control. Teacher competence is defined as the beliefs that the teacher has in their teaching abilities, understanding of material, and their professional skills (Ma & MacMillan, 1999). Educators who are more likely to rate higher job satisfaction, tend to be teachers who are actively engaged in professional development training, and have more confidence in their teaching abilities (Ma & MacMillan, 1999). Administrative control focuses on the school-level factors that are likely to exert influence over teacher's job satisfaction. These factors include: staff members, breadth of paperwork, and the leadership styles of the principals (Ma & MacMillan, 1999). Lastly, organizational control emphasizes how the teacher engages in the school and their role. Depending on the dynamic of the school, teachers may flourish in some situations and wither in others. If the school environment is one that highlights communication and togetherness, teachers are more likely to report higher levels of job satisfaction, compared to an environment that promotes loneliness and individualization (Ma & MacMillan, 1999). Additionally, administrators can implement and promote innovative ways of teaching, specifically those that challenge current beliefs and promote thinking. This is expected to engage the teachers in the use of these techniques and skills (Ma & MacMillan, 1999). Finally, research has indicated that positive relationships with the administrators promote positive ratings of job satisfaction, non-dependent on the teachers' experience (Ma & MacMillan, 1999).

In their study, Sutton and Huberty (1984) found that teacher job satisfaction had a direct effect on teachers' perceived stress. The researchers asked participants to rate their job satisfaction while completing a measure of the number of potential stressors that professional has

currently. Results showed that in general, teachers who reported high levels of job satisfaction, reported lower levels of occupational stressors, while teachers who reported lower levels of job satisfaction reported higher levels of stress in the classroom (Sutton & Huberty, 1984).

Additionally, teachers who reported lower levels of job satisfaction were more likely to report the presence of negative affect (e.g., anxiety and depression) as the number of environmental and personal stressors increased (Ho & Au, 2006). However, there are very few studies that point to the impact demographic factors have on job satisfaction and how they may shape their beliefs about promoting SRL in the classroom. The present study addressed this issue.

Teacher Self-Efficacy

Another factor that has been linked to learners' engagement in SRL is teachers' self-efficacy. In general, self-efficacy describes how confident individuals' feel in their abilities to complete tasks and meet goals (Bandura, 1997). In the present study teacher efficacy refers to an educators' appraisal of their capabilities in helping their students learn (Klassen & Chiu, 2010). Research has demonstrated that teachers who report high levels of self-efficacy also report greater job satisfaction (Caprara, Barbaranelli, Steca, & Malone, 2006). High levels of teacher efficacy encourage teachers to network with colleagues and support happiness relating to work (Caprara et al., 2006). However, if the teacher does not have access to resources, they are more likely to become discouraged (Browsers, Evers & Tomic, 2001). Studies have demonstrated that teachers who have high levels of teacher efficacy, are more likely to support students' development of cognitive and metacognitive strategies like those implicated in learners' SRL (Perry, Vandekamp, Mercer & Nordby, 2002). Not only do teachers with high teacher efficacy enhance more positive views relating to the classroom, they also are seen to increase student's motivation for their own learning (Caprara et al., 2006). Finally, teachers who report higher

levels of teacher efficacy have students who also report high levels of self-efficacy (Caprara et al., 2006). To date, there are few studies that research the factors that influence self-efficacy in teachers, and ways to foster higher ratings of confidence in teachers who are struggling.

A growing body of research has emerged indicating that some demographic factors that play into teachers developing understandings of their teacher efficacy. Typically, the individual's ratings of their self-efficacy will depend on a number of factors and situations. Research completed by Huberman (1993), found that the years of experience has a positive impact on teacher's self-efficacy. Overall, teacher's self-efficacy is seen to increase until 23 years of experience, after this point is seen to decline (Klassen & Chiu, 2010). Additionally, teachers in the various stages have their own concerns and challenges that are focused on (Klassen & Chiu, 2010). This research points to the importance in understanding how specific factors may change over time and are not stable for the individual but rather shift depending on time or circumstances. In terms of other factors, it has been found that teachers who have a relatively calm classroom are more likely to report higher levels of self-efficacy than teachers who have disruptive students and classrooms, specifically when speaking on their abilities of classroom management (Caprara, Barbaranelli, Steca, & Malone, 2006). Although, years of experience and classroom environment have been shown to affect teachers' self-efficacy, the present study is interested in exploring teacher self-efficacy in relation to measures of job satisfaction, beliefs about SRL, and stress, which is described below.

