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Corresponding Address / Yazışma adresi
Mersin Üniversitesi
Beden Eğitimi ve Spor Yüksekokulu
Çiftlikköy Kampüsü Yenişehir / Mersin / TURKİYE
intjorass@gmail.com

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YAZIM KURALLARI

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***Anahtar Kelimeler**:* Anahtar Kelimeler başlığı italik ve 10 punto olmalı, en az 3 en çok 5 kelimeden oluşmalıdır. Anahtar kelimeler virgül (,) işareti ile birbirinden ayrılmalı, küçük harfle yazılmalıdır. Giriş ile anahtar kelimeler arasına 1 satır boşluk bırakılmalıdır.

Giriş: Makalenin ana bölüm başlıkları Giriş, Yöntem, Bulgular, Sonuç ve Tartışma olmak üzere numaralandırma yapmadan sola dayalı, 11 punto, kalın ve büyük harflerle yazılmalıdır. Çalışmada paragraf başı yapılmamalıdır. Paragraf sekmesinde girintiler bölümünde; önce ve sonra alanı 6 nk satır aralığı 1 olmalıdır. Problem durumu, giriş bölümü içinde açıkça belirtilmelidir. Makale MS Office Word programında uzantısı .doc ya da docx olacak şekilde kaydedilmelidir. Metin, A4 boyutuna üst, alt, sağ ve sol boşluk 2,5 cm. bırakılarak tek satır aralıklı yazılmalıdır. Times New Roman yazı karakteri kullanılmalı ve tek sütun olmalıdır.

İkinci düzey başlıklar numaralandırma yapmadan sola dayalı, 11 punto, ilk harfleri büyük, kalın ve italik olarak yazılmalıdır. Kendinden önceki paragraftan bir satır boşluk ile ayrılmalıdır. Biçimlendirmeyi bozmadan bu kısmı silip makale metnini yazabilirsiniz.

Yöntem: "Giriş" bölümünü sırasıyla "Yöntem", "Bulgular", "Sonuçlar ve Tartışma" bölümleri izlemelidir. Belirtilen yazım esaslarına uygun olarak hazırlanan ve inceleme kurulu tarafından onaylanan makaleler yayımlanır.

Örneklem/Çalışma Grubu/Katılımcılar: Araştırmada, grubun oluşturulma biçimine göre Örneklem, Çalışma Grubu ya da Katılımcılar başlıklarından biri kullanılmalıdır. Araştırmanın çalışma grubunun kimlerden oluştuğu ve örnekleme yöntemine ilişkin bilgiler bu bölümde belirtilir.

Veri Toplama Araçları/Veri Toplama Yöntemleri / Veri Toplama Teknikleri: Araştırmada kullanılan veri toplama araçları ile ilgili bilgiler bu bölümde belirtilebilir. Başlıktaki üç ifadeden tercih edilen bir tanesi kullanılmalıdır.

Üçüncü Derece Başlık (Ölçme Aracı) : Sola dayalı, 11 punto, italik ve sadece ilk kelimenin ilk harfi büyük olacak biçimde yazılmalıdır. Kendinden önceki paragraftan bir satır boşluk ile ayrılmalıdır.

Verilerin Analizi: Araştırma kapsamında elde edilen verilerin analizleri ile ilgili bilgiler bu bölümde belirtilebilir. Aşina olunan istatistiklere ilişkin açıklayıcı bilgilere yer verilmemelidir. Ancak aşina olunmayan istatistikler hakkında açıklayıcı kısa bilgilere yer verilmesi yararlı olacaktır.

Bulgular: Kullanılacak referanslar, tablolar, şekiller APA 6'ya uygun şekilde hazırlanmalıdır. Yazım kuralları ve APA'ya uygun olmayan makaleler ilk aşamada editör tarafından yapılan değerlendirmede elenir. Referanslarınızı gözden geçirmeniz ve APA 6'ya uygunluğunu kontrol etmeniz gerekmektedir. Tablolara, tablo numarasıyla birlikte metin içinde mutlaka atıfta bulunulmalıdır. Tablolar gerekirse tek sütun yapılabilir.

Tablolar, rakamla numaralandırılmalı ve Tablo başlığı tablonun üstünde kelimelerin baş harfleri büyük, sola dayalı 11 punto ile yazılmalıdır. Tablo başlığı kalın veya eğik yazı şeklinde olmamalıdır. Tablo numarasından sonra nokta işareti konup tablo adı yazılmalıdır. Tablo içi değerler/yazılar ise 9 punto olmalıdır. Tablo başlığı ile tablo arasında boşluk bırakılmamalıdır. Tablolar metin içinde tablo sayısı verilerek belirtilmelidir. Tablolar, metin içinde kullanıldıkları veya izleyen sayfada yer almalıdır.

İlgili not ve kaynaklar, tablonun altında, "Not:" veya "Kaynak:" ifadelerinden sonra, belirtilmelidir. Tablodan önce ve sonra metin ile tablo arasındaki boşluk 1 satır olmalıdır.

Şekiller sola dayalı olmalı ve rakamlarla numaralandırılmalıdır. Şekil başlığı numarası ile birlikte, 11 punto, şeklin altında, kelimelerin baş harfleri büyük sola dayalı yazılmalıdır. Kalın veya eğik yazı şeklinde olmamalıdır. Şekil numarasından sonra nokta işareti konup şekil adı yazılmalıdır. Şekil içindeki yazılar ise 9 punto olmalıdır. Şekil ile şekil başlığı arasında boşluk, bırakılmamalıdır. Şeklin başlığı, şeklin altında yer almalıdır. Kaynak kullanılmış ise parantez içinde şekil altına yazılmalıdır. Şekillere, metin içinde mutlaka atıfta bulunulmalıdır. Şekilden önce ve sonra metin ile şekil arasındaki boşluk 1 satır olmalıdır.

Tartışma ve Sonuç: Buraya sonuç, tartışma ve öneriler kısmı eklenmeli ve yukarıda verilen yazım kurallarına dikkat edilmelidir. Metin içi 11 punto, tek satır aralıklı ve burada verilen biçime uyularak hazırlanmalıdır.

Kaynakça: Kaynakça, APA 6 Publication Manual yayın ilkelerine uygun olarak hazırlanmalıdır. Daha fazla bilgi için; http://www.apa.org bakınız. Kaynaklar başlık dahil 10 punto ile tek satır aralığında hiç boşluk bırakmadan alfabetik sıralı yazılmalıdır. Paragraf girintisi sağdan asılı 1,16 cm'dir. Her kaynakçanın bu metinde gösterildiği şekilde ikinci ve daha sonraki satırlar içe 1.16 cm girintili olacak şekilde hazırlanmalıdır.

Sayfa alt üst bilgileri makale kabulünden sonra düzenlenebilir. Dergi sistemindeki şablondaki hali ile çalışmanızı sisteme yükleyebilirsiniz. Burada açıklanan yazım kurallarına uymayan makaleler editörler tarafından reddedilir, incelenmek üzere hakemlere gönderilmez.

Makale ile Birlikte Gönderilmesi Beklenen Dosyalar

1) İntihal Raporu (Makaleler, alınan karar gereği 2017 itibari ile intihal (IThenticate, Turnitin, vb) raporu ile birlikte değerlendirilmeye alınmaktadır.) Intihal raporu eklenmediği takdirde editör kurulu IThenticate yazılımında intihal olup olmadığını kontrol ederek makaleyi direk reddetme hakkına sahiptir.

2)Telif Hakları Devir Formu (doc)

Makalelerin telif hakkı devri, dergi internet sayfasında sunulan form doldurulup imzalanmak suretiyle alınır. İmzalı **Telif Hakkı Devir Formu**'nu buradan indirerek, imzalandıktan sonra tarayıcıdan geçirilerek sisteme PDF olarak yüklenmelidir. Bu formu göndermeyen yazarların yayınları basılamaz.

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Evaluation of the Leisure Boredom Perception of Coaches from Different Sports Branches

Şebnem ŞARVAN CENGİZ[1] Ebrar Şevval COŞKUN[2] Batuhan ER[3]

[1]Manisa Celal Bayar University, Faculty of Sport Sciences, Manisa-Turkey, csebnem@gmail.com, https://orcid.org/0000-0002-2916-4784
[2]Manisa Celal Bayar University, Instute of Social Sciences, Manisa-Turkey, natarebrar@gmail.com, https://orcid.org/0000-0002-5627-8701
[3]İstanbul Aydın University, Faculty of Sport Sciences, İstanbul-Turkey, batuhaner32@hotmail.com, https://orcid.org/0000-0002-4269-4149
Corresponding Author: batuhaner32@hotmail.com

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ABSTRACT

The aim of this study is to evaluate the perceptions of leisure boredom of coaches working in different sports branches. The sample group of the study consist of 224 coaches, 173 men and 51 women, actively working in different sports branches.In the study, in order to determine individuals' perceptions of leisure boredom, a method developed by Weissinger and Iso-Ahola, "Leisure Boredom Scale (LBS),"which was adapted to Turkish culture by Kara et al. (2014), was applied. When the internal consistency coefficients of the Leisure Boredom Scale were examined, it was determined that α = .721 for the boredom sub-dimension and α = 721for the satisfaction sub-dimension. In order to compare the boredom perceptions of the participant group in terms of different variables, Independent Samples T-Test and One-way ANOVA were applied. As a result of the analyses, no difference was detected in the coaches' perception of leisure boredom in terms of gender variable (p>.05).No significant difference was detected as a result of the single-factor analysis of variance performed, according to the coaching branch variable of the participant group (p>.05).However, when the results of the single-factor analysis of variance for the coaching experience variable were examined, it was seen that there was a significant difference in the "boredom" and "satisfaction" sub-dimensions according to the experience of the coaches (p<.05).Tukey test was performed to determine the source of significant difference. According to the results, it was determined that there were significant differences in the "boredom" sub-dimension between the coaching experience groups of 1-5 years and 6-10 years, 1-5 years and 11 years and over, and 6-10 years and 11 years and over. As a result, this study reveals that coaches' perception of boredom in leisure does not differ according to variables such as gender, age, educational status, and coaching branch. However, it was observed that the coaching experience variable had a significant effect on the "Boredom" sub-dimension and this effect was found to associated with the difference between the duration of the coaching experience.

Keywords: Leisure, Leisure boredom, Coach

INTRODUCTION

The concept of leisure is described as a significant period that allows individuals to balance their lives and develop different aspects, providing opportunities for personal growth, creativity, and originality (Crawford, 2009; Kelly, 2017). Leisure is often seen as the opposite of work, but what is work for one person may be leisure for another. Most activities can encompass characteristics of both leisure and work (Torkildsen, 2005). Leisure activities help reduce stress, support mental health, and contribute to maintaining physical health (Sharma et al., 2021; Warburton et al., 2006). They assist in balancing personal life with work or education. These activities can enhance time management skills and alleviate stress (Macan et al., 1990).

