

Physical Education, Art and Music Pre-Service Teachers' Life Satisfaction and Automatic Negative Thought Perception

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Abstract

The purpose of this study is to examine the life satisfaction and automatic negative thoughts perception of physical education, art and music pre-service teachers. Students (n=387) who training in physical education and sport, art work and music departments participated in this study. Results showed that physical education teacher candidates' life satisfaction scores were significantly higher than those of art and music teacher candidates. On the other hand, the automatic negative thought perceptions of the art and music pre-service teachers were found to be higher than the physical education teacher candidates. Life satisfaction levels of the physical education pre-service teachers are found to be high, negative thought levels were low. Current findings emphasize the importance of participating in sports activities in order to increase the life satisfaction levels of pre-service teachers and decrease their negative automatic thinking levels.

Keywords: Student, Teacher Candidate, Negative Feeling, Happiness, Subjective Well-Being

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INTRODUCTION

University period is a critical period when young people step from adolescence to adulthood, causing a series of significant changes in their lives (Hiçdurmaz, Inci & Karahan, 2017). During this period, young people who leave family environment with which they are familiar become more open to many external factors (Mazıcıoğlu & Öztürk, 2003). In addition to making new friends in this period, young people (Mazıcıoğlu & Öztürk, 2003) who have started to make their own free choices are faced with many problems such as habituation, budget and time management, financial problems, fear of loneliness and future business anxiety (Burriss, Brechting, Salsman & Carlson, 2009; Cashmore, Green & Scott, 2010; Patel, Flisher, Hetrick & McGorry, 2007). Young people interacting with people from different cultures in the new social environment have to meet their families' expectations in an effort to manage their own budgets and fulfill their academic responsibilities. In addition, young people who have to face many vital complexities in physical, cognitive, social and emotional terms (Tümekaya, Çelik & Aybek, 2011) have to find solutions to the problems on their own. Young people are often negatively affected and may have negative feelings and thoughts due to extreme stress.

Automatic negative thoughts emerge quickly when confronted with stressful life events that disturb the person and are cognitions that the person accepts as accurate without any pre-assessment (Beck & Newman, 2005; Free, 2007). Automatic thoughts lead to negative evaluations of the person himself, the outside world and the future (Beck, 1964). Automatic negative thoughts are a way of perceiving, understanding and interpreting the social stimuli that affect the psychological power and the social skills of the individuals, which enable them to impose on people and at the same time overcome the problems (Ellis, Wolfe & Moseley, 1966). During the demonstration of these social skills, positive or automatic negative thoughts can affect individuals' emotions, behaviors, and life satisfaction (Tümekaya et al. 2011). Negative thoughts generally show these effects by preventing individuals' life satisfaction and effective participation in society (Ellis et al. 1966).

Life satisfaction is a way of evaluating one's own life, satisfaction or dissatisfaction according to the criteria one chooses (Diener, Emmons, Larsen & Griffin, 1985; Schimmack, Radhakrishnan, Oishi, Dzokoto & Ahadi, 2002). In other words, life satisfaction consists of cognitive evaluations and judgments about life in general, which arise from the comparison of the individual's expectations from life and the real situation in which one lives (Suldo & Huebner, 2006). Life satisfaction also includes the emotional reactions of individuals to life in school, at work and in leisure time. Therefore, life satisfaction provides important information about subjective well-being and quality of life of individuals (Vara, 1999).

Physical education, art and music teachers' candidates continuously participate in various social, cultural and sports activities such as exhibitions, concerts, competitions, music programs and sports competitions due to the characteristics of their departments throughout their education. On this occasion, they find the opportunity to visit the touristic places of the regions they visit. Therefore, they may be more advantageous than students of other departments in coping with the difficulties of life. For, findings suggest that artistic and cultural activities (Kapıkıran & Yağcı, 2012) and participation in physical activity (Gökçe, 2008) influence positively life satisfaction.

