



Journal of Education and Recreation Patterns (JERP)

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To cite this article:

Çolak, M., Bilgin, U. & Küçük Kılıç, S. (2023). The relationship between leisure time participation, automatic thought and life satisfaction in pre-service teachers. *Journal of Education and Recreation Patterns (JERP)*, 4 (2), 283-302. DOI: <https://doi.org/10.53016/jerp.v4i2.148>

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* The summary of this study was presented as an oral presentation at the 4th International Recreation and Sport Management Congress (17-20 May 2023, Antalya).

The Relationship between Leisure Time Participation, Automatic Thought and Life Satisfaction in Pre-Service Teachers

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ARTICLE INFORMATION

Original Research Paper

Received 18.06. 2023

Accepted 09.09. 2023

<https://jerpatterns.com>

December, 2023

Volume: 4, No: 2

Pages: 283-302

ABSTRACT

The aim of this study is to examine pre-service teachers' leisure time participation, automatic thought and life satisfaction levels according to some variables and to determine the relationship between them. A sample of 862 (468 female, 394 male) pre-service teachers studying a state university provided responses. In the study, 'Life Satisfaction Scale' (LSS) and 'Revised Automatic Thought Questionnaire (ATQ-R)' were administered on the participants. Descriptive statistical methods, t-test, ANOVA and correlation analyses were used in the data analysis. Pre-service teachers' automatic thought perceptions were at low level, while life satisfaction perceptions were at middle level. The scores of the LSS and ATQ-R did not differ significantly according to gender, department and grade level. While the scores of ATQ-R did not differ significantly according to income and leisure time evaluation, the scores of LSS differed significantly. On the other hand, the scores of both LSS and the ATQ-R differed significantly according to the frequency of participation in recreational activities. And also, there was a negative and moderate correlation between pre-service teachers' life satisfaction and automatic thought perceptions. Results showed that the life satisfaction and automatic thought perceptions of male and female students did not change. It was determined that the participants' life satisfaction and automatic thought perceptions did not differ according to department and grade level. In addition, participants with high income and pre-service teachers who stated that they participate in social, cultural and artistic activities in leisure time had higher life satisfaction. As participation recreational activities in leisure time increased, the life satisfaction perception increased, and the perception of automatic thought decreased. In addition, as the participants' life satisfaction perceptions increased, their automatic thought perceptions also decreased.

Keywords: Automatic Thought Perception, Leisure Time, Life Satisfaction, Pre-Service Teacher



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INTRODUCTION

The university period is an important step and a critical turning point in the journey of young people to the adult business world, where radical changes occur in human life (Galaway & Hudson, 1996). In this period, young pre-service teachers gain important experiences in forming a stable identity by experiencing various roles, values and identity images in a new environment. In particular, the first year is the most critical year in terms of adaptation to university because of the many possible adaptation difficulties that may arise due to responsibilities such as negotiating with a new and complex world, developing intrinsic motivation for learning, managing time and money well, attending classes and fulfilling academic studies. When the relevant literature is reviewed, it is seen that negative structures and negative thoughts such as anxiety, depression, vulnerability to stress, anger, mood, and mental illness, which are indicators of negative adjustment related to adaptation to university life, emerge (Mattanah et al., 2004). In addition, the findings also show that there is a significant relationship between negative structures such as depression and anxiety and negative automatic thoughts (Buschmann et al., 2018; Tang et al., 2018).

Automatic negative thoughts are thoughts that come to mind unconsciously and are accepted as true by individuals who encounter disturbing stressful life events (Beck & Newman, 2005; Fenn & Byrne, 2013). Automatic negative thinking, which causes a person to have irrational beliefs and is called cognitive distortion, is basically based on Cognitive Behavioral Theory. According to this theory, an individual's behavior and emotions are affected by his/her thoughts or perceptions. It is stated that cognition is responsible for what one feels, rather than the situation and conditions one is in, and at the same time, the way a person interprets situations determines his or her emotions (Beck, 1964). In other words, automatic negative thoughts can also be defined as the individual's statements about him/herself and internal conversations with him/herself (Yavuzer & Karataş, 2017). Automatic thoughts that lead to negative evaluations about one's self, external world and future (Beck, 1964) can affect the individual's emotions, behaviors, and life satisfaction (Tümkiye et al., 2011). Studies conducted in this context show that automatic negative thoughts are an important predictor of life satisfaction in young adults (Mahmoud et al., 2015; Yavuzer & Karataş, 2017).

