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The Effect of Sport Recreation Participants'Body Image Perceptions on Their Recreation Anxiety: The Role of Gender¹

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Abstract

Recreation is the utilisation of individuals' free time outside working hours. Recreation anxiety refers to the stress and anxiety experienced by individuals during participation in these leisure time activities. Recreation anxiety is affected by many factors and has an effect on individuals' well-being. This study aims to examine the relationship between individuals' body image perception and recreation anxiety and the regulatory role of gender in this relationship. For this purpose, analyses were carried out with the data obtained from 295 volunteer participants, 148 of whom were female and 147 of whom were male. Recreation anxiety was assessed with the Recreation Anxiety Scale and body image perception was assessed with the Body Image Scale. As a result of the analysis, it was seen that increasing body image anxiety showed a significant relationship with increasing recreation anxiety. It was found that the regulatory role of gender in the relationship between body image anxiety and recreation anxiety was not significant. In especially sportive recreation activities, the negative evaluation of body image may

be an important cause of anxiety due to performance, social comparisons and aesthetic expectations. It is thought that this situation may cause a decrease in intrinsic motivation, an increase in recreation anxiety and thus a decrease in participation in sportive activities. Although women feel pressure towards body image due to expectations of being thin and aesthetic, it is seen that men may also feel anxiety towards body image due to social expectations of being muscular and strong. Therefore, women and men may feel similar levels of body image anxiety, albeit with different expectations. The relationship between recreation anxiety and body image perception is complex and multifaceted. Therefore, this relationship needs to be explained by different factors and cross-cultural studies are needed.

Keywords: Sport Recreation, Recreation Anxiety, Body Image, Gender, Psychology Behaviour.

JEL Codes: I10, I12, I83

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1. Introduction

Recreation is the use of leisure time outside of work and other responsibilities (Gündoğdu, 2018). This leisure time experience is often described as positive experiences such as socialising, excitement, enjoyment and relaxation. Indeed, studies have revealed that participation in recreational activities has a positive effect on individuals' physical, social, and psychological well-being (Bélair et al., 2018). However, these experiences can also turn into negative experiences such as ambition, anger, and anxiety. It has been observed that individuals sometimes experience anxiety when participating in these activities. The anxiety and stress that individuals experience when participating in leisure time activities is defined as recreation anxiety (Karakaya & Yıldız, 2021). The concept of recreation anxiety is a relatively new concept and has not been sufficiently addressed. Studies often focus on the relationship between recreation and anxiety rather than recreation anxiety specifically. In particular, performance anxiety experienced by individuals who engage in sports (Weinberg & Gould, 2020) and the risk of injury in sports that require intense physical effort (Gould & Krane, 2019) have been found to be associated with high levels of anxiety. Furthermore, in group recreational activities, individuals' concerns about being evaluated may also be related to increased anxiety (Russell, 2021). All of these factors can contribute to increased recreation anxiety in individuals who participate in sports, thereby limiting their participation in recreational activities (Scanlan et al., 2020), increasing their stress and burnout levels (Smith, 2019), and being associated with a decrease in self-esteem (Deci & Ryan, 2020). This research examines the relationship between body image perception and recreation anxiety in individuals who engage in sports. The concept of body image perception refers to individuals' perceptions of their own physical appearance and their evaluations of that appearance (Cash & Smolak, 2011). The perception of body image, especially among individuals who engage in sports and recreational activities, can be a significant cause of anxiety due to performance, social comparisons, and aesthetic expectations. Studies often evaluate the relationship between body image perception and the level of participation in recreational activities. Indeed, a study reveals that body dissatisfaction causes social physical anxiety, which leads to avoidance of sports activities (Atalay & Gençöz, 2008). Another meta-analysis study shows that increased body image satisfaction is associated with increased participation in sports activities (Campbell & Hausenblas, 2009). These findings suggest that body image perception may cause an increase in recreation anxiety and thus limit participation in these activities. Therefore, the main question of this research is whether there is a relationship between individuals' body image perception and recreation anxiety.