The concept of "boredom perception during leisure" is defined as the inability of individuals to create alternatives during their leisure in the face of

meaningful and high-quality time (Iso-Ahola and Wessinger, 1987). Today, it is believed that the perception of boredom is associated with evaluating leisure (Köse and Bayköse., 2019). An active lifestyle is seen to benefit long-term job performance and post-work efficient recovery, especially in terms of participation in various creative activities and physical activity (Bloom et al., 2018). In a study examining boredom perception during leisure, Wegner and Flisher (2009) categorized this experience as social control (parental monitoring, gender, and identity, age), psychological tendency (motivation, personality, and impact), and content effect (lack of anything to do, limited leisure resources, lack of challenge, and time use). Experiencing boredom during leisure can lead to negative consequences such as internet addiction (Lin et al., 2009), but it can be said that the ability to manage leisure reduces boredom perception (Wang, 2019). Individuals experiencing boredom during leisure can attempt to reduce their stress through the use of digital technologies (Leung, 2015).

In line with all this information, the increasing importance of time management in our era has led to significant developments in the concept of leisure. In this context, the perception of leisure boredom among coaches is important regarding both professional and personal life balance. In this regard, the aim of the study is to evaluate the perception of leisure boredom of coaches working in different sports branches. The research questions related to the study are as follows:

H1: The perception of leisure boredom of individuals working in different sports branches varies according to the gender variable.

H2: The perception of leisure boredom of individuals working in different sports branches varies according to the coaching experience variable.

H3: The perception of leisure boredom of individuals working in different sports branches varies according to the sports branch they work in.

METHOD

Research Design

In this study, a descriptive model from quantitative research methods was utilized to reveal the current situation (Karasar, 2009).

Study Group

The demographic information of the participants included in the study is presented in Table 1. Accordingly, the study group consisted of 224 coaches, with 173 males (77.2%) and 51 females (22.8%). The participants' coaching experiences were also evaluated separately. In this context, it was determined that the number of participants with coaching experience between 1-5 years was 93 (41.5%). The number of participants with coaching experience between 6-10 years was found to be 48 (21.4%). Additionally, the number of participants with coaching experience of 11 years and above was determined to be 83 (37.1%). When the distribution of participants according to coaching disciplines was examined, it was observed that there were 62 (27.7%) participants in the football discipline, 17 (7.6%) in the basketball discipline, 14 (6.3%) in the volleyball discipline, 57 (25.4%) in the swimming discipline, 18 (8.1%) in the fitness/pilates discipline, 18 (8.0%) in combat sports, and 38 (17%) in other disciplines.

Table 1: Findings on Participants' Demographic Information

		Frequency	%
Gender	Female	51	22.8
	Male	173	77.2
Age	24 and under	55	24.6
	25-29	43	19.2
	30-35	34	15.2
	36-40	26	11.6
	40-45	21	9.4
	46 and above	45	20.1
Coaching Experience	1-5 years	93	41.5
	6-10 years	48	21.4
	11 years and above	83	37.1
Education Level	Graduate of Faculty of Sports Sciences	190	84.8
	Other	34	15.2
Coaching Discipline	Football	61	27.2
	Basketball	17	7.6
	Volleyball	14	6.3
	Swimming	58	25.9
	Fitness/Pilates	18	8.0
	Combat Sports	18	8.0
	Other	38	17

Data Collection Tools

Personal Information Form: The aim of this form is to gather information about coaches independent of the two sub-factors of the Leisure Boredom Scale (LBS). This form includes questions covering relevant topics such as age, gender, coaching discipline, active coaching experience duration, and educational background.

Leisure Boredom Scale (LBS): Developed by Iso-Ahola and Weissinger in 1990, the Turkish version's validity and reliability were investigated by Kara et al. (2014). LBS consists of two sub-factors: 'Boredom' and 'Satisfaction.' The scale items are scored as "Strongly Disagree (1)", "Disagree (2)", "Undecided (3)", "Agree (4)", and "Strongly Agree (5)". In this study, the analyses conducted on the collected data resulted in a reliability coefficient of 0.77 for the 'Boredom' subscale and 0.73 for the 'Satisfaction' subscale.

Data Collection

The data was collected online from coaches working in different sports disciplines through the "Microsoft Forms" using the "Personal Information Form" and the "Leisure Boredom Scale" between April and August 2023. The principle of voluntary participation was adopted in this study, and the total application time for both scales was approximately 10 minutes.

Data Analysis

The statistical analyses conducted in the scope of the research were performed using the SPSS 26 statistical package program. Independent Samples t-Test and One-Way Analysis of Variance (ANOVA) were applied to compare the participants' boredom perceptions regarding different variables.

RESULT

In this section, the findings obtained from the study are presented.

Table 2. Independent T-Test Results for Leisure Boredom Perception of Coaches According to Gender Variable

	Gender	N	X̄	S.s.	sd	t	p
Boredom	Female	51	2.2078	.69278	222	-.640	.523
	Male	173	2.2832	.75298			
Satisfaction	Female	51	3.0235	.86223	222	.464	.643
	Male	173	2.9607	.84514			

*p<0.05

No significant difference was found in the perception of leisure boredom in terms of the gender variable for both the "boredom" and "satisfaction" subscales (p > 0.05).

Table 3. One-Way Analysis of Variance (ANOVA) Results for Coaches' Leisure Boredom Perception According to Coaching Experience Veriable

		Sum of Squares	sd	Mean Squares	F	p	Significant Difference
Boredom	Between Groups	7.696	2	3.848	7.456	**.001***	1-5 years -6-10 years 1-5 years-11 years and above 6-10 years-11 years and above
	Within Groups	114.046	221	.516			
	Total	121.742	223				
Satisfaction	Between Groups	1.102	2	.551	.765	.466	-
	Within Groups	159.078	221	.720			
	Total	160.180	223				

*p<0.05

When the coaching discipline variable is examined, no significant difference was found in the perception of leisure boredom in both the "boredom" and "satisfaction" subscales (p > 0.05).

DISCUSSION AND CONCLUSION

This study was conducted to assess the perception of leisure boredom among coaches working in different sports disciplines. The analysis of the obtained data revealed that there was no significant difference in the perception of leisure

boredom based on gender and coaching discipline variables. Coaches showed similar patterns in how they spend their leisure according to these demographic factors.

No significant difference was found in the perception of leisure boredom based on the gender variable. When reviewing relevant literature, İskender (2023) did not find any significant difference in the perception of leisure boredom based on gender in a study examining the relationship between university students' social media addiction, leisure boredom, and life satisfaction. Similarly, Yaşartürk et al. (2017) did not find any significant difference based on gender in a study investigating the relationship between university students' participation in recreational activities, leisure boredom, and life satisfaction. Likewise, Kara et al. (2018) did not find any significant difference in the perception of leisure boredom, life satisfaction, and social attachment levels among physical education teacher candidates based on gender. These results are in line with the present study.

A significant difference was observed in the perception of leisure boredom in the "boredom" subscale based on coaching experience. This result can be interpreted as coaches' perception of leisure boredom may change as their experience increases.

Specifically, it can be stated that the difference observed in the "boredom" subscale stands out between coaches with 1-5 years of experience compared to those with 6-10 years and 11 years and above of experience.

No significant difference was found in the perception of leisure boredom in the subscales based on coaching discipline. This indicates that the discipline in which coachesal., (2015) suggests that while the perception of boredom in leisure is seen to be associated with negative situations such as delinquency and depression, it also affects the developmental processes of these groups. Spruyt et al., (2018) stated that the perception of boredom in leisure in young individuals may cause weakness in social relationships and result in low life satisfaction. As seen in the studies, it can be said that the perception of boredom in leisure may cause the internal motivation process of individuals to deteriorate (Weissinger et al., 1992). This situation revealed the need to examine the leisure boredom perception of coaches in the current study.

The results of this research provide insights into the variables that may contribute to differences in coaches' perceptions of leisure boredom. Furthermore, the absence of a significant difference in the analysis conducted based on the coaching discipline variable can be interpreted as the coaching discipline variable having no effect on the perception of leisure boredom. The study indicates that demographic factors such as gender, age, and education level, as well as sports discipline, have limited influence on this perception. However, it was observed that coaching experience has a more prominent effect on the perception of boredom. These findings emphasize the importance of taking coaching experience into consideration when developing strategies to effectively manage coaches' leisure. Understanding how coaches' experience levels may change throughout their careers can contribute to the development of more effective support and guidance strategies in the field of coaching.

While the study aims to evaluate the leisure boredom perception of coaches from different sports branches, it also contains some limitations. These limitations include the natural and cultural structure of the study group. Contextual differences that occur in this direction can be examined in a generalized and specific way by examining work groups in different cultural environments.

Conflict of Interest

We declare that this article we wrote is not involved in any particular conflict of interest.

Author Contributions

Study Design, ŞŞC, EŞC and BE; Data Collection, ŞŞC, EŞC and BE; Statistical Analysis, ŞŞC, EŞC and BE; Data Interpretation, ŞŞC, EŞC and BE; Manuscript Preparation, ŞŞC, EŞC and BE; Literature Search, ŞŞC, EŞC and BE. All authors have read and agreed to the published version of the manuscript.

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The Impact of Leadership Orientations on Decision-Making Styles: A Research on Youth Camp Organizations

Arif Özsarı[1] Tolga Tek[2]

[1]Mersin University, Faculty of Sport Sciences, Mersin-Turkey, https://orcid.org/0000-0002-4753-8049, arifozsari@mersin.edu.tr
[2]Selçuk University, Konya-Turkey, https://orcid.org/0000-0002-8350-1307, tolgatek5@gmail.com
Corresponding Author:arifozsari@mersin.edu.tr

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ABSTRACT

Youth organizations are very important for the development of young people. It is thought that the leadership orientations of youth leaders and the decision-making mechanisms which they use are important in terms of being role models for young people who will play an important role in the construction of the future. This study aims to investigate the relationship between leadership orientations and decision-making styles of individuals working as leaders in youth camps affiliated to the Ministry of Youth and Sports, a non-profit public organization. A total of 197 youth camp leaders, consisting of 45 females and 152 males, voluntarily participated in the research. The Multifactor Leadership Orientations Scale and the Decision-Making Styles Scale were used to collect research data. According to the correlation analysis results, a positive and moderate level of relationship was found between rational decision-making and structural leadership *(r=.553)*, human resource leadership *(r=.531),* political leadership *(r=.429),* and charismatic leadership *(r=.475)* dimensions. There was a weak level of relationship between intuitive decision-making style and structural leadership *(r=.165)*, human resource leadership *(r=.232)*, there was a moderate level of relationship political leadership *(r=.355)*, and charismatic leadership *(r=.381)* dimensions. A positive and weak level of relationship was found between dependent decision-making style and human resource leadership *(r=.207)* and political leadership *(r=.187)* dimensions. A negative and weak level of relationship was observed between avoidant decision-making style and structural leadership *(r=-.171*). According to the regression analysis results, structural leadership (β=.295), human resource leadership (β=.248) and charismatic leadership (β=.198) dimensions have a significant positive influence on the rational decision-making sub-dimension of the decision-making styles scale. Charismatic leadership (β=.315) dimensions have a significant positive influence on the Intuitive decision making sub-dimension of the decision-making styles scale. Human resource leadership (β=.225) dimensions has a significant positive influence on the dependent decision-making subdimension of the decision-making styles scale. In conclusion, leaders who exhibit structural, human-oriented, and charismatic leadership styles are likely to effectively employ a rational decision-making approach. Additionally, leaders with a charismatic leadership orientation may be proficient in utilizing an intuitive decision-making style, while those with a human-oriented leadership approach might excel in dependent decision-making.

