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TEACHER JOB SATISFACTION IN PRIMARY SCHOOLS

The relation to work environment

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Abstract

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Aim: Teachers contribute to students' success and school development to a great extent. Since there is in Sweden—as in other countries—a teacher shortage, it seems important to find ways to value the profession and keep it attractive. Research into factors that affect job satisfaction can be very useful for school leaders and teachers. The scholarly literature on job satisfaction is however scarce, suggesting that inquiry into factors that relate to job satisfaction is lacking, including in Sweden. The purpose of this study is to explore how job satisfaction relates to two attributes of school environment: teacher-student relations and school management, and stress as a mediating factor. The strength and direction of these relationships are examined using data collected in 2011 among Swedish primary school teachers as part of longitudinal research, the 1998-Evaluation Through Follow-up cohort from Gothenburg University

Method: A bivariate correlation analysis was conducted in order to investigate whether, and the extent to which, job satisfaction is related to stress, teacher-student relations and school management.

Results: The school environment attributes: positive teacher-student relationships and support from school management were positively associated with teacher job satisfaction, whereas stress and the factor attributes discipline issues (an attribute of student-teacher relationship) and lack of social support (an attribute of school management) were negatively related to it. Sociodemographic variables did not change the zero-order correlations. The study has linked both stress and psychosocial factors in the school environment—notably, attributes of teacher-student relationships and school management—to teachers' job satisfaction, thereby reducing the knowledge gap in the empirical literature about factors that affect job satisfaction among primary teachers. Having identified school environment factors that school leaders should be alert to, the study may benefit school leaders in helping to retain teachers and increase their job satisfaction.

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Introduction

This chapter describes the context of the study and provides the reader with information on the problem discussion. It highlights the significance of the study and narrows it down to the thesis statement. This is followed by the thesis aims, objectives and questions. Finally, the last section provides key definitions of terms used throughout this study.

Background

The problem

Recruiting and retaining teachers is a continuing concern for school leaders at all levels in Sweden. This concern has turned into an ongoing national debate in Sweden about how to decrease teacher shortage (Lärarförbundet, 2016). According to researchers, this shortage can be minimized by increasing teachers' job satisfaction (Skaalvik & Skaalvik, 2011). Studies show that a positive work environment contributes to teachers' job satisfaction (Tran & Le, 2015; Skaalvik & Skaalvik, 2011). Several studies emphasize that satisfied teachers choose to keep working in schools that provide a positive environment. In other words, job satisfaction contributes to teacher retention (Skaalvik & Skaalvik, 2011; Ingersoll, 2001). In order to increase teacher effectiveness, productivity and job commitment, schools should satisfy teachers' needs by building a positive work environment. The objective of this paper is to explore the relationship between psycho-social attributes of work environment (teacher-student relationships and school management) and teachers' job satisfaction, while using stress as mediating factor. The study employed a quantitative methodology. The theoretical framework—namely the motivated connection between main variables and particular psycho-social measures—and so the selection of measures to be used in analysis, were derived from a literature review on teacher job satisfaction and work environment. The study that follows is organized into six sections. This introduction will continue by providing brief information on the practical and theoretical context, before listing the research questions that guide the present study. The subsequent literature review explores the research problem in depth, forming an empirically-based theoretical framework of observed connections between three constructs, namely teachers' job satisfaction, stress, and teachers' work environment. The latter is itself composed of two main variables, namely teacher-student relations and school management. The review also situates the research in relation to the existing literature. The section on methodology provides a description of how the data-set was obtained and analyzed. The results section presents the findings of the study, which is followed by a discussion reporting a summary, an explanation and the main implications of the study. Finally, the conclusions present the key points emerging from the research.

Context of the study

In 2011 the Swedish Parliament introduced certification of teachers in Sweden to improve the quality of educational services by raising the number of skilled teachers (Skolverket, 2014), yet instead of school success there is teacher shortage crisis (Lärarförbundet, 2016). According to The Swedish Teachers Union's (Swedish: Lärarförbundet) compilation of statistics from the Swedish Public Employment Service, vacancies in primary schools have

increased by 30% compared to 2015 (Lärarförbundet, 2016). The number of vacancies in summer 2016 was 22% more than the year before (Lärarförbundet, 2016). The vacancies for preschool teachers increased by 32% and for secondary school teachers by 29%. Figures show that around 40,000 teachers have abandoned the profession to work in other sectors like public administration, health care and child welfare, while 6 out of 10 teachers are considering leaving the profession (Lärarförbundet, 2016). Teachers report dissatisfaction with high levels of work stress and lack of support from school management (Olsson, 2016)—hence an obvious and motivational connection is made by teachers themselves between job satisfaction and work-related stress factors. Sick leave for stress-related diseases have increased considerably among teachers in the past five years (Stridsman, 2016; Försäkringskassan, 2012). Lärarförbundet reports that teacher shortage is becoming more serious every year and the new figures suggest that it will be even worse. Statistics Sweden predicts that in ten years time the greatest shortage of trained teachers will be in primary and secondary education reaching a staggering number of 65,000 educators (SCB, 2014). No surprise that teachers are among the most sought professionals on the labor market (Lärarförbundet, 2016).

The impact of teacher shortage can have serious consequences in the form of larger classes and more unqualified teachers (Lärarförbundet, 2016). School leaders struggle with recruitment. As a result, 4 out of 10 schools employ unqualified staff (Lärarförbundet, 2016). Moreover, teacher shortage can affect student performance. Studies show that high quality teaching depends on high quality teachers (Bolin, 2007). Furthermore, a teaching recruitment and retention crisis is likely to affect the optimal integration of immigrants and refugees. In 2015, around 160,000 people applied for asylum in Sweden and 70,000 of them were asylum seeking children (Thurfjell, 2015). Who is best placed to teach immigrant children about national values and knowledge, if not suitably qualified and job-satisfied teachers?

The attractiveness of the teaching profession is therefore properly a matter of national concern. Efforts need to be made to make the profession more attractive to those who may be choosing the profession and to those who are considering leaving the profession. The Swedish government sees part of the solution in foreign teachers now arriving in Sweden (Thurfjell, 2015). Yet they fail to realize that the validation of foreign diplomas is a long process and that prior to entering the job market the applicants often need to (a) complete their qualifications according to Swedish standards and (b) master Swedish (Skolverket, 2014). Moreover, these foreign teachers then enter a profession that remains negatively affected by experienced work conditions, high levels of stress, high levels of drop-out and low professional status.

The question what can be done to retain teachers in Sweden thus remains to be addressed. Studies show that it is important to value teacher job satisfaction as it influences teacher turnover (Skaalvik & Skaalvik, 2011; Otto & Arnold, 2005; Ingersoll, 2001). Job satisfaction is key to teachers' psychological and emotional well-being (Klassen & Chiu, 2010), teachers' motivation and career commitment (Raziq & Maulabakhsh, 2015; Demirtas, 2010) and quality of teaching, as well as to students' success (Demirtas, 2010, Bolin, 2007).

Much of the early research focused on identifying factors associated with teacher job satisfaction. They have been classified into work environment factors (Tran & Le, 2015; Skaalvik & Skaalvik, 2011) and individual factors (Bolin, 2007; Spector, 1997; Bishay,

1996). Spector's (1997) defined the former as the nature of work, pay, the treatment at work and relations with others. Bolin (2007) defined the latter as age, gender, educational background, work experience and subject area. Numerous studies have investigated the relationship between job satisfaction and work environment by taking into consideration the above-mentioned variables.

