

An Investigation of the Relationship among High School Students' Self-Regulation, Free Time Management, and Self-Esteem

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Abstract

This study aimed to investigate the relationship between self-regulation, free time management, and self-esteem variables among high school students. The research sample consisted of 193 girls and 276 boys, totaling 469 students studying in different types of high schools. The Personal Information Form, the Adolescent Self-Regulatory Inventory, the Free Time Management Scale, and the Two-Dimensional Self-Esteem Scale were used to collect data. Independent samples t-test analysis was conducted to compare the self-regulation, free time management, and self-esteem scores of the students in terms of gender and status of doing sports. One-way analysis of variance (ANOVA) was performed to compare the scores based on grade level, type of high school, and types of leisure time activities. In addition, correlation analysis was conducted to test whether there is a relationship between self-regulation, free time management, and self-esteem scores of the students. The results of the analyses indicated that there was a significant difference in self-regulation scores among the students based on gender, while no significant difference was found in free time management and self-esteem scores. However, significant differences were found in self-regulation, free time management, and self-esteem scores based on the status of doing sports. There was a significant difference in self-regulation scores according to grade level, while no significant differences were found in free time management and self-esteem scores. A significant difference was found in self-regulation and free time management scores based on the type of high school, but no significant difference was found in self-esteem scores. When examined in terms of leisure time activity type, significant differences were found in self-regulation, free time management, and self-esteem scores. The grade point averages of the students showed a negative correlation with their daily average free time, yet a positive correlation with their self-regulation scores. Self-regulation scores were found to be positively related to free time management and self-esteem scores. In conclusion, it is believed that the exploration of the relationships between high school students' grade point averages, free time, self-regulation skills, free time management, and self-esteem scores may play a significant role in helping high school students achieve positive outcomes.

Keywords: self-esteem, free time management, high school students, self-regulation

1. Introduction

High schools are considered to have significant functions in preparing individuals for life and are regarded as an educational level that includes preparation for university education. Students who graduate from high school, which is classified as secondary education level, are required to fulfill and learn many skills necessary for their lives outside of school. Besides the education provided at the secondary education level, it is believed that students' self-regulation skills contribute to their transition to higher education. Self-regulation has a significant impact on education in terms of developing lifelong learning skills, which start from the early stages of life and continue to progress throughout one's lifetime (Bronson, 2019). Schools are crucial in developing self-regulation skills for students. Adhering to school rules helps them to be attentive and avoid unwanted behavior while assisting them in reaching desired goals (Berhenke, 2013). Self-regulation is also considered essential for initiating and sustaining physical activity, especially during the transition to adolescence when individuals progressively gain control over their physical activities (Kwasnicka et al., 2016).

Self-regulation can be defined as the ability of individuals to control and manage their thoughts, emotions, and actions to achieve the goals they have set (Aslan & Özgün, 2017; Zimmerman, 2002). Self-regulation skills are defined as the regulation of emotions, thoughts, attention, and behavior in a manner that is socially acceptable (Vohs & Baumeister,

2004). Individuals who have control over their thoughts, emotions, and actions and who can use unique strategies according to the situations they encounter, regulate their behavior, and learn from others are considered to possess self-regulation skills (Bandura, 1986). Self-regulation is largely associated with academic achievement across a wide age range. It has been observed that self-regulation, with its inhibitory control, working memory, and attention components, supports academic success (McClelland & Cameron, 2012). Furthermore, it is known that self-regulation is highly significant in enabling children to develop the necessary behaviors and habits for successful academic careers in the future (Becker et al., 2014).

Time management and self-regulation skills, such as goal setting, effort, perseverance to complete challenging tasks, and self-observation of one's own performance, should not only be associated with academic success for individuals. They are also considered fundamental components of successful writers, athletes, artists, and scientists' lives (Zimmerman, 1998). Based on this perspective, the high school period can be seen as a time when students can develop and effectively utilize time management skills, which include the efficient management of time based on the self-regulation skills expected to be acquired in previous stages. Individuals can engage in multiple leisure time activities to break free from the routine of daily life. Through leisure activities, people find opportunities to develop their potentials and personalities. Therefore, effectively planning and using leisure time can significantly impact an individual's quality of life, both socially and economically. To make the most of the activities they participate in, individuals need to engage in good planning and effectively manage their free time (Er, Dmirel, & Çuhadar, 2020). Free time management refers to the process of organizing free time by setting goals and priorities, allowing individuals to use their free time efficiently and productively (Britton & Tesser, 1991; Macan, 1994).