Another question addressed in the study is whether there is a significant relationship between body image perception and recreation anxiety, and whether this relationship is moderated by gender. The relationship between body image perception and gender has been frequently examined in the literature, but the findings obtained from the studies are not homogeneous. Due to different samples, cultural contexts, and measurement methods, some studies report that women (Grogan, 2016; Sabiston & Crocker, 2008) have a more negative body image than men, while other studies report no significant gender difference (Demarest & Allen, 2000; Ricciardelli & McCabe, 2004). While both genders share the pressure to have an ideal body, they may experience this pressure differently. Social gender roles and associated norms and expectations can cause different concerns in women and men. The roles that society assigns to genders often emphasise that women should be thin and aesthetic, while men should have a more muscular and powerful body image. Thus, while both women and men feel pressure to have an ideal body, women feel pressure to have a slim body, while men feel pressure to have a muscular body. This pressure can negatively affect body image perception, which may be related to an increase in recreation anxiety. Because the belief that individuals do not have an ideal body, especially in sports activities, can lead to expectations of failure and anxiety about looking worse than others when comparing oneself to others in group activities.

In summary, with the diversity of findings presented by recreation studies, the concept of recreation anxiety is relatively new and needs further explanation. Studies often provide explanations regarding the relationship between participation in recreational activities and anxiety. This study specifically addresses recreation anxiety, which is anxiety related to recreational activities. It is known that recreation anxiety restricts participation in recreational activities and therefore has a negative effect on mental well-being. Therefore, there is a need for further explanation of recreation anxiety and related factors in order to develop possible solutions and create programmes aimed at reducing anxiety. This study focuses on the relationship between individuals' body image perception and recreation anxiety. In addition, the study examines the moderating role of gender in the relationship between body image perception and recreation anxiety. That is, it examines whether the possible relationship between body image and recreation anxiety is higher or lower in different gender groups. In this respect, in addition to explaining recreation anxiety, the research aims to offer an explanation for both genders as an alternative to the findings of studies that focus mainly on women.

The main questions of the study and the hypotheses developed based on these questions are listed below.

The Effect of Sport Recreation Participants’Body Image Perceptions on Their Recreation Anxiety: The Role of Gender

Q1: Is there a statistically significant relationship between body image perception and recreation anxiety?

Q2: Does gender have a moderating role in the relationship between body image perception and recreation anxiety?

H1₀: There is no statistically significant relationship between body image perception and recreation anxiety.

H1₁: There is a statistically significant relationship between body image perception and recreation anxiety.

H2₀: Gender does not play a statistically significant moderating role in the relationship between body image perception and recreation anxiety.

H2₁: Gender plays a statistically significant moderating role in the relationship between body image perception and recreation anxiety.

2. Method

Ethical approval for the study was obtained from Süleyman Demirel University Ethics Committee on 18/10/2024. The number of Ethics Committee approval is E.865351.

2.1. Sampling

The sample of the research was aimed to consist of individuals participating in active sports recreation activities. The sample size was determined according to the analyses to be applied in the research, and the highest sample number suitable for these analyses was taken into consideration. Using the G Power 3.1.9.4. programme, it was determined that the sample size should be 119 (F test, fixed model R2 increase, a priori, effect size f2: 0.15, alpha error probability: 0.05, power: 0.95, number of estimators tested: 3, total number of estimators: 3). In addition, it was decided to apply path analysis to the structural equation modelling in the research. Path analysis consists of three variables and a total of three paths. Siddiqui (2013) reported in his compilation research, which he conducted with reference to many sources, that a sample size of 200-400 is necessary for SEM. The researcher stated that a minimum of 100, preferably 200, samples are required for SEM. Jackson

(2001) noted that the sample size should be between 200 and 400. Hu and Bentler (1999) recommended a sample size of 250 or more. Çerezci (2010) stated that the sample size could be around 300, and that fit values stabilise after this size. Considering all this information together, and taking into account missing data, the target was set to reach approximately 300 participants.

The research data was collected using an online survey and snowball sampling. Specifically, the initial sharing was conducted with university students studying at the Faculty of Sports Sciences at Süleyman Demirel University, and then it was requested to be shared in groups, including members of sports clubs. Before participating in the research, individuals were informed in detail about the research and ethical rules. Data was collected from 306 participants who voluntarily agreed to participate in the research. After the data was collected, the data set was checked. The condition for participation in the research was that individuals were currently actively participating in recreational sports activities. In this context, data from three individuals who are not currently actively participating in these activities but who indicated that they had participated in the past were excluded from the data set. Additionally, data from eight participants were excluded from the data set due to incomplete forms. Ultimately, the study continued with data from 295 participants after the data set was checked.