The relevant literature examined, it is obvious that there is a good many studies evaluating separately the concepts, life satisfaction of the university students (Ardahan, 2014; Chow, 2005; Dilmaç & Ekşi, 2008; Gökçe, 2008; Işık & Koçak, 2014; Kiralp & Bolkan, 2016; Özaydın, 2011; Serin & Aydınoglu, 2011) and automatic negative thoughts (Aysan & Bozkurt, 2000; Hiçdurmaz et al. 2017; Serin & Aydınoglu, 2011; Şirin & İzgar, 2013; Tümekaya & Iflazoğlu, 2000) while very few researches (Aysan & Bozkurt, 2004; Serin & Aydınoglu, 2011) have been reported to evaluate automatic negative thoughts and life satisfaction together. In addition, there are studies reporting a decrease in automatic negative thought and its avoidance (Aysan & Bozkurt, 2004) as teachers' life satisfaction increases and suggests that the pre-service teachers have low life satisfaction and higher depression scores (Gündoğar, Sallan, Gül, Ersin & Diljin, 2007), who stated that they chose the department they study in in order not to be unemployed.

Aim of the Study

There are many studies that investigated physical education (Ardahan 2014; Dinç, Dikici & Özdemir, 2019), art (Doğan, 2012) and music pre-service teachers' (Özaydın, 2011) negative emotions and life satisfaction separately. Considering the fact that participation in artistic and cultural activities (Kapıkıran, Ş., & Yağcı, U. (2012)) and physical activity (Rodriquez (2006) as cited by Gökçe, H. 2008) positively affects life satisfaction, it may be more appropriate to evaluate the life satisfaction and automatic negative thought perceptions of the physical education, art and music teacher candidates together. Because, while pre-service teachers studying in art and music teaching departments perform more artistic activities such as painting and individual instrument training as per the curriculum, pre-service physical education teachers mostly perform physical and sportive activities. For this reason it is thought that determining and comparing the life satisfaction and automatic negative thought perceptions of pre-service teachers who do different kinds of activities, including artistic and sportive, will make an important contribution to the literature.

The aim of this study is to investigate the life satisfaction and automatic negative thoughts perception of physical education, art and music pre-service teachers.

MATERIAL AND METHOD

Research Design

The research was designed as descriptive survey model. In this model, the case, which is the subject of the research, is observed without changing the present situation as the individual or object exists within its own conditions (Büyüköztürk, Çakmak, Akgün, Karadeniz & Demirel, 2019; Karasar, 2012).

Participants

The study was carried out in 2018-2019 academic year with pre-service teachers studying in the department of Physical Education and Sports Education at the Faculty of Education, Art and Music Education programs in the department of Fine Arts Education and Physical Education Department of Erzincan Binali Yıldırım University School of Physical Education and Sports. The research group consists of the students selected from the students studying in these departments by convenience sampling, non-probability sampling method. A total of 387 pre-services teachers, 187 women ($\bar{x}_{age} = 21.51 \pm 3.08$ years) and 200 men ($\bar{x}_{age} = 22.5 \pm 3.19$ years) voluntarily participated in the research.

Table 1. Demographic Characteristics of Pre-services Teachers Participating in the Research

Tables	Groups	Frequency (n)	Percentage (%)
Gender	Female	187	48.3
	Male	200	51.7
	Total	387	100.0
Department	Physical Education	147	38.0
	Art Education	94	24.3
	Music Education	146	37.7
	Total	387	100.0

When Table 1 is examined, it is seen that 48.3% (187) of the teacher candidates are female and 51.7% (200) are male. Pre-service teachers' participating in the study, 38% (147) are studying in Physical Education, 24.3% (94) Art and 37.7% (146) Music Departments.

Data Collection Tools

To collect the data “Life Satisfaction Questionnaire” and “Revised Automatic Thought Questionnaire (ATQ-R)” are used.