Teachers and parents can teach students how to set goals, observe their learning processes, evaluate students' self-efficacy for learning, and support students by guiding them to use self-regulation skills so that they can have a level of motivation to develop self-efficacy for learning and feelings of competence to manage their academic activities (Caprara et al., 2008). From this perspective, self-efficacy is considered as an important concept that supports the self-regulation process and can further develop through this process. In this context, self-efficacy, which is regarded as a significant component of self-esteem, is believed to be related to individuals' self-regulation skills. Tafarodi and Swann (1995) defined self-esteem in two dimensions: self-liking and self-efficacy. Self-efficacy refers to how individuals view themselves as competent, effective, and in control. It involves positive and negative thoughts about oneself in achieving goals and desired outcomes. A low level of self-efficacy can lead to negative effects, while a high level can foster positive thoughts. On the other hand, self-liking involves the individual's subjective evaluation of themselves and their perception of themselves as valuable as a social being. In short, it is how individuals judge themselves as either good or bad (Tafarodi & Swann, 2001). In essence, self-liking refers to who we are, and self-efficacy refers to what we can do (Tafarodi & Swann, 1995; 2001). The concept of self-efficacy has been considered a fundamental motivational component of self-regulation and has been extensively studied in the context of academic achievement and performance (Ramdass & Zimmerman, 2011). It is believed to have a significant impact on various aspects of self-regulation (Bouffard-Bouchard, Parent, & Larivee, 1991).

Research on the development of self-regulation (Becker et al., 2014; Ludwig & Rauch, 2018; McClelland & Cameron, 2012) often emphasizes the importance of early childhood. However, it is essential to highlight that self-regulation skills are also highly significant for individuals in their adolescence, particularly during the high school period. Considered as the step before higher education, where vocational career orientation takes shape, the high school period is believed to have a crucial role in an individual's ability to regulate their own learning experiences. Students with self-regulation skills in the educational environment manage and initiate their learning processes instead of relying on teachers, family, or other educational elements to gain knowledge and skills (Zimmerman & Martinez-Pons, 1988). Individuals with self-regulation skills are responsible, able to organize and control their lives, and successful individuals (Aydın, Özer Keskin, & Yel, 2013). High school students are expected to have a high level of self-regulation skills, which would enable them to manage their free time efficiently and possess a high level of self-esteem. Studies (Bidzan-Bluma & Lipowska, 2018; Gunnell et al., 2018) examining mainly middle childhood and early adolescence have shown that physical activity and participation in sports are associated with enhanced cognitive development and self-regulation skills. In this context, this study aimed to investigate the relationship between high school students' self-regulation, free time management, and self-esteem scores. This study also aimed to examine the self-regulation, free time management, and self-esteem scores of high school students based on their status of doing sports, type of high school, and type of free time activities.

2. Method

Research Model

This study is a cross-sectional study conducted using a correlational survey model, aiming to examine the relationship between students' self-regulation, free time management, and self-esteem scores.

Research Sample

The research population consisted of high school students studying in the 2022/2023 academic year. The research sample included a total of 469 students (193 females with a mean age of 15.80 ± 1.36 and 276 males with a mean age of 16.00 ± 1.29), who were selected from different types of high schools (Anatolian high school, vocational high school, religious vocational high school, sports high school) in Turkey, using the convenience sampling method, one of the non-random sampling techniques.

Data Collection Tools

The Personal Information Form, the Adolescent Self-Regulatory Inventory, the Free Time Management Scale, and the Two-Dimensional Self-Esteem Scale were used to collect data in the study.

Personal Information Form: The researchers developed the form to gather information about participants' age, gender, the status of doing sports, grade level, type of high school, and type of leisure time activities.

