



## The Investigation on Physical Education Teacher Candidate's Resilience, Tenacity and Motivation Levels

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### Abstract

The main purpose of this study is to examine possible relationships between resilience, tenacity and motivation of physical education teacher candidates. In addition, resilience, tenacity and motivation levels were examined according to class and gender levels. Participants of the study are 154 PE students in Ağrı province. There are 50 female participants and 104 male students. The Resilience Scale adapted to Turkish by Sarıçam *et al.* (2012). The Tenacity Scale-Short Form adapted to Turkish by Sarıçam *et al.* (2016) Stability Scale and Personal Information Form were used. To analyze the data, t test, ANOVA, Pearson moment product correlation analysis and multiple regression analysis were used. 99%  $p < .01$  was taken as confidence interval in the study. According to research findings, there are statistically significant relationships in positive direction among the resilience, tenacity and motivation in the candidates of physical education teachers. When the resilience increases, tenacity and motivation levels also increase. According to gender and class level, resilience, tenacity and motivational stability do not differ statistically. The study can be expanded by adding different sections and classes.

**Keywords:** Physical education, Resilience, Tenacity and motivation.

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## 1. Introduction

Knowledge, skills, competences and attitudes are needed in the cognitive, emotional and dynamic areas in order to be able to produce in the teaching profession as it is in every profession. These characteristics can also be taken within the scope of individual responsibilities that the individual acquires from the other side at the point of personal development while trying to acquire them together with the courses taken during undergraduate education. Teachers, like every profession, want to accommodate qualities that can make them strong at the point of their work. At the beginning of these properties is the resilience.

Resilience, is a rapid recovery capacity and tendency despite of the negative life experiences and stressors encountered, Sariçam *et al.* (2012); Sariçam and Yetim (2016). According to Rutter (2006) achieving strong output in risk and stress factors is reducing vulnerability to surrounding challenges and obstacles. In another definition, it is a strong fit against the changes that individuals may face in the face of unfavorable situations and the changes that may occur in their lives (Karairmak, 2006). Resilience that manifests itself in the form of continuous mood, adaptation, internal control, sense of humor, Masten (1986); Karairmak (2006) is of great importance in terms of teaching profession, which is called art of human reproduction. Physical education and sports teacher candidates are considered to be a feature that robustly completes the state of being physically solid.

One is a powerful character and another is a tenacity. In other words, tenacity is one of the signs of character power. Individuals with high self-control have high levels of tenacity. There are processes that require decisions in every human life. It is important to insist on reaching the result of the decision as much as the strategies used in decision making. Duckworth *et al.* (2007) call for tenacity to show the extreme desire, effort, and determination to overcome obstacles the individual will face. When it is thought that education is a long process, there is a need for teacher and teacher candidates to continue this process (Celik, 2015; Sariçam *et al.*, 2016).

Ahmet *et al.* (2015) the concept of motivation (Breen and Lindsay, 2002; Brennen, 2006; Pew, 2007; Demirel, 2009; Soyer *et al.*, 2010; Calik, 2014) which appears to be a desire to be successful in the educational process, manifests itself in two forms as internal and external motivation (Ryan and Deci, 2000) but the most effective is internal motivation (Deci and Ryan, 1985). Motivational stability is one of the goal orientated personality traits (Bostan, 2015) and is an important element for quality learning and success (Sariçam *et al.*, 2014). In our lives, we will have long-term goals and ideals in which we can have short-term goals. Motivational stability is inevitable especially for long-term goals (Sariçam, 2015).

### 1.1. The Aim and Importance of the Study

After the emergence of positive psychology in the last quarter of the twentieth century, it is inevitable that today this current reflects on different disciplines such as management, business, economy, sports and education. One of the most important aims of positive psychology is the components of goodness and how this will be achieved.) according to PERMA-Profile, which has developed to evaluate the state of well-being. These are positive emotions, attachment, relationships, meaning and success. As you can see, one of the elements that lead to the subjective well-being of the individual is success. Thus, identifying the factors that make a student successful in a sport, in a teacher, will provide significant contributions in showing the reflection of positive psychology on the educational discipline.

The main purpose of this study is to examine possible relationships between resilience, tenacity and motivation of prospective physical education teacher candidates. Furthermore, it is accepted that the study of resilience, tenacity and motivation levels according to class and gender levels may provide teacher candidates with cognitive and emotional readiness to carry out their future professions together with qualification in the dynamic area. For this reason, it will be possible to eliminate deficiencies and program deficiencies according to the research results.

## 2. Method

### 2.1. Study Group

Participants of the study are 154 PE and Sports students in Ağrı province. There are 50 female participants and 104 male students. Participants' ages ranged from 20 to 25 years, with a mean age of 21.51 (Ss = 1.22).

