Teachers' Technostress Levels as an Indicator of Their Psychological Capital Levels

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Abstract   The rapid development and easy accessibility of internet and personal computers have increased their use in educational environments as well as in every field. In schools, responsibilities of teachers in using technology have increased within the scope of educational processes and management processes and administrative level, and indirectly it has been determinative in their behavior towards the institution. In this respect, teachers' technostress levels which are the pressure they incur in the use of technology, and psychological capital levels which are the positive organizational behaviors, have been investigated in the present study. Two different scales were used in the research conducted with the participation of 228 teachers at different school levels in the academic year of 2016-2017. At the end of the study, it was found that teachers had a high level of psychological capital and a medium level of technostress, and there was a moderate and inverse relationship between their psychological capital and technostress levels. In addition, as a result of the structural equation modeling, it was found that the teachers' technostress levels were important indicator of their psychological capital levels. In this respect, it can be stated that measures to reduce the technostress level will increase the psychological capital level.

Keywords   Technostress, Psychological Capital, Teachers, Technology, ICTs

1. Introduction

Institutions have a certain organizational culture and employees are expected to have this culture. Innovations, new rules and structuring require compliance of employees. In this respect, schools are one of the organizational structures in which corporate culture is maintained.

Schools are educational institutions in which display certain organizational behaviors. In this respect, in addition to the administration level, teachers are the individuals of schools who work in the context of manpower. The institutional behavior of teachers within the school determines the quality of educational institutions and may lead to an increase or decrease in the quality of education. In schools, teachers have an important position with different visions such as providing leadership in using technology and guiding the student [1,2]. In this regard, psychological capital, which is the expression of positive organizational behaviors, is thought to be related to the use of technology.

1.1. Psychological Capital

The concept of psychological capital has a meaning that satisfies individual motivational tendencies (self-efficacy, optimism, hope and psychological resiliency) [3]. Erkuş and Fındıklı [4] explain psychological capital as the sum of positive behaviors that an individual exhibits. Psychological capital activates the positive approach and success motive of the individual to the events that they face [5]. Psychological capital emphasizes who the individual is [6].

When considering the approach of psychological capital, it is useful to take a closer look at what is positive psychology and its importance. Positive psychology was founded under the leadership of Martin Seligman as a branch of psychology in the 1990s. Positive psychology can be defined as positive subjective experience, positive individual traits, and the science of positive institutions that promise to improve the quality of life and prevent pathologies from the idea that life is vicious and meaningless [7]. Positive psychology deals with positive aspects rather than negative aspects of human psychology.

Psychological capital, unlike human capital and social capital, focuses on the positive organizational behavior perspective that is related to questions of "who the person is" and "what a person might be a in terms of positive development" [3]. Another point of reference to the concept of positive psychology is based on the theory of

positive emotions [8]. Positive emotion theory emphasizes that positive emotions increase psychological resources (psychological well-being, happiness, etc.) along with intellectual (problem solving and creativity, etc.), physical (coordination, coping with stress, cardiovascular health, etc.) and social (relationships, personal networks, friends, etc.) resources. In this context, it was found that people having high level of positive emotion were working at the more optimal cognitive and emotional function levels in the organizational environment [9].

Psychological capital, which affects individuals positively in achieving organizational goals and which individuals have to develop to overcome difficulties have four elements which are self-efficacy, optimism, hope, and resiliency [10].