Studies show that a negative work environment results in low job satisfaction due to high levels of stress (Black, 2004). Stress can lead to low quality of teaching (Demirtas, 2010; Judge, Thoresen, Bono, & Patton, 2001) and high turnover rates (Ingersoll, 2001). Åkerwall & Johansson's qualitative study (2015) suggests that a negative work environment is characterized by high workload and stress levels and that it results in poor teacher health. Kokkinos, Panayiotou, and Davazoglou (2005) observe negative teacher-student relationships and discipline problems as the main sources of teacher stress. Skredsvik's quantitative study (2006) describes a positive work environment as one where management provides social support and developmental support to teachers. Skredsvik (2006) suggests employing background variables like age, gender and educational level in further research. Other experts argue that not work environment but individual factors influence job satisfaction (Bolin, 2007). Bolin's study (2007) on the relationships between job satisfaction, workload, income, school management, and collegiality controlling for age, length of teaching service, and educational level lacks, however, teacher-student relations as variable. Saiti and Papadopoulos (2015) report that the personal characteristics (gender, age, years of experience, and educational level) of primary school educators have an impact on job satisfaction. The study was based on 360 non randomly selected primary school teachers in Athens, Greece.

Work environmental aspects that contribute to job satisfaction do need to be identified so that school leaders can introduce appropriate changes in order to increase the satisfaction levels of teachers (Perie, Baker & Whiterner, 1997). Indeed it seems that researchers are in broad consensus on the relationship between work environment and teacher job satisfaction, and have subsequently identified associated factors that mediate that relationship. However, although progress has been made in identifying factors associated with teacher job satisfaction, leading also to the development of programs aimed at promoting teachers' job satisfaction, the phenomena of high teacher turnover and teachers leaving the profession remain ongoing issues, so that the matter seems less than resolved.

Moreover, the review of literature shows that until now few studies have examined the interaction of school management and teacher-student relationships with teachers' job satisfaction in Swedish primary schools. Most studies that do investigate work environment and teachers' job satisfaction, analyze a partial conception of work environment, in which either school management or teacher-student relationships is studied. Since teachers' work environment has been studied only aspectually, with school management and teacher-student relations as two isolated parts of teachers' work environment, in both quantitative and qualitative studies, it seems relevant to conduct a study in which the joint relationship of both school management and teacher-student relationships with job satisfaction among teachers is analyzed.

This thesis tries to fill the gap in the literature by analyzing job satisfaction against stress, teacher-student relations and school management as joint factors of work environment,

while controlling for background variables such as age and gender. The purpose is to examine whether and how strongly job satisfaction is affected by work environment attributes: teacher-student relations, school management, and stress as a mediating factor. The study employs a quantitative analytical framework in order to explore and understand the relationship among variables (Creswell, 2014) such as the strength and direction of the relationships. The study is empirical, and the context consists of earlier empirical studies to which this study hopes to further contribute. The researcher uses 2011 data from the 1998 ETF-cohort. The data were collected via a survey conducted by Statistics Sweden among primary school teachers and pupils in Sweden (Härnqvist, 2000).

Research questions

The main purpose of this study is to investigate the relationship between school environment and teachers' job satisfaction. Specifically, the study will analyse how teachers' job satisfaction relates to two attributes of school environment: teacher-student relations and school management, with stress as a mediating factor.

Hence the study aims at answering the following overall research question:

- How are factors in the school environment related to primary school teachers' job satisfaction in Sweden?

The following subsidiary research questions are investigated:

1. How is work-related stress related to primary teachers' job satisfaction?

2. How are teacher-student relationships related to primary teachers' job satisfaction?

3. How is school management related to primary teachers' job satisfaction?

Objectives

The study's broad objectives are to explore the relationship between work environment and job satisfaction of Swedish primary school teachers. The specific objectives are to explore the relationship between teachers' job satisfaction and stress, to explore the relationship between teachers' job satisfaction and teacher-student relationships and to explore the relationship between teachers' job satisfaction and school management.

Research Hypotheses

Based on the review of literature, the researcher will examine the following four hypotheses:

Hypothesis 1: Teachers' job satisfaction correlates with school management, as an attribute of school environment.

Hypothesis 2: Teachers' job satisfaction correlates with teacher-student relationships, as an attribute of school environment.

Hypothesis 3: The relationship between teachers' job satisfaction and school environment is mediated by stress.

Hypothesis 4: There is no relationship between teachers' job satisfaction and teachers' background variables.

Key definitions

Job satisfaction

Job satisfaction refers to the degree to which teachers' needs like recognition, appreciation and fulfillment are being met (Evans, 1997). Job satisfaction is negatively affected by stress (OECD, 2014; Borg, Riding & Falzon, 1991).

Work environment

The term refers to a physical place, where employees work (Leithwood, 2006). While the physical aspects can consist of buildings, equipment and workstations, the psycho-social aspects include employees' attitudes, work-related stress, social interactions and behavior (Chandrasekar, 2011). Teacher work environment is school. The study examines notable psycho-social aspects of teachers' work environment. School environment as a dimension consists of two attributes: school management and teacher-student relationships. The whole dimension of school environment is mediated by another dimension called stress.

Literature review

The purpose of this section is to provide readers with a critical review of theorised connections that have been found to exist between job satisfaction, stress, school management and teacher-student relationships.

Teacher Job satisfaction

Herzberg (1987) suggested two types of factors that contribute to job satisfaction and job dissatisfaction. The former are the motivators (intrinsic factors): recognition, personal growth, the work itself, opportunities for promotion, achievement. The hygiene factors (extrinsic factors) ensure that employees perform their tasks at minimum level. These are: supervision, security, organization policies, work conditions, salary, relationships with colleagues and supervisors and status are associated with job satisfaction. While the presence of extrinsic factors does not guarantee job satisfaction, their absence can result in employee job dissatisfaction (Herzberg,1987).

Studies (Wu and Short, 1996; Herzberg, 1987) show that teachers emphasize the motivators. Other studies (Crossman & Harris, 2006) suggest the hygiene factors as the best predictors of teacher job satisfaction. Recent studies (Griva, Panitsidou, & Chostelidou, 2012) suggest the mix of both factors as main predictors of teachers' job satisfaction.

Teachers' satisfaction is important for student achievement and school performance. To begin with, job satisfaction influences job performance (Judge et al., 2001). It increases teacher motivation and commitment to teaching (OECD, 2014; Van Maele & Van Houtte, 2012; Judge et al., 2001). Satisfied teachers are more likely to provide higher quality teaching that benefits students' success (Collie et al., 2012; Griva et al., 2012; Demirtas, 2010). Teacher job satisfaction has serious implications for the school development and teachers themselves. Particularly, it can influence teacher absenteeism, turnover and school effectiveness (Ingersoll, 2001; Ostroff, 1992). Satisfied and motivated teachers are more interested in professional development (Ostroff, 1992), which subsequently can improve the quality of teaching (OECD, 2014).

Finally, studies highlight (Collie et al., 2012; Klassen & Chiu, 2010; Borg et al., 1991) that teachers' job satisfaction is determined by stress and teaching efficacy. In addition, job satisfaction affects teacher turnover and retention. The likelihood of leaving the profession decreases when employees have high levels of job satisfaction (Crossman & Harris, 2006; Tye & O'Brien, 2002).

School environment

Teachers are mainly responsible for developing young learners' literacy skills, provide opportunities for personal development, educate about societies and prepare for job market (OECD, 2014). School environment can affect productivity, motivation and wellbeing (Chandrasekar, 2011). It is a complex system, consisting of interactions between school administrators, fellow teachers and pupils (OECD, 2014). Studies show that the environment is related to teacher job satisfaction (Tran & Le, 2015; Raziq & Maulabakhsh, 2015; Skaalvik & Skaalvik, 2011), but also dissatisfaction (OECD, 2014; Ingersoll, 2001). Research

examining the relationship between school environment and job satisfaction have shown that teachers experience greater satisfaction not from financial rewards but interpersonal relationships that they experience with school administrators, fellow teachers and pupils (Korb & Akintunde, 2013; Abd-El-Fattah, 2010).

