www.ijonse.net

Teachers' Work Conditions and their Job Satisfaction in Primary and Secondary Education

Wilfried Admiraal
Oslo Metropolitan University, Norway

To cite this article:

Admiraal, W. (2023). Teachers' work conditions and their job satisfaction in primary and secondary education. *International Journal on Studies in Education (IJonSE)*, *5*(1), 15-26. https://doi.org/10.46328/ijonse.81

International Journal on Studies in Education

2023, Vol. 5, No. 1, 15-26 https://doi.org/10.46328/ijonse.81

Teachers' Work Conditions and their Job Satisfaction in Primary and Secondary Education

Wilfried Admiraal

Article Info

Article History

Received:
10 December 2021
Accepted:
04 April 2022

Keywords

TALIS 2018
Job satisfaction
Teachers
Work conditions
School conditions

Abstract

In view of the teacher shortage in the Netherlands and Flanders, it is not only important to increase the intake and outflow of students in teacher education programmes, but also to increase job satisfaction of in-service teachers. Satisfied teachers in school will lead to higher retention of teachers in the profession. Based on secondary analyses of TALIS 2018 data from primary and secondary school teachers in the Netherlands and Flanders, work and school conditions and their job satisfaction have been examined. Regression analyses show that feelings of distress, perceived stress in teaching and classroom management and perceived barriers to professional development show a negative relationship with job satisfaction. Moreover, a safe learning and working climate in school and school satisfaction in general are positively related to teachers' job satisfaction. The results are discussed in the light of findings from other research on teachers' job satisfaction and research of TALIS data, in particular.

Introduction

Teacher shortage is a major problem for primary and secondary education in the Netherlands and Flanders, as well as in various other countries across Europe. This is only expected to increase in the coming years (OECD, 2020). A number of problems cause this shortage of teachers. Not only do not enough students choose to follow a teacher education programme, many teachers who are already working in school leave the teaching profession. In addition to the status and image of the teaching profession, especially for this group of in-service teachers, dissatisfaction with the teaching profession appears to be an important reason why they leave the teaching profession (see e.g. Dupriez et al., 2016; Skaalvik & Skaalvik, 2017; Wyatt & O'Neill, 2021). It is therefore important to gain insight into teachers' job satisfaction and which work and school conditions are related to their job satisfaction. Insights into these conditions can support the development of policy to increase teacher satisfaction in order to retain more teachers in the profession. The present study attempts to contribute to this insight by reanalyzing TALIS data from 2018 for the Netherlands and Flanders.

Teachers' Job Satisfaction

Teachers' job satisfaction has been subject of research for some time, either as a cause of dropout or retention of teachers in the profession (e.g. Struyven & Vanthournout, 2014) or as a result of various factors related to the

school environment, the teaching profession and characteristics of the teachers (e.g. Skaalvik & Skaalvik, 2017). Analyses of data from the Survey of Health, Aging and Retirement in Europe (SHARE; Federičá, 2021) indicate that in both the Netherlands and Belgium approximately 25% of those who are or have been teachers have stopped teaching, of which about half of them report they have permanently left the teaching profession. Although these figures are similar to those in domain of care, teachers' dropout from the teaching profession can also be seen as a qualitative loss because dropout generally applies more to academically trained teachers (Goldhaber et al., 2011) and to teachers who work in schools with a relatively large number of special-needs students or students from low social backgrounds or from a cultural minority group (Murnane & Steele, 2007).

In previous research, work and school conditions that show a negative relationship with job satisfaction are, among others, work pressure, student misbehavior, low student motivation, diversity in student population, conflicts with colleagues, lack of administrative support, conflicting values and norms in school, and different opinions of what a teacher should do (see e.g. Betoret, 2009; Collie et al., 2012; Fernet et al., 2012, 2013; Hakanen et al., 2006; Klassen & Chiu, 2010; Kokkinos, 2007; Skaalvik and Skaalvik 2018; Spilt et al., 2011) Workload and student misbehavior, in particular, have been found to be related to feelings of stress, emotional exhaustion, less commitment to teacher duties, lower job satisfaction, less self-efficacy, and a greater intention to leave the teaching profession.