Life satisfaction includes cognitive evaluations and judgments about life in general, which are revealed by the comparison of the individual's real situation and expectations from life (Suldo & Huebner, 2006). In other words, the difference between "having" and "desires" determines the level of life satisfaction of the individual (Frisch, 1998). The basis of life satisfaction is based on the Quality of Life Theory proposed by Frisch (1994). According to Frisch (1998), quality of life is equal to life satisfaction. In addition, it is stated that life satisfaction can be better understood by the subjective evaluation of the individual's goals, needs and desire levels. However, the Quality of Life Theory emphasizes the quality of positive inner experience (thoughts and emotions). An individual's thoughts are very important determinants of life satisfaction because automatic thoughts affect the quality of an individual's inner experience. According to the Quality of Life Theory, emotions can reflect an individual's progress towards personal achievements, needs, and desires. Thus, life satisfaction is achieved as a result of the combination of the individual's beliefs and desires about life (Rice et al., 1992).

Individuals use leisure time activities as an important tool to increase life satisfaction (Soyer et al., 2017). Leisure time can be defined as an activity that individuals want to do, that they manage to do at a personally satisfactory level by using their talents and resources, that are carried out in their leisure time and that are done without difficulty (Stebbins, 2005). It is stated that leisure time activities, which have an important role in modern life, are equivalent to self-actualization according to Maslow's hierarchy of needs theory (Csikszentmihalyi & Kleiber, 1991). When an individual satisfies his/her need for autonomy as a result of choosing

a leisure time activity that s/he wants to participate in, this individual's life satisfaction is also positively affected (Deci & Ryan, 2000; Ryan & Deci, 2000). Thus, leisure activities, which have an important role in the development of satisfying emotions, affect not only life satisfaction but also the quality of life positively (Siegenthaler & O'Dell, 2000).

When evaluated in general, participation in leisure time activities is a dynamic that affects life satisfaction and quality, as well as automatic thought perception (Deci & Ryan, 2000; Kleiber et al., 2002; Ryan & Deci, 2000; Siegenthaler & O'Dell, 2000). In other words, there is a correlation between life satisfaction, automatic thought and leisure activities. The hot-cross bun model proposed by Greenberger and Padesky (1995) based on Cognitive Behavior Theory helps to explain the relationship between thoughts, feelings and behaviors. According to this model, just as thoughts affect emotions, emotions affect behavior and behavior affects physical symptoms. However, all variables (thoughts, emotions and behaviors) can directly affect each other. In the current study, automatic thoughts constitute the cognitive component of the hot-cross bun model, life satisfaction constitutes the emotion component, and leisure time activities constitute the behavioral component.

In line with the information given about life satisfaction, automatic negative thoughts and participation in leisure time activities, it can be said that leisure activities are an important tool in increasing individuals' life satisfaction and quality of life and developing positive automatic thoughts. When the literature on the subject is examined, it is seen that there are many studies that deal with participation in leisure activities and life satisfaction together (Ayhan & Bilge, 2020; Küçük Kılıç et al., 2016; Mutz et al., 2021; Özmaden, 2019; Rodríguez et al., 2008; Schmiedeberg & Schroder, 2017; Tercan, 2015). When the results of these studies are examined, it is seen that participation in leisure time activities increases life satisfaction and that life satisfaction and leisure satisfaction are positively related. It has been determined that there are limited studies that deal with life satisfaction and automatic negative thought perception together and examine the relationship between them (Aysan & Bozkurt, 2004; Çolak & Bilgin, 2021; Serin & Aydınoglu, 2011; Tümkiye et al., 2011). When the studies were examined, no studies were found on the relationship between leisure time participation, automatic thought and life satisfaction in pre-service teacher. In this context, it is thought that the results to be obtained from this research are especially important in terms of revealing how participation in leisure activities has an importance in increasing life satisfaction by moving away from negative automatic thoughts. Especially when it is considered in terms of university youth, it is thought that academic pressure as well as worsening living conditions will push teacher candidates into negative thoughts. In this context, it is important to determine the negative automatic thoughts and life satisfaction levels of teacher candidates who will raise the building blocks of the future, and to reveal the relationship between these concepts and leisure time activities in order to detect potential problems early. As a matter of fact, the fact that the participants are still at the candidate teacher stage creates the idea that these problems can be solved within the education triangle. On the other hand, it is important for institutions such as universities to understand the importance of leisure activities and to bring recreational areas to a sufficient and effective position. For this reason, it is thought that the results obtained from the research will contribute to the field in this regard. From this point of view, the aim of this study is to examine the levels of leisure time participation, automatic thought and life satisfaction of pre-service teacher according to some variables and to determine the relationship between them. Within the scope of this purpose, answers to the following questions were sought:

1. What is the level of automatic thought and life satisfaction perceptions of pre-service teachers?

2. Do pre-service teachers' perceptions of automatic thoughts and life satisfaction differ significantly according to variables such as gender, department, grade level, income, leisure evaluation style, and frequency of participation in recreational activities?
3. Is there a significant relationship between pre-service teachers' perceptions of automatic thought and life satisfaction?