The Adolescent Self-Regulatory Inventory (ASRI): The ASRI was developed by Moilanen (2005) to assess adolescents' self-regulation abilities. It was adapted to Turkish by Harma (2008), and its validity and reliability studies were conducted. The scale consists of 32 items, rated on a four-point Likert scale ranging from 1 (never) to 4 (always). Some items in the scale are reverse-coded. Scale scores range from 32 to 128, and higher scores indicate higher levels of success in self-regulation for adolescents. In this study, the Cronbach's Alpha of the scale was found to be 0.70.

Free Time Management Scale (FTMS): The FTMS was developed by Wang et al. (2011) to assess the free time management skills of individuals. It was adapted to Turkish by Akgül and Karaküçük (2015). The scale consists of 15 items on a five-point Likert scale (1= I strongly disagree, 5= I strongly agree) under four sub-dimensions: Goal Setting and Method, Evaluation, Free Time Attitude, and Scheduling. In this study, the Cronbach's Alpha of the scale was found to be 0.88.

Two-Dimensional Self-Esteem Scale (TDSES): The TDSES was developed by Tafarodi and Swann (2001) to assess self-esteem. The Turkish validity and reliability studies of the scale were conducted by Doğan (2011). It consists 16 items under two dimensions: Self-Liking and Self-Competence. The items are rated on a five-point Likert scale, ranging from 1 "Strongly disagree" to 5 "Strongly agree". Some items in the scale are reverse-coded. Higher scores on the sub-dimensions of the scale indicate higher levels of self-esteem. The Cronbach's Alpha for the Turkish version of the scale was found to be 0.83 for the Self-Liking sub-dimension and 0.74 for the Self-Competence sub-dimension (Doğan, 2011). In this study, the Cronbach's Alpha for the whole scale was found to be 0.85.

Data Collection Procedure

Prior to the data collection process, necessary permission was obtained from the Non-Interventional Clinical Research Ethics Committee of Selçuk University Faculty of Sports Sciences (E-40990478-050.99-454801). The students who volunteered to take part in the study were informed about the purpose of the study. It took approximately 15 minutes for the participants to fill out the scales.

Data Analysis

In this study, preliminary analyses (testing assumptions, descriptive statistics analyses) necessary for answering the research questions were conducted to perform the required statistical analyses. Subsequently, independent samples t-test analysis was performed to compare the students' self-regulation, free time management, and two-dimensional self-esteem scores based on gender and the status of doing sports variables. One-way analysis of variance (ANOVA) was conducted to compare the scores based on the type of high school attended and the type of leisure time activities. Furthermore, Pearson's moment correlation analysis was conducted to examine whether there is a relationship between the self-regulation, free time management, and two-dimensional self-esteem scores of the students.

The data set was initially subjected to preliminary analyses, including missing data and outlier analyses. It was observed that the total number of missing items was less than 1% of the total items, and the mean values obtained from the answered items were added in their place (Kantardzic, 2003). In the next step, z-scores were calculated for the total scores to identify outliers (>3.29), and the values were reviewed based on the Mahalanobis distance criterion (Tabachnick & Fidell, 2007). According to the results, z-scores greater than 3.29 and based on the Mahalanobis distance criterion, a total of 25 data points were removed, leaving a total of 469 data points in the dataset. To test whether the data showed a normal distribution, Skewness and Kurtosis values were examined, and it was observed that the values were between -1 and +1. In addition, the Kolmogorov-Smirnov and Shapiro-Wilk tests showed that the significance levels were not significantly different from normal distribution ($p > 0.05$). The homogeneity of variances required for one-way analysis of variance (ANOVA) was evaluated based on the results of the Levene test, and it was observed that the variances of the scores obtained from the self-regulation, free time management, and two-dimensional self-esteem scales were homogeneous ($p > 0.05$). The analyses in this study were conducted based on the total scores and sub-dimension scores obtained from the self-regulation, free time management, and two-dimensional self-esteem scales. All the analyses were performed using IBM SPSS Statistics 22.0 program.

3. Results

The frequency and percentage values of the information obtained from the Personal Information Form are shown in Table 1.

