Teachers' Burnout: Indicators of Burnout and Investigation of the Indicators in terms of Different Variables

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Abstract

Burnout is characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment. Since teaching profession is excessively demanding, requires effective communication, and leads one to suffer from emotional burnout, it is acknowledged as one of the professions with a great likelihood of burnout.

The purpose of the present study was to analyze teacher burnout in reference to certain variables. Relational model was used in this study. A total of 163 teachers from various cities participated.

Two different data collection tools were used in this study, namely "Personal Information Form" and "Maslach Burnout Inventory (MBI)". The first one was used to identify the demographics of the participants. The second data collection instrument, MBI, was used to reveal the degree of burnout experienced by participants. The inventory divided into three sub-dimensions: namely emotional exhaustion, personal accomplishment, and depersonalization.

Results indicated that different variables contributed to teachers' burnout scores in terms of being on high and low groups. For example, while "education level" variable contributed to emotional exhaustion subscale, the variable of socio-economic status of the region where the school is located contributed to depersonalization subscale.

Furthermore, there were higher mean ranks for those teachers who worked as an Information and Communication Technologies (ICT) teacher. While expressing their views, the ICT teachers focused on their unhappiness resulting from what they had been experiencing in their discipline.

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It is evident that the use of technology plays a key role in effective learning at school. ICT teachers can make contributions in this respect. They can guide both other teachers and students for using technology in an effective way. Thus it is worth to bring attention to the fact that preventing burnout of ICT teachers is a precondition for improving the quality of education in schools.

Introduction

Burnout, as a concept, was used by scientists in the 1960s to refer to chronic drug addiction. However, the term became more popular when a psychologist called Herbert Freudenberger (1980) used it to describe his condition resulting from overworking.

Researchers have defined the term in a number of different ways since 1970s. For instance, Pines and Aronson (1988) identified a series of symptoms to define burnout, namely "physical exhaustion, desperateness and hopelessness, frustration, low self-concept, and negative attitudes to one's job, colleagues and life in general." A high level of burnout is a serious obstacle to one's accommodation to his/her environment. Similarly, Maslach (1976) reported that employees might lose their interest in and feel hostile to their job and colleagues. Mattingly (1977) considered burnout as a series of symptoms, behaviors and attitudes specific to each individual. According to Freudenberger and Richelson (1980), burnout is exhaustion or frustration over a particular objective, lifestyle, or relationship. What all these definitions have in common is that burnout makes one weaker and leads him/her to have difficulty in accommodation to life. In this context, it may be argued that desperateness is an appropriate term to define burnout.

Research has also suggested that the level of burnout is not the same for every person; instead, it may vary from "slight burnout" to "serious burnout". In the profession of teaching, burnout is viewed as an accelerator of a number of severe problems, including "frequent absenteeism, low commitment to work, ailments, physical illness, inappropriate behaviors, and low teaching performance" (Huberman & Vanderberghe, 1999; Rudow, 1999). Similarly, Cordes and Dougherty asserted that burnout could lead to physical and mental problems, disruptions in social and family life, negative behaviors, smoking, and risks of drug and alcohol use.
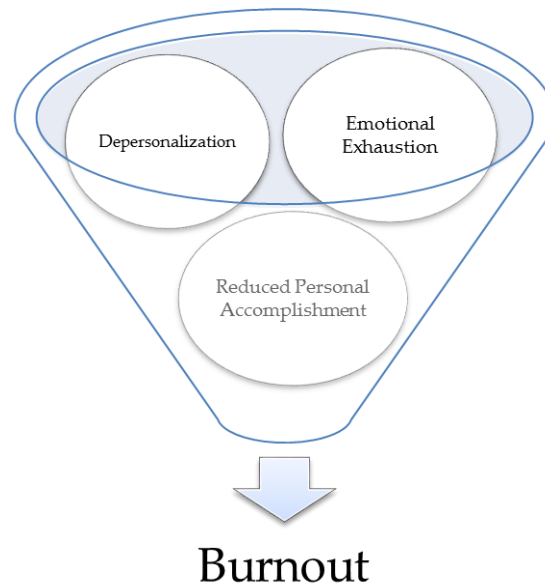
Figure 1: Dimensions of Burnout as Described by Maslach

Having conducted widely accepted studies on burnout, Maslach identified three dimensions of burnout, namely emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion stands for emotional burnout, depersonalization for interpersonal burnout and unresponsiveness, and reduced personal accomplishment for hopelessness at assessing one's own accomplishment (Brouwers & Tomic, 2000; Budak & Surgevil, 2005; Durr, 2008; Ergin, 1992; Gaines, 2011; Maslach & Jackson, 1981).