METHOD

Research Model

This research was designed in relational survey model within the framework of quantitative research approach. The aim of these studies is to determine whether there is a co-change between two or more variables (Karasar, 2012). Questionnaire technique was used as data collection technique in the research (Nachmias & Nachmias, 1996).

Research Group

The sample of the study consisted of 862 (468 female, 394 male) pre-service teachers studying at Erzincan Binali Yıldırım University Faculty of Education in the spring semester of the 2022-2023 academic year and selected by convenience sampling method. The mean age of female participants was 21.26 ± 2.33 ; male participants 22.11 ± 2.64 and the total participants was 21.65 ± 2.51 . Demographic information of the participants is included in Table 1.

Table 1. Demographic information of participants

Variable	Group	n	%	
Gender	Female	468	54.3	
	Male	394	45.7	
Department	Departments admitting students with special talent exam	528	61.3	
	Other departments	334	38.7	
Grade Level	1 st class	207	24.0	
	2 nd class	204	23.7	
	3 rd class	267	31.0	
	4 th class	184	21.3	
Income Status	1500 TL and below	701	81.3	
	1501 TL and above	161	18.7	
Status of Evaluating the Leisure Time	Chores at Home	Yes	698	81.0
		No	164	19.0
	Sportive Activities	Yes	361	41.9
		No	501	58.1
	Social Activities	Yes	431	50.0
		No	431	50.0
	Cultural/Artistic Activities	Yes	243	28.2
		No	619	71.8
	Outdoor activities	Yes	295	34.2
		No	567	65.8
	Touristic activities	Yes	162	18.8
		No	700	81.2
	Frequency of Participation in Recreational Activities	Never/Very Rare	98	11.4
		Sometimes	362	42.0
Frequently		402	46.6	

468 female (54.3%) and 394 male (45.7%) pre-service teachers participated in the study. 528 of the pre-service teachers were studying in departments that accept students through special talent exams, and 334 of them were studying in other departments. 207 of the participants were in the first grade, 204 in the second grade, 267 in the third grade and 184 in the fourth grade. While the number of participants included in the study with an income of 1500 TL and below was 701, the number of participants with an income of 1501 TL and above was 161. 698 of the participants stated that they spent their free time with chores at home (reading book, listening music, etc.), 361 with sports activities, 431 with social activities, 243 with cultural/artistic activities, 295 with outdoor activities and 162 with touristic activities. 98 of the teacher candidates stated that they never or rarely participated in free time activities, 362 stated that they sometimes participated, and 402 stated that they frequently participated.

Data Collection Tools & Process

Personal Information Form

The personal information form developed by the researchers consisted of variables related to gender, age, department, class, income, leisure time evaluation style and leisure time evaluation frequency in order to collect information about the pre-service teachers who are the subject of the research.

Revised Automatic Thought Questionnaire (ATQ-R)

Individuals' negative automatic thoughts were determined by the Automatic Thoughts Questionnaire- Revised ATQ-R developed by Kendall et al. (1989). The Turkish validity and reliability study of the questionnaire was carried out by Bozkurt (1998). The scale consists of 40 items and 10 items in the questionnaire are scored in reverse. The scale consists of four sub-dimensions: negative self, positive self, loneliness and hopelessness, disharmony and regret. The sum of the scores obtained from the positive and negative items in the scale gives the total score of the participant regarding the scale. In this context, analyzes were made on the total score in this study. The lowest and highest scores to be obtained from the questionnaire are 40 and 200, respectively. A high score indicates high automatic negative thoughts. In the Turkish adaptation study of the questionnaire, the Cronbach Alpha internal consistency coefficient was found to be 0.92. The Cronbach Alpha internal consistency coefficient calculated on the data collected within the scope of this study is 0.95.

Life Satisfaction Scale

The 'Satisfaction with Life Scale' developed by Diener et al. (1985) and adapted into Turkish by Yetim (1991) was used to determine students' levels of life satisfaction. The scale consisting of 5 items was prepared in 7-point Likert type and scoring was done accordingly. Likert options are listed as "Strongly Disagree (1)", "Disagree (2)", "Partly Disagree (3)", "Undecided (4)", "Partly Agree (5)", "Agree (6)" and "Strongly Agree (7)". The highest score that can be obtained from the scale is 35. The Cronbach Alpha internal consistency coefficient calculated on the data collected within the scope of this study is 0.84.