Table 1. Distribution of the Students According to Demographic Characteristics

Demographic variables		n	%
Gender	Female	193	41.2
	Male	276	58.8
Grade level	9th	123	26.2
	10 th	118	25.2
	11 th	134	28.6
	12 th	94	20.0
Type of high school	Anatolian High School	152	32.4
	Vocational High School	103	22.0
	Religious vocational high school	88	18.8
	Sports High School	126	26.9
Status of doing sports	Yes	197	42.0
	No	272	58.0
Leisure time activity	Sports activities	88	18.8
	Reading books	40	8.5
	Spending time with family	71	15.1
	Spending time with friends	54	11.5
	Playing on the phone/computer games	72	15.4
	Watching movies	59	12.6
	Spending time on social media	85	18.1

The total scores of the participants obtained from the self-regulation, free time management, and two-dimensional self-esteem scales were calculated according to gender. The results of the independent groups t-test analysis showing the differences between the scores based on gender are presented in Table 2.

Table 2. Self-regulation, Free Time Management, and Two-dimensional Self-esteem Scores of the Students According to Gender

Variables	Gender	n	X	Sd	t	p
Self-regulation	Female	193	78.59	12.08	3.850	.000*
	Male	276	82.64	9.85		
Free Time Management	Female	193	51.20	10.44	-.131	.896
	Male	276	51.32	10.36		
Self-esteem	Female	193	59.80	9.71	-.205	.838
	Male	276	59.98	8.97		

The results of the independent samples t-test revealed that the students' self-regulation scores significantly differ based on gender ($p < .05$), while there is no significant difference in free time management and two-dimensional self-esteem scores based on gender ($p > .05$). It is observed that male students have higher mean self-regulation scores compared to female students. The mean free time management and self-esteem scores for male and female students are very close to each other.

Table 3. Self-Regulation, Free Time Management, and Self-Esteem Scores of the Students Based on the Status of Doing Sports

Variables	Status of Doing Sports	n	X	Sd	T	p
Self-regulation	Yes	197	83.16	10.43	3.714	.000*
	No	272	79.39	11.14		
Free Time Management	Yes	197	53.26	9.66	3.579	.000*
	No	272	49.83	10.66		
Self-esteem	Yes	197	61.24	8.58	2.681	.008*
	No	272	58.93	9.64		

When Table 3 is examined, it can be observed that there is a significant difference in self-regulation, free time management, and self-esteem scores between high school students who do and do not do sports ($p < 0.05$). In other words, the students who engage in sports have higher mean scores in self-regulation, free time management, and self-esteem compared to those who do not participate in sports.

Table 4. Self-regulation, Free Time Management, and Self-esteem Scores of the Students According to the Type of School They Attend

Variables	Type of school	n	X	Sd	F	p
Self-regulation	Anatolian High School	152	79.26	12.08	4.658	.003*
	Vocational High School	103	79.35	10.86		
	Religious Vocational High School	88	82.35	9.70		
	Sports High School	126	83.44	10.09		
Free time management	Anatolian High School	152	48.51	11.82	6.062	.000*
	Vocational High School	103	51.74	10.01		
	Religious Vocational High School	88	53.69	8.92		
	Sports High School	126	52.55	9.09		
Self-esteem	Anatolian High School	152	59.34	10.29	.740	.529
	Vocational High School	103	60.18	9.28		
	Religious Vocational High School	88	59.28	8.44		
	Sports High School	126	60.80	8.53		

One-way analysis of variance (ANOVA) was conducted to examine whether there was a difference in self-regulation, free time management, and self-esteem mean scores of the students based on the type of school they attend (Table 4). It was found that there was a significant difference in self-regulation scores based on the type of school ($F_{(3-465)} = 4.658$, $p < .05$). To explore the differences among school types, Tamhane's T2, one of the post-hoc analysis methods, was performed. Tamhane's T2 test results indicated that the self-regulation scores of the students studying in sports high schools (83.44 ± 10.04) were significantly different from those of the students studying in Anatolian high schools (79.26 ± 12.08) and vocational high schools (79.35 ± 10.86). Furthermore, there was a significant difference in free time management scores of the students based on the type of school they attend ($F_{(3-465)} = 6.062$, $p < .05$). According to Tamhane's T2 test, when the free time management scores of the students were compared based on the type of school they attend, it was found that the students studying at religious vocational high schools (53.59 ± 8.92) and sports high schools (52.55 ± 9.09) had significantly different scores than Anatolian high school (48.51 ± 11.82) students (Table 4). However, when the self-esteem scores of the students were examined, no significant difference was observed based on the type of school ($F_{(3-465)} = .740$, $p > .05$). As there was no difference, post-hoc analysis was not performed.