Teacher Stress

Out of all careers, the teaching profession is seen to be of highest stress, and roughly 25 percent of teachers' report high levels of job stress (Kyriacou, 2001). Stress is defined as a state in which an individual feels negative affect and tension (Sutton & Huberty, 1984). Specifically,

stress is the outcome of an inability to properly cope with the psychological demands that are being put on the individual (Steinhardt, et. al, 2010). Teacher stress has been linked to experiences and situations in the workplace that cause the individual to feel negative affect (Kyriacou, 2001). Common areas of stress for teachers involve time constraints, approaching deadlines, working with colleagues, the politics of the school in which they work, and having a heavy workload (Kyriacou, 2001). It can also involve the quarrels between policy and school procedures, and what the teacher believes students need to engage in meaningful learning (Sutton & Huberty, 1984). Stress and the stressors in the environment are seen to be unique to the individual and will depend on their affect, experience, and situations (Kyriacou, 2001), as well as the demographics of the classroom and demographics of the teachers. For example, female educators tend to report more stress in their career, compared to males. This applies to both workload stress, and classroom stress (Klassen & Chiu, 2010).

Studies have found that high stress in teaching is seen to be correlated with a lower rating of job satisfaction (Klassen & Chiu, 2010). Additionally, teachers who report higher levels of stress have been associated with lower levels of self-regulation promotion in teaching (Serratore & Hutchinson, 2015). Chronic stress, the presence of a constant workplace stressor over a set period of time, is further linked with an increase in burnout, negative feelings, and emotional exhaustion, and also linked to depressive symptoms (Steinhardt, et. al, 2010). Teachers stress may also impact teacher interactions with students in the classroom. For example, a study completed by Yoon (2002), studied stress and the impact it had on the students. The researcher examined roughly 115 teachers in elementary school. A questionnaire was administered to the participants based on the various factors being studied; stress, negative affect, and self-efficacy. A demographic questionnaire was utilized to understand the teacher and how they build

relationships with students. Results showed that teachers who report higher levels of stress are more likely to act negatively towards unruly students, such as raising their voices or becoming frustrated more often. In turn, this often leads to these teachers forming more negative relationships with their students than non-stressed individuals. On the contrary, teachers who have lower reports of stress, contribute to an increase in the levels of children's engagement in the classroom; specifically, their motivation and enthusiasm (Pakarinen, et al, 2010). As discussed earlier, constructive and positive feedback from teachers were seen to help students become more self-regulated. However, stressed educators are less likely to provide positive feedback when the students act positively, and more likely to provide negative feedback when the students engage in negative behaviours (Yoon, 2002).

Summary and Research Questions

The purpose of this study was to explore how teachers' education and experience, plus ratings of their job satisfaction, stress, and self-efficacy are related to their beliefs about self-regulated learning. Three research questions and hypotheses were investigated. The first research question was: What are the relationships among teachers' experience, job satisfaction, self-efficacy, stress, and beliefs about SRL? It was hypothesized that statistically significant and positive relationships would emerge among job satisfaction, self-efficacy, and beliefs about SRL. Additionally, it was hypothesized that the amount of experience the teacher has would impact these factors in a positive manner. Also, stress would negatively correlate with these variables. The second research question was: Do teacher demographic variables (years of experience, age, grade taught, etc.) predict stress, self-efficacy, job satisfaction and beliefs about SRL? It was predicted that various demographic factors such as age, education, experience and gender will be significant predictors of the teachers' self-efficacy, perceived stress, job satisfaction and their

beliefs about SRL. The third research question was: Does the grade taught by teachers interact with their teacher self-efficacy to influence their perceived stress? It is anticipated that an interaction of grade the participant teaches, and their self-efficacy will better account for the variance in their stress, than by themselves, meaning that both have a role in aiding or hindering the teachers stress.