The data collection tools used within the scope of the study were applied to the teacher candidates forming the research group before the lesson hours with the approval of the Human Research Educational Sciences Ethics Committee of Erzincan Binali Yıldırım University, dated 30.12.2022 and numbered 12/22, in the spring semester of the 2022-2023 academic year. In accordance with the Principles of the Declaration of Helsinki, it was specifically stated in the questionnaire that participation in the study was based on confidentiality and voluntariness, and detailed explanations were made before the application. In addition, it was stated to the participants that the information of the participants would be kept confidential, and their individual and self-determination rights would be respected. In this context, the collected

questionnaires were checked and those that were filled incompletely or incorrectly were excluded from the study.

Data Analysis

Statistical analyses within the scope of the study were carried out with the SPSS 21 statistical package program. Descriptive statistical methods, t-test, ANOVA and Pearson Correlation tests were used in the analysis of the data. It was decided whether the data met the prerequisites of parametric tests by examining the Skewness and Kurtosis values, normal distribution curve and Levene test results. The normal distribution range +1, -1 was taken as reference (Büyüköztürk, 2010). In the analysis of the data, the level of significance was accepted as $p < 0.05$. Cronbach's Alpha internal consistency coefficients were calculated to determine the reliability of the scales.

FINDINGS

The comprehensive analysis results are presented in the findings section, encompassing distribution of scale scores, gender-specific t-test outcomes, department-based t-test findings, class-dependent ANOVA results, income-stratified t-test results, leisure time utilization t-test findings (housework and sportive activities), t-test outcomes related to leisure time utilization (social and cultural activities), leisure time utilization t-test results (outdoor and touristic activities), ANOVA outcomes linked to the frequency of participation in recreational activities, and the correlation analyses illuminating the relationship between ATQ-R and LSS variables.

Table 2. Distribution of scale scores

	Number of Items	Mean	Sd	Skewness	Kurtosis	Min.	Max.
<i>ATQ-R</i>	40	2.27	0.68	0.66	0.62	1.00	5.00
<i>LSS</i>	5	4.03	1.38	0.03	-0.67	1.00	7.00

While the arithmetic mean and standard deviation of the scores obtained from the Revised Automatic Thought Questionnaire (ATQ-R) of the pre-service teachers participating in the research are 2.27 and 0.68, respectively, the arithmetic mean of the scores from the Life Satisfaction Scale (LSS) is 4.03 and the standard deviation is 1.38. When the skewness (ATQ-R=0.66, LSS= 0.03) and kurtosis (ATQ-R=0.62, LSS=-0.67) values of the scores obtained from the scales are examined, it can be said that the data collected within the scope of the research show a normal distribution (Table 2).

Table 3. Results of t-test according to gender variable

	Female (<i>n</i> =468)		Male (<i>n</i> =394)		t	p
	Mean	Sd	Mean	Sd		
<i>ATQ-R</i>	2.24	0.67	2.29	0.69	1.00	0.32
<i>LSS</i>	4.04	1.38	4.02	1.39	0.26	0.79

In table 3, the t-test results of the scores obtained by the pre-service teachers from the scales according to the gender variable are presented. The analyses showed that the ATQ-R ($t=1.00$, $p > 0.05$) and LSS scores did not differ significantly according to the gender variable ($t=0.26$, $p > 0.05$). According to this finding, it can be said that the automatic thought and life satisfaction perceptions of male and female pre-service teacher do not change.

Table 4. Results of t-test according to department variable

	1 (n=528)		2 (n=334)		t	p
	Mean	Sd	Mean	Sd		
<i>ATQ-R</i>	2.26	0.69	2.27	0.66	0.17	0.86
<i>LSS</i>	4.08	1.40	3.97	1.36	1.11	0.27

1: Departments admitting students with special talent exam; 2: Other departments

In table 4, the t-test results of the scores of the pre-service teachers participating in the study from ATQ-R and LSS are presented according to the department variable. As a result of the t-test, it was determined that the scores of the participants in ATQ-R ($t=0.17$, $p>0.05$) and LSS ($t=1.11$, $p>0.05$) did not differ significantly. According to this, the automatic thought and life satisfaction perceptions of pre-service teachers studying in departments that admit students with special talent exams and other departments do not differ.

Table 5. Results of ANOVA according to class variable

	1 st Class (n=207)		2 nd Class (n=204)		3 rd Class (n=267)		4 th Class (n=184)		F	p
	Mean	Sd	Mean	Sd	Mean	Sd	Mean	Sd		
<i>ATQ-R</i>	2.28	0.69	2.26	0.71	2.31	0.67	2.20	0.64	0.96	0.41
<i>LSS</i>	4.08	1.41	3.96	1.37	4.02	1.37	4.08	1.40	0.35	0.79

Table 5 presents the ANOVA results of the scores obtained by the participants from the scales according to the class variable. The analyses show that the scores of pre-service teachers from ATQ-R ($F(3,858)=0.96$, $p>0.05$) and LSS ($F(3,858)=0.35$, $p>0.05$) do not differ significantly. In this context, it can be said that automatic thought and perception of life satisfaction do not change according to class level.