Keywords: Leadership orientations, decision-making styles, youth camp

INTRODUCTION

Youth organizations have a serious role in the comprehensive development of individuals (Cheng et al., 2022) and camping experiences can facilitate the satisfaction of psychological needs (Ellis et al., 2021). According to Cranfield (1990), youth service is seen as part of the educational structure of the country and includes organizations in both the statutory and voluntary sectors. Although many leadership researches have been conducted in the corporate and public sectors (Posner, 2015), it is possible to say that these researches are limited in non-profit organizations. Youth camps under the Ministry of Youth and Sports, which is a non-profit public organization, include activities carried out to evaluate their time outside of school in order to

support the social and cultural development of individuals. These activities are carried out at certain periods throughout the year. Youth development leaders play vital roles in the lives of young people (Garst et al., 2019). Youth camp leaders are individuals who have successfully completed the training programs offered by the Ministry of Youth and Sports and are appointed as group leaders, activity leaders, and program coordinators in summer and winter camps in natural and seaside settings (Özsarı & Yıldız, 2020). Each of the leaders working in youth camps is a person who strives to achieve the determined missions by receiving certain training in order to carry out the leadership process (Özsarı, 2021). These leaders are responsible for organizing and conducting activities (sporting, social and cultural) and events that benefit young participants throughout the camp, and they hold qualifications and certifications in these areas (Atabey, 2022).

Unquestionably, leadership is the most deliberate field within the social sciences (Maqbool et al., 2023). The changing perception towards leadership reveals that different leadership types are felt to be needed to deal with different problems that modern organizations face (Ulucan &Yavuz Aksakal, 2022). The literature examines the attributes of leaders, models of leadership behavior, sources of power, and various leadership approaches utilized by leaders, as well as leadership theories (Dursun et al., 2019). The behavioral leadership theory is one of them.

These theories, which focus on the different styles and behaviors of leaders, try to explain the work of leaders by their nature (Goff, 2003). There are some important studies explaining the development and content of behavioral theories (Yesil, 2016).

These are listed as follows: Ohio State University Leadership Model (Schriesheim & Bird, 1979), University of Michigan Leadership Research (Evans, 1996; Boje, 2000), Harvard University Studies (Hare, 1973; Stein, 1979), Blake and Mouton's Management Style Matrix Model (Blake & Mouton, 1964; Blake & Mouton, 1982), X and Y Approaches (Bobic et al., 2003; Carson, 2003; Kopelman et al., 2008), Yukl's leadership behavior models (Yukl, 1981, 1989), and Rensis Likert's System 4 Model (Reilly, 1978; Mathew et al., 2011). Different studies make serious contributions to the development of behavioral theories. These studies have led to the identification of various leadership styles, and their effectiveness has been examined. Taking on the role of a leader is an impressive and challenging task (Gomes, 2014). Recently, the concept of leadership is perceived as a more flexible, collaborative and democratic process in a community (Shera & Murray, 2016). Leadership is a personal relationship in which one person guides, coordinates, and supervises others. Leadership is the power to influence individuals or communities to achieve common goals (Khan et al., 2015). Leaders provide guidance to their followers, create a climate of trust, and motivate them to rise above their personal interests, thus inspiring them to go beyond expectations (Bin Jomah, 2017; Erol & Savas, 2023). Leaders enhance the level of sensitivity within an organization, provide guidance on how to reach a goal, and facilitate the development that benefits not only themselves but also others (Bender, 2006). Leadership and orientation styles have significant impacts on both small and large organizations (Abood & Thabet, 2017). A leader can facilitate or hinder team members from exchanging, processing, and integrating information (Schippers &Rus, 2021). A leader can guide people towards a particular direction, especially forward, by managing their performance, activities, and processes (Bender, 2006). It can be stated that the extent to which leaders fulfill their responsibilities effectively is directly proportional to their leadership qualities (Aykurt, 2022).

Recently, researchers have focused more attention on understanding which environmental and personal features influence decision-making processes, and how (Marques da Rocha et al., 2023). Individuals often need to make decisions in their daily lives (Ayal et al., 2015). The decision-making process is primarily driven by individual cognition (Lean Keng & AlQudah, 2017). Ayal et al. (2015) argued that decision-making should incorporate not only analytical tasks but also intuitive processes. Nunnally states that the initial theoretical explanations of decision-making styles primarily emphasize behaviors rather than characteristics. However, some researchers studying decision-making styles concentrate on the information collected by individuals and how they process it (Tasdelen, 2001). Dual-process theorists argue that there are two different types of processing modes for a cognitive task. One process is characterized as fast, automatic, and unconscious, while the other is characterized as slow, controlled, and conscious. Type 1 processes are also variously described as associative, heuristic, or intuitive, while type 2 processes are variously described as rule-based, analytic, or reflective (Frankish, 2010; Dijkstra et al., 2013; Viswanathan & Jain, 2013).

The decision-making mechanisms of individuals is a key factor (Riddell, 2017). Scott and Bruce (1995) classified five fundamental decision-making styles in the decision-making process as follows: rational, dependent, intuitive, avoidant, and spontaneous decision-making styles. Rational decision-making style requires systematically selecting among possible options based on reason and facts, involving

a series of processes. These processes can be listed as follows: problem identification, generating alternative solution scenarios, analyzing the outcomes by selecting the best possible options, implementing the solution decisions, and evaluating the final result to make a decision (Uzonwanne, 2016). Intuitive decision-making style represents the belief that emotions lead to the right decision-making process (Dikerel, 2008). Dependent decision-making style is characterized by being guided and advised by others (Cook & Gonzales, 2016). The recommendations and guidance of other individuals are taken into consideration (Aygun, 2020). Avoidant decision-making style is a style characterized by attempts to avoid making decisions (Loo, 2000). Individuals are hesitant to take responsibility during the decision-making stage (Ghareeb & Kaya, 2022). Spontaneous decision-making style is a model in which time constraints are present. Immediate and prompt decision-making is required, aiming to reach the most logical decisions as quickly as possible (Bahrami, 2017). Effective decision-making is an important life and business skill (Loo, 2000). Decision-making not only shapes the culture of an organization but also affects its performance. The decision-making process is the final outcome when there are alternative choices, selecting among several potential variables (Sulich et al., 2021). The most crucial aspect of leadership is decision-making (Aygun, 2020; Yunita et. al., 2023). Individuals who have strong decision-making mechanisms and can appropriately utilize their leadership orientations also have a high potential for success (Bahrami, 2017). It is expected that a leader's decision-making style is contingent on specific contextual variables (Hariri et al., 2014). Leadership is the process of influencing followers to achieve a goal (Noori,2021). Leaders are individuals who possess strong values that guide their decisions and actions (Baloglu et al., 2009).

There is a need for youth leaders in youth organizations who can contribute to increasing the effectiveness and productivity of young people (Cheng et al., 2022). It is also important to understand the experiences of youth leaders (Garstet al., 2023). Some researchers have found that youth organizations support student development (Amirianzadeh et al., 2011; Borges et al., 2011; Alajmi &Kalitay, 2019; Lopukhova et al., 2022). Therefore, in this study, a study was conducted from the perspective of youth camp leaders in order to contribute to the literature on determining the relationship between leadership orientations and decision-making styles. Leadership is a widely recognized phenomenon in social organizations that helps to facilitate coordination among individuals (Perret & Powers, 2022). Leadership skills facilitate the ability to pose the right questions and then make suitable decisions (Bhugra et al., 2013). Awareness of individuals' decision-making styles as well as their leadership styles can help to focus on achieving organizational goals and develop the necessary skills (Al-Omari, 2013). Leadership styles have often been proven to support employees in performing their duties better and more efficiently, while also allowing them to extend their organizational tenure (Pattali vd., 2024). Leadership styles significantly impact organizational dynamics and it is crucial to optimize leadership strategies to improve performance (Rao vd., 2024).

The fundamental element of leadership, perhaps the most important element, is the decision-making function. Because individuals, groups, or masses are directly or indirectly affected by the decisions made. Young people, who are an important building block of society, spend a significant portion of their time with youth leaders during the youth camps they participate in. During this process, it can be observed that youth leaders and young people integrate through various activities. Therefore, it is believed that youth leaders have an impact on the individuals who participate in youth camps during this process, where their leadership orientations are effective in decision-making mechanisms. Recent research confirms connections between leadership and adolescent development (Engelbert & Wallgren,2016). Hence, it is considered important to know the leadership styles that are believed to have an impact on the decision-making skills of youth leaders working in nature and sea camps. The starting point of the research is based on this idea. It is believed that the research findings will contribute to individuals participating in various nature and sea camps, their families, as well as to those working in the public and private sectors and managing camp activity providers. No research has been found that evaluates the leadership orientations and decision-making styles of youth camp leaders together. For this reason, the research findings are thought to be important due to their contribution to the literature.

METHOD

Ethical Considerations

The Research Ethics Committee of Osmaniye Korkut Ata University's Faculty of Science has granted ethical approval for the research under decision number 2022/5/23 dated 03/06/2022. Additionally, research permission has been obtained from the Ministry of Youth and Sports, General Directorate of Education, Research and Coordination. The study adhered to the research principles of the Declaration of Helsinki.

Research Model

This study employed a relational screening model, a research methodology designed to evaluate the presence and magnitude of change between two or more variables (Karasar, 2019).

Participants

The sample group consists of individuals selected by convenience sampling method among those who have been successful in participating in youth camp leadership training and actively serve in youth camps. A total of 197 individuals participated in the research, including 45 females (22.8 %) and 152 males (77.2 %). In terms of educational level, 23 individuals (11.7 %) had an associate degree, 150 individuals (76.1 %) had a bachelor's degree, and 24 individuals (12.2 %) had a postgraduate degree. Regarding leadership experience, it was determined that 118 individuals (59.9 %) had 1-3 years of experience, 38 individuals (19.3 %) had 4-6 years of experience, and 41 individuals (20.8 %) had 7 years or more of experience.

Data Collection Tools

Decision-making styles scale*:* The scale was developed by Scott and Bruce (1995) and translated into Turkish by Tasdelen (2002). The scale consists of 5 subscales and 25 items. The rational decision-making style includes items 1-5, intuitive decision-making style includes items 6-10, dependent decision-making style includes items 11-15, avoidance decision-making style includes items 16-20, and spontaneous decision-making style includes items 21-25.

Multidimensional Leadership Orientations Scale: The scale, developed by Dursun et al. (2019), consists of 4 subscales and 19 items. The structural leadership dimension includes items 1-4, human resource leadership dimension includes items 5-9, political leadership dimension includes items 10-14, and charismatic leadership dimension includes items 15-19.

Statistical Analysis

Two components of normality are skewness and kurtosis (Tabachnick vd., 2013). One of the basic assumptions of parametric tests is normal distribution (Uysal et al., 2022). The skewness and kurtosis values in the study were distributed in the range of -1/+1 (Cokluk et al., 2018), the assumption of normality was met. Confirmatory factor analysis, descriptive statistics, Pearson correlation analysis and Multiple regression methods were used in the analysis of research data used.