The inclusion criteria of the study were determined as being over the age of 18, completing the inventories completely and being currently engaged in sportive recreation activities. Exclusion criteria were determined as being younger than 18 years of age and not currently participating in sportive recreation activities. Considering the inclusion and exclusion criteria, 295 participants participated in the study. Of these participants, 50.2% (n=148) were female and 49.8% (n=147) were male. The average age of the participants was 34.49 years (SD=7.903), the youngest participant was 19 years old and the oldest participant was 55 years old. Again, 1% (n=3) of the participants were high school graduates, 39.7% (n=117) were associate/undergraduate graduates and 59.3% (n=175) were postgraduate graduates. The socio-demographic characteristics of the participants are summarized in Table 1.

Table 1. Socio-Demographic Information of Participants

Variables		N	%
Gender	Female	148	50,2
	Male	147	49,8
	Total	295	100,0

Age	18-25	30	10,2
	25-35	118	40,0
	35-45	118	40,0
	45 ve Over	29	9,9
	Total	295	100,0
Education Status	İlköğretim	0	0,0
	Lise	3	1,0
	Önlisans/Lisans	117	39,7
	Lisansüstü	175	59,3
	Toplam	295	100,0
Income Level	Lower	20	6,8
	Lower-Middle	41	13,9
	Middle	146	49,5
	Upper-Middle	88	29,8
	High	0	0,0
	Total	295	100,0
Regular Sports	Yes	295	100,0
	No	0	0,0
	Total	295	100,0
Frequency of Sports	1 Day a Week	75	25,4
	2-3 Day a Week	150	50,8
	4-5 Day a Week	47	15,9
	Every Day of the Week	23	7,8
	Total	295	100,0

2.2. Research Method and Technique

The research was quantitatively designed and carried out with the similar subjects sampling method (survey). The data in the study were obtained online through written questioning (questionnaire) technique.

2.3. Research Purpose and Model

In this study, it is aimed to determine the regulatory role of gender in the relationship between recreation anxiety and body image perceptions of people engaged in sportive recreation activities. The research model created in this direction is given in Figure 1.

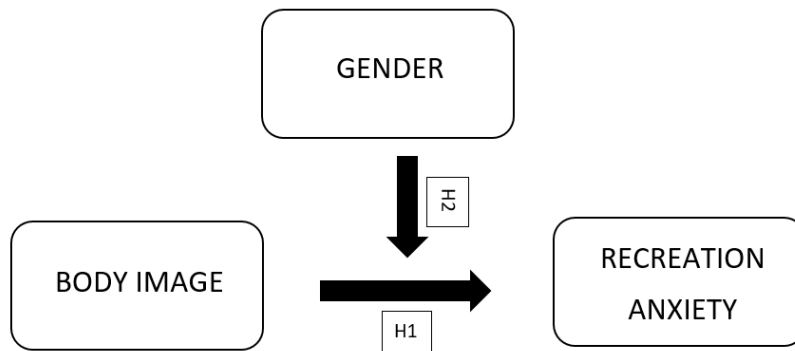


Figure 1. Research Model

2.4. Data Collection Tools

2.4.1. Socio-demographic information form

Socio-demographic information form includes questions prepared by the researchers to collect information about the socio-demographic characteristics of the participants. The form also includes questions such as gender, age, education level, socio-economic status, organized sports activities, frequency of doing sports, finding their body beautiful, finding others' bodies beautiful and comparing their bodies with others.

2.4.2. Recreation anxiety scale

It was developed by Orhun et al. (2024) The scale, which was developed with 113 items, was finalized with 25 items. The scale is in 5-point Likert type. As the scores obtained from the scale increase, it is thought that recreation anxiety also increases. The scale consists of six sub-dimensions. These are self-efficacy and social anxiety, physical symptoms, economic anxiety, safety anxiety, responsibility anxiety, and expectation anxiety. In the study, the Cronbach Alpha coefficients of the subscales were found to be .89, .74, .86, .86, .77, .88, and .83, respectively. The overall scale was found to be .94. The factor loads of the items belonging to the subscales were found to be between 0.567 and 0.766 in the self-efficacy and social anxiety subscale, between 0.610 and 0.816 in the physical symptoms subscale, between 0.518 and 0.790 in the economic anxiety subscale, between 0.808 and 0.727 in the safety anxiety subscale, between 0.838 and 0.489 in the responsibility anxiety subscale, and between 0.844 and 0.517 in the expectation anxiety subscale. The total variance of all subscales is 68.72%. Finally, the confirmatory factor analysis data of the scale were statistically appropriate ($X^2/df= 2.24$; RMSEA= 0.072; GFI= 0.91; CFI= 0.92; SRMR= 0.06).

