THE EFFECTS OF EXTRINSIC AND INTRINSIC FACTORS ON TEACHERS' JOB SATISFACTION IN TALIS 2018

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Abstract

Investigating whether the effects of extrinsic and intrinsic factors on teachers' dissatisfaction with the teaching profession show variation between countries is crucial, especially given the significant impact on quality of instruction, which is also associated with student performance. In this respect, the main aim of this study is to reveal the effects of a group of variables categorized as extrinsic and intrinsic factors and covered in OECD's 2018 Teaching and Learning International Survey (TALIS). These factors include teacher-student relations, perceived value of teachers in their society, the participation of stakeholders in school decisions, teacher cooperation, teacher salary satisfaction, teacher gender, socioeconomic status (SES) composition of the class, teacher workload, and this study examines TALIS results from Finland, Italy, and Turkey. Structural equation modelling (SEM) were carried out to reveal relationships between extrinsic factors and teacher satisfaction with the profession, to investigate the effects of extrinsic and intrinsic factors on the dimensions of teachers' satisfaction, and to reveal relationships among the dimensions of teacher satisfaction. In addition, the probability of having dissatisfied teachers with their jobs for each country were estimated by using two consecutive multiple logistic regressions. The results indicated that teachers' satisfaction with the environment had a positive effect on satisfaction with the profession, which is highest in Finland compared to Turkey and Italy. In addition, when a group of variables are controlled for, teachers' dissatisfaction with the profession was highest in Finland among the three countries and lowest in Turkey.

Keywords: Teachers' job dissatisfaction, TALIS 2018, structural equation modelling (SEM)

INTRODUCTION

Unquestionably, one of the determinants of the quality of instruction is teacher quality (Hanushek & Rivkin, 2010). Some basic conditions are expected to be provided for the teacher, who is regarded as the main component for improving the quality of instruction. As well as teacher training, teacher job satisfaction has been noted as one of the conditions that improve the quality of instruction (Iwu, Ezeuduji, Iwu, Ikebuaku & Tengeh, 2018). Therefore, revealing the factors ensuring teacher job satisfaction should be considered first in efforts to improve the quality of instruction.

Investigating the factors that affect teacher job satisfaction will enable us to reveal the reasons that hinder increasing quality of instruction. In addition, studies show that there is a significant relationship between teacher attrition and dissatisfaction with the teaching profession (Johnson, Kraft & Papay, 2012). Teacher retention seems to be the other crucial and problematic issue that should be considered. For example, in the United States, the need for qualified science and math teachers is 2.5 times higher than the retired teachers; in Norway, 4.6% of teachers left their profession during a period of one year (Mostafa & Pal, 2018). Moreover, the teacher attrition rate is increasing in some countries, including Australia, China, and England (Mostafa & Pal, 2018). Therefore, teacher job satisfaction/dissatisfaction is an important issue that should be emphasized as it affects retention. Job satisfaction, which is very important for continuing the profession, contributes not only to the motivation and development of teachers but also to the learning and development of students (Perie, Baker & Whitener, 1997). This is because the instruction that the teacher provides is affected by the teacher's job satisfaction.

Since job satisfaction is a sophisticated concept consisting of a series of factors related to a job (Ouyang & Paprock, 2006), all these factors should be considered in situations that affect teacher job satisfaction. In the literature, some studies categorize factors that affect teacher job satisfaction into three clusters – community factors, school factors, and teacher characteristics (Ouyang & Paprock, 2006) – others examine factors related to teacher job satisfaction by dividing them into two main categories: extrinsic and intrinsic factors (Gkolia, Belias, & Koustelios, 2014). Extrinsic (job satisfaction with the work environment) and intrinsic (job satisfaction with the profession) factors are related with teacher job dissatisfaction in several studies (Hauber & Bruininks, 1986; Hirschfeld, 2000). Extrinsic factors are defined as the external benefits provided by the organization, and intrinsic factors are controlled by many forces affecting the professional's internal satisfaction (Randolph & Johnson, 2005). While the extrinsic category includes some tangible factors such as school safety, salary, workload, teachers' status in society, school resources, and perceived support from administrators, the intrinsic category includes working with students, teacher control over the class, classroom activities, and students' characteristics (Madero, 2019; Mostafa & Pal, 2018).

When extrinsic factors are examined, teacher cooperation, salary, participation of stakeholders in the school decisions, and perception of value given by society are remarkable. Although the effect of salary on teacher satisfaction seems to have reduced over time (Klassen & Anderson, 2009), it has always maintained its effect on continuing work (Khazaei et al., 2016). Another factor, teacher cooperation and collegiality, are emphasized since it is considered to be a component of communities of practice and professional learning communities (Bolam & McMahon, 2004). Teacher cooperation has also been significant predictor of job satisfaction (Durksen et al., 2017). Similarly, among extrinsic factors, teacher-student relationships have an impact on job satisfaction, and this relationship is important to keep experienced teachers in the profession (Veldman, van Tartwijk, Brekelmans, & Wubbels, 2013). In addition, stakeholder participation is a significant factor. Stakeholder participation in school-based management is a means by which schools as organizations develop themselves through expanded productivity and efficiency (Botha, 2007). In this way, teachers' organizational commitment is expected to be high. The next extrinsic factor is the value of teachers in their society. Workload, the last extrinsic factor, is found to be a significant predictor of anxiety and depression (Ferguson, Frost & Hall, 2012), which are also strongly related with dissatisfaction. On the other hand, when intrinsic factors are examined, we see gender and class socioeconomic composition as significant. Although the relationship of gender with job satisfaction is generally discussed with a focus on career planning, there are studies on the effect of gender on job satisfaction (e.g., Menon & Athanasoula-Reppa, 2011). Since the socioeconomic level of students in the classroom affects job dissatisfaction in terms of the varieties of problems encountered, it is also taken into consideration.

In the last decade, many studies have been carried out to reveal the factors that have potential to affect teacher job satisfaction (e.g., Madero, 2019; Malinen & Savolainen, 2016; Okeke & Mtyuda, 2017; Sahito & Vaisanen, 2020). However, few of them focused on the comparison of job satisfaction by considering intrinsic and extrinsic factors across countries based on an international large-scale assessment. The TALIS 2018, which was carried out by OECD (The Organisation for Economic Co-operation and Development), provides us with useful dimensions related to teacher job satisfaction, including extrinsic factors such as teacher cooperation in schools, student and teacher relations in schools, participation of stakeholders in school decisions, teachers' perceived value in their society, and teacher workload and intrinsic variables, including teacher gender and the socioeconomic composition of classes (Ainley & Carstens, 2018).