Stajkovic and Luthans [11] describe the self-efficacy as the belief and trust that the members of the organization feed on their own abilities in determining the motivation, cognitive resource and form of action they need to achieve the determined goals by carrying out a specific task in the organizational context. Individuals who have high beliefs and trust are willing to choose challenging tasks; they do not hesitate to reveal their power to reach the goals and become persistent [12]. Bandura [13] describes the self-efficacy as an individual's opinion about its capacity to organize and present the activities that it needs to manage possible processes. Bandura [14] states that self-efficacy includes how much effort the individual has to do to overcome difficulties and how much he/she needs to pursue this effort even if the conditions are very challenging and frustrating in the process of carrying out the tasks undertaken by the individual. Bandura [14], who explains on how self-efficacy develops, states that individuals have begun to develop along with their experiences as a result of their responsibilities and childhood experiences, and they continue this process with their experiences, competences and new insights. Optimism is an individual's positive approach to situations and events [15]. Employees in optimism think that good things will happen, and this is a feature that is handled on an individual level. Optimistic individuals regard their achievements as a result of their determination and positive expectations in their inner world [16,17]. Individuals with high optimistic characteristics, despite having negative results in their previous experiences, continue to work with a goodwill effort due to the positive aspect of their point of view [18]. Hope depicts a positive motivational situation that depends on a sense of success. It contains two basic concepts, which are factors and paths. Factors are the motivational energy required to achieve the desired effect, while the paths can be defined as identifying and following alternative directions to achieve the goals [19]. Resiliency is expressed as a sudden change or an ability to get successful results against a problem [6, 20]. It is a situation where individuals will react (anti-proactive) when they encounter problems,

uncertainties or sudden changes [21]. Thus, it is possible for individuals to recover from the difficulties they face and make them strong and consistent again [6]. The concept of resiliency, which is more likely to arise from the effects of adverse events, can be considered as the ability to combat these negative conditions [20].

1.2. Technostress and Its Causes

Technostress has been described by Brod [22], who is one of the pioneers in this field, as a disease caused by insufficient feeling to adapt to computer technologies. In other definitions, it is defined as general negative emotions, thoughts, behaviors and attitudes such as anxiety that the employees feel when they need to deal with new technologies [23, 24]. Technostress is renewed very quickly and has negative consequences on people's attitudes, thoughts, behaviors and psychology as a result of the pressures arising from the use of Information and Communication Technologies (ICT) which are located in their institutions with their new models [25]. In a general definition, it is stated that psychological and behavioral behaviors such as fear, anxiety and hostility which prevent the best use of ICTs are caused by technostress [26].

Shu, Tu and Wang [26] describe three different reasons for technostress: the first is that employees cannot adapt to new technologies in their business environment or are not able to undergo a good adaptation process; the second is that individuals at administrative level are in high expectation due to the broad application, the prevalence of internet and mobile commerce of ICTs; the third is that very fast replenishment of ICTs and causing changes in working conditions. Therefore, it is likely that technostress will occur in today's employees and it is likely to cause problems in daily life [27, 28].

According to Zuboff [29], there are three factors in the formation of technostress. Employees' business environments are constantly being equipped with new and tremendous technologies (such as personal computers, enterprise applications, manufacturing applications and connectivity tools) with software and hardware-updated versions. Secondly, there is a significant difference between the knowledge of the employees and managers and the information required to perform various tasks. Thirdly, the development of ICT in modern life changed the working environment and culture. These three factors are indicative of the changing nature of the interaction between the workplace and the individual. Business habits of executives, reorganization of routines and all of the struggles for changing traditional assumptions at workplaces cause technostress.

In the study conducted by Tarafdar et al. [30], the factors creating technostress were divided into five as Techno-Overload, Techno-Invasion, Techno-Complexity, Techno-Insecurity and Techno-Uncertainty. However, in other studies, it is seen that the lack of education is the

main source of technostress [31, 32, 22, 23].

As in every field, technostress is an important problem for the teaching profession. Especially in the process of integration of new technologies as a situation that is frequently encountered with digital technology, teachers are under technostress [33, 34, 35]. In addition, the continuation of technology integration pressure, which is caused by both institutions and society and the lack of information and support lead teachers to experience in technostress [36].

1.3. Purpose of the Study

The purpose of the present study is to determine the relationship between teachers' technostress and psychological capital levels. For this purpose, the answers to the following questions were sought.
1. What are the technostress levels of teachers?
2. What are the psychological capital levels of teachers?
3. Are the technostress levels of teachers a significant predictor of their psychological capital levels?