Method

Participants

Data were collected from 58 Canadian elementary and high school teachers (51 females; $M_{\text{age}} = 39.93$ years; $SD = 9.77$ years). Teachers indicated their specializations in teaching as primary grades (57.1%; K-Gr.3), intermediate grades (14.2%; Gr. 3-8), and high school grades (28.6%, Gr. 9-12). 42% of participants reported completing a master's degree ($N = 24$, missing data = 2). Participants reported 0 to 32 years of classroom teaching experience (Mean = 13.08 years, $SD = 7.82$ years). Approximately 82.8% of participants identified their ethnic background as Caucasian; other reported ethnicities were Chinese (1.7%), Black (1.7%), South Asian (1.7%), Latin American (1.7%), and 8.6% of participants reported "other". 93% of participants resided in Ontario, while 7% resided in British Columbia

Measures

Teacher Demographic Questionnaire. The teacher demographic questionnaire was created by the study author and contained 20 items. The first five items asked teachers to provide information about the demographic composition of the classroom (e.g., How many boys and girls are in the classroom?), and classroom supports (e.g., "Is there an Early Childhood Educator and/or Educational Assistant in the classroom?"). The next twelve items asked teachers to describe their educational background and experience (e.g., How many years of formal teaching experience do you have?), as well as demographics of themselves such as age and gender.

Teacher Self-Efficacy Scale. The Teacher Self-Efficacy Scale (Tschannen-Moran & Woolfolk-Hoy; 2011) is comprised of 11 items designed to measure three aspects of teacher efficacy: (1) classroom management (4 items; "How much can you get children to follow classroom rules?"), (2) student engagement (4 items; "How much can you do to provide alternative strategies in your classroom?"), and (3) instructional strategies (3 items; "How much can you do to motivate students who show low interest in school work?"). Teachers responded to items using a 9-point scale with endpoints ranging from 1 (nothing) and 9 (a great deal). Internal consistency for the teacher self-efficacy variable was calculated at .93 (95% CI = .90 - .96), indicating a high level of internal consistency. Also, Cronbach's alpha for the classroom management ($\alpha = .93$; 95% CI = .89 - .95), student engagement ($\alpha = .91$; 95% CI = .86 - .94), and instructional strategies subscales ($\alpha = .86$; 95% CI = .78 - .91) were calculated and exhibited good internal consistency. A total mean score of teacher self-efficacy, plus mean scores for each of the classroom management, student engagement, and instructional strategies subscales were computed by summing the individual item scores and dividing by the number of items.

Teacher Job Satisfaction Scale. The Teacher Job Satisfaction subscale (Caprara et al., 2003) is comprised of two items which measured teachers' self-reported job satisfaction (e.g., "I am satisfied with what I achieve at work"). Teachers responded to items using a 9-point Likert-scale with endpoints ranging from 1 (not satisfied) to 9 (extremely satisfied). Cronbach's alpha for this subscale was calculated at .91 (95% CI = .86 - .95). A mean score of teacher job satisfaction was calculated by summing the item scores and dividing by the number of items.

Teacher Stress Scale. The 7-item Teacher Stress Scale (Klassen & Chiu, 2010) was employed to measure two aspects of teacher stress. Workload stress was assessed with four items (e.g., "How great a source of stress is having too much work to do?"). Teachers' perceptions of

classroom stress were measured with three items (e.g., “How great a source of stress is having noisy students”). Teachers responded to items using a 9-point Likert-scale with endpoints ranging from 1 (no stress) to 9 (extreme stress). Internal consistency for the teacher stress variable was calculated at .77 (95% CI = .67 - .85), indicating a moderately high level of internal consistency. Also, Cronbach’s alpha for the classroom stress ($\alpha = .83$; 95% CI = .73 - .89), and workload stress subscales ($\alpha = .62$; 95% CI = .42 - .76) were calculated and exhibited good internal consistency. A total mean score of teacher stress, plus mean scores for each of the classroom stress and workload stress subscales were computed by summing the individual item scores and dividing by the number of items.