Table 6. Results of t-test according to income variable

	1500 TL and below (n=701)		1501 TL and above (n=161)		t	p
	Mean	Sd	Mean	Sd		
<i>ATQ-R</i>	2.28	0.67	2.22	0.71	0.85	0.40
<i>LSS</i>	3.97	1.38	4.33	1.38	3.00	0.00

In table 6, the t-test results of pre-service teachers' ATQ-R and LSS scores are presented according to the income status variable. The analyses show that the scores of the participants from the ATQ-R did not differ significantly ($t=0.85$, $p>0.40$). On the other hand, it was determined that the LSS scores of the participants differed significantly ($t=3.00$, $p<0.01$). Accordingly, it can be said that participants with higher income levels have higher life satisfaction perceptions.

Table 7. Results of t-test according to leisure time evaluation variable (Chores at home and sportive activities)

	<u>Chores at home</u>						<u>Sportive activities</u>					
	Yes (n=698)		No (n=164)		t	p	Yes (n=361)		No (n=501)		t	p
	Mean	Sd	Mean	Sd			Mean	Sd	Mean	Sd		
ATQ-R	2.27	0.67	2.25	0.70	0.38	0.70	2.26	0.70	2.27	0.66	0.13	0.90
LSS	4.02	1.39	4.10	1.37	0.65	0.52	4.14	1.41	3.96	1.36	1.85	0.06

In table 7, the t-test results of the scores by the pre-service teachers from the scales are presented according to the status of evaluating the leisure time with activities at home and with sports activities. The analyses show that the ATQ-R ($t=0.38$, $p>0.05$) and LSS scores of the participants ($t=0.65$, $p>0.05$) do not differ significantly according to the status of evaluating the leisure time with activities at home. According to this finding, the automatic thoughts and life satisfaction perceptions of the participants, who evaluate their leisure time with activities at home and those who do not, do not change. On the other hand, the analyses show that the ATQ-R ($t=0.13$, $p>0.05$) and LSS scores of the participants ($t=1.85$, $p>0.05$) do not differ significantly according to the status of evaluating the leisure time with sportive activities. According to this finding, automatic thoughts and life satisfaction perceptions of pre-service teachers, who participate in sportive activities in their leisure time and do not, do not show a difference.

Table 8. Results of t-test according to leisure time evaluation variable (Social activities and cultural activities)

	<u>Social activities</u>						<u>Cultural activities</u>					
	Yes (n=431)		No (n=431)		t	p	Yes (n=243)		No (n=619)		t	p
	Mean	Sd	Mean	Sd			Mean	Sd	Mean	Sd		
ATQ-R	2.23	0.66	2.30	0.70	1.50	0.14	2.26	0.65	2.27	0.69	0.06	0.95
LSS	4.13	1.35	3.93	1.42	2.13	0.03	4.19	1.39	3.97	1.38	2.10	0.04

In table 8, the t-test results are presented according to the scores from the scales of the participants within the scope of the study, according to the status of evaluating the leisure time with social activities and cultural activities. As a result of the t-test, while the scores of the participants from the ATQ-R ($t=1.50$, $p>0.05$) did not differ significantly according to the status of evaluating the leisure time with social activities, the scores they got from LSS ($t=2.13$, $p<0.05$) differ significantly. Accordingly, it can be said that pre-service teachers, who stated that they participate in social activities in their leisure time, have higher life satisfaction perceptions. As a result of the t-test, while the scores of the participants from the ATQ-R ($t=0.06$, $p>0.05$) did not differ significantly according to the status of evaluating leisure time with cultural activities, the scores they got from LSS ($t=2.10$, $p<0.05$) differ significantly. Accordingly, it can be said that the life satisfaction perceptions of the participants who stated that they participated in cultural activities in their leisure time were higher.

Table 9. Results of t-test according to leisure time evaluation variable (Outdoor activities and touristic activities)

	<u>Outdoor activities</u>						<u>Touristic activities</u>					
	Yes (n=295)		No (n=567)		t	p	Yes (n=162)		No (n=700)		t	p
	Mean	Sd	Mean	Sd			Mean	Sd	Mean	Sd		
ATQ-R	2.28	0.66	2.26	0.69	0.30	0.76	2.29	0.63	2.26	0.69	0.58	0.56
LSS	4.03	1.32	4.04	1.42	0.06	0.95	4.09	1.33	4.02	1.40	0.56	0.57

In table 9, t-test results are presented according to the scores obtained by the participants from ATQ-R and LSS according to the status of evaluating the leisure time with outdoor activities and touristic activities. The analyses show that the scores of the participants in both ATQ-R (t=0.30, p>0.05) and LSS (t=0.06, p>0.05) do not differ significantly according to the status of evaluating the leisure time with outdoor activities. According to this finding, automatic thought and life satisfaction perceptions of pre-service teachers, who participate or do not participate in outdoor activities in their leisure time, do not change. On the other hand, the analyses show that the scores of the participants in both ATQ-R (t=0.58, p>0.05) and LSS (t=0.56, p>0.05) do not differ significantly according to the status of evaluating the leisure time with touristic activities. According to this finding, automatic thoughts and life satisfaction perceptions of pre-service teachers, who participate in touristic activities in their leisure time and do not, do not show a difference.