2. Methods

In this section, research model, population and sample, data collection instrument and data analysis are presented as headings.

2.1. Research Model

This research model, which aims to determine the relationship between teachers' technostress and psychological capital levels, is designed in general and relational survey models. While general survey model is based on surveying all variables or a subset of elements within a domain, relational Survey Model aims to research the existence and/ or the degree of a relation between two or more variables. McMillan and Schumacher [37] have stated that the relational survey model is used to determine the current state of multiple variables and the relationship between them.

2.2. Population and Sample

The teachers who work in a central district of a province of Turkey constitute the population of the present study in the 2016-2017 academic years. Due to the size of the universe, the problem of time and the accessing problem, it was sampled by random sampling method, and the schools teachers will participate in the study were determined by the lottery method of sampling. Within the scope of the present research, 6 out of approximately 30 schools were randomly selected to each of the each primary (2 school), secondary (2 school) and high school (2 school) levels in the central district and the data were collected from

teachers working in these schools. In this context, a total of 228 teachers were reached and the statistical data of the research sampling was given in Table 1.

Table 1. Demographic Information of Sampling Teachers

Variables		f	%
Gender	Female	117	51.3
	Male	111	48.7
Type of Institution	Primary School	60	26.3
	Secondary School	86	37.7
	High School	82	36.0
He/ She has…	no computer	19	8.3
	a Desktop	36	15.8
	a Laptop	152	66.7
	both computers	21	9.2
Total		228	100

When the Table 1 is examined, it can be seen that the genders of the teachers are approximately equal (female - 51.3%, male - 48.7%). According to the type of institution, it is seen that the teachers working in the secondary schools have the highest participation rate (primary schools - 26.3%, secondary schools - 37.7% and high schools - 36%), whereas the majority of teachers (66.7%) have only a laptop computer in terms of computer ownership variable.

2.3. Data Collection Instrument and Its Procedures

In order to collect data, a data collection instrument consisting of personal information section, Defining Teachers' Technostress Levels Scale and Psychological Capital Scale were used.

2.3.1. Psychological Capital Scale

In order to determine the teachers' psychological capital levels, the Psychological Capital Scale, which was culturally adapted by Erkmen and Esen [38] was used. The original of this scale was developed by Luthans et al. [3] and consisted of four factors and 24 items. However, following the adaptation process by Erkmen and Esen [38], it was observed that the scale consisted of three factors and 18 items (self-efficacy - 9 items, hope – 7 items and optimism - 2 items). The internal consistency coefficient (Cronbach Alpha) was calculated as .886 for the reliability of the scale.

2.3.2. Defining Teachers' Technostress Level Scale

In order to determine the teachers' technostress levels, Defining Teachers' Technostress Level Scale developed by Çoklar, Efilti and Sahin [39] was used. The scale, which is developed with 395 teachers and has five-level Likert items, consists of 28 items and five factors. The factors included in the scale with exploratory and confirmatory factor analyzes were named as "Learning-Teaching Process Oriented", "Profession Oriented", "Technical Issue

Oriented", "Personal Oriented" and "Social Oriented" technostress. The internal consistency coefficient (Cronbach Alpha) was calculated as .917 for the reliability of the scale.

2.4. Data Analysis and Interpretation

The validity of the data was controlled before being transferred to the computer. While the two scale items consisting of five-point Likert items were scored as "1-Strongly disagree" and "5-Strongly agree". In the analysis of data, arithmetic mean and standard deviation were used to define the teachers' technostress and psychological capital levels. In order to determine the relationship between the two scales, the Pearson product-moment correlation coefficient was used. In addition, a structural equation model (SEM) has been developed with maximum likelihood estimation from regression analysis, which is a frequently used method [40] to determine whether technostress is a determinant of psychological capital. Root Mean Square Error of Approximation (RMSEA), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI) and Chi-square Goodness of Fit (χ^2/sd) fix indexes which were the most preferred [40, 41] were used to define the compatibility of the model. SPSS 20 (Analysis Package for the Social Sciences) and AMOS 16.0 (Analysis of Moment Structures) were used to analyze the data.

