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Original scientific paper

UDC: 371.15

DOI: 10.5937/IstrPed2101251T

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## INVESTIGATION OF THE PSYCHOLOGICAL RESILIENCE OF TEACHER CANDIDATES IN TERMS OF SENSE OF HUMOR AND LIFE SATISFACTION

**Abstract:** The aim of this study is to examine the psychological resilience in teacher candidates in terms of sense of humor and life satisfaction. Correlational research model was used in the study. The dependent variable of the research is psychological resilience and independent variables are sense of humor and life satisfaction. The research was carried out on 427 teacher candidates between the ages of 18-27, 318 females (74.5%) and 109 males (25.5%). The Resilience Scale for Adults, The Multidimensional Sense of Humor Scale, The Satisfaction with Life Scale and Personal Information Form were used to collect data. Descriptive statistics, independent groups t-test, variance analysis, Pearson correlation coefficient and hierarchical regression analysis were used to analyze the data. When the findings of the study are analyzed, it is seen that psychological resilience in terms of gender differs significantly in favor of female teacher candidates. A positive relationship was found between teacher candidates' psychological resilience and sense of humor. In addition, a positive relationship was found between psychological resilience and life satisfaction. Looking at the findings, it is seen that the variables of sense of humor and life satisfaction predict psychological resilience significantly. The findings were discussed according to the literature and various suggestions were presented.

**Key words:** Resilience, sense of humor, life satisfaction, teacher candidates.

People struggle with something from the moment they are born. Throughout their lives, people typically encounter various difficulties, from daily troubles to large life events (Fletcher and Sarkar, 2013). A serious illness, abuse, loss of a relative, torture, and natural disaster can be given as examples to these various experiences (Dogru, 2019). It is important for individuals to cope with and adapt to ongoing negativities such as crises, traumas, and loss of attachment. The concept of resilience includes an individual's ability to adapt to acute or chronic stress factors throughout her/his life (Smith and Ascough, 2016). The concept of psychological resilience is one of the study subjects of positive psychology, which focuses on the development of people, positive emotions and relationships (Graber, Pichon and Carabine, 2015).

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Various researches have been conducted on psychological resilience (Yavuz, 2019; Aydin, Oncu, Akbulut and Kucuk-Kilic, 2019; Tras, Oztemel and Kagnici, 2019; Celik, Sanberk and Deveci, 2017; Gungormis, Okanli and Kocabeyoglu, 2015; Koc-Yildirim, Yildirim, Otrar and Sirin, 2015; Malkoc and Yalcin, 2015; Sarikaya, 2015). It is seen that psychological resilience concepts used with expressions such as indomitableness (Onat, 2010; Kaner, Bayrakli and Guzeller, 2011; Buyuksahin Cevik, Dogan and Yildiz, 2016; Ciftci-Arindag and Unsal-Seydoogullari, 2019), psychological strength (Karairmak and Sivas-Cetinkaya, 2011; Arslan and Balkis, 2016), and self-recovery power (Isik, 2016; Cetinkaya and Sarici-Bulut, 2019) in the literature.

Psychological resilience can be generally defined as positive emotional and/or behavioral adaptation to negative situations (Choi, Stein, Dunn, Koenen and Smoller, 2019). According to Grotberg (1995), psychological resilience is a versatile and functional mechanism that we are endowed with, that is shaped within the scope of the opportunities offered and the environment we live in, and that offers us the opportunity to cope with problems in a crisis or in daily life. According to Henderson and Milstein (1996), psychological resilience is a mechanism that enables people to survive and sometimes become stronger after encountering a traumatic event. Psychological resilience is influenced by conscious awareness and spiritual well-being (Yavuz, 2019), leisure time assessment style and involvement in individual sports (Aydin et al., 2019), and involvement in art-based reflective activities (McKay and Barton, 2018). Ability to adapt to the social environment, and being able to provide emotional stabilization in their lives and social relationships positively affects the psychological resilience levels of individuals (Basim and Cetin, 2011). The increase in the psychological resilience levels of the parents positively affects the social competence level of their children and plays an important role in reducing anxiety and anger levels of the children (Kindiroglu and Yasar-Ekici, 2019). As the problem-solving skill increases, individuals provide more satisfaction from their social relationships and this affects psychological resilience process positively (Akdogan and Yalcin, 2018).