Work and school conditions of teachers that show a positive relationship with their job satisfaction relate to, among others, autonomy or professional space of teachers, healthy collaborative relationships with colleagues, good relationships with management and parents, opportunities for professional development, perceived future prospects, a school culture in which knowledge and experiences are shared and teachers collaborate, and agreement in norms and values in school (Author, 2016; Collie & Martin, 2017; Fernet et al., 2013; Hakanen et al., 2006; Simbula et al., 2011; Skaalvik & Skaalvik 2018; Struyven & Vanthournout, 2014). These studies have shown that positive relationships with colleagues and school management are positively related to teachers' commitment and job satisfaction, but also to their well-being.

A supportive school culture relates to a shared school vision and mission as well as exchange of teaching approaches (Admiraal et al., 2016; Skaalvik & Skaalvik, 2018). Such a supportive culture in school as well as shared views on teaching and learning appear to have positive relationships with teachers' self-confidence, their perceived opportunities for development, and their job satisfaction in general. The importance of a shared and safe learning and working environment where teachers and students show some consideration of each other, to explain differences in job satisfaction is also emphasized in a number of studies using TALIS 2013 or 2018 data, such as in the US (Wang et al., 2020), China (Liu et al., 2020), England (Jerrim & Sims, 2019), and Portugal (Lopes & Oliveira, 2020). Job satisfaction is an important reason that teachers work (longer) in education. This also makes it a good starting point for policy at school and the national level, in particular, to keep teachers in the profession. This requires insight into which work and school conditions explain differences in teachers' job satisfaction. Therefore, the research question is formulated as follows: *"Which work and school conditions are related to school teachers' job satisfaction?"* This main question will be answered separately for primary and secondary education, and for the Netherlands and Flanders.

Method

Procedure

The procedure of the development and administration of the TALIS 2018 questionnaire in the Netherlands and Flanders is reported in a technical report (OECD, 2019). This report also describes how the data collection has been monitored and which quality checks have been carried out. For primary education (PE), a sample was drawn that led to 201 (Flanders) and 444 (Netherlands) schools; for lower secondary education (SE), this led to 200 schools (both the Netherlands and Flanders). Within these schools, the questionnaire was distributed to 20 teachers or to all teachers if fewer than 20 teachers were employed in a school. The number of students, denomination and degree of urbanization was taken into account in the selection of schools. Selected schools were examined for a proportional distribution according to subject area, age and gender. Data from a school are included in the final data file if at least 50% of the teachers contacted have completed a questionnaire (see Table 1). Various quality checks have been carried out that indicate that the final data are representative. All documents relevant for information about TALIS 2018 can be accessed via the OECD website (https://www.oecd.org/ education/talis/talis-2018-data.htm).

Table 1. Background Information Participants TALIS 2018 Netherlands and Flanders (number with percentage between brackets)

	Netherlands		Flanders	
	PE	SE	PE	SE
	130 schools	116 schools	177 schools	182 schools
Gender				
Female	1274 (84.7)	1012 (53.7)	2193 (82.4)	2172 (69.6)
Male	230 (15.3)	872 (46.3)	369 (17.6)	950 (30.4)
Highest level formal education completed				
Lower SE or lower	2 (0.1)	3 (0.2)	0 (0)	0 (0)
SE	60 (4.0)	40 (2.1)	9 (0.3)	205 (6.6)
Post SE	14 (0.9)	7 (0.4)	1 (0)	6 (0.2)
Associate degree	0 (0)	2 (0.1)	27 (1.0)	32 (1.0)
Bachelor	978 (65.2)	1038 (55.2)	2517 (94.8)	2577 (82.7)
Master	440 (29.8)	779 (41.4)	100 (3.8)	294 (9.4)
Doctorate	0 (0)	14 (0.7)	0 (0)	2 (0.1)
Employment				
Tenures	1375 (92.0)	1604 (85.6)	2179 (82.5)	2542 (82.3)
Fixed more than 1 year	33 (2.2)	78 (4.2)	127 (4.8)	132 (4.3)
Fixed 1 year or lessr	86 (5.8)	192 (10.2)	335 (12.7)	414 (13.4)
Employment status				
Full-time (90% or more)	502 (34.0)	735 (39.3)	1895 (73.8)	2156 (72.0)
Part-time (71-80%)	359 (24.3)	575 (30.8)	425 (16.6)	527 (17.6)
Part-time (50-70%)	465 (31.5)	491 (22.4)	220 (8.6)	277 (9.2)
Part-time (less than 50%)	150 (10.2	140 (7.5)	27 (1.1)	35 (1.2)