Life Satisfaction Questionnaire (LSQ)

Life satisfaction levels of individuals were evaluated by means of "Life Satisfaction Questionnaire" developed by Diener et al. (1985) and adapted to Turkish by Yetim (1993). The scale consists of 5 items and is prepared in 7-point Likert type. The highest score that can be obtained from the questionnaire is 35. In this study, Cronbach Alpha internal consistency coefficient calculated on the collected data was determined as 0.85.

Revised Automatic Thought Questionnaire (ATQ-R)

Automatic negative thoughts of the individuals were determined by Automatic Thought Questionnaire- Revised developed by Kendall, Howard and Hays (1989). The first version of the questionnaire, Automatic Thoughts Questionnaire ATQ-30, was developed by Hollon and Kendall (1980). The validity and reliability of the first questionnaire consisting of thirty items was realized by Aydin and Aydin (1990). The number of items of the Automatic Thoughts Questionnaire, which was developed by adding 10 positive sentences to the ATQ-30 was increased to 40. The validity and reliability of the ATQ-R in Turkish used in this study was conducted by Bozkurt (1998). In the evaluation of the questionnaire, the numerical values of the negative expressions were added and the numerical values of the 10 positive expressions in the questionnaire were reversed and scored. As a result, the sum of the scores obtained from positive and negative items gave us the total score. The lowest and highest scores obtained from the questionnaire are 40 and 200, respectively. A high score indicates that automatic negative thoughts associated with depression are high. In the questionnaire, 10 positive expressions scored in reverse are questions 3, 7, 10, 13, 16, 20, 24, 28, 32 and 37. In the reliability test of the questionnaire conducted with high school students, Cronbach Alpha internal consistency coefficient was found 0.92. The internal consistency coefficient of Cronbach Alpha calculated based on the data collected in this study is 0.95. The high scores of the questionnaire indicate high level of negative thought (Bozkurt, 1998; Hiçdurmaz, Inci & Karahan, 2017).

Procedure

Prior to the study, the participants were informed about the aims of the research, the confidentiality of the answers and all the procedures related to the research. In addition, it was explained to the participants that they have the freedom to stop participating in the research at any time. A signed informed consent form was obtained from the participants indicating that they agreed to participate in the study of their own free volition. This study was conducted in accordance with the principles specified in the Turkish Psychological Association Ethical Regulation.

Data Analysis

IBM SPSS 22 package program was used for data analysis (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.). Descriptive statistics of continuous variables were summarized and mean and standard deviation (SD) values were also given. The analysis of pre-service teachers' automatic negative thoughts and life satisfaction scores according to gender and department variables was examined with the MANOVA test. Before starting to analyze the data, the assumptions of normality, homogeneity of variances and covariance matrices of MANOVA were examined. Univariate normality and multiple normality assumptions were met for the groups. Equality of covariance matrices was examined with Box's M statistics and homogeneity of variances was examined with Levene's Test. The results of these analyzes are given in Table 2 for each variable.

Table 2. Analysis results for assumptions (MANOVA)

	Levene's Test of Equality of Error Variances				Box's M Testi				
	F	df1	df2	p	Box's M	F	df1	df2	p
Life Satisfaction	0.878	5	381	0.496					
Automatic Negative Thoughts	1.378	5	381	0.232	17.994	1.182	15	327803.752	0.277

When Levene's Test and Box's M statistics for assumptions were examined, it was found that error variances and covariance matrices were equal for each of the dependent variables ($p > .05$). Wilk's Lambda value was interpreted to determine the common effect and the significance level was determined as .05 in all analyzes. When the difference between the groups was significant, Tukey test was used as the mean significance test according to the variance homogeneity.

To find out if the data are to ensure the assumptions of parametric tests, Skewness and Kurtosis (normal distribution of data) values and Levene (equality of variance) test results are examined (Büyüköztürk, 2008). In order to determine the reliability of the questionnaire, Cronbach Alpha coefficient was calculated (Table 3).