2.4.3. Body image scale

The scale developed by Saylan and Soyyiğit (2022) was formed in a pool of 30 items. The final version of the scale has 21 items and is a 5-point Likert scale.

It is thought that as the scores obtained from the scale increase, negative body image increases. The scale consists of four subscales. These are; negative perception of the body, evaluation sensitivity, positive perception of the body and body change. While Cronbach's Alpha for the total scale was 0.92, the Cronbach's Alpha values of the subscales ranged between 0.79 and 0.88. Again, the factor loadings of the items in the overall scale ranged between 0.49 and 0.98, while the total variance explained was 62.0%. Finally, the confirmatory factor analysis data of the scale are statistically appropriate ($X^2/df= 1.72$; RMSEA= 0.061; GFI= 0.87; CFI= 0.95; SRMR= 0.063).

2.4.4. Process

A questionnaire form including Demographic Information Form, Recreation Anxiety Scale and Body Image Scale was given to the participants who approved the Informed Consent Form stating that participation and completion of the study was voluntary. In the analysis of the data, SPSS 25 program was used for descriptive information and SPSS Process v.4.2 plug-in was used for regulatory effect detection. Before evaluating the results, basic assumptions were examined. The normality assumption was evaluated based on the condition that the skewness and kurtosis values were between -2 and +2 (George & Mallery, 2010). Since the skewness and kurtosis values of the variables were within the desired range, it was seen that the normality assumption was met. For multicollinearity, correlation coefficients between variables and variance inflation factor (VIF) values were evaluated. It is seen that the correlation coefficient between variables is .553 and VIF values are 1.000. Since the VIF values were below 10 and the correlation coefficients were below .80, it was shown that there was no multicollinearity (Büyüköztürk, 2010).

3. Findings

3.1. Descriptive Findings

Descriptive findings of the inventories are given in the Table. According to the findings, the mean of the Recreation Anxiety Scale was 58.66 (SD= 16.498), while the mean of the Body Image Scale was 51.93 (SD= 14.745).

Table 2. Descriptive Findings Related to the Scales

Variables	N	Min.	Max.	Average	Standard Deviation	Kurtosis	Skewness
Recreation Anxiety Scale	295	25	98	58.66	16.498	-0.326	0.313
Body Image Scale	295	23	98	51.93	14.745	0.111	0.645

3.2. Reliability and Validity Findings Regarding Inventories

Reliability and validity analyzes of the inventories were conducted. Accordingly, the Cronbach Alpha value of the Recreation Anxiety Scale was determined as .906. The Cronbach Alpha value of the Body Image Scale was determined as .914. The value determined for both scales can be interpreted as high reliability (Aksu et al., 2017). The Kaiser-Meyer-Olkin

Measurement (KMO) value of the Recreation Anxiety Scale was found to be .789 (Bartlett's Test= $p < .05$). This value can be interpreted as a moderate value close to good. The Kaiser-Meyer-Olkin Measurement (KMO) value of the Body Image Scale was .817 (Bartlett's Test= $p < .05$). This value can be interpreted as good (Büyüköztürk, 2010). In addition, the total variance explained by the items of the Recreation Scale was 62.36%, while the total variance explained by the items of the Body Image Scale was 66.97%.

Table 3. Reliability and Validity Findings of the Scales (Exploratory Factor Analysis)

Scales	RELIABILITY	VALIDITY (Exploratory Factor Analysis)	
	Cronbach Alpha	KMO	Total Variance Explained
Recreation Anxiety Scale	.906	.786	%62.357
Body Image Scale	.914	.817	%66.971

The goodness of fit values for confirmatory factor analysis of the inventories are given in the table. When we look at the value ranges of the goodness of fit values, a χ^2/df value below 2 is considered as a good fit value (Cole, 1987). Accordingly, it is seen that these values indicate good fit in both inventories. For the GFI value, above 0.90 is considered as good fit and above 0.95 is considered as perfect fit (Chow, Snowden & McConnerll, 2001). Accordingly, it is seen that the GFI value of the Recreation Anxiety Scale shows a good fit and the Body Image Scale shows a good fit close to perfect. For the CFI value, above 0.80 is reported as acceptable and above 0.90 is reported as good fit value (Chow, Snowden