Another factor that is effective in increasing psychological resilience is having positive emotional experiences (Judd, 2016). One of the sources of positive emotional experiences is sense of humor concept associated with positive psychological structures (Papousek et al., 2019; Maiolino and Kuiper, 2014). Psychological functions of humor include the cognitive and social benefits of the positive emotion of mirth, and its uses as a form of social communication and influence, and as a way of relieving tension, regulating emotions and coping with stress (Martin, 2006). According to psychoanalytic theory, the place of humor in dealing with the tension and anxiety caused by the problem is an attempt to deal with anxiety and tension that a person experiences through jokes, caricatures or wit (Levine, 2017). People show their resilience when they respond to stressful situations with humor or laughter instead of fear or anger, and by doing this, they avoid unfruitful emotions (Hughes, 2008). There are benefits provided to the individual by the positive use of humor (Tras, Arslan and Mentis Tas, 2011). One of these benefits can be considered as increasing the psychological resilience of the individual by using humor. In other words, individuals who have the ability to use positive emotions such as developing effective relaxation techniques by using sense of humor can be considered to have high psychological resilience (Shin, Taylor and Seo, 2012). Increased psychological resilience plays a role in the relationship between positive emotional experiences and increased life satisfaction (Cohn, Fredrickson, Brown, Mikels and Conway, 2009).

Life satisfaction, which is thought to increase psychological resilience, is one of the important concepts of positive psychology (Huang, Han, Sun, Zhang and Li, 2019; Proctor, Linley and Maltby, 2009). Life satisfaction is almost always a component of quality of individual life definitions and assessments, even when the individual's life quality includes objective living standards and functional abilities (Bailey, Eng, Frisch and Snyder, 2007). In general, evaluating many areas of life and what one has and what s/he wants to have, comparing her/his dreams and desires are related to the concept of "life satisfaction" (Erdinc, 2018). The life satisfaction levels of people who are more successful in regulating and controlling their emotions in terms of experiences also differ significantly (Bakan and Guler, 2017). In studies supporting the argument that personality plays a role in determining life satisfaction, psychological resilience has been found to be associated with life satisfaction (Sousa and Lyubomirsky, 2001).

When the relevant literature is considered, it is understood that it is important to examine the concept of psychological resilience with different variables. Accordingly, the aim of this study is to examine the psychological resilience of teacher candidates according to their sense of humor and life satisfaction.

## Method

### **Research Model**

In this study, correlational research model was used to examine the relationship between psychological resilience, humor and life satisfaction. Correlational research model is used to determine the relationships between variables (Shaughnessy, Zechmeister and Zechmeister, 2012). The dependent variable of this research is psychological resilience and independent variables are humor and life satisfaction.

### **Study group**

The study group of this research consists of 427 prospective teachers in total, 318 females (74.5%) and 109 males (25.5%), studying at a university in Central Anatolia. The ages of the participants vary between 18-27 and the average age is 22.

### **Data Collection Tools**

**The Resilience Scale for Adults:** The adaptation of the scale (RSA) to Turkish, developed by Friborg, Hjemdal, Rosenvinge and Martinussen, (2003), was made by Basim and Cetin (2011). The scale has 33 items. The scale is a 5-point Likert type. As the scores increase, psychological resilience increases. Confirmatory factor analysis results of the scale were  $\chi^2 = 1104$ ,  $df = 480$ ,  $\chi^2 / df = 2,3$ , RMSEA = 0,055; TL = 0.90; CFI = 0.91. Internal consistency coefficients ranged between .66 and .81 and test-retest reliability coefficients ranged between .68 and .81 (Basim and Cetin, 2011). The validity and reliability results of the scale seem to be appropriate. Cronbach Alpha value was found as .86 for this research.