RESULTS

Table 1. Confirmatory Factor Analysis for The Data Collection Tools

	CMIN/DF (x^2/df)	CFI	TLI	IFI	RMSEA
Multidimensional Leadership Orientations Scale	1.754	.949	.937	.950	.062
Decision-making styles scale	1.733	.936	.922	.938	.055

Confirmatory Factor Analysis (CFA) results for the Multidimensional Leadership Orientations Scale were as follows: CMIN/DF (x2/df): 1.754, CFI: .949, TLI: .937, IFI: .950, RMSEA: .062. Additionally, for the subscales of the scale in this study.The Cronbach's Alpha (α) values were found as follows: structural leadership dimension: .86, human resource leadership dimension: .85, political leadership dimension: .87, charismatic leadership dimension: .77, and the overall Cronbach's Alpha value for the scale was found to be .93.

Confirmatory Factor Analysis (CFA) results for the Decision-Making Styles Scale were as follows: CMIN/DF (x2/df): 1.733, TLI: .922, CFI: .936, IFI: .938, RMSEA: .055.Additionally, for the subscales of the scale in this study, the Cronbach's Alpha (α) values were found as follows: rational decision-making style: .78, intuitive decision-making style: .82, dependent decision-making style: .74, avoidance decision-making style: .84, spontaneous decision-making style: .82,and the overall Cronbach's Alpha value for the scale was found to be .84. Inter-item covariance was plotted to provide fit indices.The results obtained for both scales can be considered within acceptable limits (Doll et al. 1994; Erdogan et al., 2007; Kurgun & Akdag, 2013; Kline, 2019).

Table 2. Correlation Analysis

N: 197	1	2	3	4	5	6	7	8
1-Rational decision-making style	-							
2-Intuitive decision-making style	.311**	-						
3-Dependent decision-making style	.185**	.154*	-					
4-Avoidant decision-making style	-.105	.209**	.289**	-				
5-Spontaneous decision-making style	-.055	.302**	.181*	.678**	-			
6-Structural leadership	.553**	.165*	.096	-.171*	-.047	-		
7-Human resource leadership	.531**	.232**	.207**	-.092	-.014	.711**	-	
8-Political leadership	.429**	.355**	.187**	-.021	.057	.605**	.681**	-
9-Charismatic leadership	.475**	.381**	.088	-.103	.016	.603**	.582**	.725**

***p<0.01; *p<0.05*

According to the correlation analysis results, a positive and moderate level of relationship was found between rational decision-making and structural leadership (r=.553), human resource leadership (r=.531), political leadership (r=.429), and charismatic leadership (r=.475) dimensions. There was a weak level of relationship between intuitive decision-making style and structural leadership (r=.165), human resource leadership (r=.232), there was a moderate level of relationship political leadership (r=.355), and charismatic leadership (r=.381) dimensions.

A positive and weak level of relationship was found between dependent decision-making style and human resource leadership (r=.207) and political leadership (r=.187) dimensions. A negative and weak level of relationship was observed between avoidant decision-making style and structural leadership (r=-.171)

Table 3: Multiple Regression Analysis

1- First Part								
Model	**B**	**±**	**(β)**	**t**	**p**	**VIF**		
Constant	1.324	.301	-	4.404	.000	-		
Structural leadership	.287	.085	.295	3.387	.001	2.282		
Human resource leadership	.268	.099	.248	2.706	.007	2.534	p=.000 $F_{(4,192)}$= 27.274 D-W=2.187	R=.602 R^2=.362 Adj.R^2=.349
Charismatic leadership	.192	.085	.198	2.259	.025	2.320		
Political leadership	-.052	.078	-.062	-.660	.510	2.695		
Dependent variables: Rational decision making								
2- Second Part								
Model	**B**	**±**	**(β)**	**t**	**p**	**VIF**		
Constant	1.898	.476	-	3.990	.000	-		
Structural leadership	-.233	.134	-.172	-1.732	.085	2.282	p=.000 $F_{(4-192)}$= 10.051 D-W=2.096	R=.416 R^2=.173 Adj.R^2=.156
Human resource leadership	.040	.156	.026	.254	.800	2.534		
Charismatic leadership	.424	.135	.315	3.151	.002	2.320		
Political leadership	.244	.124	.212	1.972	.050	2.695		
Dependent variables: Intuitive decision making								
3- Third Part								
Model	**B**	**±**	**(β)**	**t**	**p**	**VIF**		
Constant	2.506	.512	-	4.898	.000	-		
Structural leadership	-.144	.144	-.105	-.996	.320	2.282		
Human resource leadership	.340	.168	.225	2.022	.045	2.534	p=.018 $F_{(4-192)}$= 3.065 D-W=1.997	R=.245 R^2=.060 Adj.R^2= .040
Charismatic leadership	-.146	.145	-.107	-1.005	.316	2.320		
Political leadership	.203	.133	.175	1.526	.129	2.695		
Dependent variables: Dependent decision making								

VIF (variance inflation factor) values were lower than 10 (Mertler & Vannatta Reinhart, 2017), it was determined that there was no multicollinearity problem among the research variables. At the same time, the Durbin-Watson value indicates whether there is autocorrelation in the model. Usually D-W around 1.5-2.5. value is proof that there is no autocorrelation (Kalaycı, 2018). Table 3 presents the results of the multiple regression analysis conducted to examine the relationship between the multidimensional leadership orientation, modeled as the independent variable, and the decision-making styles, presented as the dependent variables. However, the avoidance decision-making style ($F_{(df=4,192)}$=2.274; p>0.05) and the spontaneous decision-making style ($F_{(df=4-192)}$=0.694; p>0.05) were not included in the multiple regression model due to their lack of statistical significance.

The model presented in the first part of Table 3 is statistically significant ($F_{(df=4,192)}$=27.274 p<0.001). The R^2 value of the model is .362, and the adjusted R^2 value is .349, indicating that approximately 35% of the variance in rational decision-making can be explained by multidimensional leadership orientation. When examining the beta values, significant and positive effects are observed for the dimensions of structural leadership (β =.295), human resource leadership (β=.248) and charismatic leadership (β=.198) within the multidimensional leadership orientation scale. It is determined that structural leadership, human resource leadership, and charismatic leadership dimensions have a significant positive influence on the "rational decision-making" sub-dimension of the decision-making styles scale. The model presented in the second part of Table 3 is found to be statistically significant ($F_{(df=4,192)}$=10.051 p<0.001). The R^2 value of the model is .173, and the adjusted R^2 value is .156, indicating that approximately 16% of the variance in intuitive decision-making can be explained by multidimensional leadership orientation. When considering the beta values, significant and positive effects were observed for the dimensions of charismatic leadership (β =.315)within the multidimensional leadership orientation scale. It is determined that charismatic leadership dimensions have a significant positive influence on the "intuitive decision-making" sub-dimension of the decision-making styles scale. The model presented in the third part of Table 3 is found to be statistically significant ($F_{(df=4,192)}$= 3.065 p<0.05). The R^2 value of the model is .060, and the adjusted R^2 value is .040, indicating that 4% of the variance in dependent decision-making can be explained by the independent variable of multidimensional leadership orientation. When considering the beta values, a significant and positive effect is observed for the dimension of human resource leadership (β=.225) within the multidimensional leadership orientation scale. It is determined that the dimension of human resource leadership has a significant positive influence on the dependent decision-making sub-dimension of the decision-making styles scale.

CONCLUSION

In this study conducted with the participation of nature and sea youth camp leaders, structural leadership, human resource leadership and charismatic leadership dimensions have a significant positive influence on the rational decision-making sub-dimension of the decision-making styles scale. Charismatic leadership dimension has a significant positive influence on the intuitive decision-making sub-dimension of the decision-making styles scale. Human resource leadership dimension has a significant positive influence on the dependent decision-making sub-dimension of the decision-making styles scale. In conclusion, leaders who exhibit structural, human-oriented, and charismatic leadership styles are likely to effectively employ a rational decision-making approach. Additionally, leaders with a charismatic leadership orientation may be proficient in utilizing an intuitive decision-making style, while those with a human-oriented leadership approach might excel in dependent decision-making. Being in a leadership position involves both dealing with demands and developing an identity as a leader (Larsson & Björklund, 2021). Searle &Hanrahan (2011) stated that leaders can consciously develop opportunities to inspire others through interaction and effort.It can be said that the results of this research have implications for both youth leaders and individuals participating in youth camp organizations. The implication for youth leaders is to identify the impact of the leadership orientations they use or have on their decision-making mechanisms. Thus, they will be able to gain knowledge about leadership orientations and decision-making mechanisms and develop themselves accordingly. There may be differences in young people's perceptions of issues such as what a good leader is and even the value of leadership within an organization (Riddell, 2017). Since the leadership styles and decision-making styles of youth leaders can have a direct impact on young people, the perspectives of young people can improve thanks to these differences. This idea is what it means for young people. It can be said that today young people need strong leaders who understand their dynamics and can set an example for them during periods of development and change. For this reason, various studies on leadership from the perspective of young people can be conducted in the future.

Conflict of Interest

The authors declare that there is no conflict of interest that may compromise the content presented in this paper.

Author Contributions

Study Design, AÖ.; Data Collection, AÖ; Statistical Analysis, AÖ, TT; Data Interpretation, AÖ, TT; Manuscript Preparation, AÖ, TT; Literature Search, AÖ, TT. All authors have read and agreed to the published version of the manuscript.

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Limitations

The major limitation is the small size of the sample. This indicates difficulties with the generalizability of the research. However, taking into account both variables in the context of youth camps diminishes the significance of these limitations.

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Examining the Relationship Between Sportsmanship Understanding and Self-Efficacy Levels in Athletes

[1]Turan Çetinkaya

[1]Kırşehir Ahi Evran University, Faculty of Sport Sciences, Kırşehir-Turkey, https://orcid.org/0000-0001-6363-5300
Corresponding Author: turan.cetinkaya@windowslive.com

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ABSTRACT

The purpose of this research is to examine athletes' sportsmanship understanding and self-efficacy levels in terms of different variables. The sample of the research consisted of 178 student athletes studying at Ahi Evran University, Faculty of Sports Sciences in 2024. In the study, a personal information form, the sportsmanship behavior scale developed by Gümüş et al. (2020) and the self-efficacy scale developed by Riggs, Warka, Babasa, Betancourt and Hooker (1994) and adapted into Turkish by Öcel (2002) were used as data collection tools. Distribution, frequency, t test, anova test and correlation analysis were performed to compare the relevant data. As a result of statistical analysis, while there was no significant difference for all scales according to the participants' gender, type of sport and family income level variables, a significant difference was observed for the variables of nationality and sport year. Additionally, it was determined that there was no significant relationship between sportsmanship and self-efficacy.