Teacher Burnout

Burnout is characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach and Jackson, 1981). Teaching is one of the professions in which stakeholders are subject to high levels of burnout. The reason for this is that teaching is excessively demanding, requires effective communication, and leads one to suffer from emotional burnout. Therefore, teaching is acknowledged as one of the professions with a great likelihood of burnout (Baltas & Baltas, 1993). There are many structural and organizational factors in teacher burnout, including but not limited to the public's diminished confidence in education and the gap between teachers' pre-service expectations and their actual classroom experiences (Dworkin, 2001).

Teachers are under an increasing pressure to become more knowledgeable on and effective in their profession. Apart from academic expertise, they have other responsibilities as well. They are obliged to work with students who suffer from many emotional and behavioral problems. There are a lot of teachers who have difficulty in satisfying individual needs of their students owing to the lack of resources. According to Dorman (2003), burnout has a severely adverse impact on teachers' ability to sustain their job. A teacher with burnout begins developing negative attitudes and having communication problems with their students and other teachers, which, in turn, causes health problems and damage to their private life.

There are findings in the literature suggesting that teacher burnout is a serious problem that is becoming more and more widespread in educational institutions. Several studies conducted abroad have revealed the relationship between burnout and work stress, job satisfaction, self-efficacy beliefs, and effort-reward imbalance (Dorman, 2003; Farber, 2000; Mykletun & Mykletun, 1999). The syndrome has also been heavily studied in Turkey, especially since the mid-1970s (Babaoglan, 2007; Cemaloglu & Sahin, 2007; Ercen, 2009; Gunduz, 2005; Otacioglu, 2008; Kirilmaz, Celen & Sarp, 2002; Peker, 2002; Tugrul & Celik, 2000; Tumkaya, 1996). Teachers with burnout are likely to have problems

with their students, colleagues, administrators, and parents of their students- all the stakeholders in the educational process - and they are day by day alienated from their profession.

Teachers are expected to cope on their own with many problems they are faced with in their profession. However, teachers need to feel competent and successful; in other words, they need motivation. Only in this way they can make their students feel the same way. If teachers feel unsuccessful and dissatisfied, this does not only result in problems between those teachers and their students; even the whole school is at risk. Teacher burnout is infectious. If a school has teachers with burnout, the whole school will be feeling in a similar way soon. Therefore, it is a problem that needs to be tackled as early as possible.

Studies have been conducted on burnout experienced by a wide range of educationalists from faculty members to preschool teachers. In addition, the problem has been discussed in reference to a number of variables, including demographics, occupational variables, and psychological variables. Studies in the literature have primarily focused on the reasons for and solutions to teacher burnout. Some of them have discussed the matter in reference to such variables as age, satisfaction with the environment, views of professional prospects, gender, educational background, and experience in teaching.

Teacher stress and burnout have significant influences, either directly or indirectly, on the whole society in general or families, administrators, students, and students' parents in particular (Friedman & Farber, 1992). Societies have been undergoing considerably rapid changes. Accordingly, teachers' roles and responsibilities, as well as expectations from teachers, have been changing. These expectations affect teachers' view of life and their teaching performance. In this context, it is safe to argue that burnout should be further studied and attempts should be made to identify the correlation between the syndrome and various variables. Identification of teachers' emotional exhaustion, as well as their depersonalization towards students and reduced personal accomplishment, will hopefully make contributions to revealing the overall status of teacher burnout. This will enable the syndrome, which cannot be overcome despite being overly studied, to be analyzed in the light of new perspectives in changing social structures and different solutions to be offered. In this context, the purpose of the present study is to reveal the overall status of teacher burnout and to identify the correlation between burnout and certain demographics.

Teacher burnout is influenced by demographic factors (i.e. gender, age, educational background, experience, and marital status), institutional factors (i.e. administrative support, workload, classroom management, and work pressure), and environmental factors (i.e. the school environment and the classroom climate) (Basol & Altay, 2009; Budak & Surgevil, 2005; Ercen, 2009; Pines & Aranson, 1988). The purpose of the present study is to analyze teacher burnout in reference to certain variables. The following research questions were posed accordingly:

1. What are teachers' burnout levels in reference to their demographics?
2. Do teachers' burnout levels differ significantly depending on gender, age, experience in teaching, educational background, school type, socio-economic status of school location, and discipline?
3. Do teachers' demographics enable them to be accurately classified as belonging to groups of low or high burnout?