While good school environment is characterized by good relationships and communication, stress is cited as a strong predictor for teacher dissatisfaction with work environment (Klassen & Chiu, 2010). Particularly, classroom stress and workload stress affect teachers negatively (Tran & Le, 2015; Collie et al., 2012; Klassen & Chiu, 2010). The effects of poor school environment include lack of motivation (OECD, 2014), poor student performance (Judge et al., 2001), teacher absenteeism (Skaalvik & Skaalvik, 2011) and teacher burnout (López, Santiago, Godás, Castro, Villardefrancos & Ponte, 2008). López et al. (2008) report persistent student disruptive behavior and lack of support in disciplinary issues as predictors of teacher burnout.

Stress, workload and tiredness

Kyriacou (2001) defined teacher stress as the experience of negative emotions resulting from teacher's work. In comparison with other jobs, teaching profession is highly stressful (Kyriacou, 2001). It encompasses a wide range of tasks, roles and responsibilities. The schedule is filled with planning, administrative work, student counseling, extracurricular activities, and meetings (OECD, 2014; Leithwood, 2006). Swedish teachers are often asked to add more hours to the administration, documentation and lesson planning (Skolverket, 2013). Between 20 to 40 per cent of planning, grading and documentation occur either in the evenings or weekends when teachers are home. Teachers should keep students satisfied and engaged in lessons (Leithwood, 2006). Therefore, they plan the educational process in collaboration with the students, allowing students to plan their time (Skolverket, 2007). They often give different type of work to students with learning difficulties and to the high performing ones (OECD, 2014).

Teachers report tiredness and stress due to too much workload and demands from stakeholders (Klassen & Chiu, 2010; Black, 2004; Borg et al., 1991), discipline issues (Leithwood, 2006) and a lack of appreciation (Leithwood, 2006). Stress from discipline issues (Lopet et al, 2008; Leithwood, 2006) and stress from workload (Kyriacou, 2001) often lead to: low levels of teaching efficacy (Collie et al., 2012 ; Skaalvik & Skaalvik, 2011), increased levels of burnout (Klassen & Chiu, 2010; Leithwood, 2006; Kyriacou, 2001) and negative teacher-student relationships (Kokkinos et al., 2005; Kyriacou, 2001). For example, multitasking and working over-time often leaves teachers exhausted and demotivated (OECD, 2014; Botwinik, 2007), whereas inadequate time for planning and preparation contributes to anxiety (OECD, 2014; Liu & Ramsey, 2008). Leithwood (2006) adds that too much workload prevents teachers from developing professionally, finding time to help students, asking for help the colleagues as well as meeting their personal goals. Additionally, it puts a strain on both their professional and personal lives (Leithwood, 2006).

Too many demands to meet and too little support and recognition for work can result in emotional exhaustion (Moore, 2012; Botwinik, 2007). However, other researchers like Lopez, Santiago, Godas, Castro, Villardefrancos, and Ponte (2008) mention student disruptive

behavior (aggression among students and against teachers, acts of vandalism, challenging the competence and professionalism of teachers) as the main explanatory factor of teacher emotional exhaustion. Regardless of what causes the state of exhaustion, researchers seem to agree that such exhaustion can lead to teacher counterproductive behaviour and strained relationships (Moore, 2012; Lopez et al., 2008; Leithwood, 2006).

A supportive work environment in a form of feedback, mentoring and workshops from school management (Liu & Ramsey, 2008; Leithwood, 2006), however, can help mitigate teacher stress (Collie et al., 2012; Demir, 2008; Leithwood, 2006). Conversely, when deprived of such support, they experience feelings of dissatisfaction and low motivation, which affect their work commitment and performance (Tye & O'Brien, 2002).

School management

Some studies report work recognition and career advancement opportunities as key components to teacher job satisfaction and retention (OECD, 2014). In contrast, other studies put emphasis on extrinsic rewards: appreciation, recognition and support from the relationships with school members (Van Maele & Van Houtte, 2012; Moore, 2012; Goddard, Goddard, Miller, Larsen & Jacob, 2010).

Managerial support largely contributes to teacher overall well-being (Spilt, Koomen & Thijs, 2011; Bataineh, 2009) and retention (Leithwood, 2006). When facing organizational and social pressures, workload, discipline issues, teachers need social support to stay motivated and relaxed (Skolverket, 2013; Skolverket, 2007). Teachers build stress resistance when school managers offer help with disciplinary issues, feedback and mentoring (OECD, 2014; Crossman & Harris, 2006; Kyriacou, 2001). Teachers feel unmotivated and insecure if the management ignores their problems and needs (Leithwood, 2006).

Another form of managerial support is helping teachers with discipline issues. The difficulties experienced by teachers in managing conflict and the lack of support with regard to disciplinary actions are named as predictors of teacher burnout (Lopez et al., 2008). Lacking a network of social support manifests in difficulty in maintaining positive, emphatic personal relationships at work (Lopez et al., 2008). Teachers report managerial support in handling disciplinary issues, maintaining discipline within the classroom and solving conflicts with students and parents as important to mitigating the levels of stress (OECD, 2014). In contrast, Lopez et al. (2008) argue that social support in the above-mentioned matters should come from all stakeholders (parents, co-workers, school leaders) as a preventive method to teacher burnout.

Opportunities for self-growth can also positively reinforce teacher job satisfaction (Skaalvik & Skaalvik, 2011) as professional development is associated with higher teacher morale, organizational commitment and students' success (OECD, 2014; Skolverket, 2007; Leithwood, 2006). For example, pedagogical feedback enhances teaching practices and raises the attractiveness of the profession (OECD, 2014). Teacher-teacher feedback provides opportunities to seek help and receive moral support reducing this way work-related stress (OECD, 2014; Skaalvik & Skaalvik, 2011). In addition, in-service training enables them to reflect on their practice, improve instruction and apply effective teaching methods (OECD, 2014). Teachers with wide range of pedagogical knowledge are more confident and satisfied

as professionals (OECD, 2014). High teaching efficacy means stronger abilities to engage students in the lessons and handle discipline issues (Klassen & Chiu, 2010).

Last but not least, social appreciation (from stakeholders) also raises the attractiveness of the profession (OECD, 2014). Participating in decision making is also vital for teacher job satisfaction and retention (OECD, 2014; Demir, 2008; Liu & Ramsey, 2008; Otto & Arnold, 2005) as it makes the teaching staff feel more valued and important (OECD, 2014). Conversely, having no say in decision making and lack of control over their work environment can lead to more stress as well as feeling ignored and unappreciated (OECD, 2014).

A positive school environment is characterized by social support, high levels of trust and communication with teachers (OECD, 2014). Supportive school leaders tend to consult teachers, seek their advice and enable them to participate in decision making. Principal's decisions should enable teachers to have time for planning, assessment, documentation of student's progress and knowledge (OECD, 2014). The OECD report (2014) further explains that a healthy school culture emphasizes teachers' work as meaningful, has clear institutional goals, and encourages teacher collaboration (OECD, 2014). Supportive school management increases teacher job satisfaction by allowing teachers to participate in decision making process, helping with discipline issues, organizing workshops, creating trust and collaboration among teachers (Fantilli & McDougall, 2009; Leithwood, 2006).

Teacher-student relationships

Dewey (1958) once said that individuals forming the school environment make the basis for an effective school. Students' development and learning are widely influenced by the school environment, especially its social aspect. A positive school environment promotes feelings of belonging and community, which consequently prompt the development of prosocial attitudes in students. Additionally, a caring and supportive school environment contributes greatly to students' academic success (Wubbels, Brekelmans, den Brok, Wijsman, Mainhard, & van Tartwijk, 2014) by having a positive influence on "their attitudes, motivation, engagement, and goal setting" (Schaps, 2005). Researchers agree that positive student-teacher relationships play a key role in building a positive school environment for students and teachers (Wubbels et al., 2014; Anderman, Andrzejewski, & Allen, 2011).