Keywords: Sense of Sportsmanship, Self-Efficacy, Student Athletes

INTRODUCTION

Sportsmanship can be described as the attitudes and behavior patterns expected from men and women, regardless of whether they are athletes. In other words, the concept of sportsmanship can be expressed as athletes complying with the various rules expected of them and showing positive behavior towards the individuals they are in competition with. Sportsmanship is showing the characteristics of not only thinking about oneself, but also sharing for others, having an optimistic mood, being polite and polite, being respectful and dignified towards the people around them. In short, being a sportsman can be expressed as never thinking of winning unfairly and always acting honestly and in good faith towards the other competitor (Archer, 2017; Elik, 2017; Pan, et al, 2024). Anxiety and sportsmanship in adolescent athletes: the multiple mediating effects of athlete burnout and exercise cognition. Although the concept of sportsmanship is a concept evaluated within sporting activities today, this concept actually refers to basic moral values that symbolize respecting human rights in all areas of life, being fair, not accepting unfair gain, being respectful to everyone under all circumstances, and always being honest and living honestly. can be expressed. (Tel, 2014). The content of the concept of sportsmanship refers to a stance that includes living with dignity and not fighting for rights with anyone. In this way, the concept of sportsmanship can show its city as fair and honest competition in every field of activity of sports. The concept of sports includes many positive behavioral patterns such as love, cooperation and tolerance. In addition, while the positive effects of sports for personality and character development are obvious, we can also say that today it has become a platform where many behaviors that are contrary to sports and social morals are seen (Pehlivan and Konukman, 2004). We can state that sporting activities, which are pedagogically expected to contribute positively to the physical, mental and spiritual development of the individual, have today turned into a platform for learning and exhibiting behaviors contrary to sports ethics. Due to some practices in the field of sports, basic behaviors and attitudes in the field of sports

ethics and sportsmanship have lost their importance day by day and the idea of winning no matter what in the field of sports has gained importance. This situation, which is especially seen in professional sports fields, has unfortunately begun to manifest itself in school sports (Yıldıran, 2005). Additionally, Yıldıran (2005) states that the concept of sportsmanship is used in the sense of fair play in some sources. The researcher recommends that coaches should take initiative not only in the physical performance of the athletes they work with, but also in their personality and moral development. In addition, the concept of sportsmanship generally states that the recommended behaviors should be revealed before the competition phase, during the competition and for the period after the competition, and that it is necessary to be reliable and honest in the whole framework of life.

According to social cognitive theory, self-efficacy belief is one of the most important elements that play a central role in the processes of controlling one's behavior and maintaining control over it. In this way, the concept of self-efficacy is one of the most important basic concepts of social cognitive theory and states that a person must first build self-confidence and have self-confidence to enable them to perform their abilities as they should (Azar, 2010; Saenz et al., 2013). Self-efficacy is the individual's positive attitudes and opinions about himself/herself regarding the extent to which he can struggle against the difficulties he may encounter in life and the extent to which he can overcome those difficulties (Gümüş, 2019; Özdemir, 2015; Ouyang, et al., 2020).

In a different definition, the concept of self-efficacy is the individual's ability to cope with different situations that he encounters and the ability to successfully complete a task. It is the self-belief and perception of competence regarding whether one has the skills and capacity required for one's life (Sanches-Alcaraz et. al., 2018; Senemoğlu, 2007).

It is seen that individuals with high self-confidence and a high perception of competence have a high power to struggle for any job they start and show perseverance and endurance in the job they start, but individuals with a low perception of competence have insufficient power to struggle with the difficulties they encounter. Although most people have the skills and knowledge necessary to successfully perform any task, they may also doubt their own skills and abilities. Therefore, instead of being able to fulfill the task expected of them, they may exhibit avoidance behavior. In addition, it has been observed that people who do not believe in their own abilities and skills become negative over time and lack the necessary motivation and desire when they encounter any difficult situation (Bandura, 1989).

When we look at the concept of self-efficacy from the field of sports, it can be stated that it is an important factor affecting sports success. We can say that one of the important characteristics for individuals participating in sports events to be successful is their self-efficacy perception. Here we can talk about a concept of self-efficacy that will allow athletes to prevent and control their negative emotions about themselves (Cherry, 2005; Cosma et al., 2021).

The concepts of sportsmanship and self-efficacy, which are two frequently discussed topics in the field of sports in recent years, will contribute to an original, moral and virtuous process in the field of sports, and will also enable sports performance to be at the highest levels. Thus, it is thought that these two concepts can contribute to the positive development of athletes in the field of sports.

With all this conceptual framework, the aim of this study is to examine the relationship between sportsmanship understanding levels and self-efficacy levels in athletes.

METHOD

Participants

The population of the research consists of student athletes studying at Ahi Evran University, Faculty of Sports Sciences in 2024. The sample consisted of 178 student athletes

Data Collection Tools

In the study, a personal information form, the Sportsmanship Behavior Scale developed by Gümüş et al. (2020) and the Self-Efficacy Scale developed by Riggs, Warka, Babasa, Betancourt and Hooker (1994) and adapted into Turkish by Öcel (2002) were used as data collection tools.

Sportsmanship Behavior Scale: The sportsmanship behavior scale developed by Gümüş et al. (2020) is a tool used to evaluate the concept of sportsmanship and consists of 27 items and 5 sub-dimensions in total. The score range for this scale varies from 27 to 135, with higher scores reflecting higher sportsmanship behavior. The scale has a 5-point Likert structure between Strongly Disagree (1) and Strongly Agree (5) for participants to rate. This scale evaluates participants' attitudes by measuring sportsmanship behavior in different sub-dimensions and determines the extent to which they display sportsmanship in the field of sports. Within the scope of the study, the Cronbach Alpha Coefficient of the total score and sub-dimensions of the scale was found to be reliable. 0.873 for the scale total score

and 0.873 for the sub-dimensions; rules 0.839, deliberate behavior 0.820, game outlook 0.72, sportsmanship behavior 0.701.

Self-Efficacy Scale: The scale developed by Riggs, Warka, Babasa, Betancourt and Hooker (1994) to measure individuals' belief in their own capacities was adapted into Turkish by Öcel (2002). The scale consists of 10 items to determine individuals' beliefs in their own capacities. Subjects make a 5-point Likert type evaluation (strongly disagree, disagree, undecided, agree, strongly agree) to indicate the extent to which they agree with the statements in the items. The scale includes reverse questions (2, 3, 4, 6, 8, 10). Within the scope of the study, the Cronbach Alpha Coefficient of the scale was determined as 0.748.

Collection of Data

The survey forms used in the research were applied to student athletes studying at Ahi Evran University, Faculty of Sports Sciences in 2024. Before participating in the study, participants were given necessary explanations about the purpose of the research and detailed information about filling out the data collection tool. The data collection tool collected by the researcher was checked and those that were filled in incompletely or incorrectly were excluded from the study. Then, among the data collection forms applied to the candidates, the valid and acceptable ones (178) were coded and transferred to the electronic environment for evaluation.

Evaluation and Analysis of Data

The analysis of the data collected in the study was made in the SPSS 20.0 statistical package program. As a result of examining the kurtosis and skewness values to determine the tests to be used in the analysis of the data, it was observed that it provided the accepted ±2 range for the assumption of normality (George and Mallery, 2019). Kolmogorov-Smirnov and Shapiro-Wilk tests were performed for normality of distribution. It was observed that the data obtained were in the range of Skewness-.847, .182 Kurtosis -.079.362 for the Sportsmanship behavior scale, and in the value range of Skewness.637.182, Kurtosis-.393.362 for the Self-efficacy scale. In evaluating the data; distribution, frequency, t test, anova test and simple correlation analyzes were performed. In the tests carried out to analyze the data; The principle of equality of variances, one of the assumptions of parametric tests, was taken as the basis, and if the variances were not equal, no significant difference was sought between the groups, even if the "p" value was less than the significance level. The significance level in the analyzes was determined as $\alpha = 0.05$.

RESULTS

This section includes research findings.

Table 1. Frequency and percentage distributions of participants' demographic information

Variables	Sub-Variables	F	%
Gender	Woman	65	36,5
	Male	113	63,5
Sport Year	1-3	74	41,6
	4-5	52	29,2
	6-9	39	21,9
	10 And Above	13	7,3
İncome Rate	Low	88	49,4
	Middle	70	39,3
	Good	20	11,2
National Sportsmanship	Yes	32	18,0
	No	146	82,0
Sport Type	Team	92	51,7
	Individual	86	48,3

65 of the student athletes participating in the research are female and 113 are male. The distribution of student athletes according to their sports year is as follows: 74 between 1 and 3 years, 52 between 4 and 5 years, 39 between 6 and 9 years, and 13 with 10 years and above. According to the income level variable, the answers given by the student athletes stated that 88 people had low income, 70 people had medium income, and 20 people stated that they had good income. According to the national athlete variable, 32 of the participants answered yes to the national athlete question, and 146 people said no and stated that they were not a national athlete. Finally, according to the type of

sport variable, the number of participants who stated that they do team sports is 92, and the number of participants who are engaged in individual sports is 86.

Table 2. Comparison of Participants' Sportsmanship and Self-Efficacy Total Scores and Sub-Dimension Scores According to Gender Variable

Scale	Gender	n	x	ss	t	p
Sportsman Total	Woman	65	3,5407	,65909	-,289	,773
	Male	113	3,5706	,67213		
Self Efficacy	Woman	65	3,0338	,77928	,316	,752
	Male	113	2,9973	,67168		
Rules	Woman	65	3,8615	,78261	,478	,633
	Male	113	3,7950	1,06230		
Deliberate Behavior	Woman	65	3,5615	,85442	,451	,653
	Male	113	3,4978	,99454		
View Of The Game	Woman	65	3,2000	,94394	1,750	,082
	Male	113	3,4668	1,03860		
Sportsmanship	Woman	65	3,4598	,82726	-,586	,559
	Male	113	3,5320	,72183		

*p>0.05

As a result of the analysis made for the total sportsmanship scores of the participants according to the gender variable, it was seen that the average of women was 3.54 and the average of men was 3.57. When self-efficacy total scores are examined according to gender variable, the average of women is 3.03 and the average of men is 2.99. In the rules sub-dimension, the average of women is 3.86 and the average of men is 3.79. In the intentional behavior sub-dimension, the average of women is 3.56 and the average of men is 3.49. In the game perspective sub-dimension, the average of women is 3.20 and the average of men is 3.46. In the superman behaviors sub-dimension, the average of women is 3.45 and the average of men is 3.53. Additionally, as a result of the analysis, it was determined that there was no significant difference between the groups for sportsmanship total scores, self-efficacy total scores and all sub-dimensions.

Table 3. Comparison of Participants' Sportsmanship and Self-Efficacy Total Scores and Sub-Dimension Scores According to Nationality Variable

Scale	National Team	N	$\bar{x}$	ss	t	p
Sportsman Total	Yes	32	3,74	,521	2,037	,046
	No	146	3,52	,688		
Self Efficacy	Yes	32	3,05	,722	,341	,731
	No	146	3,00	,710		
Rules	Yes	32	4,00	,870	1,302	,231
	No	146	3,77	,985		
Deliberate Behavior	Yes	32	3,64	,773	,918	,430
	No	146	3,49	,977		
View of The Game	Yes	32	3,67	,889	2,117	,055
	No	146	3,30	1,025		
Sportsmanship	Yes	32	3,68	,670	1,582	,151
	No	146	3,46	,775		

*p>0.05

As a result of the analyses conducted for the total scores and sub-dimension scores of sportsmanship and self-efficacy according to the variable of being a national athlete, a significant difference was found for the total score of sportsmanship. For the total

score of sportsmanship among the participants, the scores of national athletes were found to be significantly higher than those of non-national athletes. While the mean score of national athletes was 3.74, the mean score of non-national athletes was 3.52. For all other scales, no significant difference was found on the axis of whether the participants were national or not.