Table 10. Results of ANOVA according to frequency of participation in recreational activities variable

	Never/Very Rare (n=98)		Sometimes (n=362)		Frequently (n=402)		F	p	Significant Difference
	Mean	Sd	Mean	Sd	Mean	Sd			
ATQ-R	2.41	0.68	2.32	0.70	2.19	0.65	5.97	0.00	1>3, 2>3
LSS	3.70	1.41	4.03	1.37	4.11	1.38	3.51	0.03	3>1

Table 10 presents the ANOVA results according to the frequency of participation in recreational activities of pre-service teachers' ATQ-R and LSS scores. The analyzes show that the scores obtained from both ATQ-R ($F_{(2,859)}=5.97$, $p<0.01$) and LSS ($F_{(2,859)}=3.51$, $p<0.05$) differ significantly according to the variable of frequency of participation in recreational activities. According to this, the scores of the participants from the ATQ-R differ significantly between those who do not participate in recreational activities at all, or those who rarely and sometimes participate, and those who participate frequently, in favor of those who do not participate at all, or those who participate very rarely and sometimes, while the scores obtained from the LSS differ significantly among those who never or rarely participate in recreational activities and those who participate frequently, in favor of those who participate frequently. According to this finding, it can be said that as the frequency of participation in recreational activities increases, the perception of automatic thought decreases and the perception of life satisfaction increases.

Table 11. Correlation results between ATQ-R and LSS

	<i>ATQ-R</i>		
	<i>n</i>	<i>r</i>	<i>p</i>
<i>LSS</i>	862	-0.48**	0.00

Table 11 presents the correlation results between the scores of the participants from the scales. The results show that there is a negative and moderately significant relationship between automatic thought and the perception of life satisfaction. According to this, as the participants' life satisfaction increases, their automatic thought perceptions decrease.

DISCUSSION

The data obtained from this study, which was conducted to examine the leisure time participation, automatic thoughts and life satisfaction levels of pre-service teachers according to some variables and to determine the relationship between them, were discussed and interpreted in this section.

According to the results obtained from the study, automatic thought perceptions of pre-service teachers are relatively low. Similarly, in the studies conducted by Dok (2018); Hazır (2019); Kalender (2017); Kara (2016); Kaynak (2019); Parim (2019); Sevilgen et al. (2023); Şansal (2016) and Yılmaz (2015), it was determined that the automatic thought perceptions of the participants were at a low level. On the other hand, in the study conducted by Akgüç (2021), it was determined that the automatic thought perceptions of the participants were close to the moderate level. According to another result obtained from the research, the life satisfaction perceptions of the participants are at a moderate level. Similarly, in the study conducted by Akbulut et al. (2019), Küçük Kılıç et al. (2018), and Miliyazim Memet (2022), it was determined that the participants' perceptions of life satisfaction were moderate. In the studies conducted by Avcı (2015) and Gül (2018), it was stated that the participants' perceptions of life satisfaction were high, while in the study conducted by Ak (2019), it was determined that the participants' perceptions of life satisfaction were at a low level. In the studies conducted by Derinyar (2022) and Küçük Kılıç et al. (2022), it was determined that the life satisfaction levels of the participants were below the moderate level. The relatively low level of automatic thought perceptions of pre-service teachers may be due to the fact that they are still students and they do not fully take their own responsibilities about life. Although individuals are trying to stand on their own feet in this period, the thought that their families will be behind them can help them get away from negative thoughts. On the other hand, the moderate level of life satisfaction perceptions may be due to the difficulties of academic life. In this context, planning studies can contribute to a better understanding and deeper understanding of the subject.