### 2.2. Data Collection Tools

For the purpose of data collection in the study, Resilience Scale adapted to Turkish by Sariçam *et al.* (2012) Motivational (Turkish) adapted to Turkish culture by Sariçam *et al.* (2014) Azim Scale-Short Form adapted to Turkish by Sariçam, Çelik and Oğuz Stability Scale and Personal Information Form were used.

**Resilience Scale:** Confirmatory factor analysis result 12 items 3 factorial constructs fit index values  $\chi^2 = 117.28$ ,  $sd = 47$ ,  $p = 0.00000$ ,  $RMSEA = .060$ ,  $CFI = .97$ ,  $NFI = .95$ ,  $.97$ ,  $GFI = .96$ ,  $SRMR = .049$ ). The factor loadings are in the range of .38 to .70. Cronbach alpha internal consistency reliability coefficients were found to be .66 for social support, .73 for emotional coping, .71 for situational coping, and .81 for the entire scale. Corrected item total correlations range from .38 to .57.

**Tenacity Scale-Short Form:** In the explanatory factor analysis, it was observed that the scale items were in original form under 2 factor after being found that the sample suitability and number were sufficient in the results of the KMO sample suitability coefficient .83 and the Bartlett-Sphericity test  $\chi^2 = 503,877$  ( $p < .001$ ,  $sd = 24$ ). The AFA endurance factor loadings ranged from .46 to .65 for the subscale of relevance and .67 to .80 for the vigorous insistence subscale. Furthermore, these two sub-dimensions explain 53% of the total variance. The validity factor analysis results showed that the fit index values of the 2-dimensional model of 8 items ( $\chi^2 / sd = 2.06$ ,  $p = .00011$ ,  $RMSEA = .046$ ,  $CFI = .95$ ,  $GFI = .94$ ,  $AGFI = .93$ ,  $SRMR = .047$ ); factor loadings ranged from .42 to .77. In the similar scale validity study, the relationship between  $r = .68$   $p < .01$  was found between Motivational Stability Scale and Short Stability Scale. Internal consistency: The Cronbach alpha internal consistency reliability coefficients were calculated as .83 for the whole scale, .80 for the interest coherence subscale, and .71 for the vigor persistence

subscale. The test re-test correlation coefficient was calculated as .86 with 64 people in the same study group with 21 days intervals.

**Motivational Stability Scale:** The fit index values were found ( $\chi^2 = 141.85$ ,  $sd = 60$ ,  $RMSEA = .058$ ,  $CFI = .85$ ,  $GFI = .95$ ,  $AGFI = .92$ ,  $SRMR = .057$ ) for the DFA result three-dimensional model applied for construct validity of the Motivational Stability Scale. The factor loadings of the scale ranged from .30 to .61. The Cronbach Alpha internal consistency reliability coefficient of the Motivational Stability Scale was 0.69 for the overall scale, .72 for the long-term goals follow-up subscale, .70 for the current targets follow-up subscale, and .71 for the unreachable goals repeatability subscale. In addition, when the scale was re-administered to 73 subjects from the same study group after 26 days for a test-retest reliability scale, the correlation coefficient between the two applications was  $r = .66$  for the whole scale,  $r = .69$  for the long-term targets follow-up sub-dimension,  $r = .70$  for unreachable targets and  $r = .68$  for replicate sub-dimensions.

**2.2. Process**

In data obtained from 3 scales obtained from Ağrı İbrahim Çeçen University Physical Education and Sports School students, 19 data which distorted the normal distribution were taken and Pearson moments multiplication correlation analysis, multiple regression analysis, t test and ANOVA test were used from parametric tests to analyze the data obtained from 154 participants. 99%  $p < .01$  was taken as confidence interval in the study.

**3. Findings**

Findings were obtained in three different chapters and tried to be explained in tabular form as findings related to sex, findings related to class level and correlation findings.

**3.1. Findings Related to Sex**

Independent samples t test was used to determine whether the resilience, tenacity and motivation levels of the candidates for physical education teacher candidates differ according to the sex, and the findings are shown in Table 1.

**Table-1.** Results of t-test on resilience, tenacity and motivation levels of candidates for gender-related physical education teachers

Variable	Gender	N	$\bar{X}$	SS	t	p
Resilience	Female	50	43,72	6,94	-72	.47
	Male	104	44,65	8,41		
Motivation	Female	50	48,48	9,39	1.61	.11
	Male	104	45,96	8,21		
Tenacity	Female	50	25,76	3,47	1.45	.15
	Male	104	26,67	3,87		

Source: Data have obtained from authors' field study.