Method

The study was based on a correlative survey model. These models treat a phenomenon as it is, without attempting to change or affect it, and they try to identify the degree and direction of differentiation between given variables (Buyukozturk, 2009; Fraenkel & Wallen, 2006).

Study Group and its Characteristics

The study was conducted with a total of 163 teachers in different disciplines from certain provinces of Turkey (e.g. Ankara, Aksaray, Trabzon, Istanbul, Kocaeli, Corum, Kirsehir, Izmir,

Karabuk, Balikesir, Mus, Sirnak, and Eskisehir). Table 1 presents the distribution of the participants by their demographics, namely gender, age, experience in teaching, educational background, school type, socio-economic status of school location, and discipline.

While 59.5% of the participants were female, the remaining 40.5% were male. Most of them were 20 to 30 years old (55.8%) and had been serving as a teacher for one to five years (42.9%). The great majority of them had a bachelor's degree (74.2%). Those who worked for public primary schools mostly defined the socio-economic status of the school location as *intermediate*. The discipline with the highest number of participants was Information and Communication Technologies (ICT; 47.9%) (47.9%) (Table 1).

Data Collection Instruments

The data for the study were collected using two instruments. The first one was the Personal Information Form, whereas the other was the Maslach Burnout Inventory. The instruments were administered to the participants online between April and June, 2012.

The Personal Information Form was designed by the researchers themselves to identify the demographics of the participants, namely gender, age, experience in teaching, educational background, school type, socio-economic status of school location, and discipline. The form contained nine items.

Table 1. The Participants' Burnout Levels by Demographics

Demographics	Options	n	%
Gender	Female	97	59.5
	Male	66	40.5
Age	20 to 30 years old	91	55.8
	31 to 40 years old	43	26.4
	41 to 50 years old	22	13.5
	51 years old and older	7	4.3
Experience in Teaching	1-5 years	70	42.9
	6-10 years	41	25.2
	11-15 years	17	10.4
	16-20 years	16	9.8
	21-25 years	10	6.1
	26 years and more	9	5.5
Educational Background	Associate Degree	4	2.5
	Bachelor's Degree	121	74.2
	Master's Degree	34	20.9
	Doctorate	4	2.5
School Type	Primary school (public)	107	65.6
	Primary school (private)	6	3.7
	Secondary school (public)	47	28.8
	Secondary school (private)	3	1.8
Socio-Economic Status of School Location	Low	56	34.4
	Intermediate	83	50.9
	High	24	14.7
Discipline	ICT Teachers	78	47.9
	Classroom Teachers	26	15.9
	Branch Teachers	59	36.2
	Total	163	100.0

The Maslach Burnout Inventory was developed by Maslach and Jackson (1981) and adapted to Turkish by Ergin (1992) in order to reveal the degree of burnout experienced by participants. The inventory had 22 items divided into three sub-dimensions: nine items for emotional exhaustion (items 1, 2, 3, 6, 8, 13, 14, 16, and 20), eight items for personal accomplishment (items 4, 7, 9, 12, 17, 18, 19, and 21), and another five items for depersonalization (items 5, 10, 11, 15, and 22). The inventory was graded on a five-point Likert-type scale, in which "zero stood for never…… and four represented always" for emotional exhaustion and depersonalization. For personal accomplishment, however, "four represented never…. and zero stood for always", for the sub-dimension contained positive statements unlike the other two sub-dimensions.

In the study, the internal consistency coefficients were calculated for the validity and reliability of the Maslach Burnout Inventory. Cronbach's alpha was 0.887 for the overall inventory whereas the coefficients were .882, .805 and .823 for emotional exhaustion, personal accomplishment, and depersonalization respectively.

Data Analysis

The data were analyzed through descriptive statistics (percentage, mean, median, and standard deviation) and logistic regression. The level of significance was 0.05 for the analyses, which were conducted using SPSS 18.0.

Those dependent variables that were not distributed normally were classified (as high or low) on the basis of a cutoff point, which was specified in accordance with median values not affected by extreme values. For the first sub-dimension of the Maslach Burnout Inventory, Emotional Exhaustion (EE), a value of 11 and higher was classified as 1, while those values lower than 11 were classified as 0. For the next sub-dimension, Depersonalization (D), a value of two and higher was classified as 1, whereas a value lower than two was classified as 0. The classification for the last sub-dimension, Personal Accomplishment (PA), was in the same way as the first sub-dimension.