In this study, we have investigated the direct effects of the extrinsic and intrinsic factors included in the TALIS 2018 on teacher satisfaction across Turkey, Finland, and Italy. In addition, the variation in teacher dissatisfaction has been examined by controlling for these factors across the three countries. The reasons for variation are also discussed by scrutinizing the educational systems and cultural differences in these three countries. The outstanding performance of students in Finland on the PISA (Programme for International Student Assessment) and the low performance of students in Italy and

Turkey on both the PISA and TIMSS (Trends in International Mathematics and Science Study) lead us to compare these three countries with regard to teacher job satisfaction.

Research Aims

This study has three aims. In the first phase of the study, the direct effects of extrinsic factors on lower secondary teachers' satisfaction with the profession are investigated and compared across Turkey, Finland, and Italy. The second aim of the study is to investigate whether dissatisfaction of lower secondary teachers show variation across three countries when the extrinsic (teacher cooperation, teacher-student relations, the participation of stakeholders in school decisions, teachers' perceived value in their society, teacher salary satisfaction) and intrinsic (teacher gender, class SES composition, teacher workload) factors included in the TALIS 2018 are controlled for. In addition, the probability of teacher job dissatisfaction is also interpreted regarding extrinsic and intrinsic factors, respectively. The last aim of this study is to investigate the effects of extrinsic and intrinsic factors on the dimensions of teacher job satisfaction, which were defined in the TALIS 2018 as teacher satisfaction with the work environment, with the profession, and with classroom control. In addition, the effects of these dimensions of teacher job satisfaction on each other are also examined and compared across Turkey, Finland, and Italy.

METHODS

Firstly, the sample of the study and the rationale behind the variable selection were described based on the related literature. In the first phase of the study, while dissatisfaction of teachers with their profession was determined as the dependent (response or predicted) variable of this study, independent variables (explanatory or predictor) were defined as teacher cooperation, teacher-student relations, participation of stakeholders in school decisions, teachers' perceived value in their society, teacher salary satisfaction, teacher gender, class SES compositions, and teacher workload. In the second phase of study, teachers' satisfaction with the work environment and teachers' satisfaction with classroom control were considered as dependent variables in addition to teacher satisfaction with their profession.

TALIS 2018 Data and Sampling

The third cycle of the TALIS (2018), which includes more than a hundred thousand teachers from 48 countries at the lower secondary level, deals with some of the important dimensions such as teachers' professional practices, instructional practices, feedback and development, education and initial preparation, self-efficacy, and job satisfaction (Ainley & Carstens, 2018). A stratified two-stage probability sampling design was used: in the first stage, schools in each country were randomly selected, and in the second stage the list of in-scope teachers was randomly selected. In-scope teachers were defined as the teachers who provide instruction at the lower secondary level for the International Standard Classification of Education (ISCED 2). Totally 10.415 (Turkey = 3952; Finland = 2851; Italy = 3612) teachers participated this study from three countries. The missing values did not exceed 2.2% for each recoded categorical response and explanatory variable. Therefore, the missing values were replaced with the mode for each variable (Tabachnick & Fidell, 2007).

Target Dimensions and Factors in TALIS 2018

In the TALIS 2018, numerous questionnaire items were presented related to teachers' attitudes, perceptions, and practices. These items allow for scale scores for latent constructs which are simply derived from the combination of the responses to the related items. In the TALIS 2018, these scale scores for latent constructs were produced by confirmatory factor analysis (CFA) latent modelling within the framework. The process which covers the scale score calculation includes the following steps: (1) Descriptive and internal consistency analysis, (2) CFA, (3) measurement invariance testing, (4) final score modelling, and (5) construction of the scale scores (OECD, 2019a). Scale scores were also presented in the TALIS 2018 database. For the aim of this study, when we examined the direct effects of extrinsic and intrinsic variables on teacher job satisfaction and investigated the relationships among job satisfaction dimensions, the scale scores were used directly. On the other hand, during the

investigation of the variation on teacher dissatisfaction across countries, scale scores were converted to the two-level categorical variables.

The dimensions of satisfaction with the profession, satisfaction with classroom control and satisfaction with the work environment were used as dependent variables in the analyses. The dimension of satisfaction with the profession comprises four items in the TALIS 2018 teacher questionnaire (OECD, 2019a):

> The advantages of being a teacher clearly outweigh the disadvantages (1), If I could decide again, I would still choose to work as a teacher (2), I regret that I decided to become a teacher (reversed scored) (3), and I wonder whether it would have been better to choose another profession (reversed scored) (4).

The dimension of satisfaction with the work environment includes items such as "I would like to change to another school if that were possible (reversed scored) (1), I enjoy working at this school (2), I would recommend this school as a good place to work (3), and All in all, I am satisfied with my job (4)." For the dimension of teachers' satisfaction with classroom control, teachers were asked to point out degree of control in the following areas: "Determining the course content, Selecting teaching methods, assessing students' learning, disciplining students, and determining the amount of homework to be assigned." The response options were strongly agree (4), agree (3), disagree (2), and strongly disagree (1) (OECD, 2019a). In this study, whereas the scale scores of three dimensions were taken directly for structural equation modelling (SEM), a two-level categorical variable was produced for the dimension of teacher satisfaction with the profession by setting a cut-off point, below which teachers are labelled as dissatisfied with their profession, and above the cut-off point the teachers are labelled as satisfied with their profession. In this way, this categorical variable could be used in logistic regression.

Teacher-student relations (Teach-stu), participation of stakeholders in school decisions (participation), teachers' perceived value in their society (value), and teacher cooperation are the dimensions which were used as dependent variables. Teacher-student relations (Teach-stu relations) includes four items, such as "Teachers and students usually get on well with each other (1), Most teachers believe that the students' well-being is important (2), Most teachers are interested in what students have to say (3), If a student needs extra assistance, the school provides it (4)" (OECD, 2019a). The factor of participation of stakeholders in school decisions comprises five items as follows (OECD, 2019a):

> This school provides staff with opportunities to actively participate in school decisions (1), This school provides parents or guardians with opportunities to actively participate in school decisions (2), This school provides students with opportunities to actively participate in school decisions (3), This school has a culture of shared responsibility for school issues (4), There is a collaborative school culture which is characterized by mutual support (5).