Table 3. Distribution of questionnaire scores

	Item	Mean	Sd	Skewness	Kurtosis	Min.	Max.	Cronbach's α
LSQ	5	4.15	1.42	-0.06	-0.64	1.00	7.00	0.852
ATQ- R	40	2.22	0.69	0.78	1.06	1.00	5.00	0.950

The arithmetic mean of the total scores of the participants in the study obtained from Life Satisfaction Questionnaire (LSQ) was 4.15 and the standard deviation was 1.42, whereas the arithmetic mean of the total scores obtained from the Revised Automatic Thoughts Questionnaire (ATQ-R) was 2.22 and the standard deviation was 0.69. When skewness (LSQ = -0.06, ATQ-R = 0.78) and kurtosis (LSQ = -0.64, ATQ-R = 1.06) values of the scales were examined, it is obvious that the data show normal distribution (Kline 2005). Reliability analysis results show that the reliability of both scales is high (LSQ Cronbach's α : 0.852 and ATQ-R Cronbach's α : 0.950).

RESULTS

The comparison of pre-service teachers' automatic negative thoughts and life satisfaction scores according to gender and department variables is presented in Table 4.

Table 4. Pre-service teachers' life satisfaction and automatic negative thought perceptions in terms of gender and department (MANOVA)

Effect	λ	F	Hypothesis df	Error df	p	η^2
Intercept	0.027	6855.021	2	380	0.000	0.973
Gender	0.99	0.261	2	380	0.770	0.001
Department	0.922	7.856	4	760	0.000	0.040
Gender*Department	0.955	4.380	4	760	0.002	0.023

According to the results of the MANOVA analysis; It was observed that the gender variable did not have a significant effect on the automatic negative thoughts and life satisfaction scores of teacher candidates ($\lambda=0.99$, $F(2)= 0.261$; $p>.05$). However, it was determined that the department variable had a significant effect on automatic negative thoughts and life satisfaction scores ($\lambda=0.92$, $F(4)=7.85$, $p<.05$). In addition, it was observed that the joint effects of gender and department variables on automatic negative thoughts and life satisfaction scores were significant ($\lambda=0.95$, $F(4)=4.38$, $p<0.05$). When partial eta square values are examined, it is seen that the value related to gender is insignificant ($\eta^2 =0.001$) and weak according to Wilk's lambda test. The value for the

department was determined to be weak ($\eta^2 = 0.04$) and significant. In addition, the value for the joint effect of gender and department variables ($\eta^2 = 0.023$) was found to be weak.

Table 5 presents the descriptive results according to the gender variable of the pre-service teachers' scores from the LSQ and ATQ-R.

Table 5. Descriptive statistics of pre-service teachers' life satisfaction and automatic negative thought perceptions in terms of gender

	Female (n=187)		Male (n=200)	
	Mean	Sd	Mean	Sd
LSQ	4.12	1.44	4.17	1.40
ATQ-R	2.24	0.71	2.20	0.67

The arithmetic mean of the total scores of the female pre-service teachers in the study obtained from the LSQ was 4.12 and the standard deviation was 1.44, whereas the arithmetic mean of the total scores obtained from the ATQ-R was 2.24 and the standard deviation was 0.71. It is seen that the mean scores of male teacher candidates' satisfaction with life and automatic negative thoughts are quite similar to the mean scores of female teacher candidates (4.17 and 2.20, respectively).

The difference between the LSQ and ATQ-R scores of the pre-service teachers studying in the department of Physical, Art and Music Education is presented in Figure 1.