As seen in Table 1, the average of the resilience scores of women (= 43.72) is lower than the average of the resilience scores of men (= 44.65); this difference was not statistically significant ( $t = -.72$ ,  $p > .05$ ). In terms of motivation levels, the average score of the women (= 48.48) and the motivation of the men were found to be 3887.50, but this was not statistically significant ( $t = 1.61$ ,  $p > .05$ ) ( $T = 1.45$ ,  $p > .05$ ), although this score was found to be higher than that of women (26.67). As a result, resilience, tenacity and motivation levels of physical education teacher candidates do not differ statistically according to sex.

**3.2. Findings Related to Class Level**

One-way ANOVA was applied to determine whether the resilience, tenacity and motivation levels of the physical education teacher candidates differ according to the class level and the findings are shown in Table 2.

**Table-2.** One-way ANOVA results of comparison of resilience, tenacity and motivation levels of physical education teacher candidates by class level

Variable		Sum of Square	sd	Average of squares	F	p
resilience	Inter-group	33,786	3	11,262	,176	,913
	Intra-group	9219,322	144	64,023		
	Total	9253,108	147			
Mot.	Inter-group	21,568	3	7,189	,094	,963
	Intra-group	11041,135	144	76,675		
	Total	11062,703	147			
Tenacity	Inter-group	43,482	3	14,494	1,030	,381
	Intra-group	2026,815	144	14,075		
	Total	2070,297	147			

Source: Data have obtained from authors' field study.

As seen in Table 2, the resilience scores of the physical education teacher candidates do not differ statistically according to the grade level ( $F(3,147) = .18$ ,  $p > .05$ ). Stability scores did not differ statistically according to class level ( $F(3,147) = 1.03$ ,  $p > .05$ ). The motivation stability levels did not differ statistically according to the grade level ( $F(3,147) = 1.03$ ,  $p > .05$ ).

**3.3. Correlation Findings**

Pearson moment product correlation analysis was applied to determine whether there was a relationship between resilience, tenacity and motivation levels in the candidates for physical education teachers and the findings are shown in Table 3.

**Table-3.** Results of Pearson Correlation Tests Relating Resilience, Tenacity and Motivation Levels

Variable	1	2	3	$\bar{X}$	Ss	$\alpha$
1.Resilience	-	.69**	.22**	44.34	7.93	.84
2.Motivation Stability		-	.31**	46.81	8.67	.76
3.Tenacity			-	26.36	3.75	.88

\*\*p&lt;.01

There is a statistically significant positive correlation between resilience and motivational stability at the  $p < .01$  significance level ( $r = .61$ ). There was a statistically significant positive correlation between resilience and tenacity at  $p < .01$  significance level ( $r = .22$ ). There was a statistically significant positive correlation between motivation and tenacity at the  $p < .01$  significance level ( $r = .31$ ).

#### 4. Conclusion and Evaluation

The main reason for this study was to determine the relationship between resilience, tenacity and motivational stability levels in physical education teacher candidates. According to research findings, tenacity level increases when resilience is increased. Celik *et al.* (2018) found that increasing their beliefs about the strengths of individuals increases their resilience and their psychological stability increases their tenacity. Celik and Sariçam (2018) found that their positive thinking skills increased little by little. So the above studies overlap with the study findings.

In another finding of the study, a positive relationship was found between resilience and motivational stability. In other words, when the resilience is increased, the effort and insistence of the individual in achieving success are also increasing. Sariçam and Kurgil (2013) stated that as the well-being of teachers increases, their motivational commitment increases. Conscious awareness plays an important role in the formation of the psychological integrity that comes from the overcoming of difficulties (Keye and Pidgeon, 2013). When individuals increase their conscious awareness, the motivation to achieve their goals is also increasing (Raphiphatthana *et al.*, 2018). These current findings support this research finding.

In another finding of the study, statistically significant relationship was found between tenacity and motivational stability. Similarly, Reraki *et al.* (2015) found that the motivational commitment of determined people is high. Although perseverance and motivational stability seem to be internal grit concepts, one is considered as a dimension of temperament and personality and the other is known as part of the belief system (Park and Peterson, 2006; Lounsbury *et al.*, 2009; Linley *et al.*, 2010).

Teacher candidates are able to graduate after passing through various obstacles and passing through a long education and training process. This situation makes it necessary for the teacher candidates to make a constant struggle for life. It is possible to achieve resilience by motivating them to be successful through the determination and motivation they have in this struggle. The research findings also show that there is a positive relationship between the levels of resilience, tenacity and motivational stability of the prospective teachers. This will enable the training of more effective teachers with the programs to be made at the point of bringing the psychological stability to the prospective teachers.

In order to generalize the research results, studies can be carried out by including university students from different departments

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