In order to identify the factors in teacher burnout, a logistic regression analysis was conducted for the dependent variables that were not distributed normally (Cokluk, Sekercioglu & Buyukozturk, 2010). In the study, the dependent variables were considered as two-dimensional categorical variables.

The following are the independent variables of the study that were thought to have an influence on teacher burnout (x_{ki}):

x_1: Gender,

x_2: Age,

x_3: Experience in teaching,

x_4: Educational background,

x_5: School type,

x_6: Socio-economic status of school location, and

x_7: Discipline

On the other hand, y_i for the three dependent variables (emotional exhaustion-EE, depersonalization-D, and personal accomplishment (PA) was coded as follows:

"0-Low", and

"1-High".

Findings and Discussion

The findings were presented in the same order as the questions posed for the study in the form of answers to them.

1. Teachers' Burnout Levels in Reference to their Demographics

The first research question posed for the study was: "What are teachers' burnout levels in reference to their demographics?" Table 2 presents the distribution of the data obtained from frequencies, percentages, arithmetic means, and standard deviation values.

The female teachers received lower scores in all the three sub-dimensions of the Maslach Burnout Inventory when compared to the male teachers (Table 2). A similar finding was reported by Basol and Altay (2009), who discovered that male administrators and teachers experienced greater levels of burnout in the sub-dimensions of burnout. Likewise, Otacioglu (2008) reported that male music teachers received significantly higher scores of burnout when compared to female music teachers.

Table 2. The Participants' Burnout Levels by Demographics

Demographics	Options	Inventories (X±S)		
		Maslach-EE	Maslach-D	Maslach-PA
Gender	Female	11.9±7.1	2.95±3.9	10.72±5.2
	Male	12.85±7.1	3.47±3.4	12.47±4.9
Age	20 to 30 years old	13.0±7.5	3.8±3.8	12.4±5.1
	31 to 40 years old	12.3±6.9	3.3±3.7	10.5±4.6
	41 to 50 years old	10.5±5.1	0.6±0.9	8.5±4.2
	51 years old and older	7.0±4.9	3.0±3.7	12.9±8.4
Experience in Teaching	1-5 years	12.9±7.9	3.8±4.1	12.0±5.1
	6-10 years	14.6±7.0	4.1±3.7	13.2±4.9
	11-15 years	9.9±5.1	2.0±2.1	9.1±3.6
	16-20 years	10.3±5.2	1.1±1.9	9.6±3.6
	21-25 years	8.4±2.8	1.0±1.9	7.4±4.9
	26 years and more	9.3±6.7	2.1±3.8	11.0±7.6
Educational Background	Associate Degree	20.0±18.8	10.3±11.3	2.0±2.8
	Bachelor's Degree	11.7±6.5	3.0±3.3	11.9±5.1
	Master's Degree	13.4±6.8	2.9±3.2	10.8±4.8
	Doctorate	13.8±6.1	2.3±2.9	11.0±6.3
School Type	Primary school (public)	13.1±7.5	3.6±3.9	11.8±5.2
	Primary school (private)	8.0±6.0	2.8±3.3	7.2±4.0
	Secondary school (public)	10.9±5.9	2.5±2.9	11.3±5.1
	Secondary school (private)	11.0±4.6	1.3±2.3	9.0±5.3
Socio-Economic Status of School Location	Low	13.3±7.1	3.9±4.3	12.2±5.0
	Intermediate	12.3±7.3	2.9±3.5	11.3±5.3
	High	9.8±5.4	1.9±2.3	9.8±4.8
Discipline	ICT Teachers	13.89±6.94	3.74±3.34	12.96±4.74
	Classroom Teachers	12.81±9.42	4.11±5.81	10.24±6.42
	Branch Teachers	9.91±5.37	1.97±2.53	9.93±4.61
	Total	12.3±7.1	3.2±3.7	11.4±5.2

X±S: Mean ± Standard Deviation

EE: Emotional Exhaustion, D: Depersonalization, and PA: Personal Accomplishment.