The dimension of teachers' perceived value in their society includes items such as: "Teachers' views are valued by policymakers in this country/region (1), Teachers can influence educational policy in this country/region (2), and Teachers are valued by the media in this country/region (3)" (OECD, 2019a). The response choices presented for these items range from *strongly agree* (4) to *strongly disagree* (1). The factor of teacher cooperation comprises eight items such as (OECD, 2019a):

> Exchange or develop teaching materials with colleagues (1), Discuss the learning development of specific students (2), Work with other teachers in this school to ensure common standards in evaluations for assessing student progress (3), Attend team conferences (4), Teach jointly as a team in the same class (5), Provide feedback to other teachers about their practice (6), Engage in joint activities across different classes and age groups (e.g. projects) (7), Participate in collaborative professional learning (8).

The response options were presented as "never (1), once a year or less (2), 2–4 times a year (3), 5–10 times a year (4), 1–3 times a month (5), and once a week or more (6)" (OECD, 2019a). The scale scores for these dimensions were taken for the SEM. In addition, for the logistic regression, two-level categorical variables were obtained by using the determined cut-off point on the scale scores.

In addition, salary satisfaction, class SES composition, and teacher workload were also used as explanatory variables for the logistic regression analyses. Although the amount of teacher wages was not asked directly, teachers' satisfaction with their salaries were presented as an item to indicate whether they were satisfied with the salary that they received for the teaching profession. The response categories presented range from strongly agree (4) to strongly disagree (1). We combined response options (1) strongly disagree and (2) disagree to indicate the (1) dissatisfaction with salary and (3) agree and (4) strongly agree under the label satisfaction with salary (0) (OECD, 2019a). SES composition of the class is the other variable that was derived from a single item. Percentage of students coming from socioeconomically disadvantaged homes asked to teachers. Teachers who indicated that the percentage of students from socioeconomically disadvantaged homes is more than 10% of the students in the classroom were labelled as teachers who have low-SES students in their classes (1). On the other hand, teachers who indicated that none of the students or less than 10% students in their classes were coming socioeconomically disadvantaged homes were labelled as teachers who do not have low SES students in their classes (0). The teacher workload variable was calculated by whether the teaching hours of teachers exceeds 67% of their total time in school (Modero, 2019).

The omega coefficients and stratified Cronbach's alpha for the three countries, which indicate satisfactory reliabilities for the dimensions, are presented in Table 1 (OECD, 2019a).

Table 1. Omega coefficients and stratified cronbach's alpha for the *dimensions*

Dimensions/Factors	Omega Coefficients		
	Turkey	**Finland**	**Italy**
Satisfaction with the profession	.86	.91	.91
Satisfaction with work environment	.86	.83	.84
Satisfaction with classroom control	.90	.87	.90
Teacher-student relations	.88	.80	.84
Participation of stakeholders in school decisions	.90	.80	.77
Teachers' perceived value in their society	.78	.83	.72
	Stratified Cronbach's Alpha		
Teacher cooperation	.87	.80	.79

Data Analysis
The two dada analysis methods performed in the study were structural equation modelling (SEM) and multiple logistic regression. SEM was carried out using LISREL 8.7, and logistic regressions were conducted using SPSS 26. In the first step, multiple regression analyses were carried out using LISREL for each country to produce path diagrams which explicitly show the relationships of extrinsic factors with teacher satisfaction with the profession. In the second step, two consecutive multiple logistic regression analyses were conducted to infer whether the odds of teacher dissatisfaction across countries varies by controlling for some of the extrinsic and intrinsic variables and to investigate whether the presence of the extrinsic and intrinsic factors have an effect on teacher dissatisfaction in Turkey, Italy, and Finland. In the third step, a structural model was conducted to test the relationship between extrinsic factors, teacher satisfaction with the profession, teachers' satisfaction with the work environment, and teacher satisfaction with classroom control.

In the first step, the teacher-student relations (Teach-stu), participation of stakeholders in school decisions (Participation), teachers' perceived value in society (Value), teacher cooperation (Cooperation), and teacher workload (Workload) were used as the predictor variables, and teacher satisfaction with the profession (Satisfaction) was used as the predicted variable. The multiple

regression analysis conducted to reveal the relationships between extrinsic factors and teacher satisfaction can be expresses with the following equation:

$Satisfaction = \beta_0 + + \beta_1 Teach\text{-}stu_t + \beta_2 Participation_s + \beta_3 Value_t + \beta_4\ Cooperation + \beta_8 Workload$

Multiple logistic regression, which was conducted in the second step, allows us to understand the impact of a set of predictors on the categorical explanatory variable (Pallant, 2011). It was run to understand which variables affect the teacher dissatisfaction with the profession. We can also interpret the probability of teacher dissatisfaction with the profession based on a group of predictors and various effects of the variables separately among the set of predictors on teacher dissatisfaction with the profession.

To investigate these aims, multiple logistic regression was run twice to infer whether the probability of teacher dissatisfaction changes across the countries by controlling for a group of explanatory variables, such as teacher cooperation, teacher-student relations, participation of stakeholders in school decisions, perception of teachers' value in the society, teacher salary satisfaction, teacher gender, class socioeconomic composition, and teacher workload. Based on this aim, we can express the equation as:

$Pr(Dissatisfaction_t = 1) =$

$$\frac{(\beta_0 + \beta_1 T_t + \beta_2 F_t + \beta_3\ Cooperation_t + \beta_4 Teach\text{-}stu_t + \beta_5 Participation_s + \beta_6 Value_t + \beta_7 Salary_t + \beta_8 Gender_t + \beta_9 SES_c + \beta_{10} Workload_t)}{1 + exp(\beta_0 + \beta_1 M_t + \beta_2 M_t + \beta_3 Cooperation_t + \beta_4 Teach\text{-}stu_t + \beta_5 Participation_s + \beta_6 Value_t + \beta_7 Salary_t + \beta_8 Gender_t + \beta_9 SES_t + \beta_{10} Workload_t)}$$

The second multiple logistic regression was run to infer the presence of effects of teacher cooperations, teacher-student relations, participation of stakeholders in school decisions, perceptions of teachers' value in the society, teacher gender, class socioeconomic composition, and teacher workload on teachers' odds of being dissatisfied in Turkey, Finland, and Italy. We ran logistic regression for each country using the equation below:

$Pr(Dissatisfaction_t = 1) =$

$$\frac{exp(\beta_0 + \beta_1\ Cooperation_t + \beta_2 Teach\text{-}stu_t + \beta_3 Participation_s + \beta_4 Value_t + \beta_5 Salary_t + \beta_6 Gender_t + \beta_7 SES_c + \beta_8 Workload_t)}{1 + exp(\beta_0 + \beta_1 Cooperation_t + \beta_2 Teach\text{-}stu_t + \beta_3 Participation_s + \beta_4 Value_t + \beta_5 Salary_t + \beta_6 Gender_t + \beta_7 SES_t + \beta_8 Workload_t)}$$

In the equations, the presence of teacher dissatisfaction, which is the binary indicator, was expressed as $Dissatisfaction_t$; teacher countries such as Turkey and Finland were expressed as T_t and F_t, respectively; $Cooperation_t$ represented collaborative actions employed by teachers; Teach-stud is student-teacher relations; participation of stakeholders in school decisions was expressed as $Participations$; $Value_t$ is the perceived value given to the teachers by the society; $Salary_t$ represented teacher salary satisfaction; $Gender_t$ is the teacher gender; perceived class SES composition was expressed by SES_c ; and teacher workload was represented by $Workload_t$.

Logistic regression is very sensitive to multicollinearity, which deals with the intercorrelations among the explanatory (predictor) variables and correlations between predicted variable and predictor variables. Pallant (2011) states that the independent variables should not be correlated to each other (tolerance value is determined to be less than .10) and there should be a robust correlation between independent variables and the dependent variable. The correlation matrix of the independent variables was checked, and none of the correlation coefficients exceeded the critical value of .10. In addition, before running the analyses, the distribution of the cases regarding the variables that were included in the analyses was carefully checked in case of the presence of outliers.

In the final step, a hypothetical model was constructed to investigate the relationships between extrinsic factors and the dimensions of teacher satisfaction, such as satisfaction with the profession, satisfaction with the work environment, and satisfaction with classroom control. The relationships among the dimensions of satisfaction were also revealed in the hypothetical model, which is presented in Figure 1.
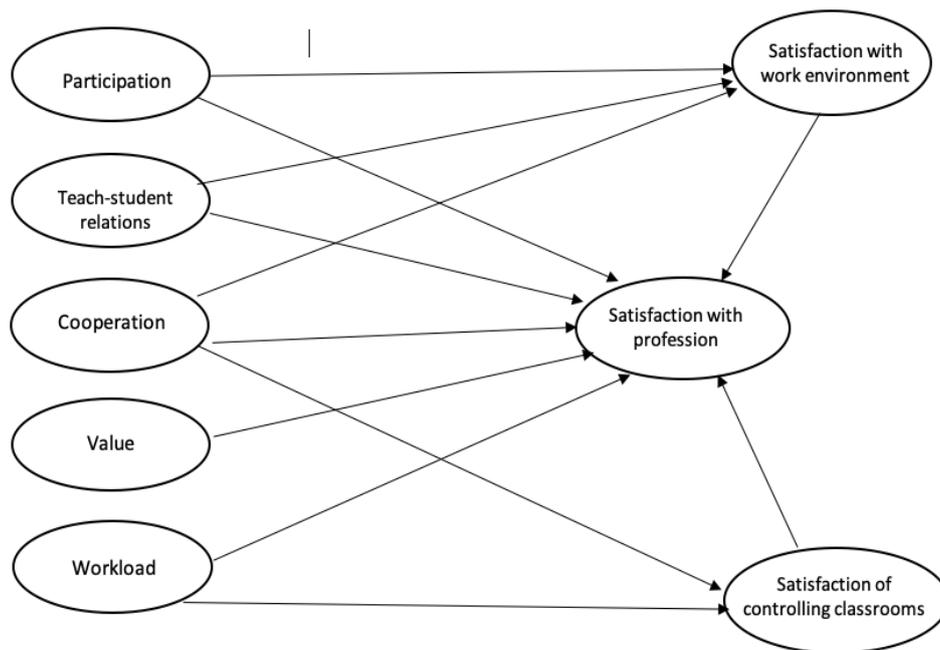
Figure 1. Hypothetical model

RESULTS

Firstly, multiple regression analyses were carried out by producing path diagrams though LISREL to compare the relationships between extrinsic factors such as teacher-student relations (Teach-stu), participation of stakeholders in school decisions (Participation), teachers' perceived value in society (Value), teacher cooperation (Cooperation), and teacher workload (Workload) with teacher satisfaction with the profession.
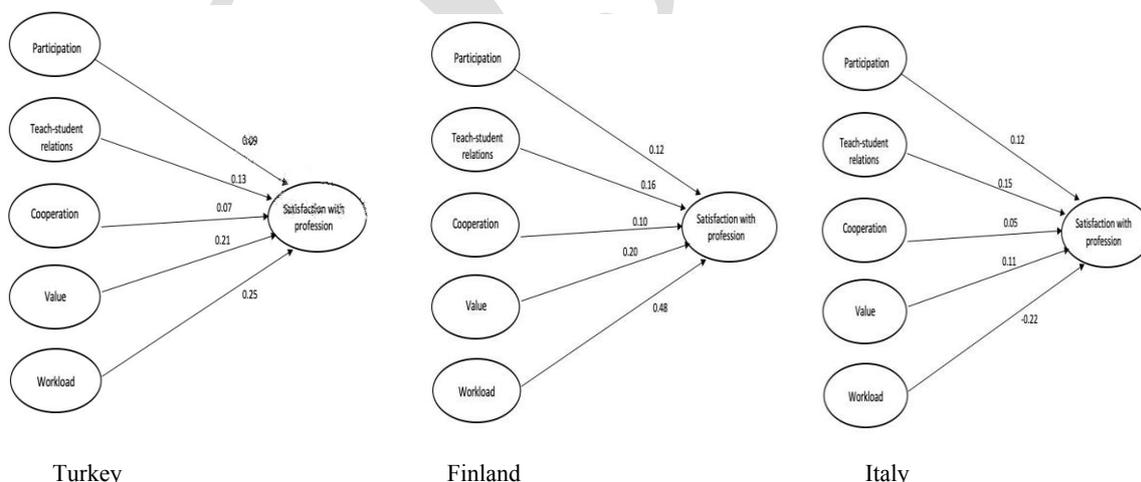

Turkey   Finland   Italy

Figure 2. Path diagrams of multiple regression analyses for Turkey, Finland, and Italy

The analysis showed that teachers' perception of value (Value), teacher-student relations (Teach-stu), participation of stakeholders in school decisions (Participation), and teacher cooperation (Cooperation) had positive effects oh teacher satisfaction with the profession for all three countries. However, the effects of teacher workload on satisfaction with the profession show some variation among countries. Whereas teacher workload had positive effects on satisfaction with the profession

for Turkey and Finland, the effect of teacher workload on satisfaction with the profession was found to be negative for Italy.