& McConnerll, 2001). Accordingly, the value of the Recreation Anxiety Scale is considered good and the value of the Body Image Scale is considered acceptable. For the NFI value, it is reported in the literature that above 0.80 is acceptable and above 0.90 is good fit value (Hooper et al., 2008). Accordingly, the value of the Recreation Anxiety Scale indicates a good fit, while the value of the Body Image Scale is acceptable. Finally, for the RMSEA value, up to 0.10 is considered as poor fit and below 0.08 is considered as acceptable fit (MacCallum et al., 1996; Schermelleh-Engel et al., 2003). Accordingly, both inventories have a poor fit.

Table 4. Validity Findings Regarding the Scales (Confirmatory Factor Analysis)

	χ^2/df	GFI	CFI	NFI	RMSEA
Recreation Anxiety Scale	1.89	0.921	0.917	0.903	0.074
Body Image Scale	1.99	0.941	0.881	0.851	0.094

3.3. Findings on the Relationships Between Variables

When we look at the descriptive information of the inventories, it was assumed that the data were normally distributed because the number of participants was over 30 and the kurtosis and skewness

values of both inventories were between +1 and -1 (Field, A., 2009; Hair et al., 2013). For this reason, the correlation relationship was examined with Pearson test (Field, A., 2009). According to the correlation test data, there is a positive and moderately significant relationship between body image and recreation anxiety ($r = .55$, $p < .001$).

Table 5. Findings on the Correlation Relationship Between the Scales

Recreation Anxiety Scale	Body Image Scale	
	Pearson Korelasyon	.553**
	Sig.	.000
	N	295

** $p < .001$

The Effect of Sport Recreation Participants' Body Image Perceptions on Their Recreation Anxiety: The Role of Gender

According to the findings of the regression analysis in which recreation anxiety was taken as the dependent variable and body image as the independent variable, it was found that body image predicted

recreation anxiety ($B=.55$, $t=11.36$, $p<.001$, 95% CI [.51-.73]; $F(1,293)=129.05$, $p<.001$). Accordingly, body image alone explains 30% of recreation anxiety ($R^2=.30$).

Table 6. Findings on the Regression Relationship between the Scales-Linear Regression Analysis with Recreation Anxiety as the Dependent Variable

	Regression Coefficient	Standard Error	p	95% Confidence
Body Image Scale	.619	.306	.000	[-.512-.726]

In the descriptive information of the inventories, normal distribution of the data was determined (Field, A., 2009; Hair et al., 2013). For this reason, Independent Sample T Test was used to determine the mean difference between gender groups in the inventories (Field, A., 2009). According to the results of the analysis, it was determined that the variances

of the data of the Recreation Anxiety Scale were homogeneous (Levene Test $p>.05$). On the other hand, it was determined that the variances of the Body Image Scale data were not homogeneous (Levene Test $p<.05$). For both scale scores, no significant difference was found between gender groups in total score ($p>.05$).

Table 7. Independent Sample T Test Results

Variables	Levene Test		T Test			
	F	p	t	df	p	%95 Confidence
Recreation Anxiety Scale	0.130	.718	1.277	293	.203	[-1.327 – 6.227]
Body Image Scale	36.507	.000	0.953	250.598	.341	[-1.743 – 5.012]

3.4. The Moderating Effect of Gender on the Relationship Between Variables

In order to reveal whether there is a moderating effect between the variables in this study, the Process Macro developed by Andrew F. Hayes (Hayes, 2013) was used. The moderating effect reveals in which situations and how the effect of the independent variable will increase or decrease. If there is a moderating effect, the slope test will be applied to

determine in which situations (low, medium, high) it changes (Gürbüz, 2019).

When the moderating effect of gender factor in the relationship in which body image predicts recreation anxiety is examined; it is seen that gender factor does not have a moderating effect in this relationship ($\beta=1.169$, $p>.05$). For this reason, in order to understand how the moderating effect changes situationally; slope analysis, which reveals the status of being male and female, was not needed.