Those participants who were aged 20 to 30 years old received higher scores than the other age groups in emotional exhaustion and depersonalization whereas those who were aged 51 years old or older received a higher score than the other age groups in personal accomplishment (Table 2). A similar finding was reported by Otacioglu (2008), who discovered that the highest level of burnout was experienced by those teachers who were 26 to 35 years old. In this respect, it can be argued that age and length of service (and therefore professional experience) have an influence on burnout (Budak & Surgevil, 2005; Ormen, 1993; Otacioglu, 2008). In the present study, those participants who had been serving as a teacher for six to ten years received higher scores in all the three sub-dimensions of the inventory when compared to the other groups, whereas those who had been serving for 21 to 25 years received the lowest scores of all in all the three sub-dimensions. In other words, the teachers with more professional experience suffered from a lower amount of burnout. In addition, those teachers with an associate degree received higher scores than the others in emotional exhaustion and depersonalization. Even so, they received the lowest score in personal accomplishment. Similarly, Cemaloglu and Sahin (2007) concluded from their study on teachers that a lower educational status meant higher scores of burnout. These findings suggest that teacher burnout might be lessened if teachers are provided with opportunities to improve themselves academically.

As for the school type, those teachers who worked for public primary schools received higher scores than the other groups in all the three sub-dimensions. Furthermore, those teachers who defined the socio-economic status of the school location as *low* received the highest scores of all in all the three sub-dimensions, whereas those who described the socio-economic status of the school location as *high* received the lowest scores in all the three sub-dimensions (Table 2). These two findings suggest that teacher burnout is influenced by the facilities the schools might have.

2- Teachers' Burnout Levels Depending on Gender, Age, Experience in Teaching, Educational Background, School Type, Socio-Economic Status of School Location, and Discipline

The second question posed for the study was: "Do teachers' burnout levels differ significantly depending on gender, age, experience in teaching, educational background, school type, socio-economic status of school location, and discipline?" In order to find answers to this question Kruskal-Wallis test was conducted. Table 3 presents the results of the Kruskal-Wallis test.

Table 3. The Results of the Kruskal-Wallis Analysis on Identifying Teacher Burnout in Reference to Demographics

Demographics	Options	f	Mean Rank	df	X^2	p
Gender	Female	97	76.71	1	3.011	.083
	Male	66	89.77			
Age	20 to 30 years old	91	91.24	3	12.905	.005
	31 to 40 years old	43	77.80			
	41 to 50 years old	22	53.41			
	51 years old and older	7	65.43			
Experience in Teaching	1-5 years	70	89.06	5	24.858	.000
	6-10 years	41	101.74			
	11-15 years	17	60.65			
	16-20 years	16	58.69			
	21-25 years	10	41.40			
	26 years and more	9	64.00			
Educational Background	Associate Degree	4	89.88	3	.269	.966
	Bachelor's Degree	121	80.98			
	Master's Degree	34	84.49			
	Doctorate	4	83.88			
School Type	Primary school (public)	107	87.17	3	5.983	.112
	Primary school (private)	6	50.33			
	Secondary school (public)	47	73.99			
	Secondary school (private)	3	61.00			
Socio-Economic Status of School Location	Low	56	92.55	2	7.059	.029
	Intermediate	83	80.57			
	High	24	62.31			
Discipline	IT Teachers	78	97.51	2	18.863	.000
	Classroom Teachers	26	80.44			
	Branch Teachers	59	62.19			

According to the results of the Kruskal-Wallis test, teacher burnout significantly differed depending on age, experience in teaching, socio-economic status of school location, and discipline ($p \leq 0.05$). The mean rank of teacher burnout was lower for the female teachers when compared to the male teachers. In addition, the mean rank was higher for those who were 20 to 30 years old. As for length of service, the highest mean rank was for those who had been serving as a teacher for six to ten years. Furthermore, there were higher mean ranks for those teachers who had an associate degree, those who worked for public primary schools, those who defined the socio-economic status of the school location as *low*, and those who worked as an ICT teacher.

A review of the participants' responses to the open-ended questions suggested that the ICT teachers, in particular, raised their voice louder regarding their negative perceptions. Some of the ICT teachers reported as follows:

ICT teaching is finished; I believe that the department will be closed down soon. All ICT teachers have been made redundant. Within the scope of the optional intra-city appointments last week, ICT teachers were sent an official letter by directorates of national education, which explained that they had been made redundant and they had to ask to be appointed to another school. ICT teachers are forced to become a formatter. In short, graduates of Computer and Instructional Technologies like me feel blue. I cannot define what I am doing as "teaching." Maybe this is the reason why I expressed such pessimistic views (ICT Teacher, Participant no: 22)

Recent developments make me get alienated from my discipline. I love my job, and I would feel better if our discipline was valued more. However, these recent developments cause me to become alienated even though I am a newly-recruited teacher. (ICT Teacher, Participant no: 4).