The results of the research show that the automatic thought perceptions of male and female pre-service teachers do not show a difference. Similarly, in the studies conducted by Akgüç (2012); Kalender (2017); Oruç (2013); Parim (2019); Sevilgen et al. (2023); Şansal (2016); Şirin and Izgar (2013); Tümkiye & İflazoğlu (2000); Yılmaz (2015), it was determined that the automatic thought perceptions of male and female participants did not change. On the other hand, in the study conducted by Kara (2016), it was determined that male participant had higher automatic thought perceptions. As a result of the research, it was determined that the perception of life satisfaction did not differ according to gender. In some studies in the literature, it has been concluded that the perception of life satisfaction does not differ according to gender (Avcı, 2015; Demir, 2017; Derinyar, 2022; Dikici, 2020; Gül, 2018; İnci, 2014; Küçük Kılıç et al., 2018; Küçük Kılıç et al., 2022 and Yıldırım, 2019). Similarly, in the study conducted by Fortin et al. (2015) in Western European and Latin American countries, it was

stated that there was no gender difference in life satisfaction. On the other hand, some studies have concluded that female participants have higher perceptions of life satisfaction (Akbulut et al., 2019; Aydilek, 2019; Deniz & Yılmaz, 2004; Jovanović, 2017; Miliazim Memet, 2022; Tuzgöl Dost, 2007). The reason for this difference in the results of the study can be shown as the effect of different regulatory variables on gender. As a matter of fact, Meisenberg & Woodley (2015) and Graham & Chattopadhyay (2013) reported in their studies that gender differences in life satisfaction are formed by the effects of sociocultural conditions and demographic variables such as age, income, education and marital status, and regulatory variables such as national development level.

Another result of the study is that the automatic thought perceptions of the participants did not differ according to the department they study. Similarly, in the studies conducted by Yılmaz (2015), it was determined that the perception of automatic thought did not change according to the department. On the other hand, in the study conducted by Şirin & Izgar (2013), it was determined that the automatic thought perceptions of the participants studying in the nursing department were higher. According to the results obtained from the research, the life satisfaction perceptions of the participants do not change according to the department they study. Similarly, in the studies conducted by Aydilek (2019), İnci (2004), Küçük Kılıç et al. (2022), and Receptoğlu (2013), it was determined that the participants' perceptions of life satisfaction did not differ according to the department. In the studies conducted by Avcı (2015), Gül (2018) and Yıldırım (2019), it was determined that the participants' perceptions of life satisfaction differed according to the department. Warren and Hale (2020) reported that cognitive factors such as automatic negative thoughts and rational belief have a significant effect on non-cognitive factors such as resilience and fortitude. In other words, it can be said that automatic negative thoughts reduce the resistance of pre-service teachers to negative situations such as stress, anger, anxiety, etc. they experience in university life (Jafar et al., 2016). In addition, it can be said that the way of interpreting the negative situations and emotions and behaviors of the participants due to the characteristics of the generation they are in, are similar.

According to another result obtained from the study, the automatic thought perceptions of the participants do not differ according to the class variable. In some studies in the literature, it has been determined that the perception of automatic thought does not change according to the class (Akgüç, 2021; Duran et al, 2017; Kara, 2016; Şirin & Izgar, 2013; Tümkaya & İflazoğlu, 2000). On the other hand, in the studies conducted by Avcı (2015) and Parim (2019), it was determined that the perception of automatic thought changes according to the class and that the fourth grade students have a higher automatic thought perception. According to the results obtained from the research, the life satisfaction perceptions of the participants do not differ according to the class. Similarly, in studies conducted by Aydilek (2019), Derinyar (2022), Gül (2018), Küçük Kılıç et al. (2022), and Miliazim Memet (2022), it was determined that the perception of life satisfaction did not change according to class. On the other hand, in the study conducted by Yıldırım (2019), it was determined that the first-year participants had higher perceptions of life satisfaction, and in the study conducted by Akbulut et al. (2019), the fourth-grade participants had higher perceptions of life satisfaction.

As a result of the study, it was determined that the automatic thought perceptions of the participants did not differ according to their income status. Similarly, in the studies conducted by Oruç (2013), it was determined that the perception of automatic thought does not differ according to income. On the contrary, in some studies in the literature, it has been determined that income status and automatic thought perception are related, and those with low income status have high automatic thought perceptions (Akgüç, 2021; Tümkaya & İflazoğlu, 2000). As a result of the research, it was determined that the participants with high income levels also had high life satisfaction perceptions. Similarly, in many studies (Akbulut et al., 2019;

Blanchflower & Oswald, 2004; Clark et al., 2005; Derinyar, 2022; Gül, 2018; İnci, 2014; Kabasakal & Uz Baş, 2013; Kahneman & Deaton, 2010; Küçük Kılıç et al., 2018; Küçük Kılıç et al., 2022; Lelkes, 2006; Tuzgöl Dost, 2007), it was determined that those with high income levels have high life satisfaction perceptions. On the other hand, in the studies conducted by Demir (2017), Dikici (2020), Miliazim Memet (2022), and Yıldırım (2019), it was determined that the perception of life satisfaction did not differ according to income. Diener et al., (1999) reported that income alone is insufficient to increase life satisfaction. Along with income status, age (Frijters & Beatton, 2012), physical health (Gerdtham & Johannesson, 2001), marital status (Winkelmann & Winkelmann, 1998), having children (Theodossiou, 1998) and other familial conditions (Shields & Price, 2005) were reported to be associated with life satisfaction. In addition, Haveman (2009) stated that the non-material aspects of well-being have become increasingly important as societies become wealthy. In this study, the fact that the perception of automatic thought did not differ according to the income status variable may be due to the non-material aspects of well-being. It is thought that the increase observed in life satisfaction in parallel with the increase in income status may be related to physical health and other family conditions.