In order to facilitate the interpretation of the scale items, the average scores for the scale and the sub-dimensions were evaluated. The data are expressed in three ranges (low, medium, high) to facilitate teachers' comments. Accordingly, (the highest value - the lowest value)/ evaluation range number formula was used and the evaluation criteria in Table 2 were accepted.

Table 2. Criteria for Evaluating the Levels of Technostress and Psychological Capital

Evaluation Range	Evaluation Criteria
1.00 – 2.33	Low level
2.34 – 3.6	Medium level
3.67 – 5.00	High level

3. Findings and Comments

In the present study, the relationship between the teachers' technostress and psychological capital levels, and whether the technostress levels of teachers a significant predictor of their psychological capital levels were investigated, and the findings were given as headings.

3.1. Technostress Levels of Teachers

The data obtained from the participants (n = 228) were analyzed in order to determine the technostress levels of

the teachers as the first sub-objective of the present study and the findings were given in Table 3.

Table 3. Technostress Levels of Teachers

Dimensions of Technostress	$\overline{X}$	sd
Learning-Teaching Process O. (LTPO)	2.73	1.03
Profession Oriented (PrO)	2.01	0.94
Technical Issue Oriented (TIO)	2.75	1.02
Personal Oriented (PO)	2.38	1.12
Social Oriented (SO)	2.77	1.07
Technostress General (TSGen)	**2.53**	**0.93**

It can be said that the technostress level of the teachers is medium ($\overline{X}$ = 2.53). In terms of sub-dimensions, only Profession Oriented technostress is low ($\overline{X}$ = 2.01). In all other dimensions, teachers have a medium level of technostress: Learning-Teaching Process Oriented ($\overline{X}$ = 2.73), Technical Issue Oriented ($\overline{X}$ = 2.75), Personal Oriented ($\overline{X}$ = 2.38) and Social Oriented ($\overline{X}$ = 2.77). In other words, teachers have low-level technostress for the Profession Oriented and have an medium level of technostress in terms of all other dimensions.

3.2. Psychological Capital Levels of Teachers

Psychological capital levels of the teachers, which were the second sub-objective of the study, were also investigated. In this context, the data obtained from the psychological capital scale of 228 teachers who participated in the research were analyzed and the findings were given in Table 4.

Table 4. Psychological Capital Levels of Teachers

Dimensions of Psychological Capital	$\overline{X}$	sd
Self-efficacy (PC_S)	4.12	0.48
Hope (PC_H)	4.10	0.57
Optimism (PC_O)	3.97	0.79
Psychological Capital General (PCGen)	**4.10**	**0.48**

Table 4 shows that teachers have high levels of psychological capital ($\overline{X}$ = 4.10). When it is examined in terms of sub-dimensions, it is observed that arithmetic mean is high in all sub-dimensions, respectively self-efficacy ($\overline{X}$ = 4.12), hope ($\overline{X}$ = 4.10) and optimism ($\overline{X}$ = 3.97).

3.3. Technostress as an Indicator of the Psychological Capital Level

Within the scope of the third sub-goal of the present study, it was investigated whether the technostress level of teachers was a significant predictor of psychological capital level. For this purpose, structural equality modeling was used to determine whether technostress was an

indicator of psychological capital level. However, the correlation values between the two variables were examined (Table 5).

As seen in Table 5, there is a significant correlation between all factors constituting the Psychological Capital Scale and this correlation varies between .68 and .93. The highest correlation between the Psychological Capital Scale and its factors is Hope - PC_H (r = .93) and the lowest correlation is Optimism - PC_O (r = .69). In addition, the correlation value between the Psychological Capital Scale (PCGen) and Technostress Scale (TSGen) is -.63. This value shows that the relationship between these two variables is significant and negative (p<.01). The correlation values between the Psychological Capital Scale and factors of Technostress Scale range from r = - .50 to r = -.63, and this change is significant at .01 level. Similarly, the correlation values between Technostress Scale and factors of Psychological Capital Scale range from -.39 to -.67, and these changes are statistically significant. When Table 5 is examined in general, it is seen that there is a negative and medium level relationship between the teachers' psychological capital and technostress levels and psychological capital level decreases when technostress level increases.