Table 5. Self-Regulation, Free Time Management, and Self-Esteem Scores of the Students Based on Their Free Time Activities

Variables	Type of Activity	n	X	Sd	F	P
Self-regulation	Participating in Sports Activities	88	84.50	10.99	5.946	.000*
	Reading Books	40	79.55	12.71		
	Spending Time with Family	71	84.37	10.45		
	Spending Time with Friends	54	82.35	10.03		
	Playing Games (phone, computer)	72	80.24	8.99		
	Watching Movies	59	78.42	10.67		
	Spending Time on Social Media	85	76.72	11.15		
Free Time Management	Participating in Sports Activities	88	54.01	9.23	2.656	.015*
	Reading Books	40	52.28	8.52		
	Spending Time with Family	71	51.86	9.25		
	Spending Time with Friends	54	50.04	11.28		
	Playing Games (phone, computer)	72	50.96	10.53		
	Watching Movies	59	51.90	10.62		
	Spending Time on Social Media	85	48.12	11.66		
Self-esteem	Participating in Sports Activities	88	61.22	8.89	2.405	.027*
	Reading Books	40	59.60	9.55		
	Spending Time with Family	71	60.33	8.42		
	Spending Time with Friends	54	62.06	8.68		
	Playing Games (phone, computer)	72	60.90	8.24		
	Watching Movies	59	57.32	9.85		
	Spending Time on Social Media	85	57.92	10.48		

One-way analysis of variance (ANOVA) was conducted to determine if there was a difference in self-regulation, free time management, and self-esteem mean scores based on the types of activities students typically engage in during their leisure time (Table 5). The results showed that there was a significant difference in the self-regulation scores of the students based on the type of leisure time activity they participate in ($F_{(6-462)}=5.946$, $p<.05$). Tamhane's T2 test, one of Post-Hoc analysis methods, was used to examine differences among the types of leisure time activities. Tamhane's T2 test results showed that the students engaged in sports activities had significantly higher self-regulation scores (84.50 ± 10.99) compared to those who watched films (78.42 ± 10.67) and spent time on social media (76.72 ± 11.15).

Furthermore, there was a significant difference in free time management scores based on the types of leisure time activities the students engaged in ($F_{(6-462)}=2.656$, $p<.05$). According to Tamhane's T2 test results, the students engaged in sports activities had significantly higher free time management scores (54.01 ± 9.23) compared to those who spent time on social media (48.12 ± 11.66). Significant differences were also found in self-esteem scores based on the types of leisure time activities the students engaged in ($F_{(6-462)}=2.405$, $p<.05$). The students who spent time with their friends had significantly higher self-esteem scores (62.06 ± 8.68) compared to those who watched films (57.32 ± 9.85) and spent time on social media (57.92 ± 10.48) (Table 6).

Pearson's moment-product correlation analysis was conducted to explore the relationship between the students' grade point averages, daily free time, self-regulation, free time management, and self-esteem mean scores (Table 7).