As a result of the research, it was determined that the automatic thought perceptions of the participants did not change according to the way they spend their leisure time. On the other hand, it has been determined that the life satisfaction levels of pre-service teachers who participate in social, cultural and artistic activities in leisure time are higher. In the study conducted by Küçük Kılıç et al. (2018), it was determined that university students who participate in sports and social activities in leisure time have high life satisfaction. Similarly, in the studies conducted by An et al. (2020); Brown et al. (2015); Dolan et al. (2014); Hamer et al. (2009); Mutz et al. (2021); Sigvartsen et al. (2016) and White et al. (2017), it was determined that physical activities performed in leisure time are associated with life satisfaction. In the study conducted by Küçük Kılıç et al. (2022) on pre-service teachers, it was determined that participation in sportive, social and cultural/artistic activities in leisure time increases life satisfaction. In the study conducted by Akbulut et al. (2019), it was determined that life satisfaction did not differ according to the way of using leisure time. From this point of view, it can be said that automatic thought perception is not related to the type of leisure time activity, but rather to the frequency of participation in the activity rather than the style of activity. On the other hand, it can be said that social, cultural and artistic activities are activities that give pleasure to people and provide social freedom due to their structure. It can be said that this affects life satisfaction positively.

According to the results obtained from the study, the increase in the frequency of participation in recreational activities in leisure time reduces the perception of automatic thoughts and increases life satisfaction. Similarly, in the studies conducted by Küçük Kılıç et al. (2018) and Küçük Kılıç et al. (2022), it was determined that the level of life satisfaction increased as the participation in leisure time activities increased. Similarly, in the study conducted by Yıldırım (2019), it was determined that participants who do sports three days a week have a higher perception of life satisfaction than participants who do not do any sports or do sports once a week. In addition, Dolan et al. (2014) found that the frequency of exercise and sports was positively related to life satisfaction. On the other hand, in the studies conducted by Akbulut et al. (2019) and Dikici (2020), it was determined that there is no relationship between the frequency of participation in leisure time activities and life satisfaction. In this context, it can be said that participation in leisure time activities especially reduces negative thoughts and, in parallel, increases life satisfaction. In particular, it can be stated that individuals who are freed from negative thoughts tend to have more positive emotions and get more satisfaction from life. According to the Cognitive Behavior Theory, which constitutes the theoretical basis of the qualitative study, thoughts affect emotions and emotions affect behaviors.

Finally, as a result of the research, it was determined that the increase in the perception of life satisfaction decreases the perception of automatic thought. It can be said that individuals with high life satisfaction are generally individuals who think positively, enjoy life and have a high level of happiness. In this context, it can be said that the automatic thoughts of individuals who have positive thoughts in general will be low. On the other hand, it is thought that planning studies that increase the life satisfaction of individuals will contribute to the reduction of automatic thoughts.

CONCLUSION

The results of the research show that the life satisfaction and automatic thought perceptions of male and female students do not change. In addition, it was determined that the participants' life satisfaction and automatic thought perceptions did not differ according to the department and class variables. On the other hand, participants with high income and pre-service teachers who stated that they participate in social, cultural and artistic activities in their free time have higher life satisfaction levels. As participation in recreational activities in leisure time increases, the perception of life satisfaction increases, and the perception of automatic thought decreases. In addition, as the participants' life satisfaction perceptions increase, their automatic thought perceptions also decrease.

Recommendation

The fact that the research was conducted in a state university and in a single faculty can be considered as a limitation of the study. It is thought that it is important to include students from different faculties and universities in future studies. In addition, it is important to examine similar issues with different approaches and methods in order to examine the subject in depth. From this point of view, it is recommended to conduct studies in terms of different dependent and independent variables. In addition to all these, universities organizing areas where students can spend their free time more effectively and adding such organizations to university activities can contribute to increasing life satisfaction and preventing negative automatic thoughts.

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Author(s)' statements on ethics and conflict of interest

Ethics statement: We hereby declare that research/publication ethics and citing principles have been considered in all the stages of the study. We take full responsibility for the content of the paper in case of dispute.

Conflicts of Interest: There are no conflicts of interest declared by the authors.

Funding: None