Positive student-teacher relationships, described as warm and open (Wubbels et al., 2014), with elements of mutual respect and empathy (Wubbels et al., 2014), help teachers remain motivated, committed, and satisfied with job (Grayson & Alvarez, 2008). Respectful and appreciative student provide teachers with positive emotions such as enthusiasm, understanding and being at ease (Claessens, Van Tartwijk, Pennings, Van der Want, Verloop, Van den Brok, & Wubbels, 2016; Collie et al., 2012).

Negative teacher-student relationships are characterized by conflict between teacher and students as well as disrespectful attitude of students (Spilt et al., 2011). Student misbehavior affects teachers' attitudes to students and work (Durr et al., 2014; Lopez et al., 2008) and leads to teacher stress. Disruptive students increase the complexity of teachers' work (Leithwood, 2006) and the amount of time teachers spend on keeping the discipline (OECD, 2014). Discipline issues in Swedish classrooms are sometimes a result of teachers

being over friendly with pupils and refraining from using classroom management techniques, making teachers feel stressed and disrespected (Jelmini, 2014). Stressed teachers report having less control of their classroom and lower commitment (Moore, 2012; Klassen & Chiu, 2010). Too much stress can weaken teachers' positive disposition towards pupils making them make crude comments, shout or show anger when pupils produce poor work or misbehave (Claessens et al., 2016; Griva et al., 2012; Kyriacou, 2001). In addition, negative teacher-student relationships can result in teacher burnout (Lopez et al., 2008), absenteeism (Ingersoll, 2001) and teachers' early retirement (Spilt et al., 2011; Lopez et al., 2008; Tye & O'Brien, 2002). More and more primary and high school teachers experience violence and aggressive behavior such as intimidation, verbal threats, bullying, assault, theft and gang activities (Espelage, Anderman, Brown, Jones, Lane, McMahon, Reddy, Reynolds, 2013).

Examining the quality of students' relationships with peers and the school staff can help better understand the discipline issues (Schaps, 2005). Such issues, specifically demonstrating hostile attitudes towards peers, teachers and learning, often arise when students' expectations of acceptance and attention are not met (Pas et al., 2015). However, giving attention to building relationships based on trust as well as creating opportunities for pupils to take up leadership roles, can help develop their self-confidence, motivation and increase their participation resulting this way in more student satisfaction (Anderman et al., 2011) and less disruptive behaviors (Pas et al., 2015). Teachers also report teaching as more enjoyable and easier when students behave well and accept responsibility for their actions (OECD, 2014; Klassen & Chiu, 2010).

Experts (Collie et al., 2012; Moore, 2012) report that creating a school environment with just occasional discipline issues depends on teachers' motivation and attitude. For example, students can become disgruntled and unruly if teachers display demotivated and dissatisfied attitudes and behavior (Collie et al., 2012). Moreover, teachers with teaching efficacy and good classroom management skills report very good communication with students (Wubbels et al., 2014). It is down to their abilities to engage students and prevent discipline issues from escalating, or arising (Veldman et al., 2013; OECD, 2014). Motivated and engaged students who are and engaged, follow the rules, achieve good grades, and are helpful to others (Claessens et al., 2016). Teachers report feeling more relaxed than stressed and consequently enjoying working as teachers (Collie et al., 2012; Spilt et al., 2011; Grayson & Alvarez, 2008).

Other factors affecting job satisfaction

While some studies report nature of work and relationships with pupils, colleagues and school administration as key predictors of teacher job satisfaction (Saiti & Papadopoulos, 2015), other studies support the correlation between job satisfaction and socio-demographic characteristics like age, gender, education level and years of experience (Eliofotou-Menon & Athanasoula-Reppa, 2011; Klassen & Chiu, 2010). In this part, the researcher provides a brief analysis of other factors: teacher characteristics and the role of stakeholders, and their relation to teacher job satisfaction.

Age

Bishay (1996) indicates that job satisfaction increases with age. Due to their limited experience in classroom management and teaching methods, young teachers are less likely to know how to teach well, engage students, handle discipline issues and manage workload (Van Maele & Van Houtte, 2012; Eliofotou-Menon & Athanasoula-Reppa, 2011). This can mean lead to poor student-teacher communication, more stress and desire to leave the job (Van Maele & Van Houtte, 2012). Low retention and high attrition rates among young teachers are often a result of low confidence in their performance (Eliofotou-Menon & Athanasoula-Reppa, 2011) as well as feeling undermined by school management (Bishay, 1996). Older teachers experience better relationships with subordinates and are given more supervision and support from school management (Eliofotou-Menon & Athanasoula-Reppa, 2011). Length of service and experience play a role. According to Saiti and Papadopoulos (2015) age correlates with the levels of job satisfaction with reference to administration, pay, colleagues and the nature of work.

Work experience

Work experience is frequently associated with the length of service (Bishay, 1996). Experienced teachers perceive teaching as more satisfying and enjoyable (Klassen & Chiu, 2010). Compared to novice teachers, experienced teachers are more familiar with applying effective instruction, managing unruly students and using successful teaching strategies (Van Maele & Van Houtte, 2012). They are also more prepared for the unpredictability of classroom environment, which can mean less stress (Claessens et al., 2016). Novice teachers tend to engage in communication with motivated and well behaved pupils, whereas experienced teachers strive to form relationships with all pupils regardless of their performance and behavior (Wubbels et al, 2016). This can have repercussions on students' inclusion and participation (Wubbels et al, 2016). In addition, experienced teachers are more oriented and accustomed to organizational policy and practices (Eliofotou-Menon & Athanasoula-Reppa, 2011). Experienced teachers tend to have a status at work, more recognition, more say in decision making and more support from school management (Eliofotou-Menon & Athanasoula-Reppa, 2011; Ingersoll, 2001). Meeting the demands of the community members and handling workload is more stressful for less experienced teachers (Klassen & Chiu, 2010; Fantilli & McDougall, 2009).

Gender

According to several studies, women are less satisfied with teaching than their male co-workers (OECD, 2014; Eliofotou–Menon & Athanasoula-Reppa, 2011; Liu & Ramsey, 2008). Dissatisfied female teachers tend to care less about the fulfillment of their career goals and professional development (Eliofotou-Menon & Athanasoula-Reppa, 2011). Female teachers have higher levels of workload and classroom stress compared with male teachers (Klassen & Chiu, 2010; Antoniou, Polychroni, & Vlachakis, 2006). They often struggle with work-life balance due to workload (Klassen & Chiu, 2010). Female teachers report discrimination at work as serious obstacle from fulfilling their career aspirations (Eliofotou-Menon & Athanasoula-Reppa, 2011).

Teacher education program

In Sweden, 20 000 informal teachers work in compulsory schools (Skolverket, 2007). One in five teachers lacks a formal teaching degree (OECD, 2014). The increasing shortage of

teaching staff in Sweden makes it difficult for schools to initiate changes such as asking the unqualified teachers to complete studies. However, studies show the quality of teaching and subsequently school performance depends on training provided to teachers (Skolverket, 2013). In order to ensure high levels of teachers' teaching efficacy teachers need formal training that involves classroom practice, content and pedagogy (OECD, 2014). Teachers with academic credentials report teaching as less stressful and more satisfying thanks to preparation they received at vocational schools (OECD, 2014). Teachers who lack vocational training find teaching more stressful and challenging due to lack of skills and adequate knowledge (OECD, 2014). In addition, they report lower self esteem and job satisfaction as a result of a lower function and status at school (OECD, 2014).

Stakeholders

School is a social system in which teachers often depend on help, resources and knowledge from stakeholders (Fantilli & McDougall, 2009). Being on good terms with stakeholders can result in more teacher engagement and enthusiasm contributing this way to teacher job satisfaction (Van Maele & Van Houtte, 2012). Teachers report high levels of job dissatisfaction mainly due to stress from workload (Leithwood, 2006; Kyriacou, 2001), discipline issues (OECD, 2014; Botwinik, 2007; Leithwood, 2006) and a lack of appreciation from stakeholders (Klassen & Chiu, 2010; Black, 2004).