While expressing their views, the ICT teachers reflected their unhappiness resulting from what they had been experiencing in their discipline. The reason for their negative ideas might stem from the reason that the course *Information and Communication Technologies* has been abolished and that they feel they have no purpose. It is evident that the use of technology plays a role in effective learning at school. ICT teachers can make contributions in this respect. They can guide both other teachers and students as to how to use technology in an effective way. In fact, they are reference guides for other teachers when it comes to, in particular, the integration of technology to the curriculum. In addition, they have a pivotal role to play in the extent to which the FATIH Project, one of the most popular projects in Turkey in recent years, can be successful. However, those ICT teachers who have such levels of burnout cannot be expected to be useful in the process.

In terms of the degree of burnout, the concerns of the ICT teachers were also voiced by the classroom teachers. One of the classroom teachers emphasized that they were especially subject to the frustration of other teachers, underlying the necessity of supporting teachers in this regard:

To me, I have sweated blood in my nine-year teaching life. What makes me really discouraged is my colleagues' frustration, not caring about their students, and putting a wrench in the works. Teachers' attitudes towards life are reflected in students, who demoralize me a lot when I am on duty. I am also the head of the disciplinary board, paying visits to classrooms and trying to solve problems. I get worn out when I observe that they do not make a slightest effort for some students. (Classroom Teacher, Participant no: 9).

The extract above suggests that teacher burnout is infectious, and it can spread to other teachers like a virus if it is not dealt with. A review of literature indicates that teacher burnout is getting worse and worse on the part of classroom teachers (Babaoglan, 2007; Cemaloglu & Kayabasi, 2007; Cemaloglu & Sahin, 2007).

Furthermore, research (Fernet et al., 2012; Skaalvik & Skaalvik, 2010) has demonstrated that there is a relationship between teachers' perceptions of school administrators and self-efficacy and that the relationship has a negative influence on all the three sub-dimensions of burnout. In the present study, it was concluded from their responses to the open-ended questions that especially the ICT teachers had negative perceptions of school administrators. Some of the teachers expressed their views in this respect as follows:

What causes problems and frustration in our teaching life is not students, but their parents and procedures. Our productivity is lowered especially when school administrators believe that teachers are wrong and the only party to blame in most situations. (Classroom Teacher, Participant no: 11)

With the trivet of parents, administrators and teachers, a school is the most productive place of education. I believe that a school cannot function well when one of these components is missing. I

am a teacher who attempts to solve most of the problems I experience without resorting to the administration. I am on good terms with parents. However, school administrators are really incompetent in problem-solving; they humiliate teachers in the presence of parents. If my school can still provide education, it is thanks to the self-sacrificing efforts of teachers. (English Language Teacher, Participant, No: 17).

I believe that administrators and some teachers consider other more knowledgeable teachers as a threat to themselves and thus do not want them to be successful in school. (ICT Teacher, Participant no: 20)

The ICT teachers in the study also underlined the negative policies towards their discipline:

With educational policies based on quantity rather than quality and Ministers of National Education undervaluing the profession of teaching, problems are becoming more and more irresolvable and causing teachers to lose their passion for teaching. (Turkish Language Teacher, Participant no: 23)

I get alienated owing to the uncertainties surrounding the Information and Communication Technologies course and the likelihood of the course being abolished. (ICT Teacher, Participant no: 27)

To sum up, even though I am not interested in economic aspects of my job I want to feel at ease and comfortable. Teachers are under the pressure of all parties. (Teachers are disregarded by the Ministry of National Education, inspectors, administrators, parents, and even students in some situations.) After all, we all know how little the public values our profession. We have lots of holidays!!! We laze around, teach 3 to 5 classes a day, and then leave!!! (Classroom Teacher, Participant no: 30)

A recent example of problematic policies toward ICT teachers is that ICT Guidance, a title once specific to ICT teachers, can be granted to all teachers regardless of their discipline through Information and Communication Technologies Guidance Course (MEB, 2012), which lasts only for 100 hours, by the General Directorate of Teacher Training and Development. Such policies cause ICT teachers to feel insignificant and worthless and lead others to consider them unimportant and worthless.

3. Prediction of Teachers' Burnout Levels by Demographic Variables

The third research question posed for the study was: "Do teachers' demographics enable them to be accurately classified as belonging to groups of low or high burnout?" To find answers to this question logistic regression analysis was conducted. The results of the logistic regression analysis are presented in Tables 4, 5, 6, and 7.

When compared to the initial model, the logistic regression model formed on the basis of all the independent variables could more effectively predict the classification of the participants as belonging to the groups of high or low burnout in terms of emotional exhaustion (X^2= 19.869, p<.006), depersonalization (X^2= 23.237, p<.002) and personal accomplishment (X^2= 20.509, p<.005). The model that involved all the predictive variables could account for 62.3% of emotional exhaustion, 71% of depersonalization, and 64.2% of personal accomplishment.