In the second step, the results of the analysis are presented using the related descriptive statistics. The sample includes 10 415 teachers for the aims of the study (Turkey=3952, Finland=2851, and Italy=3612). The percentage of teachers with respect to gender, SES compositions of their classrooms, and workload are presented in Table 2.

Table 2. Teacher gender, classroom SES composition, and workload (%)

	Turkey N = 3952	Finland N = 2851	Italy N = 3612	Total N = 10415
Gender				
Female	57.8	69.6	78.8	68
Male	42.2	30.4	22.2	32
Classroom SES Composition				
No low SES students	50.6	71.6	77.8	65.8
Having Low SES students	49.4	28.4	22.2	34.2
Workload of teachers				
Not overloaded	27.6	59.1	71.0	51.2
Overloaded	72.4	40.9	29.0	48.8

Table 3 presents teacher dissatisfaction in each country. In all three countries, approximately half of teachers reported dissatisfaction with the teaching profession. The percentages of teachers who were dissatisfied were 53.3%, 56.6%, and 53.2% in Turkey, Finland, and Italy, respectively.

Table 3. Teacher dissatisfaction with the teaching profession (%)

Dissatisfaction with the teaching profession	Turkey N = 3952	Finland N =2851	Italy N = 3612	Total N = 10415
Yes	53.3	56.6	53.2	51.6
No	46.7	43.4	46.8	48.4

The results of the first logistic regression analyses indicated that teacher dissatisfaction displays variations across the countries after controlling for teacher cooperation, teacher-student relations, and participation of stakeholders in school decisions, teachers' perceptions of value in society, teacher salary satisfaction, gender, perceptions of classroom socioeconomic composition, teacher workload (First logistic regression controlling for a group of variables).

Table 4. The odds ratios of dissatisfaction with the profession with regard to countries and teachers

	Estimated odds ratios (First logistic regression controlling for a group of variables)			Estimated odds ratios (Second logistic regression)		
	Model 1	Model 2	Model 3	Turkey	Finland	Italy
Turkey	.73* (.06)	.50* (.06)		-	-	-
Italy		.67* (.05)	1.35* (.06)	-	-	-
Finland	1.47* (.05)		1.99* (.05)	-	-	-
Cooperation	1.42* (.04)	1.42* (.04)	1.42* (.04)	.62* (.07)	.70* (.08)	.78* (.06)
Teach-student relations	2.13* (.04)	2.13* (.04)	2.13* (.04)	.46* (.08)	.52* (.08)	.42* (.07)
Participation	1.25* (.04)	1.25* (.04)	1.25* (.04)	.76* (.07)	.78* (.08)	.86 (.06)
Value	1.32* (.04)	1.32* (.04)	1.32* (.04)	.66* (.07)	.71* (.08)	.89 (.07)
Salary	.48* (.05)	.48* (.05)	.48* (.05)	2.60* (.08)	1.87* (.08)	1.72* (.09)

Gender	1.34*	1.34*	1.34*	.66*	.75*	.86
	(.05)	(.05)	(.05)	(.07)	(.09)	(.08)
SES	.86*	.86*	.86*	1.30*	1.06	1.02
	(.05)	(.05)	(.05)	(.07)	(.09)	(.08)
Workload	1.15*	1.15*	1.15*	.84*	.77*	.98
	(.04)	(.04)	(.04)	(.08)	(.08)	(.08)
Intercept	-	-	-	1.22*	2.71*	1.45*
				(.10)	(.13)	(.12)

*p<.05. Standard errors shown in parenthesis.

The first adjusted ratio (model 1) that can be used for comparing Turkey to Italy regarding teacher dissatisfaction with the profession was .73 (95% CI from .66 to .82). This value indicates that the probability of a teacher being dissatisfied with the profession is 27% lower in Turkey than in Italy when the selected variables are controlled for. In addition, model 1 revealed that the probability of being dissatisfied with the profession is 47% greater for a teacher in Finland than other countries after controlling for the determined variables (95% CI from 1.32 to 1.64). The odds ratios of model 1 were significant at .05. In model 2, the odds ratios obtained can also be used to compare teachers in Turkey with those in Finland and teachers in Italy with those in Finland. The adjusted odd ratio for teachers who are dissatisfied with the profession comparing Turkey with Finland was computed as .50 (95% CI from .44 to .55). The ratio shows that a teacher in Finland has a two times greater probability of being dissatisfied with the profession compared to an average teacher in Turkey with the same values for controlled variables. In addition, model 2 shows that an average teacher in Italy has 33% lower odds of being dissatisfied with the profession than a corresponding teacher in Finland when controlling for the determined variables. The odds ratios in model 2 were significant at .05. Model 3 was used to compare teachers in Italy with those in Turkey and teachers in Finland with those in Turkey regarding teacher dissatisfaction with the profession. The adjusted estimated odds were computed to be 1.35 (95% CI from 1.21 to 1.50), which means that in Italy a teacher has 35% greater odds of being dissatisfied than teachers in Turkey who have the same values for the controlled variables. In addition, the estimated odds ratio was computed as 1.99 for teacher dissatisfaction when comparing Finland to Turkey (95% CI from 1.78 to 2.22). This result shows that a teacher in Finland has a nearly two times higher probability of being dissatisfied than a Turkish teacher when controlling for the group of variables. This ratio (1.99) also confirms the results obtained from model 2.