Table 5 shows that there is a significant relationship between teachers' technostress and psychological capital levels. However, structural equation model was developed by using AMOS 16.0 program in order to determine whether technostress level is a determinant of psychological capital level.

Structural equation modeling, which is often used in social sciences, is an analysis method in which the relationship between variables is analyzed [42]. Kline [43] defines the structural equation model as a method used to determine the relationship between the scale and the independent variables assumed to have an impact on it. The harmony between latent, exogenous (predictor/ independent) and endogenous (outcome/dependent) variables is controlled through the index values and it is decided to accept or reject the established model [44]. Within the scope of the research, there are eight sub-dimensions latent variables, which constitute the scales, and these variables are also structurally exogenous variables. The psychological capital and technostress variables predicted by both scale factors are endogenous variables. In this context, the structural equation model was developed to define whether the three-factor Psychological Capital Scale is a determinant of the five-factor Technostress Scale in Figure 1.

Table 5. Correlations among the research variables for the total sample (n=228)

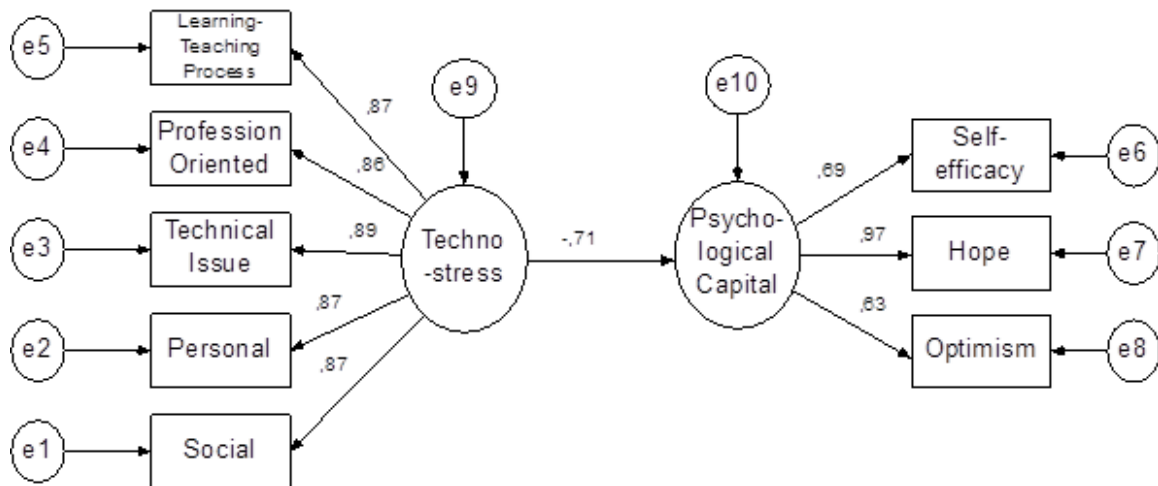| Variables		Psychological Capital Scale					Technostress Scale			
		PC_S	PC_H	PC_O	PCGen	LTPO	PrO	TIO	PO	SO	TSGen
Psychological Capital	PC_S	1.00	,76*	,68*	,90*	-,49*	-,41*	-,46*	-,54*	-,41*	-,51*
	PC_H		1.00	,71*	,93*	-,67*	-,53*	-,58*	-,65*	-,56*	-,67*
	PC_O			1.00	,69*	-,42*	-,27*	-,32*	-,37*	-,36*	-,39*
	PCGen				1.00	-,62*	-,50*	-,55*	-,63*	-,52*	-,63*

* p<.01

Figure 1. Structural Equation Model Established Between Technostress Scale and Psychological Capital Scale

Figure 1 shows the structural equation model established to determine whether teachers' technostress levels are determinants of their psychological capital levels. The significant relationship level obtained in Table 5 indicates the accuracy of this model. However, fit indexes were checked to determine the validity of the model and the degree of indication. Some fix indexes are recommended to control the compliance of the model [41]. In this context, fit indexes, acceptable values and best fit values of the model are given in Table 6.