**The Satisfaction with Life Scale:** The scale was developed by Diener, Emmons, Larsen and Griffin (1985). The original scale consists of 5 items in a 7-point Likert model. The scale was adapted to Turkish by Koker (1991). The scale, which was readapted by Baysal and Dagli (2016), has been changed as 5-point likert, considering that the 7-point likert type is not suitable for Turkish culture. Fit indices of the model are found as,  $\chi^2 / sd = 1.17$ , NFI = 0.99; NNFI = 1.00, CFI = 1.00; SRMR = 0.019 RMSEA = 0.030, GFI = 0.99, AGFI = 0.97. It seems that the model fits well. Cronbach Alpha internal consistency coefficient of the scale was found as .88.

It is seen that the scale has acceptable reliability and validity coefficients (Baysal and Dagli, 2016). Cronbach Alpha value was found as .81 for this research.

**The Multidimensional Sense of Humor Scale:** The scale (MSHS) was developed by Thorson and Powell (1993). It was adapted to Turkish by Aslan, Alparslan, Evlice, Aslan and Cenkseven, (1999), and an update work was carried out by Ozdogru (2018). The scale consists of 24 items. It is a 4-point Likert type. The scale, which consists of 4 sub-dimensions, is also evaluated over the total score. Varimax rotation was used for the validity of the scale, and it was determined that 4 factors explained 55% of the total variance (Ozdogru, 2018). As the score obtained from the scale increases, the general sense of humor increases. The Cronbach Alpha value of the total score of the scale was found as .89. Cronbach Alpha value was found as .89 for this study.

The data collection process was carried out in the 2020-2021 academic year. The application of the research was carried out by the students in the classrooms. The participants were informed about the purpose of the research and the scales. It was stated to the participants that only volunteers could participate in the research and stop filling out the scale form at any time. The application took approximately 30 minutes.

**Data Analysis**

SPSS 20.00 package program was used in the statistical analysis of the data. In the research, descriptive statistics were used to get general information about variables and research group; independent samples t-test to examine whether the level of psychological resilience differs according to gender variable; and Pearson Moments Product Correlation Coefficient and hierarchical regression analysis methods to examine the relationships between variables.

**RESULTS**

**Table 1.** Descriptive Findings Related to the Resilience Scale for Adults

Descriptive Findings				
	$\bar{X}$	Sd	Skewness	Kurtosis
<b>RSA</b>	123.98	16.84	-.120	-.153
<b>Humor</b>	64.76	13.60	-.361	-.043
<b>Life Satisfaction</b>	15.04	3.38	3.075	-.001

33 data that were found to be missing and outliers in the study were excluded from the study. Mahalanobis Distance, Cook's Distance Leverage values were used to extract the outlier. Mahalanobis Distance, Cook's Distance and Leverage values are used to determine the outlier (Kannan and Manoj, 2015). As it can be seen in Table 1, it can be accepted that the scales to be used in the research have normal distribution since the value of skewness and kurtosis is between  $\pm 1.0$ . If the skewness and kurtosis values of the variables are between  $\pm 1.0$ , the distribution can be assumed to be normal (George and Mallery, 2019).

**Table 2.** Investigation of Psychological Resilience by Gender Variable

Gender	$\bar{X}$	Sdt	p	$\eta^2$
Females	318	125.21	16.92	2,794 .010 * .029
Males	109	120.40	16.14	
p <.05				

When Table 2 is examined, the psychological resilience score averages of female teacher candidates ( $\bar{X} = 125.21$ ) are significantly higher than that of male teacher candidates ( $\bar{X} = 120.40$ ).