Table 4. The Hosmer-Lemeshow Test

Sub-Dimensions of the Maslach Burnout Inventory	Chi-Square	Sd	p
Emotional Exhaustion	9.724	8	.285
Depersonalization	12.851	8	.117
Personal Accomplishment	8.720	8	.366

The Hosmer-Lemeshow test, which was conducted to test the goodness of fit for the model with the predictive variables included in the analysis, did not yield a significant result (p>0.05), which suggested that the model had acceptable goodness of fit and the model-data fit was sufficient.

A review of the classification based on the logistic regression model indicated that 60.8% of the 79 teachers with low levels of emotional exhaustion could be accurately classified, whereas 66.3% of the 83 teachers with high levels of emotional exhaustion could be accurately classified. In addition, 47.8% of the 67 teachers with low levels of depersonalization could be accurately classified (32 teachers), while 87.4% of the 95 teachers with high levels of depersonalization could be accurately classified. Finally, 57.3% of the 75 teachers with low levels of personal accomplishment could be accurately classified (43 teachers), whereas 24.2% of the 87 teachers with high levels of personal accomplishment could be accurately classified (21 teachers).

Table 5. The Results of the Logistic Regression Analysis on the Capability of Demographics to Predict Emotional Exhaustion

Variables	Beta	Standard E.	Wald	Sd	p	Exp(ß)
Gender	.158	.352	,200	1	,655	1.171
Age	-.107	.506	,044	1	,833	.899
Experience in Teaching	.063	.289	,047	1	,828	1.065
Educational Background	.823	.362	5,175	1	,023	2.277
School Type	-.150	.189	,635	1	.425	.860
Socio-Economic Status of School Location	-.529	.271	3.825	1	.051	.589
Discipline	-.508	.257	3.913	1	.480	.602
Constant Coefficient	,197	1.092	.033	1	.857	1.218

The statistics from the Wald test concerning emotional exhaustion showed that *educational background* made a significant contribution to being classified as belonging to the groups of high or low burnout (Table 5). A comparison of the odds ratios (Exp(ß)) for the predictive values indicated that *educational background* had an Exp(ß) value of 2.277. The data in Table 5 suggest that one-unit increase in the predictive variables will increase the log odds coefficient of *educational background* by 2.227 times.

The statistics from the Walt test regarding depersonalization showed that *socio-economic status of school location* made a significant contribution to being classified as belonging to the groups of high or low burnout (Table 6). A comparison of the odds ratios (Exp(ß)) for the predictive values indicated that *socio-economic status of school location* had an Exp(ß) value of .588.

Table 6. The Results of the Logistic Regression Analysis on the Capability of Demographics to Predict Depersonalization

Variables	Beta	Standard E.	Wald	Sd	p	Exp(ß)
Gender	,208	,365	,327	1	,567	1,232
Age	-,227	,503	,203	1	,652	,797
Experience in Teaching	-,379	,288	1,738	1	,187	,684
Educational Background	,013	,345	,001	1	,970	1,013
School Type	,015	,192	,006	1	,938	1,015
Socio-Economic Status of School Location	-,531	,271	3,824	1	,050	,588
Discipline	,100	,266	,141	1	,708	1,105
Constant Coefficient	2,037	1,131	3,246	1	,072	7,668

The data in Table 6 suggest that one-unit increase in the predictive variables will increase the log odds coefficient of *socio-economic status of school location* by 0.588 times. Several studies have demonstrated that the school environment plays a role and is a factor in burnout levels (Kirilmaz, Celen & Sarp, 2002; Tugrul & Celik, 2000; Tumkaya, 1996). This seems to depend on whether one is satisfied with or distressed by conditions prevalent in where he/she works (Maslach & Jackson, 1981).

The statistics from the Walt test concerning personal accomplishment showed that *gender* and *discipline* made a significant contribution to being classified as belonging to the groups of high or low burnout (Table 7). A comparison of the odds ratios (Exp(ß)) for the predictive values indicated that *gender* and *discipline* had an Exp(ß) value of 2.051 and .581 respectively. The data in Table 7 suggest that one-unit increase in the predictive variables will increase the log odds coefficients of *gender* and *discipline* by 2.051 and 0.581 times respectively.