Participants

The questionnaire was completed by 4166 teachers from PE (1504 The Netherlands and 2662 Flanders) and 5006 teachers from the lower SE (1884 The Netherlands and 3122 Flanders). Table 1 shows the background data of the participants. For the purposes of the analyses, the highest level of formal education completed, employment and employment status are converted to a two-point scale with 0= bachelor or lower and 1= master or higher, 0= temporary and 1= permanent, and 0= part-time and 1= full-time, respectively.

Teachers' Work and School Conditions and Their Job Satisfaction

Factors that can explain differences in teachers' job satisfaction are classified into work and school conditions that are potentially experienced as either negative or positive. Factor analyses were performed with varimax rotation and items with a factor loading lower than 0.30 or with factor loadings higher than 0.30 on at least two factors were removed stepwise from the analyses. The factor analyses were first performed on the Dutch SE data file and then repeated on the other three data files. Subsequently, on the basis of reliability analyses, items were sometimes removed from a scale. The final scale compositions are the same for the four datasets. The reliability of the scales used in the analyses is shown in Table 5.

Negative Work Conditions

The TALIS-2018 questionnaire contains a number of questions that relate to teachers' negative work conditions. Table 2 shows these variables and the descriptive statistics, with item numbers referring to the original TALIS-2018 questionnaire published on https://www.oecd.org/education/school/talis2018questionnaires.htm.

Table 2. Mean Scores and Standard Deviations (between brackets) for Negative Work Conditions (within brackets the item number in the TALIS-2018 questionnaire).

	Netherlands		Flanders	
	PE	SE	PE	SE
Working hours per week				
In total (16)	35.49 (12.64)	36.00 (12.74)	41.02 (13.91)	37.06 (13.25)
Teaching (17)	19.39 (7.83)	17.25 (6.57)	22.82 (7.17)	18.35 (6.22)
Professional development				
Barriers[1] (28a,b,c,d,e,f,g)	2.01 (0.50)	2.01 (0.52)	1.97 (0.49)	1.98 (0.49)
Feelings of stress				
Distress[2] (51a,c,d)	1.89 (0.69)	1.84 (0.69)	2.32 (0.75)	2.30 (0.76)
Stress in teaching[2] (52a,b,c)	1.91 (0.68)	1.94 (0.76)	2.09 (0.67)	2.09 (0.69)
Stress in class management[2] (52g,h)	1.57 (0.64)	1.56 (0.65)	1.92 (0.77)	1.96 (0.82)
Stress activities outside class[2] (52d,e,i,j,k)	2.35 (0.63)	1.98 (0.61)	2.61 (0.66)	2.51 (0.64)

[1] 1= strongly disagree; 2= disagree; 3= agree; 4= strongly agree;

[2] 1=not at all; 2= to some extent; 3= quite a bit; 4= a lot.

Negative work conditions include the total number of hours teachers work and spend on teaching, barriers of professional development and feelings of stress. After exploratory factor analyses, the professional development

barriers items form one scale and feelings of stress include both feelings of distress and various sources of stress. Distress is a collection of three of the four original items (stress at work, negative influence of work on mental health or on physical health). Items related to stress sources were classified into three types of stress after exploratory factor analysis: teaching (3 items: lesson preparation, teaching and marking), classroom management (2 items: classroom discipline, misbehavior) and activities outside class (5 items: administration, extra tasks due to the absence of a colleague, keeping up with new guidelines, contact with parents, adapting teaching to special education students).