Table 4. Comparison of Sportsmanship and Self-Efficacy Total Scores and Sub-Dimension Scores of the Participants According to the Variable of Sport Type

Scale	Sport Type	n	x	ss	t	p
Sportsman Total	Team	92	3,5745	,63594	,304	,761
	Individual	86	3,5439	,69951		
Self Efficacy	Team	92	2,9674	,71746	-,840	,402
	Individual	86	3,0570	,70503		
Rules	Team	92	3,8877	,92222	,972	,331
	Individual	86	3,7461	1,01451		
Deliberate Behavior	Team	92	3,5747	,86841	,779	,434
	Individual	86	3,4637	1,02036		
View Of The Game	Team	92	3,3560	,98424	-,182	,855
	Individual	86	3,3837	1,04368		
Sportsmanship	Team	92	3,4626	,77494	-,781	,436
	Individual	86	3,5517	,74651		

*p>0.05

As a result of the analysis of the participants' sportsmanship and self-efficacy total scores and sub-dimension scores according to the sport type variable, no significant difference was observed between the groups for all scales and sub-dimensions.

Table 5. Comparison of Sportsmanship and Self-Efficacy Total Scores and Sub-Dimension Scores of the Participants According to the Variable of Sports Year

Scale	Sport Year	N	X	Ss	F	P	Significant Difference
Sportsman Total	1-3	74	3,56	,072	3,277	,022	1-2,1-3,1-4 2-3,2-4, 3-4
	4-5	52	3,74	,082			
	6-9	39	3,31	,115			
	10 and above	13	3,52	,227			
Self Efficacy	1-3	74	3,01	,083	,345	,793	1-2,1-3,1-4 2-3,2-4, 3-4
	4-5	52	3,05	,106			
	6-9	39	2,93	,100			
	10 and above	13	3,15	,199			
Rules	1-3	74	3,79	,104	,433	,729	1-2,1-3,1-4 2-3,2-4, 3-4
	4-5	52	3,92	,137			
	6-9	39	3,79	170			
	10 and above	13	3,60	,291			
Deliberate Behavior	1-3	74	3,56	,106	,144	,933	1-2,1-3,1-4 2-3,2-4, 3-4
	4-5	52	3,49	,140			
	6-9	39	3,45	,150			
	10 and above	13	3,57	,264			
View of The Game	1-3	74	3,33	,121	7,536	,000	1-2,1-3,1-4 2-3,2-4, 3-4
	4-5	52	3,80	,097			
	6-9	39	2,84	,173			
	10 and above	13	3,4808	,27512			
Sportsmanship	1-3	74	3,5210	,08739	8,047	,000	1-2,1-3,1-4 2-3,2-4, 3-4
	4-5	52	3,8205	,08539			
	6-9	39	3,0741	,11431			
	10 and above	13	3,4530	,25239			

*p>0.05

As a result of the analysis of sportsmanship and self-efficacy total scores and sub-dimension scores according to the sports year variable of the participants, a significant difference between the groups was detected for the sportsmanship total score, for the game view sub-dimension and for the sportsmanship behaviors sub-dimension. No significant differences were observed between the groups for the total score of self-efficacy, for the rules sub-dimension, and for the intentional behaviors sub-dimension. According to the results of the Tukey test conducted to determine the significant difference between the groups, the total score of sportsmanship, the view of the game sub-dimension and the sportive behavior sub-dimension were obtained in groups 1 and 2, groups 1 and 3, groups 1 and 4, groups 2 and 3 in groups 2 and 2. A significant difference was observed between groups 4 and 3 and 4.

Table 6. Comparison of Sportsmanship and Self-Efficacy Total Scores and Sub-Dimension Scores According to the Participants' Family Income Level Variable

Scale	Income Rate	N	X	Ss	F	P	Significant Difference
Sportsman Total	Low	88	3,556	,073	,099	,906	----
	Middle	70	3,579	,076			
	Good	20	3,505	,156			
Self Efficacy	Low	88	3,031	,083	,489	,614	----
	Middle	70	2,954	,073			
	Good	20	3,120	,155			
Rules	Low	88	3,829	,099	,355	,701	----
	Middle	70	3,854	,117			
	Good	20	3,650	,244			
Deliberate Behavior	Low	88	3,501	,099	,077	,926	----
	Middle	70	3,555	,109			
	Good	20	3,487	,250			
View of The Game	Low	88	3,429	,104	1,082	,341	----
	Middle	70	3,382	,127			
	Good	20	3,062	,201			
Sportsmanship	Low	88	3,478	,084	,289	,750	----
	Middle	70	3,506	,0893			
	Good	20	3,622	,155			

*p>0.05

As a result of the analyzes conducted to compare the sportsmanship and self-efficacy total scores and sub-dimension scores according to the participants' family income level variable, no significant difference was found in any group for all sub-dimensions and scale total scores.

Table 7. Pearson correlation analysis results for participants' sportsmanship behavior sub-dimensions and self-efficacy scores

Scale		Rules	Deliberate Behaviour	View of The Game	Sportsmanship
Self Efficacy	R	-,015	,067	,078	,073
	P	,840	,372	,298	,336
	N	178	178	178	178

**p<0.001

According to the results of the Pearson correlation analysis conducted to determine the relationships between the 4 sub-dimensions of the sportsmanship orientation scale and the self-efficacy scale; between rules and self-efficacy (r= -.015; p>0.001) was very weakly negative and insignificant, between deliberate behavior and self-efficacy r=0.67; p>0.001) moderately positive and insignificant, r= 0.78 between game view and self-efficacy; p>0.001) highly positive and insignificant, r= 0.73 between sportsmanship behaviors and self-efficacy; p>0.001), highly positive and insignificant relationships were observed.

DISCUSSION AND CONCLUSION

In this part of the research, findings regarding the relationships of the participants' sportsmanship behaviors and self-efficacy levels with various variables were included, and the relationships of these parameters in terms of gender, sport type, family income level, nationality and sports year variables were discussed.

According to our research findings, no significant difference was observed in the participants' sportsmanship behavior scores in terms of gender variable. Unlike our findings, in the study conducted by Kusan (2024) and his colleagues, it was observed that female participants exhibited more sportsmanlike behavior than male participants. Again, Tsai and Fung (2005) concluded in their study that men exhibit more aggressive attitudes than women, and that female athletes attach more importance to sportsmanship behaviors than men. In his study, Sabırlı (2024) and Mclaughlin (2020) found a significant difference in the sportsmanship orientation of the participants according to their gender. Accordingly, the author states that male participants' sportsmanship orientation scores are higher than female participants. These findings differ from the findings of our study in terms of their results. Sülün et al. (2021) report in their study that the sportsmanship scores of the participants were higher in women according to the gender variable, but this level was not significant. The study results overlap with our findings.

When the sportsmanship behavior scores of the participants were examined in terms of the nationality variable, it was determined that there was a significant difference in the total sportsmanship score and that there was no significant difference in all other sub-dimensions. This significant difference seems to be in favor of national athletes who answered yes to the national sportsmanship question. In the analysis, it was determined that the total sportsmanship scores of national athletes were significant and higher than non-national athletes. It is thought that this situation may be related to the sports culture that national athletes have developed due to their sports lives at the highest level. Kusan (2024) reports in his study that there is no significant difference in the sportsmanship behavior scores of the participants in terms of the nationality variable. In terms of study findings, our findings do not coincide with the results.

When the participants' sportsmanship behavior scores were examined according to the type of sport variable, it was determined that there was no significant difference in the total sportsmanship score and all sub-dimensions. In their study, Çağlayan et al., (2021), Yalçın et al. (2020) support our findings and report that there is no significant difference in terms of sportsmanship behavior scores of the participants for the sport type variable. Ebrahim et al. (2015) state in their study that there is a correlation between education level and the sub-dimension of respect for rules and management.

When the sportsmanship scores of the participants were examined according to the sports year variable, it was observed that there was a significant difference in the total sportsmanship score, the game outlook sub-dimension and the sportsmanship sub-dimension, but there was no significant difference in all other sub-dimensions. According to the results of the Turkey test conducted to determine the significant difference between the groups, the total score of sportsmanship in the game view sub-dimension and sportsmanship sub-dimension was the first and second group's, the first and third group's, the first and fourth group's, the second and third group's, the second and fourth group's, the third and It was determined that the fourth group made a significant difference.

It was observed that there was no significant difference between the groups in total sportsmanship scores and all sub-dimensions according to the income level variable of the research group. In their study, Akoğlu et al. (2019) Supporting our findings, they report that participants' sportsmanship behavior scores do not differ according to income level. This study supports our study in terms of its findings. On the other hand, Kusan (2024) reports in his study that there is a significant difference between the groups in terms of sportsmanship behavior scores of the participants according to the income level variable. The author states that participants with middle income have higher sportsmanship behavior scores than participants with high income. In addition, the researcher states that athletes in the high-income group may engage in selfish behavior and be more competitive in some cases because they have more opportunities.

When the self-efficacy levels of the participants were examined according to the gender variable, it was observed that there was no significant difference. The average score of women in the research group seems to be slightly higher than that of men. With this finding, we can state that there is no significant difference for the gender variable. Supporting their findings in their study, Sevinç and Kapçak (2021) and Kahwa et. al, (2021) state that there is no significant difference in the wage slipper levels of the participants in terms of gender variable. The researchers' findings are parallel to our study in terms of their results. Again, Acuner (2012) reports in his study that there is no difference in the self-efficacy scores of the research group according to the gender variable. This study also supports our findings. In addition to these studies, Özer (2015), Sharpe et al., (1995) and Tırpan (2016) report in their studies that there is a significant difference between self-efficacy scores according to the gender variable. These studies differ from our study in terms of their results.

When the self-efficacy scores of the participants were examined according to the nationality variable, it was observed that there was no significant difference between the groups. According to our findings, whether the research group is a national athlete or not does not affect the self-efficacy score. Sağ, Yağdı, Güçlü (2024) explain in their study why the self-efficacy scores of athletes who are not athletes are higher. This research differs from our study in terms of its results. Woodman and Hardy (2003) state in their study that whether the participants are national athletes or not does not affect their self-efficacy scores. This study is parallel to our study in terms of its results. Application of future studies in different cultures may result in different findings.

When the self-efficacy scores of the participants were examined according to the sport type variable, it was determined that there was no significant difference. This finding suggests that it is not very important which sport athletes do, but their belief in themselves may be related to self-efficacy. Sağ, Yağdı, Güçlü (2024) report in their study that there is no significant difference in terms of self-efficacy scores between athletes who do team sports and those who do individual sports. The findings of this study are consistent with the results of our study.

When the self-efficacy scores of the research group were examined according to the sport year variable, no significant difference was detected. In the study conducted by Toçoğlu, (2020), it was determined that there was no significant difference in the self-efficacy scores of the participants in terms of different sports years. The study results support its findings. Koçak (2019) states in his study that the duration of athletics of the participants differed significantly in terms of self-efficacy scores. This study differs from our study results in terms of its findings.

When the participants' self-efficacy scores were examined according to the family income level variable, no significant difference was observed between the groups. Supporting our findings, Aytaç, Yetiş, and Öz (2022) report in their study that there is no significant difference in terms of participants' self-efficacy scores according to the income level variable. Again, Şen (2009) states in his study that there is no significant difference between income level and self-efficacy scores, in parallel with our findings. These findings are parallel to our study in terms of their results.