The variables in the model and the corresponding estimated odds ratios are presented with the results of the second logistic regression in Table 4 (second logistic regression). In Turkey, the odds ratio of .62 means that teachers who are in an environment where cooperation takes place have a 38% lower probability of being dissatisfied with the teaching profession (95% CI from .54 to .72, significant at .5%). The odds ratios for this variable are .70 and .78 for Finland and Italy, respectively. In addition, in Italy, the odds ratio (OR=.42) indicates that when the teacher and student relations are good in a school, teachers have a 58% lower probability of being dissatisfied with the profession than a teacher who is working in a school where teacher-student relations are poor (95% CI from .37 to .49, significant at .5%). For this variable, the odds ratios are very close in the three countries (OR=.46 for Turkey, OR=.52 for Finland). Moreover, in Turkey, teachers who perceived that they are valued by their society have a 34% (OR=.66) lower probability of being dissatisfied with their profession (95% CI from .58 to .76, significant at .5%). Similarly, the probability is nearly the same for teachers in Finland (29%). However, the odds ratio was found to be highest and not significant for Italy (OR=.86). The highest variation among the odds ratios was retained using the variable of salary satisfaction. In Turkey, teachers who reported that they were not satisfied with the salary they receive for the teaching profession have more than 2.5 times (OR=2.60) the probability of being dissatisfied with the profession compared to the teachers who told that they satisfied with their salary (95% CI from 2.22 to 3.04, significant at .5%). The odds ratios found for this variable were 1.87 and 1.72 for Finland and Italy, respectively. This means that teachers who were not satisfied with their salaries have a 87% and 72% higher probability of being dissatisfied with the profession in Finland and Italy, respectively (for Finland: 95% CI from 1.60 to 2.20; for Italy: 95% CI from 1.44 to 2.04, significant at

.5%). Moreover, female teachers in Turkey and Finland have a 34% and 25% (OR=.66) lower probability of being dissatisfied with the profession than male teachers, respectively.

In the final step, a structural model was built for the three countries separately to compare the test of the hypothetical model in which teacher-student relations, participation of stakeholders in school decisions, teacher cooperation, teachers' perception of value given in society, and teacher workload have effects on teacher satisfaction with the profession; participation of stakeholders in school decisions, teacher-student relations, and teacher cooperation have effects on teacher satisfaction with the work environment; and teacher cooperation and workload have effects on teacher satisfaction with classroom control: the hypothetical model also proposed relations among the dimensions of teacher satisfaction, which implied the effects of teacher satisfaction with the work environment and satisfaction with classroom control.

GFI (Goodness-of-fit Index), AGFI (adjusted goodness-of-fit index), SRMR (standardized root mean squared residual) and RMSEA (root mean square error of approximation) were used to check the goodness of fit the SEM models for each country. Whereas values greater than .90 indicate good fit for GFI and AGFI, values that are smaller than .10 were acceptable fit indexes for RMSEA and SRMR (Steiger, 1990). For Turkey's model, he fit indexes were found to be .99, .95, .06, and .03 for GFI, AGFI, RMSEA, and SRMR, respectively. In addition, for Finland's model, the fit indexes were calculated as .99, .94, .10, and .03 for GFI, AGFI, RMSEA, and SRMR, respectively. Finally, for Italy's model, the fit indexes were found to be 1.00, .97, .08, and .03 for GFI, AGFI, RMSEA, and SRMR, respectively.
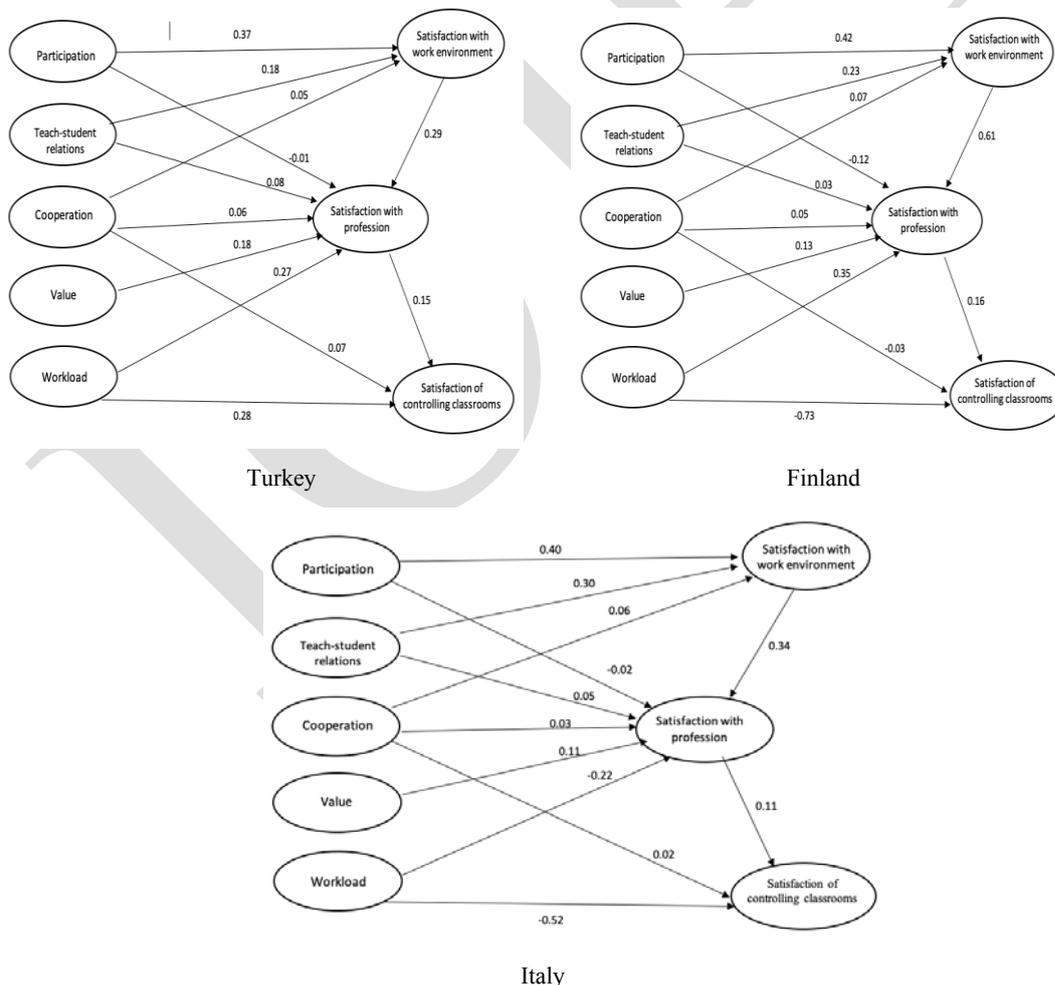