Positive Work Conditions

Positive work conditions refer to various aspects of school culture and school climate, distinguishing six scales (see Table 3). Firstly, teachers were asked about room for new ways of teaching in school (4 items). Secondly, teachers were asked about collaboration between teachers in school, such as team teaching, observing and providing each other with feedback, collaboration in projects, exchanging materials, discussions about students, collaboration on student evaluations, and team meetings. Thirdly, aspects of the school climate were asked, with a focus on participation in decision making (participation of staff, parents and students), collaborative school culture (shared responsibility, mutual support, shared views, shared rules for students, incentive for new ideas) and a safe learning and working climate (good relationship between teachers and students, attention to students' well-being, teachers who show an interest in what students say, student support and mutual trust among teachers). Finally, four items are included about how the school supports activities on diversity and multiculturalism. Due to the large number of missing values on these last four items, they were excluded from the analyses.

Table 3. Mean Scores and Standard Deviations (between brackets) for Positive Work Conditions (between bracket item numbers from the TALIS 2018 questionnaire)

	Netherlands		Flanders	
	PE	SE	PE	SE
New ways of teaching[1] (32a,b,c,d)	3.00 (0.51)	2.69 (0.50)	2.98 (0.56)	2.76 (0.54)
Teacher collaboration[7] (33a t/m h)	3.44 (0.70)	3.30 (0.73)	3.46 (0.83)	3.04 (0.78)
Participate in decision making[1] (48a,b,c)	2.99 (0.43)	2.85 (0.49)	2.96 (0.47)	2.89 (0.51)
Collaborative school culture[1] (48d,e,f,g,h	3.07 (0.43)	2.74 (0.49)	2.96 (0.45)	2.79 (0.49)
Safe learning & working climate[1] (49a t/m e)	3.49 (0.41)	3.30 (0.40)	3.43 (0.42)	3.29 (0.40)

[1]1=strongly disagree; 2= disagree; 3= agree; 4= strongly agree;

[2]1= never; 2= one a year or less; 3= 2-4 times a year; 4=5-10 times a year; 5=1-3 times a month; 6= once a week or more

Job Satisfaction

Job satisfaction was measured on the basis of nine statements and sorted into two clusters after exploratory factor analysis. The first cluster of items concerns satisfaction with the teaching profession (4 items: advantages clearly outweigh disadvantages; if I could choose, I would do it again; I regret becoming a teacher (rescored); I think it would have been better if I had chosen a different profession (rescored)). The second cluster of items concerns satisfaction with the school where one currently works (3 items: I would change school if I could

(rescored), I enjoy working at this school; I can recommend this school as a workplace). These two aspects of satisfaction are confirmed by Zakariya (2020) based on TALIS-2018 data from 27 countries. As can be seen from Table 4, apart from teachers in SE in the Netherlands, teachers are more satisfied with school than with the profession itself.

Table 4. Job Satisfaction (between brackets the items from TALIS 2018 questionnaire): Mean Scores and Standard Deviations (between brackets)

	Netherlands		Flanders	
	PE	SE	PE	SE
Satisfaction				
With teaching profession[1] (53a,b,d,f)	3,05 (0,60)	3,16 (0,59)	3,13 (0,61)	3,11 (0,60)
With school[1] (53c,e,g)	3,29 (0,54)	3,17 (0,58)	3,37 (0,60)	3,27 (0,64)

[1]1= strongly disagree; 2= disagree; 3= agree; 4= strongly agree

Analyses

Table 5 shows the reliability of each scale. Satisfaction with the teaching profession is the dependent variable in the analyses because this aspect of job satisfaction seems to be most relevant for teacher retention. As Federičová (2021) has indicated, about half of the teachers who have stopped working at school have indicated that they have quitted the profession. Satisfaction with the school is included as predictor in the final analyses. To answer the research question, linear regression analyses are performed per sector and per country, using satisfaction with the teaching profession as a dependent variable and the background characteristics of the participants, and negative and positive work conditions as independent variables.