Table 6. Fitting Indexes of Structural Equation Model and Evaluation of Them

Fit Index	Fitting Values of Model	Acceptable Ranges	Best Fitting Ranges
(χ^2/sd)	4.015	≤5	≤3
RMSEA	0.072	0.06 – 0.08	≤0.05
NFI	0.952	0.94 – 0.90	≥0.95
CFI	0.958	0.95 – 0.96	≥0.97
TLI	0.934	0.94 – 0.90	≥0.95

In order to determine the suitability of the established model, χ^2/sd and RMSEA, NFI, CFI and TLI fix indexes were checked in Table 6. In the developed model, χ^2/sd=4.015 (χ^2= 76.283; df=19; p<.01), RMSEA=.072, CFI=.958 and TLI=.934 fit indexes values indicate that the model is "acceptable" and the index value of NFI = .952 indicates that the model has "the best" compliance. It can be stated that the structural equation model established in this respect is confirmed, and the technostress level of teachers is a predictor of their psychological capital levels.

On the other hand, the regression between the levels of psychological capital and the technostress was examined to determine the predictive level of the technostress level on the level of psychological capital, and the predictive level was found to be significant (β = -0.71; p <0.01). In other words, the standard deviation of psychological capital level decreases 0.71 points as technostress level increases a standard deviation in terms of standardized regression weights. This finding shows that the technostress level of teachers is an important predictor of their psychological capital level.

4. Results and Discussion

Teachers are among the most important elements that shape education in the school environment and provide education [45]. Particularly in the recent years, the ICTs, especially the internet, have found more places in the educational environment and they have created a pressure on teachers [46]. This pressure has influenced teachers' technostress levels while also influenced their psychological capital levels as employees of schools with newly formed working conditions. In today's schools equipped with technologies, teachers experience technostress as a result of intensive technology use and

this also affects the psychological capital level expressing the positive organizational behavior approach. The results of this study will draw attention to the technology usage pressure on the teaching profession and help them to cope with this pressure. In this context, the psychological capital and technostress levels of 228 teachers were examined and the relationship between them was investigated and the following results were obtained.

Teachers generally have medium level technostress. In this respect, in the education environments equipped with the internet and ICTs, teachers experience medium level of stress in the use of technology. Longman [36] emphasized that primary school teachers have a very low level of technostress. In a study conducted by [47], it was stated that the technostress levels of instructors were medium in terms of hardware supply and low level in terms of internet use. Although researchers approach the technostress from different perspectives, it was generally expressed as medium level. The facts that the research was applied in public schools, teachers were working as permanent staff, there was no risk of losing their jobs and their job definitions were fixed may have prevented them from experiencing technostress [48].

In the present study, teachers' psychological capital levels were found to be high. In other words, teachers can be seen as individuals who aim at high levels of contribution in their schools. This result is supported by the results of various studies in the literature. In their studies, Akman [49], Buyukgoze [50], Keser and Kocabaş [51], Akdoğan and Polatçı [52], Sweetman, Luthans, Avey and Luthans [53], Avey, Luthans and Jensen [54] found that study groups had high perceptions of psychological capital. On the other hand, it was also found that teachers had positive opinions in the dimensions of psychological capital scale (self-efficacy, hope and optimism), they tried to maintain a positive environment in their institutions and they behaved in this direction. As a result of the research conducted with 337 high school teachers, Buyukgoze [50] concluded that the overall level of psychological capital of the participants was relatively high. In the Investigation of Teachers' Perceptions of Psychological Capital According to Various Variables in which 380 teachers were included, Akman [49] concluded that teachers' perceptions of psychological capital were also high in terms of self-efficacy, hope, optimism and psychological resiliency. These studies also support the results of the current research.