According to the results of the Pearson correlation analysis conducted to determine the relationships between the four sub-dimensions of the sportsmanship orientation scale and the self-efficacy scale; between rules and self-efficacy ($r= -.015$; $p>0.001$) was very weakly negative and insignificant, between deliberate behavior and self-efficacy $r=0.67$; $p>0.001$) moderately positive and insignificant, $r= 0.78$ between game view and self-efficacy; $p>0.001$) highly positive and insignificant, $r= 0.73$ between sportsmanship behaviors and self-efficacy; $p>0.001$), highly positive and insignificant relationships were observed. According to these findings, the concepts of sportsmanship and self-efficacy seem statistically unrelated to each other. In his study, Nas (2019) reported that there were statistically significant and positive weak relationships between the participants' sportsmanship and general self-efficacy scores. This study differs from our study in terms of its findings. In his study, Turan (2020) found that self-efficacy levels significantly predicted sportsmanship behaviors in a positive direction.

As a result, in this study conducted with athletes studying at the faculty of sports sciences, no significant relationship was found between the participants' sportsmanship scores and self-efficacy scores. Additionally, as a result of statistical analysis, while there was no significant difference for all scales according to the participants' gender, type of sport and family income level variables, a significant difference was observed for the variables of nationality and sports year. In order to be successful in the field of sports and to sustain these successes, the individual's self-belief, that is, self-confidence, can be achieved through a high perception of self-efficacy. The most basic way for athletes to be successful is their self-belief and positive perception of their abilities. In addition, sports events should

not be acted independently of fair play and moral processes, regardless of the circumstances. The way to achieve this is for athletes to always comply with the concept of sportsmanship. In order to achieve all these goals, periodically informing athletes about the concepts of self-efficacy and sportsmanship will have positive effects.

Suggestions

It is thought that the necessary contributions to the relevant literature will be made by conducting the research in different cultural and local areas, on different populations in terms of the masses participated.

Conflict of Interest

No potential conflict of interest was reported by the authors.

Ethical Approval

This study was approved by the Ethics Committee of Ahi Evran University with the official letter numbered e-51450103-010.9900000633791.

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Athlete Identification Level Scale (Ails): Validity and Reliability Study

[1]Mehmet KARA [2]Murat GENÇ [3]Mehmet Çağrı ÇETİN

[1]*Mersin University, Faculty of Sport Sciences, mehmetkara@mersin.edu.tr , 0000-0001-9454-5164*
[2]*Mersin University, Faculty of Sport Sciences, muratgenc91@gmail.com, 0000-0003-2596-8571*
[3]*Mersin University, Faculty of Sport Sciences,mccetin80@gmail.com, 0000-0001-7667-2143*
Corresponding Author: *mehmetkara@mersin.edu.tr*

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ABSTRACT

This study aims to develop a valid and reliable measurement tool to determine the level of athlete-athlete identification by determining which features athletes consider when identifying with other athletes they bond with. Within the scope of "qualitative steps", focus group interviews and essay writing; within the scope of "quantitative steps", assumption analyses and validity and reliability analyses were included for the form organized by the Lawshe technique and the test form of the scale. After the expert opinions, the 68-item item pool was reduced to 66 items and applied to 930 active athletes with a 5-point Likert scale (5=Very important, 1=Not important at all) with a trial form. Exploratory factor analysis (EFA) was conducted with the observations obtained, data were collected again with the 4-factor 26-item structure and Confirmatory factor analysis (CFA) was conducted with 813 observations. After factor naming with rational criteria, Cronbach alpha internal consistency coefficients were calculated as .94 for the sub-dimension of "Athletic Identity" (n=12), .82 for the sub-dimension of "Image and Career Maturity" (n=6), .85 for the sub-dimension of "Social Values" (n=4), .70 for the sub-dimension of "Communication Skills" (n=4) and .90 for the whole scale. The explained variance rate is 56.95%. While the motivation of the study is that the scales in the literature are at the fan-athlete or fan-team level and the determination of athlete-athlete identification is seen as a deficiency, the goal of closing this gap reveals the importance of the study. This study, conducted to determine the athlete- athlete identification levels of active athletes, revealed that the Athlete Identification Level Scale (AISL) is a valid and reliable scale according to results obtained.

Keywords: Identification, Idolization, Validity, Reliability, Athlete

INTRODUCTION

People acquire an identity as an output of their experiences. The concept of identity, which can be obtained in different ways and is seen as the guide of human behaviors, is thought to be formed mostly by people comparing themselves with other individuals or groups (Hogg & Adelman, 2013). It has always been a curious research topic on the reasons why individuals take the behaviour patterns of other individuals as an example. Individuals, who are in search of an identity by nature, feel the need to belong to other individuals or groups (Antonsich, M. 2010).This need for belonging can also affect the behavioral patterns of individuals. In this way, the individual seeks to acquire a social identity. Tajfel (1982) refers to an individual's feelings of attachment to a person or membership to a group as identification and interprets this concept as a part of one's social life. Identification is "the individual's behavior of conforming to the ideas of a person or a group to be similar to them" (Kağıtçıbaşı& Cemalcılar, 2014). On the other hand, Freud defines identification as an emotional bond with other people in his theory of psychoanalysis and states that identification can include both love and hate (Freud, 2013). In addition to having these opposite emotions, the individual must internalize and identify with the objects and identities that satisfy his/her motives to first create and then maintain his/her identity (Köknel, 1985). Identification is the acceptance of the values that one takes as an example and incorporating them into one's life (TDK, 2024). Erkal and his colleagues (1998) define identification as the individual's modelling of those whom he considers important, while Acet (2005) interprets identification as an effort to gain a place in society. While the individual creates his/her own identity through identification, he/she also gains a place in the society. People establish this kind of effort through invisible bonds and want to resemble others (Usal & Kuşluvan, 2006). On the other hand, the sense of belonging that enables identification contains emotional bonds (Tokgöz 2013). To fully grasp the stages of identification, the physical and psychological developmental periods of the individual should be analyzed properly. In this context, identification is a process that starts with the construction of sexual identity in infancy (Mangır & Baran, 1990), continues with the Oedipus and Electra complex (Göka et al., 2006) and maintains its dynamism throughout life.

The identification established with parents during childhood continues in later periods to protect and increase one's self-worth (Geçtan, 2004) by trying to resemble the thoughts and behaviors of friends, artists, teachers, or well-known athletes. Identified individuals provide the individual with the necessary social,

psychological and personal characteristics to create his/her image. In late childhood and adolescence, individuals who take an athlete as a role model try to structure their thoughts, actions, attitudes, movements, and behaviours through this athlete. During this process, individuals attribute importance to every feature of the athlete they identify with (Kılıç, 2020). Individuals generally try to identify themselves with teams or individuals who are successful, colorful, visible and constantly in the spotlight (Zelyurt, 2019). In this process, individuals tend to find fulcrum points that will form the basis of resemblance and conformity behaviours that will ensure identification. In a sense, people tend to resemble and conform to other people throughout their lives. Athlete identification is based on individual characteristics (Yang et al., 2024).

Since the sports environment offers suitable environmental conditions for identification, it is a quality in which people identify with each other by taking each other as an example and continuing to do so throughout their careers. Athletes take other athletes as examples for various reasons and construct their identities through their behavioral patterns. An athlete wearing the numbered jersey symbolizing another athlete, running like him/her, striding, watching his/her sportive/non-sportive flashy movements on the field, hanging posters on the wall, emulating football players, etc. are examples of identification behaviors (Zelyurt, 2019). The idolization, in a sense identification of athletes with other athletes, is a phenomenon with deep roots in society, where individuals see professional athletes as role models and sources of inspiration. The idolization of athletes may stem from various motivations and needs, with individuals showing admiration and attachment to these sports figures (Thomson, 2006). Athletes generally want to increase intrinsic motivation (Amoroso, 2024) and experience excitement (Aftab et al., 2022) by socialising with their peers (Sakalidis et al., 2023). With these methods, they try to connect with successful athletes that they feel close to themselves (Zaker & Parnabas, 2018). The realization that one shares the same interests and tastes as the idolized athlete can increase feelings of involvement in the athlete's life (Frederick et al., 2012). Athletes, especially those who exhibit exceptional personal characteristics, have become popular choices for idolization among young adults, influencing their preferences and behavioural intentions (Belasen & Belasen, 2019). As society continues to idolize professional athletes, the drive to achieve elite-level status becomes an important incentive (Bush et al., 2021). Watching athletes perform can inspire individuals to participate in sporting activities and lead to a more active lifestyle (Richelieu, 2018). Moreover, the influence of sport idols goes beyond only a sport participation; they can also influence career choices and personal values (Richelieu, 2018). Furthermore, the influence of family and social environment on sport idolization should not be discounted. Although parents, siblings and physical education teachers have some influence on a child's decision to join a sports club, the desire to become a professional athlete or to idolize sports figures plays a more important role in this decision (Piech et al., 2016). This emphasizes the importance of role models in helping to shape the aspirations and behaviours of young athletes.

The concept of identification can occur within the framework of the team or athletes that fans support, as well as in the orientation of individual athletes towards the team those active athletes' support. In this context, athletes can form a bond with individual athletes or the team. At this point, the concept of athlete identification is a common situation where individuals, especially young and low-level athletes, see elite athletes as idols and role models (Pettersson et al., 2013). Especially idolization of professional athletes has been identified as an important factor (Adeyemo, 2023). This idolization may lead young athletes to form emotional bonds with elite athletes and further reinforce their idol status (Heintz et al., 2020). Athletes, especially successful male athletes, are often idolized as heroes in society, receiving significant recognition and rewards for their achievements (Cheever & Eisenberg, 2020). The influence of athletes as idols extends to various aspects such as social media interactions; athletes use platforms such as Twitter to engage with their fans, creating opportunities for followers to feel more connected to their idols (Coche & Haught, 2018). However, the pressure of idolization can be burdensome for athletes, especially given that they are still in the process of identity formation (Guest & Cox, 2009).

Accordingly, athlete identification is a multifaceted phenomenon influenced by various factors such as communication skills, social values, athlete image, and athletic identity. Athletes often function as role models for their fans, especially young individuals who look up to them for inspiration and guidance (O'Brien et al., 2021). Athletes' image, including their athletic expertise, physical attractiveness, and their life stories, plays an important role in shaping their influence on their fans (Vaatainen & Dickenson, 2018).

Effective communication is crucial in the athlete-idol relationship. Open communication fosters trust and respect, leading to harmonious relationships between coaches and athletes (Choi & Kim, 2019). The International Olympic Committee emphasizes that elite child athletes have unique physical, social, and emotional needs that change with their developmental stage (Subotnik et al., 2011). These needs highlight the importance of understanding and addressing the challenges that young athletes face in various aspects of their lives. In the field of competence development, Epstein and Hundert emphasize the importance of communication skills as part of professional competence (Frenk et al., 2010). Competence is defined as the consistent and attentive use of communication, knowledge, technical skills, clinical judgement, emotions, values and thought in daily practice. This underlines the fundamental role that effective communication plays in the overall competence of professionals, including athletes and those involved in their development. Communication skills include the level of harmony of the idolized athlete with his/her club, his/her recognition through the media, his/her positioning in a reputable status by his/her competitors and media interactions.

Research on social values, which may be expressed as another dimension in athlete identification, suggests that individuals integrate their social identities into their self-concept, which in turn affects their adaptation and social activities (Yampolsky et al., 2016). This concept can be extended to how young athletes which are identified with elite athletes and how they influence their behaviour and level of idolization. This concept may also apply in the context of athlete idolization, where athletes may maintain their social values while appreciating and idolizing athletes from other cultures. More precisely, it is possible to express the entire set of social values that are effective in identification as the framework of respect for cultural structure, interest in social events, caring about spiritual values and displaying exemplary behaviours.