Table 5. Reliability of the Scales in Terms of Cronbachs α

	Netherlands		Flanders	
	PE	SE	PE	SE
Professional development				
PD barriers (28a,b,c,d,e,f,g)	0.77	0.77	0.75	0.72
Negative work conditions				
Distress (51a,c,d)	0.83	0.82	0.82	0.82
Stress in teaching (52a,b,c)	0.71	0.72	0.64	0.69
Stress in class management (52g,h)	0.58	0.64	0.66	0.74
Stress activities outside class (52d,e,i,j,k)	0.71	0.72	0.74	0.73
Positive work conditions				
New way of teaching (32a,b,c,d)	0.84	0.83	0.88	0.86
Teacher collaboration (33a to h)	0.73	0.72	0.73	0.74
Participation in decision-making (48a,b,c)	0.69	0.81	0.73	0.78
Collaborative school culture (48d,e,f,g,h)	0.80	0.81	0.80	0.81
Safe learning and working culture (49a to e)	0.82	0.80	0.84	0.82
Job satisfaction				
With teaching profession (53a,b,d,f)	0.82	0.82	0.79	0..80
With school (53c,e,g)	0.77	0.77	0.84	0.85

[1]For PE 6a to l

Because the data has a nested structure (teachers within schools), variance in scores on satisfaction with teaching profession at the school and teacher level was checked. For all four datasets, little variance is explained by the schools where the teachers work (varying from less than 1% for the Netherlands SE to 3% for the Netherlands PE) and the variance at school level did not significantly deviate from 0. So, the regression analyses have been performed at the teacher level only.

Results

Primary and Secondary Education Teachers in the Netherlands

Table 6 shows the results of the regression analyses for primary and secondary school teachers in the Netherlands. For both sectors, about 25% of the variance in job satisfaction scores is explained by teachers' background and work conditions (27% for PE and 25% for SE). The results are similar for primary and secondary teachers. For both groups, negative work conditions explain most variance in job satisfaction scores: distress, stressful situations in teaching and in classroom management, and perceived barriers to professional development are negatively related to their satisfaction with the teaching profession. In addition, for both groups of teachers, a safe learning and working climate in school is positively related to satisfaction with the teaching profession. Finally, for PE teachers it shows that women are more satisfied with the teaching profession than men, and the number of hours teachers work in school is positively related to job satisfaction.

Table 6. Results Teachers PE and SE in the Netherlands

	PE				SE			
	b*	t	p	partial r	b*	t	p	partial r
Background								
Gender (1=female)	0.84	3.420	0.001	0.091	n.s.			
Highest formal education (1=MA)	n.s.				n.s.			
Employment (1=permanent)	n.s.				n.s.			
Employment status (1=full-time)	n.s.				n.s.			
Negative work conditions								
Working hours in school	0.74	2.464	0.014	0.066	n.s.			
Working hours teaching	n.s.				n.s.			
Barriers PD	-0.075	-2.936	0.003	-0.079	-0.105	-4.392	<0.001	-0.107
Distress	-0.342	-12.219	<0.001	-0.312	-0.339	-12.289	<0.001	-0.287
Stress in teaching	-0.101	-3.755	<0.001	-0.100	-0.101	-3.846	<0.001	-0.093
Stress in class management	-0.076	-2.979	0.003	-0.080	-0.069	-2.961	0.003	-0.072
Stress activities outside class	n.s.				n.s.			
Positive work conditions								
New ways of teaching	n.s.				n.s.			
Teacher collaboration	n.s.				n.s.			
Participate in decision making	n.s.				n.s.			
Collaborative culture in school	n.s.				n.s.			
Safe learning and working climate	0.139	5.104	<0.001	0.136	0.141	5.825	<0.001	0.141
	F(16,1389)=33.675; p<0.001; R^2= 0.271				F(16,1680)=45.649; p<0.001; R^2= 0.246			

b*= standardized regression coefficient; t= t-value; p=significance; partial r= partial correlation; n.s.= not significant

For both educational sectors, adding satisfaction with school as a predictor increases the total proportion of variance explained in job satisfaction scores, to 0.292 (PE) and 0.287 (SE), respectively. For both sectors, satisfaction with school shows a significant and strong positive relationship with job satisfaction (PE: b*= 0.189; t= 6.458; p<0.001; $r_{partial}$= 0.171; SE: b*= 0.267;t= 9.857; p<0.01; $r_{partial}$= 0.234). For both sectors, this addition also means that perceived barriers to professional development have a less strong -though still significant- relationship with job satisfaction. For SE, a safe learning and working climate also has a significantly less strong relationship with job satisfaction after adding school satisfaction to the model.