Workload, in particular multitasking and working over-time often leaves them exhausted and demotivated (OECD, 2014; Botwinik, 2007), whereas problematic students and lack of social support lead to anxiety and frustration (OECD, 2014; Liu & Ramsey, 2008). The situation improves when school leaders actively help teachers with disciplinary issues (OECD, 2014; Collie et al., 2012; Demir, 2008; Leithwood, 2006) and sensibly distribute workload like administration, documentation and lesson planning (OECD, 2014; Skolverket, 2013; Leithwood, 2006). Moreover, teachers report feeling more motivated and satisfied when provided with professional development (Liu & Ramsey, 2008; Leithwood, 2006). It is another form of social support that helps them feel important and valued (OECD, 2014). In addition, students' behavior and participation in lessons can also be improved through a tight collaboration with parents, who can influence pupils motivation and attentiveness (Van Maele & Van Houtte, 2012).

Secondly, teachers' perceptions of the profession is often based on how the society values it. Stakeholders' perception of teaching profession can affect their self-esteem and motivation (Eliofotou-Menon & Athanasoula-Reppa, 2011), which can influence recruitment and retention (OECD, 2014; Tye & O'Brien, 2002). Teachers in Sweden perceive their profession as not valued by the society (OECD, 2014) and consider their status to have deteriorated over the past thirty years (Skolverket, 2007).

Research hypotheses

The literature reviewed provided information on various factors contributing to job satisfaction. Few studies have entirely investigated the relationships between job satisfaction and school environment attributes like school management and teacher-student relationships, and stress as a mediating factor with background variables as controlling variables. Even fewer studies have examined such relationships in a Swedish context. Therefore, the present study takes into account the two attributes of school environment, stress as a mediating factor while controlling for demographic background factors. The study focuses on Swedish primary school teachers. A review of the literature has led to the formulation of the following four hypotheses.

Hypothesis 1

Studies show that managerial support largely contributes to teacher job satisfaction (OECD, 2014; Van Maele & Van Houtte, 2012; Skaalvik & Skaalvik, 2011; Goddard et al., 2010), overall well-being (Spilt et al., 2011; Bataineh, 2009) and retention (Leithwood, 2006). Teachers' job satisfaction improves when school leaders actively help teachers (Collie et al., 2012; Demir, 2008; Leithwood, 2006). Managerial support, specifically support in handling disciplinary issues and conflicts with students, play an important role in mitigating teacher stress (OECD, 2014) and improving communication at school (Lopez et al., 2008). This helped to frame first hypothesis:

(H1) Teachers' job satisfaction correlates with school management, as an attribute of school environment.

Hypothesis 2

Several studies confirm stress from negative student-teacher relationships correlates with job dissatisfaction (Collie et al., 2012). Research indicates such relationships as a cause of absenteeism (Crossman & Harris, 2006; Tye & O'Brien, 2002; Ingersoll, 2001), teacher burnout (Skaalvik & Skaalvik, 2011; Lopez et al., 2008; Ingersoll, 2001), and early retirement (Spilt et al., 2011; Lopez et al., 2008; Tye & O'Brien, 2002). Student misbehavior affects teachers' attitudes to both their work and students (Durr et al., 2014; Lopez et al., 2008). Students' discipline problems lead to teacher stress and burnout (Skaalvik & Skaalvik, 2011; Lopez et al., 2008; Ingersoll, 2001). Conversely, positive teacher-student relationships contribute to teacher job satisfaction (Korb & Akintunde, 2013; Abd-El-Fattah, 2010). Such relationships help teachers remain motivated and committed to students and work (Grayson & Alvarez, 2008). According to several studies respectful and appreciative students help teachers stay enthusiastic, understanding and relaxed (Claessens et al., 2016; Collie et al., 2012). This helped to frame second hypothesis:

(H2) Teachers' job satisfaction correlates with teacher-student relationships, as an attribute of school environment.

Hypothesis 3

Problematic students and lack of managerial support in handling disciplinary issues are reported as predictors of increased levels of teacher stress, anxiety, frustration (OECD, 2014; Liu & Ramsey, 2008) and vocational burnout (Lopez et al., 2008). Thus, the next hypothesis:

(H3) The relationship between teachers' job satisfaction and school environment is mediated by stress

Hypothesis 4

Saiti and Papadopoulos (2015) refute the notion of any correlation between teacher background characteristics and teacher job satisfaction emphasizing that school administration, work itself and relationships with students and colleagues are key predictors of teacher job satisfaction. Thus, the last hypothesis is:

(H4) There is no relationship between teachers' job satisfaction and teachers' background variables.

Methodology

Correlational analysis and principal component analysis

When the purpose is to assess the strength and direction (positive, negative, or no direction) of the linear relationships between pairs of items, correlation coefficients are most appropriate. Correlation coefficients range between -1 and +1. There is a distinction between parametric (i.e., normally distributed variables) and non-parametric (i.e., non-normal distributed variables) versions of correlation coefficients. Pearson's correlation coefficient is used when both variables are normally distributed. Spearman's correlation coefficient is found to be more appropriate to use than Pearson's correlation coefficient when you have a skewed distribution or outliers. However, correlation coefficients do not provide with information about causality, X has an impact on Y. Hence, it is not meaningful to set up one variable as dependent (i.e., outcome variable) and the other as independent variable (i.e., predictor). Therefore, correlation coefficients should be interpreted in terms of associations and not causal relationships (Mukaka, 2012).

Cohen (1988) proposed rule of thumb for interpreting the size of a correlation coefficient. A correlation coefficient between .00 and .29 is interpreted as a weak positive relationship, a coefficient between .30 and .49 is interpreted as moderate, and $\geq$.50 is interpreted as a strong positive association. When the same range is present, but with opposite sign (e.g., -.30 and -.49), it is interpreted as a moderate negative correlation.

Garson (2012) describes that a correlation between two variables can include control variables, i.e., take other variables that are believed to affect the relationship between those variables into consideration, in order to check if the original correlation between the two variables remain. This is done by conducting so called partial correlations. In SPSS, partial correlations are employed through the syntax menu.

One method of identifying patterns of items in terms of their similarities and differences is principal component analysis (PCA). PCA is a powerful tool to detect underlying constructs in the data. In this thesis, the purpose of using PCA is twofold from a validation and reliability perspective. First, the construct (measured as coefficient alpha) can be compared to their loadings (i.e., if they load $\geq$.50 or -$\leq$.50). All items that load .50 or higher (or -.50 or lower) belong to the same construct, i.e., measure the same phenomenon. In SPSS, an add-on-package called R Factor v2.2, have been used to perform a PCA with spearman's correlation coefficients, and a reliability scale measure (i.e., Ordinal Coefficient Alpha) to assess the reliability of the constructs. According to Gadermann, Guhn and Zumbo (2012), when estimating reliability for Likert-type answers, Ordinal Coefficient Alpha is more appropriate and accurate than Cronbach's alpha. Second, the parallel analysis performed to assess how many constructs to extract is compared to the Ordinal Coefficient Alphas that are greater than 0.70. A reliability coefficient of .70 or higher is considered "acceptable" in most social science research situations. Thus, a coefficient alpha was larger than .70 suggesting that the items have relatively acceptable and high internal consistency.

In the PCA the solution was varimax rotated in order to make the factors more interpretable. Such rotation allows to "maximize the dispersion of loadings within factors"

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(Field, 2014, p. 681) without affecting the solution. Therefore, it tries to load a smaller number of variables highly on each factor, resulting in more interpretable clusters of factors.