Table 8. Findings of the Moderating Impact Analysis

Variables	β	Standard Error	t	p	%95 Confidence
Constant	55.747	.800	69.662	.000	[54.172 - 57.322]
Body Image (X)	9.757	.882	11.063	.000	[8.021 - 11.492]
Gender (W)	-.685	.802	-.854	.394	[-2.262 - 0.893]
Interaction Effect (X*W)	1.169	.885	1.830	.068	[-0.122 – 3.360]

4. Discussion And Conclusion

The aim of this study is to examine the relationship between body image perception and recreation anxiety levels among individuals participating in sports recreation activities and to assess whether gender plays a moderating role in this relationship. To this end, analyses were conducted using data obtained from a total of 295 individuals aged between 19 and 55.

The first question of the study is whether there is a statistically significant relationship between body image perception and recreation anxiety. For this purpose, a correlation analysis was performed. As a result of the analysis, the null hypothesis was rejected. A positive and significant relationship was found between body image anxiety and recreation anxiety. The effect size of this correlation is large. This reveals that increasing body image anxiety is

associated with increasing recreation anxiety. When reviewing the literature, there is no research that directly examines the relationship between recreation anxiety and body image perception. However, recreation anxiety is considered a limiting factor in participation in recreational activities and expresses the anxiety and stress individuals experience regarding participation in leisure time activities. The findings of the study show that as individuals' negative perceptions of their bodies increase, their avoidance of recreational activities also increases (Atalay & Gençöz, 2008; Vartanian & Shaprow, 2008). In addition, it has been found that individuals who participate more in recreational activities have higher positive perceptions of their bodies (Campbell & Hausenblas, 2009). Furthermore, it has been observed that as individuals' dissatisfaction with their bodies increases, their anxiety levels also increase (Johnson & Wardle, 2005). When the results of the literature are evaluated together, it is seen that as individuals' body dissatisfaction increases, their anxiety increases and they avoid sports activities. The relationship between the increasing negative body image obtained in the research and increasing recreation anxiety supports these findings. In particular, the increasing negative evaluation of their bodies by individuals who participate in sports activities distances them from the ideal body image. This anxiety about body image may trigger feelings of inadequacy due to the threat of comparison that comes with being visible in recreational activities, leading to recreation anxiety and, consequently, avoidance of sports activities (Frederick & Morrison, 1996; Tiggemann & Slater, 2001). Furthermore, negative evaluations of body image may cause a decline in the belief in one's ability to engage in physical activity among individuals who participate in sports. This may be related to an increase in recreation anxiety (McAuley et al., 1991).

Another question addressed in the study is whether gender moderates the relationship between body image perception and recreation anxiety. Therefore, a moderation analysis was conducted. The results of the analysis did not reject the null hypothesis. The result reveals that the relationship between body image perception and recreation anxiety is significant, but gender does not have a moderating role in this relationship. In other words, it shows that the strength of the relationship between body image perception and recreation anxiety does not change depending on whether the person is female or male. At the same time, it was observed that body image perception and recreation anxiety scores did not differ between women and men. The results of both the moderation test and the between-groups comparison test reveal that both gender groups evaluate body image perception similarly and that there is no significant difference in their levels of recreation anxiety. Results comparing body image perception across genders appear to be inconsistent. Some stu-

dies report that women have more negative body image perceptions, while others find no gender difference. This suggests that the role of other factors beyond gender in body image perception is more effective in explaining body image perception. When gender-based body perception is examined, it is seen that there is no difference between women and men in terms of body satisfaction, but the factors at the focus of dissatisfaction vary. In other words, both women and men are similarly dissatisfied with their bodies; however, women desire a slimmer body, while men desire a stronger, more muscular body. Therefore, it is expected that body image perception scores for women and men would be similar. When the results were evaluated in terms of recreation anxiety, although general anxiety levels were higher in women, the results for recreation anxiety did not support this finding. In gender comparisons of general anxiety levels, it is frequently stated that anxiety levels are higher in women (Kessler et al., 2005; Rosenfield et al., 2013). However, evaluations related to recreation indicate that there is no difference between genders. In a study conducted by Kinkawa et al. (2024), it was found that Leisure Time Scale scores did not differ between genders. A similar result was obtained in another study conducted by Yurcu (2021). It was reported that the perception of leisure time attitudes did not change depending on gender. In summary, the relationship between body image perception and recreation anxiety appears similar across genders. This suggests that, although in different ways, expectations of ideal body image lead to negative cognitions in both gender groups, and that both gender groups exhibit similar levels of recreation anxiety, albeit for different reasons.