Primary and Secondary Education Teachers in Flanders

Table 7 shows the results of the regression analyses for teachers from PE and SE in Flanders. Teachers' background and work conditions explain 30% of the variance in job satisfaction scores. As with the data for the Netherlands the results of the regression analyses are similar for primary and secondary teachers.

Table 7. Results Teachers PE and SE in Flanders

	PE				SE			
	b*	t	p	partial r	b*	t	p	partial r
Background								
Gender (1=female)	0.067	3.869	<0.001	0.078	0.046	2.850	0.004	0.054
Highest formal education (1=MA)	n.s.				n.s.			
Employment (1=permanent)	n.s.				n.s.			
Employment status (1=full-time)	n.s.				n.s.			
Negative work conditions								
Working hours in school	n.s.				0.042	2.353	0.019	0.044
Working hours teaching	0.071	3.568	<0.001	0.070	n.s.			
Barriers PD	-0.074	-4.050	<0.001	-0.822	-0.054	-3.190	0.001	-0.060
Distress	-0.377	-17.324	<0.001	-0.331	-0.374	-18.537	<0.001	-0.330
Stress in teaching	-0.081	-3.896	<0.001	-0.079	-0.075	-3.892	<0.001	-0.073
Stress in class management	n.s.				-0.091	-5.144	<0.001	-0.096
Stress activities outside class	-0.098	-4.210	<0.001	-0.085	-0.061	-3.025	0.003	-0.057
Positive work conditions								
New ways of teaching	n.s.				n.s.			
Teacher collaboration	0.063	3.490	<0.001	0.071	0.074	4.492	<0.001	0.084
Participate in decision making	n.s.				n.s.			
Collaborative culture in school	n.s.				n.s.			
Safe learning and working climate	0.080	3.833	<0.001	0.077	0.096	5.335	<0.001	0.100
	F(15,2463)=71.841; p<0.001; R^2= 0.301				F(15,2821)=82.724; p<0.001; R^2= 0.302			

b*= standardized regression coefficient; t= t-value; p=significance; partial r= partial correlation; n.s.= not significant.

For both groups, negative work conditions explain most variance in job satisfaction scores: feelings of distress, stressful situations in teaching, feelings of stress due to activities outside class and and perceived barriers to professional development are negatively related to their satisfaction with the teaching profession. In addition, the positive conditions teacher collaboration and a safe learning and working climate in school show a positive

relationship with teachers' job satisfaction. For both PE and SE teachers it shows that women are more satisfied with the teaching profession than men. For PE teachers, working hours spent on teaching and for SE teachers working hours in school are *positively* related to their job satisfaction. Finally, for SE teachers, stressful situations related to class management show a negative relationship with job satisfaction.

For both sectors, adding satisfaction with school as a predictor increases the total proportion of variance explained in job satisfaction scores, to 0.336 (PE) and 0.354 (SE), respectively. For both sectors, satisfaction with school shows a significant and strong relationship with job satisfaction (PE: b*=0.232; t= 11.043; p<0.001; $r_{partial}$=0.218; SE: b*=0.291; t= 15.156; p<0.001; $r_{partial}$=0.274). Also for both sectors, the addition of satisfaction with school means a safe learning and working climate does not show a significant relationship (PE) or a clearly less strong relationship with job satisfaction.

Discussion and Conclusion

The re-analyses of the data from TALIS 2018 of primary and secondary school teachers from the Netherlands and Flanders show that differences in teachers' satisfaction with the teaching profession are almost entirely caused by individual differences between teachers; the school where teachers work hardly explains these differences. Liu et al. (2020, in TALIS 2018 data China), Wang et al. (2020 in TALIS 2013 data USA) and Lopes & Olivera (2020, in TALIS 2013 data Portugal) found significant differences between schools, but did not distinguish between the two types of satisfaction (with the profession and with the school). In the present study, however, the satisfaction experienced by the teachers with the school where they work is an important explanation for differences in satisfaction with the teaching profession.