Composite index variables

A correspondence between parallel analysis and Ordinal Coefficient Alphas occurred, indicating that four constructs should be extracted. The parallel analysis indicated that 4 dimensions should be extracted and all those four dimensions were also associated with higher coefficient alphas greater than .70. Each composite index was created by summarizing all items with that composite and then dividing this sum by the number of items. For example, the Stress Composite Index, was based on three questions (Q1-Q3). The Composite Index for this summative variable was calculated as: (Q1+Q2+Q3) / 3. This gives us a mean value of this Stress variable. However, in doing so, it is important to keep in mind that all measurement errors are still in the variable. A more proper way to deal with measurement errors is to create latent variables, where the common variance is captured (Bollen & Paxton, 1998). However, creating latent variables cannot be done with the use of statistical software like SPSS. Instead, these latent variables can be modeled in other types of software like AMOS and STATA. Since the study uses SPSS, dealing with measurement errors is beyond the scope of this thesis.

Data source

The researcher uses data from the 1998 ETF cohort study, collected in 2011 by Statistics Sweden to primary school teachers and pupils in Sweden (Härnqvist, 2000). Access to data from the 1998 ETF-cohort study is possible upon request by contacting the database manager at Gothenburg University. Härnvqist is cited as reference to the ETF-cohort according to the university terms of use, which state that "every publication based on ETF-data is obliged to include a reference to Härnqvist (2000)" (Berndtsson & Nielsen, 2015). The researcher used this cohort for several reasons. The 1998 ETF-cohort study includes a survey answered by primary school teachers in 2011; these teachers are therefore the subjects of this study. The survey includes questions related to teacher satisfaction with teaching and different aspects of work environment. The cohort has responses from 1018 teachers, which means that it has made a large data set available to the study, a much larger number than could reasonably be collected as part of a Master dissertation project. Moreover, teacher crisis in Sweden is a problem on a national scale, hence the use of a nationally representative data set contributes to applying the results at that national level of analysis. A further reason is born of convenience: the 1998 ETF-cohort and its 2011 survey data is not only the most recent available large dataset, it is also readily available at Gothenburg University. And finally, none of the issues investigated are particularly time-critical; that is to say, it may reasonably be assumed that little pertaining to the issues covered here has changed between 2011 and 2016 to such a dramatic extent that this would endanger the findings having, within reason, relevance in the present.

The ETF project is longitudinal and is managed by the Department of Education and Educational Research, at Gothenburg University. All data collection is conducted in close cooperation with Statistics Sweden. The first cohort was born in 1948 and data was first gathered during spring 1961 (Giota, 2006). Since then there has been eight additional cohorts

(1948, 1953, 1967, 1972, 1982, 1987, 1992 and 1998). Initially the purpose of the ETF project was to continually evaluate the Swedish school system as well as educational and occupational careers (Giota, 2006). Göta (2006) further explains that the ETF-cohort is "flexible enough to serve social research, in general, where individuals' background and early performance could be interesting control and explanatory variables" (p. 2).

The data held in the 1998 ETF-cohort register include administrative data and self-reported data from teachers, parents and pupils (Giota, 2006). The teacher questionnaires focused on teachers' background, self-perceptions of competence, perception of educational practices, motivation, classroom and school characteristics and job satisfaction (Berndtsson & Nielsen, 2015).

Sampling

The survey population of the 1998 cohort consists of pupils who attended 3rd grade during spring 2008. A stratified schools-based sample including 9,671 pupils assures that all pupils in 3rd grade had equal probability of being selected during the school year of 2007/2008 (Nielsen & Svensson, 2012).

A questionnaire was administered to the teachers in the spring term of 2011, when the pupils were in grade 6. In total, 1018 teachers answered the questionnaire, which corresponds to a response rate of 65 percent. The questionnaire covered several topics such as job satisfaction, psychosocial aspects of work (including stress and appreciation), classroom and school characteristics, and social support (see Appendices A, B, C). Originally questions concerning social support, i.e., appreciation were also included in the study. Although this dimension is computed with respect to the amount of variance, it was subsequently dropped from further analysis due to unacceptable reliability, which will be discussed later on. In addition, eight questions about the teacher's personal background were asked.

Dimensions

The cohort has the following work-related dimensions: Job satisfaction • Stress • Student-teacher Relationships • School Management.

Job satisfaction
Six questions concern their work experience in school (see Appendix B). More precisely, questions measure how happy they are with various aspects of school-related work such as student-teacher relationships, relationships with colleagues and school management. The questions were: (1) My work is engaging, (2) I am happy with my work, (3) I am happy in my subject-team, (4) I gain a sense of pleasure from my work, (5) I am happy in my working-team, and (6) I am happy with the school management. All these questions were based on a Likert-scale 1 to 5, were 1 = Very Good, and 5 = Very Bad.

Stress
Three questions were asked about the psycho-social environment, from a stress perspective (see Appendix B). The questions were: (1) I have too much to do, (2) I feel pressured in my work, and (3) I feel tired and overworked. An important protective factor of stress is social support and appreciation. Thus, following three questions were included in the analysis: (1)

How often do you: get appreciated by the school management, (2) appreciated by colleagues, and (3) appreciated by students. All these questions were based on a Likert-scale 1 to 5, were 1 = Very Often, and 5 = Never. However, as will be seen from the principal component analysis and the reliability scale, social support showed a non-acceptable level of reliability (i.e., <0.70), and was therefore excluded from further analysis.

Teacher-student Relationships

Three questions regarding the social interactions between teachers and students were asked (see Appendix C). Those questions cover both students and school discipline related aspects. The questions were: how often do you feel: (1) harassed by the students, (2) happy among my pupils, and (3) feel that there are shortcomings in school discipline, for example punctuality. All these questions were based on a Likert-scale 1 to 5, were 1 = Very Often, and 5 = Never.

School management

Three questions concerning their relation to the school management were asked (see Appendix C). The questions were: how often do you feel: (1) badly treated or discouraged by the school management, (2) appreciated by the school management, and (3) happy with the school management. The first question were later reverse coded in order to set all these three question in a positive order. All these questions were based on a Likert-scale 1 to 5, were 1 = Very Often, and 5 = Never.

Ethical considerations

Since these large scale longitudinal data collections (ETF) are conducted in close cooperation with Sweden Statistics, confidentiality and anonymity is guaranteed (Härnqvist, 2000). The data files are anonymized. Only Sweden Statistics is able to track the respondents. In addition, the essence of statistical analysis is to summarize a large number of people in one statistical measure such as a mean or a correlation between several aspects, not to describe what a certain person thinks.

Results

Due to the skewed nature of the data, non-parametric correlation coefficients were used in an exploratory principal component analysis. The data was adequate for this technique (KMO = .824). The results showed the emergence of five dimensions.

Table 1

Extraction of work environment dimensions (Spearman's rho coefficients) with varimax rotation.

Questions	Job Satisfaction	Stress	Relationships with students	School Management	Appreciation
My work is engaging	.700	-.042	-.180	.084	.318
I am happy with my work	.671	-.262	-.092	.215	.170
I am happy in my subject-team	.652	-.088	-.125	.157	-.051
I gain a sense of pleasure from my work	.633	-.148	-.174	.142	.336
I am happy in my working-team	.630	-.023	.059	.026	-.005
I have too much to do	-.023	.878	.053	-.055	-.052
I feel pressured in my work	-.147	.869	.121	-.094	-.015
I feel tired and overworked	-.182	.822	.107	-.098	-.066
Harassed by pupils	.008	.086	.741	-.203	-.045
I feel that there are shortcomings in school discipline, for example punctuality	-.116	.160	.740	-.035	-.051
I am happy among my pupils	.493	-.005	-.631	-.023	.145
Good treated by the school management	.068	-.107	-.161	.822	-.056
I am happy with the school management	.395	-.089	-.028	.738	.099
Appreciated by the school management	.128	-.109	-.049	.654	.568
Appreciated by Colleagues	.214	-.056	-.069	-.125	.798
Appreciated by Students	.079	.038	-.431	-.090	.705
Ordinal Coefficient Alpha	.828	.894	.746	.824	.613

Note. The total cumulative variance explained by these five dimensions was 65.56 %. Only correlations ≥.50 are taken into consideration. The solution has been varimax rotated in order to have more interpretable factors.