Table 7. Pearson's moment-product correlation analysis results showing the relationship between Grade Point Average, Daily Average Free Time, Self-Regulation, Free Time Management, and Self-Esteem variables

Variables	1	2	3	4	5
1. Grade Point Average	-				
2. Daily free time (in hours)	-.243**	-			
3. Self-regulation	.147**	.003	-		
4. Free time management	.027	-.069	.236**	-	
5. Self-esteem	.067	-.012	.258**	.037	-

** $p < .01$

The correlation analysis revealed a negative weak relationship between the students' grade point averages and their daily free time ($r = -.243$, $p < .01$). In addition, a positive weak relationship was found between grade point averages and self-regulation scores of the students ($r = .147$, $p < .01$). It has been observed that there is a positive weak relationship between the students' self-regulation scores and free time management scores ($r = .236$, $p < .01$). Furthermore, a positive weak relationship was found between the self-regulation and self-esteem scores of the students ($r = .258$, $p < .01$). No significant relationship was found between grade point averages, free time management, and self-esteem scores of the students ($p > .05$). It was also observed that there is no significant relationship between the students' daily free time duration and their self-regulation, free time management, and self-esteem scores ($p > .05$).

4. Discussion

This study aimed to investigate the self-regulation, free time management, and self-esteem scores of high school students in relation to gender, status of doing sports, type of high school, and type of leisure time activities, and to explore the relationships between these variables.

The results of the statistical analysis revealed that the male students had significantly higher self-regulation scores compared to the female students. This finding is in line with Kara's (2014) study, which reported that males tend to have higher self-regulation values than females. However, other studies (Harma, 2008; Karataş, 2013; Temiz, 2019; Tetering et al., 2020; Von-Suchodoletz & Gunzenhauser, 2013) have found that female participants have higher self-regulation values compared to males. Furthermore, in some studies (Alçay, 2019; Diaz, 2013; Dilmaç et al., 2009; Özgül, 2017), no significant difference was observed in self-regulation values between genders. The current study suggests that the higher self-regulation scores among male students might be influenced by their higher involvement in sports and sports-related free activities compared to females.

There was no statistically significant difference in free time management scores based on the gender variable. This finding is consistent with the results of previous studies conducted by Çuhadar et al. (2017), Eranıl and Özcan (2018), and Denктаş et al. (2023), where they also found no statistical difference in free time management mean scores between genders. It is believed that the students in the study, regardless of their gender, spend approximately 8 hours per day at school for five days a week. This similarity in their daily schedules may lead to a similar management of their remaining free time, which could be a reason for the similarity in their free time management scores.

Although there are studies showing that men may have higher self-esteem than women, or vice versa, this current study did not find any significant difference in self-esteem scores based on the gender variable. This finding aligns with previous research conducted by Baybek and Yavuz (2005), Çeşit, Ece, and Kafadar (2012), Büyüksahin Çevik and Atıcı (2009), and Denктаş and Erkmén Hadi (2020), which also demonstrated no statistically significant difference in self-esteem scores based on gender. It is believed that the distribution of the students' engagement in sports and sports-related activities according to gender may play a role in the similarity of self-esteem scores.

It was found that the students engaged in sports had higher self-regulation values compared to those who did not participate in sports. In a study conducted by Tezel Şahin (2015) with students in the physical education and sports department, students engaged in sports were found to have higher self-regulation competencies compared to non-sporting students. Another study with students in the physical education and sports department reported that individuals engaging in regular sports had higher academic self-regulation values (Kaplan, 2014). Karaoğlu and Pepe (2020) found that university students studying physical education and sports teaching had self-regulation scores above average. Ommundsen (2006) reported in a study on self-regulation and motivation in physical education that self-regulation

positively influenced performance. It is believed that engaging in sports contributes to the personal, social, physical, and psychological development of individuals, while also contributing to the development of self-regulation values. Considering the results of this study, it is evident that participation in sports plays a significant role in having higher self-regulation skills.

It was found that individuals engaged in sports had higher mean free time management scores compared to those who did not participate in sports. Durhan, Akgül and Karaküçük (2017) determined that individuals engaged in recreational swimming had higher levels of time management skills. Demir and Alpulu (2020) found that students studying in sports sciences faculties (teaching, coaching, and sports management) obtained high scores in all dimensions of time management. Considering that effective time planning and management are crucial for achieving success in sports careers, it is possible to argue that individuals engaged in sports may possess competence in time management.