Self-Regulated Learning Teacher Belief Scale. The Self-Regulated Learning Teacher Belief Scale (Lombaerts, Backer, Engels, 2009) is comprised of 10 items that assess teachers’ beliefs about SRL (e.g., “Pupils have the capacity to determine what they want to learn”). Teachers responded to items using a five-point Likert Scale with endpoints ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach’s alpha .90 (95% CI = .85 - .93). An average score of teacher beliefs about self-regulated learning was be calculated by summing the item scores and dividing by the number of items.

Procedure

Ethics approval was granted by the Kings University College research ethics committee in November 2017. The researchers created the electronic teacher questionnaire using Qualtrics Survey Tool. The researcher distributed the questionnaire URL and a message outlining the study, which described the questionnaire and the goals of the research, using the social media platform Facebook™. From there, the individuals were given a letter of information and asked to sign and date their name acknowledging that they had read the report before the questionnaire

was administered. After participants completed the survey, they could provide their email address to receive a \$6 e-gift card to thank them for their participation.

Results

The purpose of this study was to explore how teachers' education and experience, plus ratings of their job satisfaction, stress, and self-efficacy were related to their beliefs about SRL. This completed using three analyses; the first a set of correlations to understand the relationships between various teacher factors such as self-efficacy. Next, a series of linear regressions were completed to examine how demographic factors impacted the various factors studied. Finally, a moderation analysis was conducted to understand how the grade taught by teachers interact with their teacher self-efficacy to influence their perceived stress.

Missing Data

When working with quantitative data, there are often instances where participants have missing data in their responses. This may be due to an error in the questionnaire software or the participant omitting the question in their response. In order to control for skewness, the researchers utilized the "person-mean substitution" (PMS) practice. In this method, the participant's overall mean for a certain scale is calculated. That mean value is then inputted into the missing data point. In this study, the PMS method was calculated in the Self-Regulated Learning Belief Scale in two instances.

Descriptive statistics for the main study variables appear in Table 1. In general, teachers reported higher levels of self-efficacy ($M = 6.95$, $SD = 1.10$), stress ($M = 6.40$, $SD = 1.27$), and job satisfaction ($M = 6.24$, $SD = 1.85$). The participants average score of beliefs about self-regulated learning was slightly higher than the average score ($M = 3.30$, $SD = .71$). When identifying the highest area of stress, teachers reported higher scores in the workload ($M = 6.78$,

$SD = 1.31$), when compared to classroom stress ($M = 5.90$, $SD = 1.73$). Finally, when examining the highest ratings of self-efficacy, teacher engagement was rated the strongest ($M = 7.08$, $SD = 1.21$), followed by instructional strategies ($M = 6.93$, $SD = 1.15$), with classroom management holding the lowest scores ($M = 6.82$, $SD = 1.43$).

Table 1

Descriptive Statistics for the Main Study Variables (N=58)

	<i>M</i>	<i>SD</i>
1. Total stress	6.40	1.27
2. Workload stress	6.78	1.31
3. Classroom stress	5.90	1.73
4. Total teacher efficacy	6.95	1.10
5. Classroom management	6.82	1.43
6. Teacher engagement	7.08	1.21
7. Instructional strategies	6.93	1.15
8. Beliefs about SRL	3.30	.71
9. Job satisfaction	6.24	1.85

The results of the current study are presented in order of the research questions.

Research Question 1: Are there significant relationships among teachers' experience, job satisfaction, self- efficacy, stress, and beliefs about SRL?