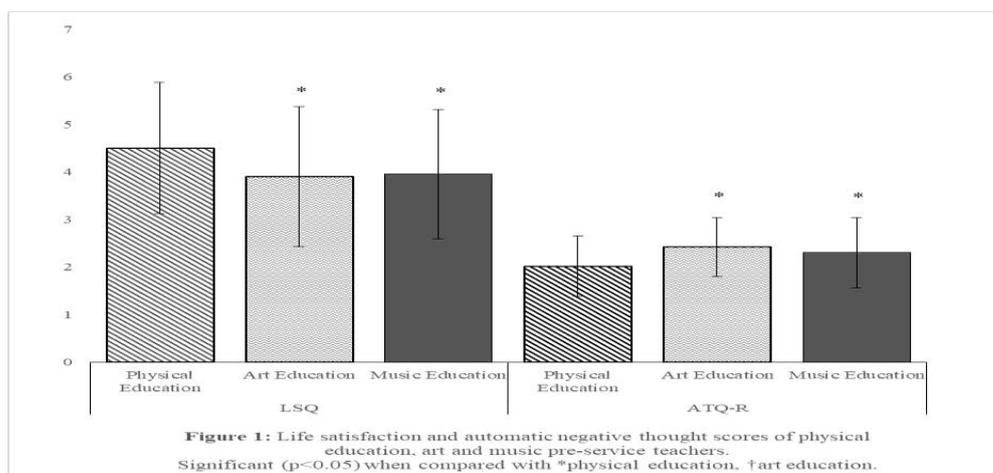


Figure 1. Life satisfaction and automatic negative thought scores of physical education, art, and music pre-service teachers

There were significant differences among LSQ and ATQ-R scores of teacher candidates studying in the Physical Education (PE), Art Education (AE) and Music Education (ME) Departments. Teacher candidates studying in the Physical Education Department had the highest perception of life satisfaction (PE vs.AE $p = 0.003$, PE vs.ME $p = 0.002$). On the other hand, no significant difference was found between the life satisfaction perceptions of teacher candidates studying in Art and Music Education Departments (AE vs.ME $p > 0.05$).

When the automatic negative thought perceptions of the teacher candidates were compared, the ATQ-R scores of the physical education teacher candidates were found to be significantly lower than the scores of the Art and Music teacher candidates (PE vs.AE $p < 0.001$, PE vs.ME $p = 0.001$). There was no significant difference between the automatic negative thought perceptions of art and music teacher candidates (AE vs. ME).

DISCUSSION

This study was carried out to determine the life satisfaction and automatic negative thoughts of physical education, art and music pre-service teachers in terms of gender and department. The findings of this study were showed that the scores of male and female teacher candidates obtained from LSQ and ATQ-R were similar.

Life satisfaction includes individuals' emotional reactions to life, and these reactions are affected by many factors, one of which is gender (Akyol, 1993; Myers & Diener, 1995; Vara, 1999). The effect of gender on life satisfaction varies. In many studies, while life satisfaction levels of women are found to be higher than men (Aydiner, 2011; Bulut & Yıldız, 2020; Dost, 2006; Gencay, 2009; Keser, 2005; Toker, 2012; Tepeli Temiz & Ulusoy Gökçek, 2020) there are studies reporting that men have higher life satisfaction than women (Altın, İlter & Gül, 2021; Gandelman & Piani, 2013; Korkut Owen, Demirbaş Çelik & Doğan, 2018; Zappulla, Pace, Cascio, Guzzo & Huebner, 2014). On the other hand, there are studies showing that life satisfaction does not differ according to gender (Chow, 2005; Çivitci, 2009; Barut, Demir, Ballıkaya & Çiftçi, 2019; Della Giusta, Jewell & Kambhampati, 2011; Gündoğar, et al, 2017; Güngör, 2011; Tümkaya et al. 2011; Yaşartürk & Bilgin , 2018). In present study, life satisfaction levels of the pre-service teachers did not differ according to gender. Because life satisfaction has a dynamic structure, it is thought why life satisfaction of physical education, art and music teacher candidates does not differ according to gender may be related to activity theory. According to this theory, happiness stems from behavior, in other words, the individual's own activity. In activity theory, if one's skill level is sufficient, he / she will achieve pleasure, love and satisfaction while performing activities. If the activity is too easy, it will cause boredom and if it is difficult and above the skill level, it will cause anxiety (Yetim, 2001). In this study, the fact that female and male teacher candidates were under similar conditions in terms of social, academic activity and taking similar responsibilities could be effective in showing similarity of life satisfaction according to gender.