However, no significant difference was observed in self-esteem scores between individuals engaged in sports and those who were not. Korkmaz (2007) found that children participating in summer sports schools had high self-esteem values. In a study conducted by Karademir et al. (2010) with candidates participating in special talent exams for the physical education and sports department, it was determined that individuals involved in social and sporting activities had higher self-esteem values. In another study, it was found that individuals engaged in swimming had significantly higher self-esteem levels (Karakaya, Coşkun, & Ağaoğlu, 2006). It is believed that sporting achievements contribute to the development of feelings of self-efficacy and self-love in individuals.

Significant differences were found in self-regulation scores among the students based on the type of school they attended. It was determined that the students attending sports high schools had higher self-regulation values compared to students attending Anatolian and vocational high schools. However, Güre, Demet and Konyaoğlu (2019) found no significant differences in self-regulation values based on the type of school in their study conducted with teacher candidates. Kanıkırmızı (2023), in a study with high school students attending different types of schools, found that students attending science and religious vocational high schools had higher self-regulation values. Considering the curriculum of sports high schools, where there are more physical education classes compared to other types of schools, it is believed that the emphasis on sports classes contributes to the development of self-regulation in individuals.

Furthermore, significant differences were observed in free time management scores among the students based on the type of school they attended. The students attending religious vocational high schools had higher mean scores compared to those attending sports and Anatolian high schools. Eranıl and Özcan (2018) conducted a study to examine time management skills of students from different high schools and found that high school students could manage their free time at a moderate level. Religious beliefs emphasize the importance of time management (Özkan, 2022). At religious vocational high schools, in addition to the regular curriculum, vocational courses related to Islam are taught. According to Islamic beliefs, individuals should be able to manage their free time well. It can be considered that religious education and religious practices contribute to individuals' effective management of their free time.

Contrary to studies that found significant differences in self-esteem scores among students based on the type of school they attended (Çeşit et al., 2011; Kaplan, 2021), this study did not find any statistically significant differences in self-esteem scores based on the type of school. Özbey and Gültekin (2021) did not find any significant differences in self-esteem scores among students attending religious vocational high schools, Anatolian high schools, and vocational and technical Anatolian high schools. Karakurt (2019) also found no significant differences in self-esteem scores among adolescents attending different types of schools. However, in this study, it was observed that the self-esteem scores of the students engaged in sports significantly differed from those who were not engaged in sports. The distribution of the students studying in different types of schools based on their engagement in sports and sports activities might have played a role in the similar self-esteem scores observed.

Furthermore, significant differences were found in self-regulation scores among the students based on the type of activity they engaged in during their leisure time. The mean scores of the students engaged in sports activities were higher than those who spent their leisure time on social media and with friends. Ilter (2019) conducted a study with students in physical education and sports department and found that those engaged in regular sports activities had higher self-regulation values. The higher self-regulation values observed in individuals engaged in sports might be attributed to the organized and purpose-driven nature of sports activities, which indirectly contributes to higher self-regulation values in individuals.

Significant differences were found in time management scores among the students based on the type of activity they engaged in during their leisure time. The mean scores of the students engaged in sports activities were found to be higher than those who spent their leisure time on social media. Previous studies (Karaoğlu, 2015; Özdemir, Özşarı, & Topuz, 2018; Yurdağül, 2016) have also found that individuals engaged in sports activities manage their leisure time effectively, and this tendency becomes more prominent as their years of engagement in sports increase. It is believed that individuals engaged in sports activities during their leisure time are more likely to manage their time effectively.

In addition, significant differences were observed in the self-esteem scores of the students based on the type of activity they do in their free time. Those who spent their time with friends had higher self-esteem scores compared to those who watched movies and spent time on social media. A study with adolescents (Çivitci & Çivitçi, 2009) found a negative correlation between self-esteem and loneliness, suggesting that spending time with peers is associated with higher self-esteem in adolescents. On the other hand, individuals who directly spend their leisure time on social media and those with social media addiction tend to have lower self-esteem (Balci, Karakoç, & Ögüt, 2020). Among various ways of spending leisure time, engaging in sports activities was associated with the highest mean self-esteem scores. Another study (Bayazıt, Atabay, & Uzuner, 2020) with 12 and 14-year-old children revealed that a 12-week sports recreational activity program led to an increase in self-esteem among the students. In other words, it is believed that sports play a significant role in positively supporting peer communication and ultimately increasing self-esteem during primary and secondary education.