Pearson Product-Moment correlations are displayed in Table 2. Teachers' age was statistically significantly related to their classroom management ($r = .26$, $p < .05$), teacher engagement ($r = .28$, $p < .05$), teachers' beliefs about self-regulated learning ($r = -.30$, $p < .05$), and years of experience ($r = .75$, $p < .01$). Additionally, teachers' years of experience was statistically significantly and positively associated with teacher-efficacy ($r = .29$, $p < .05$). Workload stress was positively and statistically significantly correlated with teachers' efficacy for classroom management ($r = .28$, $p < .05$) and instructional strategies ($r = .28$, $p < .05$).

Finally, job satisfaction and teacher-efficacy were statistically significantly and positively correlated ($r = .64, p < .01$).

Table 2

Intercorrelations Among the Main Study Variables (N=58)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Years of experience	1									
2. Age	.75**	1								
3. Total teacher stress	.16	.24	1							
4. Workload stress	.12	.18	.85**	1						
5. Classroom stress	.15	.22	.85**	.49**	1					
6. Total teacher efficacy	.29*	.26	.24	.24	.16	1				
7. Classroom management	.29*	.26*	.22	.28*	.10	.90**	1			
8. Teacher engagement	.31*	.28*	.18	.07	.23	.88**	.65**	1		
9. Instructional strategies	.09	.07	.22	.28*	.09	.80**	.58**	.61**	1	
10. Beliefs about SRL	-.25	-.30*	-.06	.09	-.19	-.06	-.08	-1.5	.12	1
11. Job satisfaction	.11	.12	.12	.09	.12	.64**	.64**	.60**	.36**	-.16

Note. Statistically significant correlations appear in bold font. ** $p < .001$, * $p < .05$. Effect sizes should be interpreted such that a large effect size ($r = .5$), medium effect size ($r = .3$) and small effect size ($r = .1$).

Research Question 2: Do teacher demographic variables predict stress, self-efficacy, job satisfaction and beliefs about SRL?

To answer the second research question, a series of linear regressions were completed to examine whether the teacher demographic variables in this study (i.e., years of experience, age, grade taught and education) were statistically significant predictors of teacher stress, efficacy, job satisfaction, and beliefs about SRL. Results demonstrated that teacher age was a statistically

significant predictor of *both* teacher efficacy, $F(1,56) = 3.93, p < .05, R \text{ squared} = .07$, corresponding to a small to medium effect size (Cohen, 1992), and beliefs about SRL, $F(1,56) = 5.32, p = .03, R \text{ squared} = .09$, corresponding to a medium effect size. Additionally, years of teaching experience was a statistically significant predictor of total teacher efficacy, $F(1,56) = 4.95, p = .03, R \text{ squared} = .08$, corresponding to a medium effect size, and teacher efficacy for classroom management, $F(1,56) = 5.28, p = .03, R \text{ squared} = .07$, corresponding to a small to medium effect size. Findings from this study demonstrated that teacher -efficacy was also a statistically significant predictor of job satisfaction, $F(1,56) = 39.50, p < .01, R \text{ squared} = .41$, corresponding to a large effect size. Finally, the grade level that teachers taught (e.g., kindergarten, grade 1), was a statistically significant predictor of their job satisfaction, $F(1,55) = 12.99, p = .01, R \text{ squared} = .19$, corresponding to a medium effect size. However, findings demonstrated that teachers' years of experience was not a statistically significant predictor of their beliefs about SRL, $F(1,56) = 3.66, p = .06, R \text{ squared} = .06$, corresponding to a small to medium effect size.

In addition, a one-way ANOVA was computed to whether teacher education (i.e., whether teachers completed a master's degree) had an effect on teacher stress. Findings from this study indicated that teacher education had a statistically significant effect on teacher stress, $F(1,54) = 4.30, p = .04, \eta \text{ squared} = .01$. That is, teachers who reported completing a master's degree ($M = 6.14, SD = 1.16$) reported lower levels of teacher stress compared to those who did not ($M = 6.74, SD = 1.01$).

Research Question 3: Does the grade taught by teachers interact with their teacher efficacy to influence their perceived stress?