In this study, the results obtained in terms of automatic negative thought from female and male teacher candidates show similarity. These results were confirmed, by Aysan and Bozkurt (2000) and Tümkaya et al. (2011) who explained that automatic negative thought of high school students did not differ according to gender. The fact that the automatic negative thoughts of pre-service teachers did not differ according to gender may be due to the increasing similarity of roles and responsibilities associated with female and male in society.

This study revealed that the physical education teacher candidates' life satisfaction is significantly higher than that of the candidates in both Music and Art Education Departments and their automatic negative thought scores are significantly lower. On the other hand, the scores of pre-service teachers studying in Art Work and Music Education Departments are similar to each other. When the literature is considered, no study has been reported in which life satisfaction levels of physical education, art and music teacher candidates jointly have been examined. However, in independent studies, physical education teacher candidates' (Ardahan, 2014), music education pre-service teachers' (Özaydın, 2011) and art education students' (Güngör, 2011) life satisfaction average scores were lower than score obtained in our study.

Art is described as a way of expressing the emotion that a person has once experienced, by connecting it with movement, sound, line, color or words in order to be able to pass on and feel the same emotion to others (as cited by Ersoy, 1983). As understood from this description of art, artistic activities appeal to people's soul and emotions. However, physical activity enables the development of complete physical, emotional, social and spiritual well-being. Regular physical activity contributes to more efficient functioning of various body systems, maintaining body weight and improving quality of life in general (Malina, 2001). All these results show that, regular physical activity brings about an increase in life satisfaction (Altın, İlter & Gül, 2021; Barut et al. 2019; Öztürk, 2020; Uğraş & Güllü, 2020). The high life satisfaction scores of physical education teacher candidates can be explained by the fact that their physical activity levels are higher than those of art and music teacher candidates.

Additionally, physical activity reduces emotional tension, depression and anxiety (Mollaoğulları & Uluç, 2019; Satman, 2018), increases serotonin level (Satman, 2018), provides good feeling (Mumcu, 2019; Satman, 2018; Uğraş & Güllü, 2020), increases psychological endurance level (Seçer & Yıldızhan Çakmak, 2020) and improves individual's tolerance of daily stress (Mumcu, 2019; Satman, 2018). Aydın and İmamoğlu (2001) in their group study conducted to improve stress coping skills stated that the stress level of the individual could be controlled by developing effective coping skills. Additionally, they was found that effective coping with stress affects individuals' cognitive processes and automatic negative thoughts positively. In this context, physical activity can be a more effective tool in coping with stress than artistic activities such as painting and music. In addition, the effect of the common interaction of gender and department on life satisfaction and automatic negative thinking was also found to be significant. It can be said that this result is due to the difference between the departments.

The results in the present study show that physical education pre-service teachers' life satisfaction level is high while automatic negative thought is low. Furthermore, music education and art education pre-service teachers' automatic negative thought and life satisfaction levels are similar. According to these findings, we can conclude that physical activity increases the life satisfaction and decreases automatic negative thoughts of individuals.

There were some limitations in this study take into consideration. One of them concerned the small sample size of research group. This research is limited to teacher candidates studying only in departments that admit students based on a talent exam at Erzincan Binali Yıldırım University. Another limitation was related to there was a lack of knowledge of stress, anxiety and physical activity levels that may be affected the life satisfaction and automatic negative thought perceptions of pre-service teachers. Therefore, in future studies, teacher candidates' life satisfaction and automatic negative thought perceptions can be examined according to their stress, anxiety and physical activity levels. In addition, physical education, art and music teacher candidates' life satisfaction and automatic negative thought perceptions can be compared with teacher candidates studying in different departments.

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