Feelings of distress and stressful situations in teaching and in class management emerge as important explanations for differences in teachers' job satisfaction, both in primary and secondary education and in both the Netherlands and Flanders. This is in line with the many studies mentioned in the introduction of this article on a negative association between teachers' feelings of burnout, student misbehavior and low student motivation, on the one hand, and teachers' job satisfaction, on the other. Toropova et al. (2021) examined work conditions in their analyses of TIMSS 2015 data from Sweden and conclude that student misbehavior (in the current study stress in class management) and work pressure (in the current study stress in teaching) of teachers are negatively related to job satisfaction. Another variable that shows a negative relationship with teachers' job satisfaction in the four data sets refers to the perceived barriers to professional development. This result ties in with other studies into the importance of professional development and the choices teachers have in it for teachers' job satisfaction (see e.g. Admiraal et al., 2016).

A safe learning and working climate in school, in which teachers and students show mutual respect, shows a strong relationship with teachers' job satisfaction, while other aspects of school culture and climate are of little or no importance. The importance of a safe learning and working environment is also found in other analyses of TALIS data, although authors have only selected a few items and (thus) indicated other labels such as mutual respect (Wang et al, 2020, TALIS 2013) or positive teacher-student relations (Liu et al., 2020 TALIS 2018;

Lopes & Oliveira, 2020, TALIS 2013). These other TALIS analyses also found (weak, but significant) associations between teachers' job satisfaction and participation in decision making, teacher collaboration and collaborative culture in school. As mentioned above, these researchers use one measure for job satisfaction that includes both satisfaction with the profession and satisfaction with the school where a teacher works. Both the positive relationship of a safe learning and working climate in school and the negative relationship of perceived barriers to professional development with job satisfaction became less strong when school satisfaction was added to the model. Evidently, a safe learning and working climate in school and professional development opportunities for teachers are important aspects of satisfaction with the school where they work.

Recommendations

A limitation is a possible bias caused by the fact that teachers who have already left the teaching profession were not included in the sample. This is inherent of distributing the questionnaire via schools. The results concern the perceptions of teachers who were (still or again) teachers at the time of the survey. A questionnaire that is administered more broadly, such as the SHARE in Federičová (2021), can solve this problem.

The results regarding the negative relationship of feelings of distress and stress with teachers' job satisfaction imply that working on optimal conditions in school and the profession as a teacher probably pays off. This is underlined by the positive relationship between satisfaction with the school where teachers work and their job satisfaction. To keep teachers in the profession, the experiences of distress and stress should be reduced, e.g. by lowering the workload, providing more support in performing the teacher's tasks, and giving more autonomy in following professional development activities.

References

Admiraal, W., Kruiter, J., Lockhorst, D., Schenke, W., Sligte, H., Smit, B., Tigelaar, D., & de Wit, W. (2016). Affordances of teacher professional learning in secondary schools. *Studies in continuing education, 38*(3), 281-298.

Betoret, F. D. (2009). Self-efficacy, school resources, job stressors and burnout among Spanish primary and secondary school teachers: A structural equation approach. *Educational Psychology, 29,* 45–68.

Collie, R. J., & Martin, A. J. (2017). Teachers' sense of adaptability: Examining links with perceived autonomy support, teachers' psychological functioning, and students' numeracy achievement. *Teaching and Teacher Education, 55,* 29–39.

Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology, 104,* 1189–1204

Dupriez, V., Delvaux, B., & Lothaire, S. (2016). Teacher shortage and attrition: Why do they leave? *British Educational Research Journal, 42,* 21-39.

Federičová, M. (2021). Teacher turnover: What can we learn from Europe? *European Journal of Education,* 56*(1),* 102-116.

Fernet, C., Austin, S., Trépanier, S.-G., & Dussault, M. (2013). How do job characteristics contribute to burnout? Exploring the distinct mediating roles of perceived autonomy, competence, and relatedness. *European Journal of Work and Organizational Psychology, 22,* 123–137.

Fernet, C., Guay, F., Senécal, C., & Austin, S. (2012). Predicting intraindividual changes in teacher burnout: The role of perceived school environment and motivational factors. *Teaching and Teacher Education, 28,* 514–525.