A moderation analysis was computed to examine whether teacher efficacy and grade taught interacted to influence teacher stress. No statistically significant interaction was observed, $F(57) = 3.84, p = .06$.

Discussion

The purpose of the present study was to explore associations among teachers' education and experience, plus ratings of their job satisfaction, stress, efficacy and beliefs about SRL. SRL has been shown to be a positive longitudinal predictor of academic achievement in children (Nota, Soresi & Zimmerman, 2004). Teachers can influence the extent to which they promote SRL in their classrooms and with their students (Schunk, 2005; Perry, Vandekamp, Mercer & Nordby, 2002). Previous studies have demonstrated relationships between various factors that have an effect on teachers' beliefs pertaining to SRL such as, self-efficacy, job satisfaction, and stress. To date, very few studies have shown the influence on these factors from demographic factors such as years of experience, education, and age. Results of the current study indicated statistically significant associations between teacher factors such as teacher efficacy and ratings of job satisfaction, as well as teachers' reports of their workload stress relating to their rating of classroom management and instructional strategies. The first correlation explains that higher ratings of self-efficacy will also show higher ratings of job satisfaction in the individual. If the individual holds a sense of confidence in their teaching abilities and believes s/he can control her/his classroom, there is likely to be an accompanying feeling of happiness. However, if there is a presence of stressors that hinder those abilities, then they will less likely to find happiness in their work. Lastly, workload stress and ratings of classroom management and instructional strategies in the individual are related, pointing to the fact that teachers who are competent in

their abilities may prepare more for class, spend more time developing lesson plans, or are more committed to the school.

Findings from this study demonstrate that demographic factors such as years of experience, grade taught, and level of education are statistically significant predictors of teacher self-efficacy and job satisfaction. Study findings confirm previous research demonstrating that teacher efficacy is a statistically significant predictor of job satisfaction (Caprara, Barbaranelli, Steca, & Malone, 2006). However, findings from this study extends previous research. In particular, this study found that the number of years of teaching experience was a statistically significant predictor of their teacher efficacy—particularly, their confidence in their classroom management skills. This brings forth the idea that as teachers progress in their career, their experience in the field grows and they learn strategies that allow them to teacher students effectively, promote self-regulation in their students, and engage them in learning. As well, the teacher is better able to cope with potential stressors that arise such as the ability to calm a disruptive child, motivate a student who is struggling and control the classroom as a group. In turn, with the development of the skills, the teacher is expected to feel more confident in their teaching abilities and increase their ratings of self-efficacy. This finding shows the importance in practical, hands on experience for those who are training in the profession, as well as supports/programming that aid in the development of teachers' self-efficacy.

In addition, the present study found that the grade currently being taught by the teacher also influenced teachers' reports of their job satisfaction. Meaning, those who taught older grades, were seen to have the highest level of job satisfaction. In general, teachers face a large amount of demands that can bring forth feelings of dissatisfaction and stress. These can include the demands from administrators, families of students, as well as demands they place on

themselves (Lambert, McCarthy, O'Donnell & Wang, 2009). However, teachers in younger grades appear to have more demands put upon them as the children they work with have greater variation in their behaviours, abilities, and knowledge (Lambert, McCarthy, O'Donnell & Melendres, 2007). If the teacher does not have classroom supports made available, the teacher may not have the resources available to engage the students and develop their learning strategies, which is likely to influence their satisfaction in teaching.

Finally, results of this study demonstrated that teacher education was a statistically significant predictor of teacher stress. In particular, teachers who reported completing a master's degree reported lower ratings of stress compared to teachers who did not. These results are interpreted as indicating that teachers with additional education (i.e., beyond their teaching degree) perhaps have more experience and education that helps them to cope with the various stressors that arise in the profession, either in workload stress or classroom stress. This points to the importance of ongoing training and professional development. Previous research has highlighted that teachers needed to have opportunities to engage in ongoing, high quality professional development. This is most beneficial when the training situates the individuals' professional learning within a community of practice to build on the needs and strengths of their classroom and students.