According to the results of the correlation analysis conducted to examine the relationship between variables, there is a negative relationship between the students' grade point averages and their daily average free time. It was found that as students' grade point averages increased, their daily average free time decreased. Previous studies (Wang & Kao, 2006; Yıldız & Tanrıverdi, 2017; Küçükeşmen, Şimşek, & Türkoğlu, 2020) have found that students with higher academic achievement tend to value their free time more and have higher levels of time management skills. In order to achieve higher academic performance, students need to allocate time for studying. It is assumed that students with higher academic achievement spend a significant portion of their time studying, which would lead to a decrease in their free time.

Furthermore, a positive relationship was found between the grade point averages of the students and their self-regulation scores. As grade point averages increased, self-regulation scores also increased. Studies have demonstrated a positive relationship between self-regulation and academic achievement (Miller, 2000; Tuncer & Tanaş, 2022). It is believed that individuals with higher self-regulation scores not only develop characteristics such as openness to learning and new experiences but also achieve higher academic success.

A positive relationship was also found between time management and self-regulation. As time management scores increased, self-regulation scores also increased. Janke, Son, and Payke (2009) found that free activities influence self-regulation in individuals. Balinan (2022) reported in their study with high school students that students with self-regulation skills are better at managing their free time. Moreover, higher levels of self-efficacy are associated with more active control of time and greater task persistence (Bouffard-Bouchard et al., 1991). Self-regulation is the ability to monitor and manage emotions, thoughts, and behaviors in specific ways. Individuals who can manage their emotions, thoughts, and behaviors effectively are believed to be able to manage their free time well.

There is a positive relationship between self-esteem and self-regulation. It has been found that as self-esteem scores increase, self-regulation scores also increase. In their study with high school students, Maxwell (1989) and Kapıkıran, Yaşar, and Kapıkıran (2016) found a positive relationship between self-esteem and self-regulation, indicating that as self-esteem increases, self-regulation also increases. It is believed that individuals who can control and manage their emotions, thoughts, and actions effectively will develop feelings of self-love and self-efficacy.

Conclusion and Recommendations

This study revealed that male students have higher self-regulation scores compared to female students, while there was no significant difference in terms of time management and self-esteem. The students who engage in sports have higher mean scores in self-regulation, time management, and self-esteem compared to those who do not participate in sports. It was observed that students attending sports high schools have higher self-regulation scores, and students attending Religious Vocational High Schools have higher time management scores. However, there was no significant difference in self-esteem scores among students attending different types of high schools in the study.

Furthermore, the students who engage in sports or spend time with friends have higher self-esteem scores, while those who spend more time on social media have lower self-esteem scores. Additionally, it was found that as students' grade point averages increase, their daily average free time decreases, and their self-regulation scores increase. Moreover, there is a positive relationship between time management and self-regulation, indicating that as time management values increase, self-regulation scores also increase. In order to support high school students in effectively utilizing their free time through appropriate time management models, it is believed that structured education emphasizing self-regulated learning processes is essential for students to have a successful career and become active individuals with high self-esteem throughout their lives. Moreover, the results suggest that encouraging individuals to engage in sports at an early age could contribute to the development of feelings such as having a more organized life, valuing one's time, feeling competent, and self-love.

However, there are some limitations to this study that need to be addressed. First, the sample for this study was selected using a non-probability convenience sampling method, which may limit the generalization of the findings to the population. In addition, the study only focused on high school students, and future research with different sample groups

may yield different results. Moreover, this study assessed the variables based on the total scores obtained from the scales, suggesting a general relationship. Examining the sub-dimensions of the concepts in future studies could provide more detailed information. Additionally, it should be taken into consideration that the study results reflect a region in Turkey where the study was conducted. In this regard, it is thought that the results of the study can be evaluated from different perspectives in countries where sports culture is developed, where participation in sports is supported at educational levels as a state policy and where the concept of leisure time is important. The study employed a cross-sectional design using quantitative research methods. Conducting future research with qualitative methods could contribute to the literature.

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