The study has various contributions and limitations. While studies on recreation and anxiety are numerous, the concept of anxiety discussed describes a general state of anxiety. Therefore, these explanations are insufficient to explain recreation anxiety. This study specifically addresses recreation anxiety and attributes it to various factors. However, the limited number of studies on recreation anxiety limits literature comparisons and weakens the discussion. Looking at this situation from another perspective, it is thought that this study could be one of the pioneering studies on the subject. In addition to explaining the relationship between body image perception and recreation anxiety, the study also explores this relationship based on gender. While the results indicate no gender differences in this relationship, they fall short of explaining how different genders experience this body evaluation and anxiety related to recreational activities. It is necessary to examine the domains in which men and women experience recreation anxiety and whether body image interpretations differ across domains. Another issue is sample size. Although the research sample was sufficient

The Effect of Sport Recreation Participants' Body Image Perceptions on Their Recreation Anxiety: The Role of Gender

for the analyses, the generalisability of the research findings is limited due to the sample size for external validity. Furthermore, if the RMSEA value reveals poor fit, it may be that the RMSEA value is affected by the sample size. It is considered that the generalisability of a study involving larger samples and more diverse populations would be higher.

It is well-documented that recreational activities have a positive effect on mental health. Consequently, it is recommended that an examination of the factors that restrict and support recreational activities, alongside the explanations to be developed on this subject, will contribute to the applications to be made in the field, in addition to the theoretical knowledge. It is recommended that studies be conducted with different cultures and cross-cultural studies. Moreover, the development and implementation of psychological interventions for recreation anxiety, in conjunction with the execution of studies on negative cognitions pertaining to body image, is poised to foster participation in sporting recreational activities and enhance psychological well-being.