Figure 3. Structural models for Turkey, Finland, and Italy

The analyses revealed that teachers' satisfaction for the work environment had a positive effect on teachers' satisfaction with the profession and teachers' job satisfaction with the profession had a positive effect on teachers' satisfaction of controlling classrooms for Turkey, Finland, and Italy. However, the effect of teacher satisfaction with the environment on teacher satisfaction with the profession is greater in Finland than both Turkey and Italy. In addition, whereas there is a positive correlation between teachers' workload and teachers' satisfaction with the profession for Turkey and Finland, the correlation was found to be negative between teacher workload and teacher satisfaction with the profession in Italy. Moreover, while there was a high negative correlation between teacher workload and teacher satisfaction with classroom control in Finland and Italy, a positive correlation was found between these dimensions in Turkey.

DISCUSSION and CONCLUSIONS

The positive impact of teachers' job satisfaction on schools and students has been expressed by especially exposing the positive association of teachers' job satisfaction with the teacher performance (Renzulli, Macpherson Parrott & Beattie, 2011). In addition, the importance of job satisfaction has not only been investigated for its positive impact on teachers' performance but also explored for having the potential to reveal the robust implications on teachers' attitudes, retention, burnout, confidence, and students' academic achievement (Klassen et al., 2009; Renzulli, Macpherson Parrott & Beattie, 2011). Therefore, it is essential that knowing the explicit and implicit elements related with social and school factors and teachers' characteristics could lead us to reach better school and educational system. Without teachers' involvement, commitment, and motivation to the teaching profession, it is impossible to constitute robust and stable school and education systems.

Using the TALIS 2018 database, we carried out this study to investigate intrinsic and extrinsic factors related to school, society, teacher attributes, and students' characteristics across the three countries. Teacher salary satisfaction (teacher factor), working in a school in which teacher cooperation actions is encouraged (school factor), being in a school where teacher-student relations are good (school factor), being in a school in which decisions were taken with the participation of all stakeholders (school factor), societal value of teachers (social factor), and teacher workload (school factor) were defined as the extrinsic elements, and teacher gender (teacher factor) and the composition of classrooms regarding the socio-economic level of students (student factor) were defined as the intrinsic elements related to teacher satisfaction with the profession. As indicated in the literature, the dominant factors that have the potential to contribute the teachers' job satisfaction/dissatisfaction were also included in TALIS 2018 and carefully selected for this study with the alignment of intrinsic and extrinsic factors. In the first phase of the study, the effects of extrinsic factors on teachers' satisfaction with the profession were revealed for three countries (Turkey, Finland, and Italy) using multiple regression analyses to reach a decision to include the variables in the analyses that were conducted in the second and last phase of the study. In the second phase of the study, instead of making interpretations about the degree of teacher job satisfaction or dissatisfaction, we preferred to make inferences based on the presence or absence of teacher job dissatisfaction. That is why the multiple logistic regression was used for the analysis process. Finally, a SEM was built to review the effects of intrinsic and extrinsic factors on teacher job satisfaction.

First, we focused on relationships between extrinsic variables and teacher satisfaction with the profession to decide whether it is worthwhile to include these variables in the logistic regressions and the SEM. Whereas the relationships show some variations among the three countries, the relationships were found to be significant. For example, whereas the correlations between teachers' perceived value in their societies and teacher satisfaction with the profession are nearly the same in Turkey and Finland, the correlation is low between variables in Italy when compared to Turkey and Finland.

Secondly, we have focused on whether there was a variation between countries when the teachers have the same values on controlled variables, which are defined in the literature as dominant elements under extrinsic and intrinsic factors. The results revealed that teachers in Finland have the highest

likelihood of being dissatisfied among the three countries. In Italy, teachers have a greater probability of being dissatisfied with the teaching profession than teachers in Turkey but a lower probability than teachers in Finland.

Although there are not any studies focusing specifically on comparing variations among European countries by controlling for related variables with job satisfaction, Rasku and Kinnunen (2003) investigated differences in well-being outcomes which involved teacher job satisfaction among ten European countries, including Finland and Italy. They revealed somewhat contrary results with our study, namely that Finish teachers reported higher scores on job satisfaction than European teachers. In addition, based on the mean scores of the countries on the index variable of 'teaching satisfaction with the profession' revealed in TALIS 2018, the average score in Finland and Italy are nearly the same, whereas the average score in Turkey is lower than these two countries, which indicates that teachers in Turkey had the lowest job satisfaction level when compared with Finland and Italy. However, in our study, after controlling for the related variables, teachers in Finland had the highest probability of being dissatisfied, while teachers in Turkey have the lowest. These results indicate that the variables which are determined to be covariates have the potential to be a driving force for variations on teacher job satisfaction among the three countries. In addition, Madero (2019) carried out a study to investigate the variations among Mexico, Chile, and Brazil in secondary teacher job dissatisfaction based on the TALIS 2013. In our study, although the teachers' level and the selected explanatory variables show some differences, Madero (2019) also found variations among Brazil, Chile, and Mexico by controlling for a different set of variables.

As it is found to be connected to many outcomes, positive school climate has also been connected to teacher job satisfaction and teacher retention (Collie et al., 2012; Ingersoll, 2001). Some of the dimensions constituting school climate were designated as cooperation among teachers, teacher-student relations, and decision making in schools (Johnson et al., 2007; Malinen & Savolainen, 2016; OECD, 2019a). In this study, the variables were selected to capture the effects of the dimensions which compose the school climate on teacher dissatisfaction with the teaching profession. One of the prime sources of teacher job satisfaction was defined as teacher cooperation (Nyamubi, 2017; Susmitha & Reddy, 2017). Effective cooperation among colleagues was recommended to improve job satisfaction (Khazaei et al., 2016). In addition, it is claimed that teacher-student relations have a robust association with teacher job dissatisfaction (Veldman, van Tartwijk, Brekelmans, & Wubbels, 2013). Moreover, although some of the contrary results were reported (Taylor & Tashakkori, 2010), participation of stakeholders in the decision-making process were found to positively affect job satisfaction (Kim & Yang, 2016). So, in our study, the importance of teacher cooperation, positive teacher-student relations, and participation of stakeholders in the decision-making process were proven to prevent teacher dissatisfaction with the profession in all three countries. For example, in Turkey, a teacher's odds of being dissatisfied decreases by 38% when the teacher cooperation in the schools is encouraged. In addition, in Italy, when teacher-student relations are good in a school, a teacher working in this school has 58% lower odds of being dissatisfied with the profession of teaching.