Goldhaber, D., Gross, B., & Player, D. (2011). Teacher career paths, teacher quality, and persistence in the classroom: Are public schools keeping their best? *Journal of Policy Analysis and Management*, *30*(1), 57–87.

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43,* 495–513.

Jerrim, J., & Sims, S. (2019). *The Teaching and Learning International Survey (TALIS) 2018. Research report.* Londen: UCL.

Klassen, R., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology, 102,* 741–756.

Kokkinos, C. M. (2007). Job stressors, personality and burnout in primary school teachers. *British Journal of Educational Psychology, 77,* 229–243.

Liu, S., Keeley, J. W., & Sui, Y. (online first, 2020): Multi-level analysis of factors influencing teacher job satisfaction in China: evidence from the TALIS 2018. *Educational Studies*. DOI: 10.1080/03055698.2020.1837615

Lopes, J., & Oliveira, C. (2020), Teacher and school determinants ofteacher job satisfaction: a multilevel analysis, School Effectiveness and School Improvement, 31, 641-659.

Murnane, R. J., & Steele, J. L. (2007). What is the problem? The challenge of providing effective teachers for all children. *The Future of Children*, *17*(1), 15–43.

OECD. (2019). TALIS 2018 Technical Report. Parijs: OECD Publishing. Opgehaald op 24 juli 2021 van https://www.oecd.org/education/talis/talis-2018-data.htm.

OECD. (2020). *Education at a Glance 2020: OECD Indicators*. Parijs: OECD Publishing. Opgehaald op 5 augustus 2021 van https://doi.org/10.1787/69096873-en.

Simbula, S., Guglielmi, D., & Schaufeli, W. B. (2011). A three-wave study of job resources, selfefficacy, and work engagement among Italian schoolteachers. *European Journal of Work and Organizational Psychology, 20,* 285–304.

Skaalvik, E. M., & Skaalvik, S. (2017). Still motivated to teach? A study of school context variables, stress and job satisfaction among teachers in senior high school. *Social Psychology of Education, 20,* 15–37.

Skaalvik, E. M., & Skaalvik, S. (2018). Job demands and job resources as predictors of teacher motivation and well-being. *Social Psychology of Education, 21,* 1251–1275.

Spilt, J. M., Koomen, H. M. Y., & Thijs, J. T. (2011). Teacher wellbeing: The importance of teacher-student relationships. *Educational Psychology Review, 2,* 457–477.

Struyven, K., & Vanthournout, G. (2014). Teachers' exit decisions: An investigation into the reasons why newly qualified teachers fail to enter the teaching profession or why those who do enter do not continue teaching. *Teaching and Teacher Education, 43*, 37-45.

Toropova, A., Myrberg, E., & Johansson, S. (2021) Teacher job satisfaction: the importance of school working conditions and teacher characteristics. *Educational Review, 73*, 71-97.

Van Droogenbroeck, F., & Spruyt, B. (2016). I ain't gonna make it. Comparing Job Demands-Resources and attrition intention between senior teachers and senior employees of six other occupational categories in Flanders. *The International Journal of Aging and Human Development, 83*, 128–155.

Wang, K., Li, Y., Luo, W., & Zhang, S. (2020). Selected factors contributing to teacher job satisfaction: A quantitative investigation using 2013 TALIS data. *Leadership and Policy in Schools, 19*, 512-532.

Wyatt, J. E., & O'Neill, M. (2021). Investigation of early career teacher attrition and the impact of induction programs in Western Australia. *International Journal of Educational Research, 107*, 101754.

Zakariya, Y. F. (2020). Investigating some construct validity threats to TALIS 2018 teacher job satisfaction scale: Implications for social science researchers and practitioners. *Social Science, 9*(30), 1-13.

Author Information

Wilfried Admiraal

https://orcid.org/0000-0002-1627-3420

Centre for the Study of Professions

Oslo Metropolitan University

PO Box 4 St. Olavs plass

N-0130 Oslo

Norway

Contact e-mail: *wilfried.admiraal@gmail.com*