**Table 3.** Correlations of variables

Variables PR	SH	LS
1. Psychological Resilience	-.287 **	.421 **
2. Sense of humor	-	.068
3. Life Satisfaction	-	

\*\* p <.01

When Table 3 is examined, it is seen that there is a positive relationship between psychological resilience and sense of humor ( $r = .28, p <.01$ ) and life satisfaction ( $r = .421, p <.01$ ).

**Table 4.** Hierarchical Regression Analysis Findings Regarding Prediction of Psychological Resilience

Model	Variables	BSE	β	t	R <sup>2</sup>	ΔR <sup>2</sup>	change	Tolerance	VIF
1	Constant	96.169		2.998					
	Life Satisfaction	1.849	.193	.421	9.576	***	1.000	1.000	
2	Constant	76.560		4.303					
	Life Satisfaction	1.771	.186	.404	9.537	***	.995	1.005	
	Humor	.321	.052	.259	6.128	***	.995	1.005	

Dependent variable: Psychological Resilience \*\*\* p <.001 DW = 2.111  
 Model-1: R = .421, R<sup>2</sup> = .177, ΔR<sup>2</sup> = .176, F<sub>(1-425)</sub> = 91.704, p <.001  
 Model-2: R = .494 R<sup>2</sup> = .244, ΔR<sup>2</sup> = .241, F<sub>(2-424)</sub> = 68.568, p <.001  
 Model 1. Predictors: Life Satisfaction  
 Model 2. Predictors: Life Satisfaction, Humor

To make the regression analysis, it is necessary to provide some postulations. If the tolerance value is greater than .20 and VIF is less than 5, it is an indication that there is no multicollinearity problem (Gaur and Gaur, 2006). As seen in Table 4, Tolerance and VIF values are in the expected range. Another postulation is that Durbin Watson value is between 1.5 and 2.5 as an indication that there is no autocorrelation (Ho, 2016). In this study, the value of Durbin Watson is acceptable as it is found to be 2.111.

As seen in Table 4, in the hierarchical regression analysis, the life satisfaction scale was entered into the analysis in the first block. In the second block, the Multidimensional Sense of Humor Scale was added. As a result of the analysis, the Satisfaction with Life Scale in the first block predicted the Resilience Scale for Adults significantly ( $\beta = .42, R = .421, R^2 = .177, \Delta R^2 = .176, F_{(1-425)} = 91.704, p <.001$ ). Life Satisfaction explains about 18% of the total variance related to Psychological Resilience. In the second block, the Multidimensional Sense of Humor Scale was added. Independent variables in block 2 predicted Psychological Resilience significantly ( $R = .494 R^2 = .244, \Delta R^2 = .241, F_{(2-424)} = 68.568, p <.001$ ). The strongest predictor variable is Life Satisfaction ( $\beta = .40$ ). Then comes Humor ( $\beta = .25$ ). Independent variables explain approximately 24% of the total variance related to Psychological Resilience.

### Discussion, Conclusion and Suggestions

In this study, it was found that psychological resilience according to gender was found to differ significantly in favor of females. Some studies also support this finding (Yaprak, Guclu, Ayyildiz Durhan, 2018; Durmus and Okanlı, 2018; Kilicand Alver, 2017; Koc-Yildirim, Yildirim,

Otrar and Sirin; 2015; Gungormis, Okanli and Kocabeyoglu, 2015; Newsome, Vaske, Gehring and Boisvert, 2015; Bozgeyikli and Sat, 2014, Sheard, 2009;). While some studies reveal that psychological resilience shows a significant difference in favor of males (Tasgin, Bozgeyikli and Bogazliyan, 2017; Kaur, 2011), there are also research results showing that psychological resilience does not differ significantly by gender (Ak, 2019; Karmalkar and Vaidya, 2018; Aydin and Egemberdiyeva, 2018; Bektas and Ozben, 2016; Sabouripour and Roslan, 2015; Aydogdu, 2013; Ulker-Tumluand Receptoglu, 2013; Sezgin, 2012). There has not been a common conclusion about the effect of gender on psychological resilience in the literature. This may be due to the fact that gender differences need to be explained not only from the perspectives of maturation or biological development, but also from the cultural perspective (Limura andTaku, 2018).