The strongest dimension, which explains 29.62 % of the variance, is called "Job Satisfaction". Those teachers that felt their job was engaging were happy with work, their subject-team and working-team, and gained pleasure from work.

The second strongest dimension consists of "Stress items," i.e., the teachers felt that they had too much to do, felt pressure in their work, and felt tired and overworked. This stress factor explains 12.63 % of the total variance.

The third dimension depicts "Relationships with students," which explains 8.99 % of the total variance. Those teachers who felt harassed by the pupils, they also felt that there were shortcomings in school discipline, and felt unhappy among their pupils. The last item is loading negatively to this dimension ($\rho = -.631$), indicating that those teachers are not happy among their pupils. Even though the general name for this dimension is "Relationships with students," the relationships are negative in nature (see Table 1).

The fourth dimension consists of "School Management," and explains 7.70 % of the total variance. The items of this dimension describe satisfaction with school management, such as teachers feeling happy and appreciated by the management.

Finally, the fifth dimension illustrates appreciation from colleagues, students and school management. This fifth dimension explains 6.61 % of the total variance. As illustrated in Table 1 the first four dimensions showed an intercorrelation alpha greater than .70, which also supports the evidence found from the parallel analysis that four dimensions should be extracted – see Figure 1. The figure indicates that 5 dimensions should be extracted if Kaiser's criterion was applied, i.e., eigenvalue is larger than 1. However, parallel analysis has been found to perform better than Kaiser's criterion in the selection process of number of dimension retrieved. Hence the fifth dimension, "Appreciation," is dropped from further analysis.
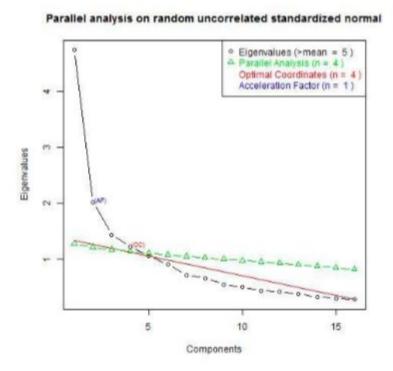
Figure 1. Determination of the number of dimensions to extract

The four remaining dimensions are represented as composite variables (summative index) were the items were summarized and the sum was then divided the number of items.

A correlational analysis, among the above mentioned composite variables, indicates that Job Satisfaction is negatively related to Relationships with students (ρ = -.47, p<0.00) and to Stress (ρ = -.29, p<0.00). Hence, Hypothesis 2 is true, i.e. teachers' job satisfaction correlates with teacher-student relationships, as an attribute of school environment. Table 1 shows what teachers report as problematic: harassment from the pupils, discipline issues, and lack of joy when among their pupils.

Table 2

Correlations between composite variables, i.e., Relationships with students, School Management, Stress, and Job Satisfaction. Spearman's rho (N = 915). Descriptive statistics.

	1	2	3	4
1. Relationships with students	--			
2. School Management	-.28**	--		
3. Stress	.27**	-.25**	--	
4. Job Satisfaction	-.47**	.46**	-.29**	--

Note. **Correlation is significant at the 0.01 level (2-tailed)

      Job Satisfaction was positively correlated with school management (ρ = .46, p<0.00), confirming Hypothesis 1 that teachers' job satisfaction correlates with school management, as an attribute of school environment.

      Hypothesis 3, i.e. the relationship between teachers' job satisfaction and school environment, specifically its two attributes: relationships with students and with school management, is mediated by stress, is also true. Stress showed a weak to moderate negative relationship with all composite index variables, except the relationship between Relationships with students and Stress (ρ = .27, p<0.00). Relationships with students (defined by teachers feeling harassed, unhappy among pupils and complaining about discipline issues) were negatively correlated with School Management (ρ = -.47, p<0.00).

      These patterns of correlations between the work environment index variables remained rather stable even after controlling for age, education, and years of teaching experience. Hence, Hypothesis 4, which says that there is no relationship between teachers' job satisfaction and teachers' background variables, is true.

Table 3

Correlations between composite variables, i.e., Relationships with students, School Management, Stress, and Job Satisfaction with control variables. Spearman's rho (N = 894).

	1	2	3	4
1. Relationships with students	--			
2. School Management	-.25**	--		
3. Stress	.30**	-.27**	--	
4. Job Satisfaction	-.50**	.43**	-.34**	--

Note. **Correlation is significant at the 0.01 level (2-tailed). These partial correlation coefficients are controlled for: age, gender, teacher qualification and years of teaching experience.

When controlling for various aspects that could influence teacher's environment, the relationship between Relationships with students and Job Satisfaction became strongly negative ($\rho = -.50$, $p<0.00$). It means that teacher job satisfaction correlates with teacher-student relationships.

Discussion

The purpose of this section is to interpret and describe the significance of the findings in light of the reviewed literature.

The purpose of this study was to investigate the relationship between teacher work environment and teachers' job satisfaction, specifically how teachers' job satisfaction correlates with two attributes of school environment: teacher-student relations and school management, with stress as a mediating factor. Analysis of the data revealed that there was a strong relationship between teachers' job satisfaction, school management, and teacher-student relationships. Further, analyses of the data indicated the occurrence of teacher stress in case of teacher-student relationships. Stress was present when teachers were reporting the shortcomings in terms of school discipline as well as feeling harassed and unhappy among the pupils. Research questions were answered in the following way: good school management and positive relationships with students are positively related to teacher job satisfaction, whereas stress from discipline issues and lack of support are negatively related to teacher job dissatisfaction.

In support of previous studies on job satisfaction (Veldman et al., 2013), the present study attests to previous findings that good teacher-student relationships and support from school management are a source of job satisfaction. In the present study, negative student-teacher relationships were identified as factors contributing to teacher stress. One factor hypothesized to be a key component to job satisfaction was support from school management, implying that help collaboration with school leaders are beneficial when a teacher is experiencing stress from discipline issues. Several experts (OECD, 2014; Collie et al., 2012; Demir, 2008; Leithwood, 2006) have attested to the significance of social support from supervisors as a means of mitigating teacher stress. As shown in the present study, school management is important to keeping teachers' satisfaction. In practical terms, if school management are to be successful in retaining teachers, it is important to take into account strengthening good collaboration between teachers and school management, as well as management support for teachers' good relationships with students. Creating a positive environment for teachers thus involves school leaders directly and indirectly. Workshops on classroom management and preventive strategies for disciplinary issues would be helpful. Administrators need to consider that time devoted to teachers will be perceived as appreciation for the profession. Appreciation can make the teaching profession more attractive, possibly positively influencing recruitment and retention. Supporting teachers, especially with regard to major discipline problems, can helps create a level of ease for them. The school principal and teaching staff can create a relationship with the community that fosters parent-teacher collaboration. Events like monthly parent-teacher meetings can facilitate fostering positive communication between parents and teachers. Such collaboration can strengthen social support for teachers.

Previous studies indicated a relationship between job satisfaction and personal characteristics (Saiti & Papadopoulos, 2015). However, this study was based on 360 non-randomly selected primary school teachers in Greece. In the present study, it is instructive that background variables (age, gender, educational level, years of work

experience) did not impact patterns of correlations between the work environment and teachers' job satisfaction. Based on this evidence, it is possible that teachers' job satisfaction is related primarily to school environment factors than to personal characteristics.