An unexpected finding was that there was no statistically significant interaction observed between the grade taught and teacher efficacy to influence their perceived stress. Although non-significant, the interaction points to the complexity of factors studied and the importance of researching the interactions between various demographics and factors. A potential explanation for the non-significance, were the sampling concerns that are explained further later in the paper.

If significant, the findings would have suggested that improving teacher-efficacy is important in reducing stress in teachers.

Altogether, findings from the current study provide some evidence that may clarify how teacher demographic factors including, age, years of formal teaching experience, level of education, the grade currently being taught, and gender influence teachers' efficacy, job satisfaction, stress, and beliefs about SRL. The first noteworthy finding pointed to the importance of years of experience on teacher self-efficacy. Secondly, the influence education had on the perceived stress of the individual. Lastly, the grade taught by the participants influenced their ratings of their job satisfaction.

Limitations

Findings from the current study should be interpreted with the following limitations in mind. First, there is a sampling limitation in the small sample size of participants. As the sample was only 58 teachers, the results and findings may be limited in the generalizability. By examining a larger sample of teachers, the data would be a more accurate reflection the population. Additionally, the non-statistically significant finding which examined the interaction between grade the teacher taught and their self-efficacy and how those factors together predicted perceived stress, was possibly due to the low sample size. Also, the interaction may be affected by the disproportionate spread of professionals in each specialization. A majority of this study's sample taught primary grades of kindergarten to grade three, with smaller percentages of those teaching intermediate and high school grades. If the sample were to be larger and have an equal percentage of participants in each specialization, the interaction may have been significant. Secondly, there was no exploration of how the variables shift over time. Typically, the studied factors are considered malleable to the environmental circumstances around the individual. By

looking at the longitudinal data, researchers could have researched the direct influence demographics of the classroom had on the scores rather than demographics of the teacher which are more stable. Lastly, the current study relied on self-report data to measure each factor of interest. This may have potentially led to data that was not as true. By obtaining information in a variety of methods, researchers can control for more of the difference in the individual more than simply self-report. Additionally, it may have led to the attrition of teachers who completed the study, as they may have lost interest in the questionnaire. One way to address some of the limitations associated with self-report data is to include a wider range of measures, such as interviews or classroom observations.

Implications

The results of this study contribute to understandings of the roles that teacher factors can have on their job satisfaction, self-efficacy, and stress. By understanding this, professionals and those working with teachers can use this information to guide policy and programming. For example, in order to increase teacher self-efficacy, a mentorship program similar to the program studied by Perry, Phillips, and Hutchinson (2006) should be implemented, where teachers beginning their career can foster a relationship with more experienced teachers, can allow them to learn effective instructional strategies for promoting SRL. Finally, there is a demand for further research in the area of SRL, strategies that foster self-regulation in students, and focusing on communities of practices so that teachers can decide how to construct opportunities to promote it in their classrooms (Perry et al., 2017).

Future Research

The findings presented in this study point to future work that considers how teacher and classroom demographic variables affect teacher's beliefs about and children's engagement in,

SRL. Furthermore, a study that involves a larger sample of participants with various ages, educational experiences, and specializations of grades will allow the results to be generalized to population of teachers in Canada. Also, a greater depth of measures and longitudinal data will allow researchers to reach a better understanding of the relationships, predictions, and interactions present between the factors of interest. Provincial differences would be beneficial in understanding what policies or school boards are the most effective, which could serve as a guide for future changes.

Additionally, by using the demographic questionnaire created in the current study, there is opportunity for future research to explore qualitative data that was asked. Questions in the survey asked participants to speak on areas of strength and challenge, personal improvements that teachers hold, and topics that are not understood in the larger sample of teachers. By researching these responses, participants can voice their opinion of the positive and negative aspects of the career without consequence or fear of repercussion from their administrative staff. Additionally, this will also help researchers learn what topics in education and programming may be lacking in current teacher training. Lastly, researchers have the potential to develop a better understanding of the complex interactions between the various demographics studied, as well as potentially expanding the factors that impact the professional.

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