When the relationship between psychological resilience and sense of humor was examined, a statistically significant positive relationship was found. In addition, humor is a significant predictor of psychological resilience. In the research conducted by Karlyk-Cwik (2016), supportive results have been reached which state that as the sense of humor increases, psychological resilience also increases. In some studies, significant positive relationships were found between humor styles and resilience (Bhattacharyya, Jena and Pradhan, 2019; Cann and Collette; 2014). Humor is suggested as a tool that can be used to strengthen psychological resilience (Wijewardena, Hartel, and Samaratunge, 2010). Resilience is not only managing and maintaining a negative process, but is also characterized with a positive response or development as a result of the event (Hughes, 2008). Therefore, it can be thought that individuals increase their psychological resilience by using humor. It can be thought that this effect of humor, which is one of the sources of positive emotional experiences, on psychological resilience arises from the positive relationship between psychological resilience and having positive emotional experiences (Papousek et al., 2019; Judd, 2016).

Another finding of the study is that there is a positive relationship between psychological resilience and life satisfaction. In addition, life satisfaction is a significant predictor of psychological resilience. Similarly, in a study conducted by Liu, Wang, and Lu (2013), a significant positive relationship was found between psychological resilience and life satisfaction of undergraduate students. In another study, a significant positive relationship was found between the life satisfaction and psychological resilience of older individuals (Zheng, Huangand Fu; 2020). In a study conducted on adolescents, a significant positive relationship was found between adolescents' life satisfaction and psychological resilience (Ramos-Diaz, Rodriguez-Fernandez, Axpeand Ferrara, 2019). There are also studies in which life satisfaction predicts psychological resilience (Yakici and Tras, 2018; Sahin-Baltaci and Karatas, 2015; Altundag and Bulut, 2014). When the literature is examined, it is seen that there are studies supporting the finding that life satisfaction increases as psychological resilience increases (Zhang, Yu, Zhang and Zhou, 2017; Celik, Sanberk and Deveci, 2017; Tepeli-Temiz, 2017; Shi, Wang, Bian and Wang, 2015; Rani and Midha, 2014; Achour, and Nor 2014; Ulker-Tumlu and Receptoglu, 2013; Liu, Wang and Li, 2012; Limonero, Tomas-Sabado, Fernandez-Castro, Gomez-Romero and Ardilla-Herrero, 2012). In a study conducted by Kong, Wang, Huand Liu, (2015), it is emphasized that life satisfaction and psychological resilience are related, and there are neural substrates that link psychological resilience and life satisfaction.

### Limitations

This research contains some limitations. Humor is a concept with different types (Kim, 2019; Evans and Steptoe-Warren, 2018). In this research, only general sense of humor was studied. This situation is considered to be one of the limitations of the research. Psychological resilience is a concept influenced by culture (Graber, Pichon and Carabine, 2015). The study group of this research consists of teacher candidates studying in a city in Central Anatolia. In this respect, it can be thought that the study group is one of the factors that cause the limitation of the research.

### Recommendations

The study group of this research consists of teacher candidates who continue their education at a university in Central Anatolia Region. It is thought that the repetition of the research with different age groups and cultures will increase the generalizability. In this study, females' psychological resilience was found higher than that of males. Learning about the roles and duties of genders is important for psychological resilience (Smyth and Sweetman, 2015). In future researches, the effect of not only gender but also gender roles on psychological resilience can be investigated.

In this study, a significant relationship was found between sense of humor and psychological resilience. Evidence for the effectiveness of humor-based positive psychology interventions is growing (Wellenzohn, Proyer and Ruch, 2018). For this reason, individual and group counseling service based on humor can be provided to increase the psychological resilience of teacher candidates.

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