Reference

- Aksu, G., Eser, M. T. & Güzeller, C. O. (2017). Açıklayıcı ve doğrulayıcı faktör analizi ile yapısal eşitlik modeli uygulamaları, Detay Yayıncılık.
- Atalay, A. A., & Gençöz, T. (2008). Critical Factors of Social Physique Anxiety: Exercising and Body Image Satisfaction. *Behaviour Change*, 25(3), 178–188. doi:10.1375/behc.25.3.178
- Bélair, M. A., Kohen, D. E., Kingsbury, M., & Colman, I. (2018). Relationship between leisure time physical activity, sedentary behaviour and symptoms of depression and anxiety: evidence from a population-based sample of Canadian adolescents. *BMJ open*, 8(10), e021119.
- Büyüköztürk, Ş. (2010). Sosyal bilimler için veri analizi el kitabı. Pegem Akademi Yayınları.
- Campbell A, Hausenblas HA. Effects of exercise interventions on body image: a meta-analysis. *J Health Psychol*. 2009;14:780-793.
- Cash, T. F., & Smolak, L. (2011). *Body Image: A Handbook of Science, Practice, and Prevention*. Guilford Press.
- Chow, J. C. C., Snowden, L. R. ve McConnell, W. (2001). A confirmatory factor analysis of the Research. 28(4), 400-411.
- Cole, D. A. (1987). Utility of confirmatory factor analysis in test validation research. *Journal of consulting and clinical psychology*, 55(4), 584.
- Çerezci, E.T. (2010). Yapısal eşitlik modelleri ve kullanılan uyum iyiliği indekslerinin karşılaştırılması. Yayınlanmamış Doktora Tezi, Gazi Üniversitesi, Fen Bilimleri Enstitüsü, Ankara.
- Deci, E. L., & Ryan, R. M. (2020). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications
- Demarest, J., & Allen, R. (2000). Body image: Gender, ethnic, and age differences. *The Journal of Social Psychology*, 140(4), 465–472.
- Field, A. (2009). *Discovering statistics using SPSS: Book plus code for E version of text* (Vol. 896). London, UK: SAGE Publications Limited.
- Fonseca, M. (2015). *Principles and practice of structural equation modeling* (3th ed.). New York: Guilford Press, 2011
- Frederick, C. M., & Morrison, C. S. (1996). Social physique anxiety: Personality constructs, motivations, exercise attitudes, and behaviors. *Perceptual and Motor Skills*, 82(3), 963–972.
- George, D., & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference*, 17.0 update (10a ed.). Boston: Pearson
- Gould, D., & Krane, V. (2019). *The psychology of sport injury and rehabilitation*. Human Kinetics.
- Grogan, S. (2016). *Body image: Understanding body dissatisfaction in men, women and children* (3rd ed.). Routledge.
- Gündoğdu, C. (2018). *Rekreasyon ve boş zaman yönetimi*. Nobel Yayıncılık.
- Gürbüz, Suat, (2019) *Sosyal Bilimlerde Aracı, Düzenleyici ve Durumsal Etki Analizleri*, Seçkin Yayıncılık, Ankara.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2013). *Multivariate Data Analysis*: Pearson Education Limited.
- Hayes, A. F. (2013). *The PROCESS macro for SPSS and SAS* (version 2.13)[Software]. New York: Guilford.
- Hooper, D., Coughlan, J. ve Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53–60.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55.
- Jackson, D. L. (2003). Revisiting sample size and the number of parameter estimates: Some support for the N:q hypothesis. *Structural Equation Modeling*, 10, 128–141.
- Johnson, F. ve Wardle, J. (2005). Dietary Restraint, Body Dissatisfaction and Psychological Distress: A Prospective Analysis. *Journal of Abnormal Psychology*. 114(1): 119-125.
- Karakaya, A., & Yıldız, M. (2021). Rekreasyonel faaliyetlere katılım ve kaygı arasındaki ilişki: Bir derleme çalışması. *Spor Bilimleri Dergisi*, 22(3), 150-165.
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62(6), 593–602. <https://doi.org/10.1001/archpsyc.62.6.593>
- Kinkawa R, Ono M, Horiuchi S, Kikkawa M, Ito S, Shimasaki A, et al. Development of the Leisure Activity Scale for young adults: Reliability and validity. *Psychiatry Clin Neurosci Rep*. 2025;4:e70070. <https://doi.org/10.1002/pcn5.70070>
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1(2), 130–149. <https://doi.org/10.1037/1082-989X.1.2.130>
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological methods*, 1(2), 130.
- McAuley, E., Courneya, K. S., & Lettunich, J. (1991). Effects of acute and long-term exercise on self-efficacy responses in sedentary, middle-aged males and females. *The gerontologist*, 31(4), 534–542.
- Orhun, B. N., Altunöz, Ö., & Demir, İ. H. (2024). Rekreasyon kaygısı: Bir ölçek geliştirme çalışması. *Journal of Gastronomy, Hospitality and Travel*, 7 (2), 609-624.
- Ricciardelli, L. A., & McCabe, M. P. (2004). A biopsychosocial model of disordered eating and the pursuit of muscularity in adolescent boys. *Psychological Bulletin*, 130(2), 179–205.
- Rosenfield, S., & Mouzon, D. (2013). Gender and mental health. In C. S. Aneshensel, J. C. Phelan, & A. Bierman (Eds.), *Handbook of the Sociology of Mental Health* (2nd ed., pp. 277–296). Springer. https://doi.org/10.1007/978-94-007-4276-5_14
- Russell, R. (2021). *Understanding leisure: Social, psychological and economic dimensions*. CABI.
- Sabiston, C. M., & Crocker, P. R. E. (2008). Examining an integrative model of physical activity and well-being in adolescent girls.

Journal of Sport and Exercise Psychology, 30(1), 3–22.

Saylan, E., & Soyyiğit, V. (2022). Dimensions of body image: body image scale. Turkish Psychological Counseling and Guidance Journal, 12(65), 229-247.

Scanlan, T. K., Russell, G. R., Wilson, N. C., & Scanlan, L. A. (2020). Sports participation motivation: A meta-analysis. Journal of Sport Psychology, 35(2), 180-202.

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. Methods of psychological research online, 8(2), 23-74.

Siddiqui K. (2013). Heuristics for sample size determination in multivariate statistical techniques. World Appl Sci J. 27(2):285-287.

Smith, R. E. (2019). Psychological foundations of sport. Human Kinetics.

Tiggemann, M., & Slater, A. (2001). A test of objectification theory in former dancers and non-dancers. Psychology of Women Quarterly, 25(1), 57–64.

Vartanian, L. R., & Shaprow, J. G. (2008). Effects of weight stigma on exercise motivation and behavior: A preliminary investigation among college-aged females. Journal of Health Psychology, 13(1), 131–138.

Weinberg, R. S., & Gould, D. (2020). Foundations of sport and exercise psychology. Human Kinetics

Yurcu, G. (2021). Leisure attitude, anxiety, and mental well-being in Turkey: The case of COVID-19. European Journal of Tourism, Hospitality and Recreation, 11(2), 181-194.