Previous studies (Åkerwall & Johansson, 2015; Skredsvik, 2006) into job satisfaction of Swedish teachers have not so far examined the relationships of teachers' job satisfaction with school environment factors such as school management and teacher-student relationships, while both using stress as a mediating factor and controlling for background variables. Perie, Baker and Whiterner (1997) called for studies identifying work environmental aspects that contribute to teacher job satisfaction, so that changes might be introduced aimed at increasing the satisfaction levels of teachers. The present study answers this call. The findings suggest that teacher job satisfaction is interrelated with both good teacher-student relationships and support from school management, as two flip-sides of one and the same coin: schools as work environment. It is hoped these findings will serve as a useful point of departure for future studies into the direct predictors of teachers' job satisfaction.

Limitations

In terms of statistical analysis, the study is limited to a simple form of quantitative statistical analysis known as a bivariate correlation analysis. The analysis indicates the dimensions that correlate with teacher job satisfaction without indicating which factor affects teacher job satisfaction the most. This type of analysis was selected for the purpose of testing simple hypotheses. A multiple regression analysis might reveal the joint effect of the previously mentioned variables on teacher job satisfaction, and so help to determine their joint contribution. It could tell the researcher which of these two independent variables has the strongest effect on the dependent variable, teachers' job satisfaction. Not using multiple regression analysis, this study could not establish the interaction between these two main variables in their effect on teachers' job satisfaction.

A second limitation is related to the operationalization of work environment. The study is limited to psycho-social aspects of the work environment such as student-teacher relationships, stress, and support from school management. Physical aspects of the environment were omitted.

The third limitation is related to the statistical method of measuring teachers' perceptions of the work environment. This thesis did not utilize latent variables in order to capture the measurement errors in the model. Such analysis could have been performed by using Confirmatory Factor Analysis with covariates. Since no statistical course in latent variable modeling was provided, the statistical analysis was limited to correlation analysis with composite index variables. Thus, a limitation is that the results are afflicted by measurement error.

Conclusion

The purpose of the study was to explore how teachers' job satisfaction relates to two attributes of school environment: teacher-student relations and school management, with stress as a mediating factor. The researcher examined the strength and direction of these relationships by using a bivariate correlation analysis. The following major conclusions can be drawn from the quantitative findings: support from school management and good communication with students positively affect teachers' job satisfaction. Negative relationships with students, specifically disciplinary issues, contribute to stress, which contributes to job dissatisfaction. The results of the present study may be beneficial to teachers and school management in helping them focus on social support in favor of teacher recruitment and retention.

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Appendices

Appendix A

Groups of questions asked in the questionnaire.

ETF-Evaluation through follow-up.
Cohort 1998.
Teacher questionnaire in grade 6

Groups of questions

Group Description

1	*Background*
7	*Self-perceptions of competence*
8	*Perception of educational practices*
9	*Motivation*
12	*Classroom and school characteristics*
13	*Work satisfaction*

Variables in dataset.

no	variable	question	group	labels
2	QT62	Teacher gender	1	show
3	QT63	In which year were you born?	1	show
4	QT64A	Have you completed a teacher education program?	1	show
4	QT64B	When did you complete your teacher education?	1	show
5		QT65 What type of teacher education do you have?	1	show
	QT65A	Teacher		
	QT65B	Primary school teacher		
	QT65C	Middle years teacher		
	QT65D	Secondary school teacher 1-7		
	QT65E	Secondary school teacher 4-9		
	QT65F	Pre-school teacher		
	QT65G	Other education		
6	QT66	What proportion of a full-time post do you have at present?	1	show
7	QT67	How many years have you been working as a teacher?	1	show
8	QT68	What percentage of 100-percent service are you doing in class?	1	show
9	QT69	How many years have you had your current class?	1	show
10	QT610	Do you think that pupils should get grades in secondary school?	9	show
11		QT611 What do you think about	12	show
	QT611A	The number of scale points in the current grading system (G, VG & MVG)?		
	QT611B	The next grade levels (F, E, D, C, B, A)?		
12	QT612	What is the gender composition of your class?	12	show
13	QT613	How many pupils in your class have a language other than Swedish as their mother tongue?	12	show
		How many children in the class have Swedish as a second language		

http://ugu.ped.gu.se/varpage.html?cohort=1998&formid=10

Appendix B

Questions related to Job Satisfaction and Stress.

14 QT614	instruction?	*12*	show
15 QT615	How would you evaluate the level of knowledge and ability in the class?	*12*	show
16 QT616	How would you evaluate the class as regards differences in levels of knowledge and ability?	*12*	show
17 QT617	How are the inter-pupil relationships in your class?	*12*	show
18	QT618 How happy are you at school?	*13*	show
QT618A	I am happy with my work		
QT618B	I am happy among my pupils		
QT618C	I am happy in my working-team		
QT618D	I am happy with the school premises		
QT618E	I am happy in my subject-team		
QT618F	I am happy with the school management		
19	QT619 How do you experience your working situation?	*13*	show
QT619A	My work is engaging		
QT619B	I feel tired and overworked		
QT619C	I have too much to do		
QT619D	I feel pressurised in my work		
QT619E	I gain a sense of pleasure from my work		
QT619F	I feel that there are shortcomings in special support teaching		
QT619G	I feel that there are shortcomings in the learning material and equipment		
QT619H	I get support from the pupil care staff in my work		
QT619I	I feel that there are shortcomings in continuing education for teachers		
QT619J	I feel that there are shortcomings in school discipline, for example punctuality		
20	QT620 What importance do you attach to the following in your work with pupils?	*8*	show
QT620A	Regular homework and testing		
QT620B	Emphasis on basic skills		
QT620C	That pupils take responsibility for their own learning		
QT620D	Parents take an active role in the work of the school		
QT620E	That pupils should be well prepared for further studies		
QT620F	Checking on knowledge gained by means of testing		
QT620G	That pupils react against bullying		
QT620H	That pupils should be well prepared for working life		
QT620I	That pupils collaborate and help one another		
QT620J	Pupil input in the planning of instruction		
QT620K	That pupils gain a good sense of self-confidence		
QT620L	That pupils are curious and think that learning is fun		
QT620M	That pupils who find school most difficult should get the most help		
21	QT621 Have there ever been occasions when you have felt …?	*13*	show
QT621A	Appreciated by students		

http://ugu.ped.gu.se/varpage.html?cohort=1998&formid=10

Appendix C

Questions related to Teacher-Student relationships and School Management.

	QT621B Harassed by pupils		
	QT621C appreciated by colleagues		
	QT621D Badly treated or undermined by colleagues		
	QT621E appreciated by the school management		
	QT621F Badly treated or undermined by school management		
22	QT622 How frequently does it occur in your class that	8	show
	QT622A Parents take an active role in the work of the school		
	QT622B Parents are informed about working methods		
	QT622C Parents are informed about the demands that the school places on pupils		
	QT622D Parents are informed about how they can help their children at home with school work		
23	QT623 How would you evaluate your competency as a teacher? How good are you at …?	7	show
	QT623A Stimulating pupils' interest for school work		
	QT623B Stimulating pupils who have difficulty learning		
	QT623C Working with pupils with different social/cultural backgrounds		
	QT623D Stimulating the learning of pupils with emotional difficulties		
	QT623E Making use of computers in instruction		
	QT623F Making sure that pupils are aware of the reasons for what they learn		
	QT623G Stimulating pupils to take responsibility for their own learning		
	QT623H Developing pupils' efforts and perseverance in school		
	QT623I Encouraging pupils to discuss things between themselves so that they learn from one another		
	QT623J Providing personal feedback on pupils' work		
	QT623K Organising lessons so that work can take place without interruptions		
	QT623L Maintaining constructive contacts with parents		
24	QT624A How is the possible remedial courses for students in the class?	9	show
	QT624A Teaching individually or in small groups alongside other lessons		
	QT624B Teaching individually or in small groups outside of class time or when other students are working individually		
	QT624C Additional resource / person in the classroom during class		
25 QT625	How do you assess the need for remedial instruction in the class?	1	show

http://ugu.ped.gu.se/varpage.html?cohort=1998&formid=10