Although the psychological capital was high in all sub-dimensions within the scope of the research results, it was concluded that the sub-dimension of self-efficacy was the highest, and it was respectively followed by the sub-dimensions of hope and optimism. Akman [49], Oruç and Özen Kutanis [55], Buyukgoze [50], Keser and Kocabaş [51], Çetin and Basım [56] have reached the similar results in their studies. These studies also support the results of the current research. Stajkovic and Luthans

[11] describe the concept of self-efficacy as the belief and trust that the members of the organization feed on their own abilities to determine the motivation, cognitive resource and form of action they need in order to achieve the determined goals by carrying out a specific task in the organizational context. Individuals who have high beliefs and trust are willing to choose challenging tasks; they do not hesitate to reveal their power to reach the goals and become persistent [12]. When these characteristics are examined, the overlap between the most important professional characteristics of the teaching profession and the characteristics defining self-efficacy support the findings of present study.

The correlation value between technostress level and psychological capital level was found to be -.63. In this respect, there is an inverse and moderate relationship between them. According to this result, it can be stated that teachers' technostress level decreases when their psychological capital level increases. On the other hand, the correlation between the levels of Psychological Capital Scale and levels of Technostress Scale's sub-dimensions, which are learning-teaching process oriented, profession oriented, technical issue oriented, personal oriented and social oriented, range from - .50 to -.63. As a matter of fact, a structural equation model was established between the two variables based on the correlation between teachers' technostress and psychological capital levels. Within the scope of this model, it was concluded that technostress was an important predictor of psychological capital, and the decrease in technostress level is an important factor that will increase the level of psychological capital. Researches on stress and psychological capital in the literature give similar results. Brod [22], who was one of the first researchers to carry out technostress studies, expressed the technostress as a kind of stress. Therefore, the findings are important. Avey, Luthans and Jensen [54] examined the role of psychological capital on workplace stress and job intention. As a result, they concluded that psychological capital was an important factor in predicting the employees' intention to quit and job search behaviors. Baron, Franklin and Hmieleski [57] examined the relationship between psychological capital and perceived stress and subjective well-being. The perceived job stress levels of the participants were quite low. It was concluded that the participants' low stress levels were associated with high levels of psychological capital. They also concluded that psychological capital had an inverse relationship with job stress. Roberts, Scherer and Bowyer [58] examined the mediating role of psychological capital in the relationship between job stress and uncivil behavior. According to the results of the present study, it has been reached that psychological capital buffers the effect of job stress on incivility.

In the light of the findings and the developed model, it can be suggested that training and activities should be given to teachers to increase their psychological capital levels and ensure that they become good teachers. The high psychological capital capacities of the teachers affect their performance, teaching effectiveness, loyalty and professional satisfaction levels [59, 60, 61]. Sweetman, Luthans, Avey, and Luthans [53] focused on the relationship between the psychological capital levels of the employees and their creative performances. As a result of this research, it was concluded that psychological capital was a significant predictor of the creative performance of employees. Luthans, Avolio, Walumbwa and Li [62] examined the relationship between psychological capital levels and job performance of employees. As a result of this study, they concluded that the employees' psychological capital values were highly correlated with their job performance and satisfaction. Nguyen and Nguyen [63] examined the role of psychological capital in job performance and the quality of professional life. As a result of the study, they have concluded that psychological capital had a positive effect on both the job performance and the quality of professional life. In this respect, it can be said that decreasing the levels of technostress as a result of an education given to teachers will have a positive effect on their psychological capital levels. Longman [36] and Al-Fudail and Mellar [31] stated that education and awareness raising were the most important factors in the reduction of technostress. In order to make recommendations for future studies, the re-realization of these researches with institutions or private schools, which have different technological facilities will contribute to achievement different results between psychological capital and technostress.

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