Table 7. The Results of the Logistic Regression Analysis on the Capability of Demographics to Predict Personal Accomplishment

Variables	Beta	Standard E.	Wald	Sd	p	Exp(ß)
Gender	,719	,355	4,100	1	,043	2,051
Age	,155	,504	,094	1	,759	1,168
Experience in Teaching	-,162	,289	,316	1	,574	,850
Educational Background	,359	,335	1,149	1	,284	1,433
School Type	,008	,190	,002	1	,968	1,008
Socio-Economic Status of School Location	-,273	,264	1,069	1	,301	,761
Discipline	-,542	,254	4,565	1	,033	,581
Constant Coefficient	-,034	1,065	,001	1	,975	,967

Similarly, various studies have concluded that gender and burnout scores are correlated with each other (Babaoglan, 2007; Cemaloglu & Sahin, 2007; Ergin, 1992; Maslach, 1982; Peker, 2002). In their study, for example, Babaoglan (2007) and Ergin (1992) discovered that men get higher scores than women in personal accomplishment, one of the sub-dimensions of burnout, as was the case for the present study. Therefore, it can be argued that *gender* can be used to classify teachers as belonging to groups of high or low burnout. This is also the case for *discipline*. As a matter of fact, Babaoglan (2007) concluded that burnout levels differ depending on one's discipline.

Conclusions and Recommendations

Conclusions

The present study attempted to investigate seven variables (gender, age, experience in teaching, educational background, school type, socio-economic status of school location, and discipline), which were thought to be predictors of teacher burnout. The following results were drawn from the findings of the study.

In the present study, teacher burnout significantly differed depending on age, experience in teaching, socio-economic status of school location, and discipline. As for gender, the male teachers received higher scores in all the three dimensions of the Maslach Burnout Inventory, namely emotional exhaustion, depersonalization, and personal accomplishment. This means male teachers' burnout level is high. In addition, those participants who are 20 to 30 years have higher level of emotional exhaustion and depersonalization.

While those participants who had been serving as a teacher for six to ten years received higher scores than the other groups in all the three sub-dimensions, those teachers with a length of service ranging from 21 to 25 years received the lowest scores of all in all the three sub-dimensions. Thus, it could be concluded that the level of "emotional exhaustion, depersonalization, and personal accomplishment" is at the highest point for teachers with 6-10 years of experience and at the lowest point for teachers with 21-25 years of experience.

As for the effect of educational background, the participants with an associate degree received higher scores than the other groups in emotional exhaustion and depersonalization while they received the lowest score in personal accomplishment. In addition, those teachers who worked for public primary schools and those teachers who described the socio-economic status of the school location as *low* received higher scores than the other groups in their own categories. Finally, the Information and Communication Technologies teachers received the highest scores of all.

According to the opinions elicited from the participants at the final section of the survey questionnaire, with the start of FATIH Project ICT teachers were given responsibilities they could accomplish easily. For example, the solution of the problems related to electricity and Internet infrastructure in schools is expected from ICT teachers. This means those teachers are having more and more technical responsibilities and this situation boosted their burnout level. In addition, having fewer hours of teaching ICT course in schools makes them even more exhausted.

The analyses revealed that all the sub-dimensions had sufficient model-data fits, which suggests that the model can be instrumental for predicting teacher burnout. Teacher's classification as belonging to the groups of low or high burnout was significantly influenced by *educational background* in emotional exhaustion, *socio-economic status of school location* in depersonalization, and *gender* and *discipline* in personal accomplishment.

The participants' responses to the open-ended question yielded different factors and dimensions, which can be expressed as follows in Figure 2:

Figure 2: Factors in Teacher Burnout

Recommendations

The present study suggests that male teachers experience a greater amount of teacher burnout in all the sub-dimensions when compared to female teachers. In-depth studies could be conducted on the reasons for this. In addition, educational background has an influence on teacher burnout, for teachers with a higher educational background experience a lower amount of teacher burnout. It can be recommended on the basis of the finding that teachers should be provided with various opportunities to improve themselves personally, professionally, and academically.

Results based upon the school type and the socio-economic status of the school location dimensions show that teacher burnout is influenced by the facilities schools might have. Thus, it could be claimed that improvements in the school facilities of schools especially in low SES communities could contribute to improvement of the quality of education offered.

The teacher burnout level was higher among ICT teachers. In this context, it could be suggested that new research studies can be conducted on how this situation would affect the success of FATIH Project which is one of the most popular technology implementation projects in Turkey in recent years. The assumption underlying this is that ICT teachers are seen as reference guides for both other subject teachers and students as to how to integrate technology to the curriculum and how to use technologies in an effective way.

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