Similarly to the other professions, improvement of recruitment and retention of qualified persons for the teaching profession depends on the value given to the teaching profession in the society, which is also associated with teacher satisfaction the profession. In addition, in the literature, one of the main factors affecting job satisfaction was defined as social respect (Khazaei et al., 2016; Sahito & Vaisanen, 2020). In this study, although in the case of Italy no relation between teacher perception of value and job satisfaction was found, in Turkey and Finland, the presence of teachers who believe that they are valued by the society decreases the odds of being dissatisfied with the teaching profession, specifically at 34% and 29%, respectively. Therefore, increasing the status and respect of teachers seems to be the key factor to improve teacher job satisfaction.

Although teacher wages and satisfaction with the salary they receive is known as one of the extrinsic factors affecting teacher job satisfaction (Khazaei et al., 2016; Sultana et all., 2017), there has been no

study that includes variables related to teacher wages or their satisfaction with the salary they receive, since previous cycles of the TALIS did not include a related item. In a similar vein with the related literature, in the case of all three countries in the study, teacher salary satisfaction seemed to be a more important extrinsic factor than the other factors included in this study. Especially in Turkey, the likelihood teachers of being dissatisfied with the teaching profession is the highest among the three countries when teachers are dissatisfied with the salary they receive. As the PISA 2018 results are examined, there is an agreement with this study in this matter. It was revealed that among the three countries, the starting salary of teachers at the lower secondary level is highest in Finland and lowest in Turkey. In addition, the salary of teachers at the top of the scale is very close in Finland and Italy; however, the salary of teachers at the top of the scale in Turkey is nearly 25% lower when compared to these two countries (OECD, 2019b). Therefore, we can conclude that one of the dominant controlled variables that leads teachers in Turkey be the least dissatisfied teachers among the three countries is undoubtedly the percentage of teachers who are dissatisfied with their salary. Moreover, in this study, whereas student socioeconomic status was found not to be associated with teacher dissatisfaction with the profession in the case of Finland and Italy, the classrooms where the proportion of low socioeconomic status students is high have higher odds of teachers being dissatisfied with the profession in Turkey. The PISA results expressed the impact of student socioeconomic status (SES) on student performance in Turkey as one of the highest among the countries (OECD, 2016a). In addition, it was found that (Ramirez & Viteri, 2016) students from more socio-economically advantaged contexts are taught by teachers who are satisfied with their salaries.

One of the surprising results of this study is about teacher workload. In the literature, although many studies have asserted that teacher work overload is one of the extrinsic factors related with teacher dissatisfaction (Geiger & Pivovarova, 2018; Sahito & Vaisanen, 2020), some studies did not find any association between teachers who experience a high workload and teacher dissatisfaction with the profession (Madero,2019). In this study, the condition of over workload for teachers is associated with teacher dissatisfaction in Turkey and Finland but not associated in Italy. Surprisingly, in both Turkey and Finland, the condition of teacher overload decreases the odds of teachers being dissatisfied with teaching profession. However, for Turkey, statistics indicate close to a non-significant association. For Finland, the teachers who are in a condition of work overload may represent their dedication to the teaching profession, which in turn is a driving force of job satisfaction.

The only personal characteristic of teachers included in this study is teacher gender. Although some of studies have indicated higher job satisfaction levels among female teachers by referencing teacher wages, working conditions, and organizational climate (Şahin & Sak, 2016), some studies have found no differences between female and male teachers regarding job satisfaction (Yayla et al., 2018). In this study, although no association was found in the in the case of Italy, female teachers tend to have lower odds of being in a situation of dissatisfaction with the profession in Turkey and Finland. The reason for this result can be explained by the desirable nature of the teaching profession among women in most European countries (Tašner et al., 2017).

Another important result in terms of the study is that relations with different dimensions are also important in satisfaction. The dimensions of teacher satisfaction implied the effects of teacher satisfaction with the work environment and teacher satisfaction with classroom control. Numerous studies on the relationship between work environment or climate and job satisfaction reveal the effects of these variables on teacher job satisfaction (Baughman, 1996). Teacher satisfaction with the work environment had a positive effect on teacher satisfaction with the profession, and teacher satisfaction with the profession had a positive effect on teacher satisfaction with classroom control for Turkey, Finland, and Italy. Many studies conducted in different countries on work environment and job satisfaction reveal similar effects on teacher job satisfaction (Dorozynska, 2016; Mehmeti & Telaku, 2020). However, one important point here is that satisfaction with the working environment in Finland is approximately two-fold that of Turkey and Italy. The most interesting point is that when the variances between schools of countries are evaluated, this rate is the lowest in Finland. This means

that although school environments in Finland are the closest to each other, they have a greater impact on teachers' satisfaction than in Turkey and Italy. However, in Turkey and Italy, the variance between schools is higher, but the level of teacher satisfaction with the work environment is effected by halfway Finland. This situation implies that teachers may be dissatisfied with other factors that have priority in the work environment.

It could be suggested that the dimensions which constitute the school climate, such as cooperation among teachers, teacher-student relations, and inclusion of stakeholders in decision making should be encouraged by the administration boards of schools and educational systems. In addition, satisfaction with the salary retains its importance on teacher satisfaction with the profession, which in turn affects the value given by society to the teaching profession, should be considered by policy makers. It should be never forgotten that the socioeconomic levels of students remain associated with teacher job satisfaction as well as with student performances. The findings of this study, which is based on a large-scale assessment conducted by OECD, have the potential to drive research about the association between teacher job satisfaction and attrition and retention in the teaching profession. Longitudinal studies should be employed at the regional level to obtain useful findings about teacher job satisfaction which enables policymakers to create a climate where teacher job satisfaction can be improved.

Limitations

There are some limitations of the present study which should be acknowledged. First, the TALIS data was obtained using self-reporting scales. The respondents/teachers may be inclined to respond favorably to authority by anticipating the correct answers that should be given. Second, the continuous variable is converted to a categorical variable, it causes information loss. However, SEM has been applied to minimize this limitation.

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