Athletes are often seen as icons of success, determination, and excellence in their sport, which leads people to imitate their

behavior, lifestyle, achievements, and image (McCormick, 2018). This behavior occurs as young athletes trying to emulate their favorite athletes in the hope of associating themselves with the perceived image characteristics of these athletes (McCormick, 2018). In this context, in terms of athlete identification, in the dimension of image and career maturity; the idolized athlete's hair and clothing style, charisma, aesthetic movements in the game, and awards such as trophies and medals as well as being praised by others stand out.

As the last dimension, athlete-athlete identification can be expressed as a multifaceted phenomenon that is closely linked to an individual's athletic identity. Because athlete identity refers to the degree to which an individual associates himself/herself with the role of an athlete (Moazami-Goodarzi et al., 2020). This identity can have a significant impact on an athlete's individual and psychological development (Huang et al., 2016). Research has shown that elite athletes generally exhibit high levels of athlete identity (Park et al., 2015). However, it is important to recognize that a strong identification with the athlete role can have both positive and negative consequences. When the positive consequences are examined, both cognitive and physical characteristics of the athlete such as being energetic, contributing to the development of athletes other than himself/herself, an effective understanding of the game and competitive nature, sense of responsibility and team spirit, leadership qualities and knowledge of the sport branch are important in identifying with his/her athletic identity.

When the relevant literature was examined, it was observed that the bonds established by athletes or fans with their sports clubs were selected as a research topic under the title of identification in sports. However, it has been determined that the level of identification of athletes with successful or well-known athletes in their branches is not the subject of research in existing studies. Filling the gap identified in the field constitutes the motivation of this study. In this context, this study aims to develop a valid and reliable measurement tool to determine the level of person-person or, in other words, athlete-athlete identification that athletes establish with the athletes they idolize.

2. METHOD

2.1. Type of Research

The aim of this study is to develop a measurement tool to determine the psychological link and belonging levels of active athletes, who are the subjects of sport, towards other athletes in their branches. The study, conducted as basic research, utilized the scaling approach through ordered sums, an approach based on subject responses. This approach allows inferences to be made based on the responses of the individuals in the study. In addition, in the study, the respondent-centered scaling approach (Crocker, 2012; Torgerson, 1958) was taken as a criterion through graded sums based on respondent responses.

2.2. Working Group

This study, aimed to measure the level of identification of active athletes, has two separate study groups. Exploratory factor analysis (EFA) was applied with the first group of 930 observations to clarify and determine the measurement model. For the CFA, observations were composed from volunteer athlete participants in January and February 2024. Among the volunteer athletes, 360 were female and 570 were male; 541 were individual athletes and 389 were team athletes; 147 had at least one international experience and 783 had no international experience; 723 were amateur athletes and 207 were professional athletes; 109 were national athletes and 821 were non-national athletes. In addition, in terms of the most recent school graduation of the participants; 88 of them are pre-high school graduates, 439 of them are high school graduates, 58 of them are preliminary bachelors, 310 of them are bachelors, and 35 of them are postgraduate graduates.

The sampling type plays a critical role in the population and sample. In the literature, the sample group representing the population for scaling studies (Karakoç & Dönmez, 2014) is also formed by simple random sampling method (Şahin & Öztürk, 2018). However, for the current study, the scale items represent the population of the study group consisting of active athletes. As a matter of fact, the items constitute the universe in scale development studies because scaling studies are not hypothesis testing studies but studies that try to reveal the structure (Erkuş, 2012).

Confirmatory factor analysis (CFA) was conducted to provide additional evidence regarding the construct validity, convergent validity, and divergent validity of the scale with the CFA conducted to obtain the final form. For CFA, data collection was also conducted in March and April 2024 and data were obtained by reaching 813 active athletes who voluntarily participated in the study.

2.3. Stages of Forming the Scale Form

In this section, the phases of the experimental and final form of the scale are detailed.

1.Focus Group Interviews: By applying the convenience sampling method of qualitative research, focus group interviews were conducted with 6 expert academicians and 12 national athletes who have scale development studies. Group interviews were held 4 times in December 2023 and possible criticisms and suggestions were discussed. Ideas were exchanged about how the item pool should be created.

2. Obtaining Athletes' Opinions through Essays: An item pool was firstly created to ensure that the scale items serve the purpose more reliably and validly. In this context, an essay study was conducted with 120 non-national and 40 national athletes competing in their own branches. A total of 160 athletes competing in individual and team categories were asked to express which criteria they were based on considering the athletes they identified with. The statements forming their own belonging were collected and made into a whole.

3.Literature Review: Within the framework of the literature review, studies in the literature that may support the study or aim to measure similar qualities were examined. In this direction, the "Sport Spectator Identification Scale" developed by Wann and Branscombe (1993) and adapted to Turkish culture by Günay and Tiryaki (2003) was utilized. In addition, other studies on identification in the literature were also examined and contributed to the item pool. The item pool created within the scope of qualitative steps was then evaluated by the target group and the researchers and turned into sentences that could measure the levels of athlete-athlete identification.

4. Testing the Content Validity Ratio (CVR): The items belonging to the candidate scale form were determined with the

item pool. Then, an expert evaluation form was created and read aloud to 20 active athletes and feedback was obtained. Then, a 68-item form was created. The form was delivered online and in written form to 15 academicians working in the field of sport sciences and 5 experts working outside the field of sport sciences but with scale development studies. The experts were asked to indicate their suggestions and opinions by marking 3: Good - 2: Should be improved - 1: Bad, separately for the criteria of "Representativeness", which aims to reveal the strength of the relationship with the theoretical structure, and "Understandability", which questions the comprehensibility of the scale items by the target audience. The expert evaluation form was organized according to the Lawshe technique and the CVR takes a value between -1, i.e. absolute rejection and +1, i.e. absolute acceptance. The calculation of the content validity rate is given in Equation 1. In this scope;

$$KGO = \frac{Nu}{N/2} - 1 \text{(Equation.1)}$$

Nu: Represents the number of experts who rated the item as good, while N: Represents the total number of experts who gave an opinion on the item. When all experts give a good response to the item, the CSR=1, whereas when half of the experts give a good response to the item, the CSR=0. In addition, if all the experts rate the item as bad, the CSR is calculated as CSR=-1. If the result of the calculation reveals that the item has a CSR=O or a negative value, the item does not have a CSR and must be removed from the scale (Ayre & Scally, 2014; Lawshe, 1975; Wilson, et al., 2012). Within the scope of the current study, the critical value of CVR=CVR for 20 experts at α=0.05 significance level was 0.701 (Lawshe, 1975), therefore, it was understood that 10 items did not reach the content validity criterion and 5 items should be removed from the experimental form upon the experts' recommendation. As a result, after the expert evaluation and content validity study, 15 items were removed from the initial form of 66 items, 13 items were added and a trial form of 66 items was obtained. In addition, the experts were consulted about the appropriate Likert type and rating names.

5. Implementation of the Trial Form: As a result of expert feedback, content validity was tested and a trial form with 66 items in a 5-point Likert structure (5: Very Important, 4: Important, 3: Slightly Important, 2: Not Important, 1: Not Important at All) was created. The trial form was delivered online to 930 active athletes, the target group.

6. Factor Analyses (CFA-DFA): Before conducting the Exploratory Factor Analysis, the 930 observations were adjusted to the desired form for factor analysis in terms of missing data, size of the participants, multicollinearity problem, outliers, linearity and normality as well as testing the factorability of R. In addition, factor analysis assumptions were tested separately for CFA and CFA.

2.4. Data Analysis Techniques

In this study, which was conducted to determine the level of identification, CFA and CFA were performed quantitatively, while Cronbach alpha internal consistency and convergent reliability were calculated for reliability. As a result of the analyses, hypothetical analyses were conducted before CFA to determine how many items and how many factors the scale would result in. In this context, firstly, the number of factors and the loading values of the factors were analyzed. CFA was conducted after the hypothesis, sample size and missing data analyses. Guadagnoli & Velicer (1988) emphasized the importance of aligning the sample size with the complexity of the analysis; Novak & Marques (2019) stated that a sample size of 180 observations may be sufficient; Chekol et al. (2016) suggested that a sample size of more than 100 is generally considered sufficient for factor analysis and that a sample to variable ratio of 10:1 is a useful guideline; Tabachnick and Fidell (2015) emphasized that the minimum number should be 300. Considering that Comrey and Lee (2013) state that 100 is a poor sample size, 300 is a good sample size, 500 is a very good sample size, and 1000 is an excellent sample size, it can be stated that the 930 observations of the current study are very close to excellent.

When the comparisons of the positions of the measures of central tendency for the scale items were analyzed, it was revealed that the distribution was normal because the square, mode and arithmetic mean values were very close to each other. On the other hand, when the Mahalanobis distances and Z values were analyzed to determine the outliers of the study, it can be stated that all Z values were between -2.012 and 2.013 and no single outlier was found in the observation set considering Tabachnick criteria (-4, +4). Vannatta (2005) stated that in studies with more than 100 samples, the Z score range can be extended to values between -4 and +4. In addition, Mahalanobis distances were analyzed to determine whether there were multiple outliers, and the Chi-squared distribution was taken as a criterion ($\chi 2$ 66;0.001=112.317) and 137 observation values above this value were excluded from the analysis because they did not meet the Mahalanobis values, and the analysis continued with the remaining 793 observation results.

Since it can be very difficult to achieve linearity in the relationships between two variables (Kara et al., 2023), the analyses were continued under the assumption that the relationships were linear. Within the scope of the normality assumption, the items were examined separately, and the measures of central tendency and skewness and kurtosis coefficients were examined. Univariate normality was ensured on the grounds that these values were very close to each other (Can, 2018). In this context, it was revealed that the skewness values of the 66 items in the scale were between .129 and -2.274 and kurtosis values were between 0.256 and 2.705. As a result of the analysis indicators, considering that the values of the skewness coefficient between -3.3 and +3.3 and the kurtosis coefficient between -7 and +7 are sufficient for normality conditions (Bernstein, 2000),), it can be stated that normality conditions are met. In addition, Tolerance and VIF values were examined for the analysis of the multicollinearity problem, and it was found that the Tolerance values of the 66 items in the scale produced values between 0.678 and 0.272 and VIF values produced values between 1.510 and 3.178. Accordingly, it was found that all Tolerance values were >0.20 and all VIF values were <5, and for this reason, none of the items in the observation set had multicollinearity problems.

The Durbin-Watson (D-W) value for all items regarding the autocorrelation of errors was calculated as 1.973, and for this reason, errors can be said to be independent of one another (Kalaycı, 2010). On the other hand, when the observations were examined within the scope of factorability of R, which is another necessary assumption for the analyses, it was revealed that the KMO (Kaiser-Meyer-Olkin) value was KMO=.956 in terms of "Measurement of Sampling Adequacy Test" and Bartlett's Test of Sphericity" and the significance of the relationships between the items was different from 0. In terms of criterion evaluation, Hutcheson and Sofroniou (1999) state that the results of KMO

values between (0.5<KMO<0.7) are normal; between (0.7<KMO<0.8) are good; between (0.8<KMO<0.9) are very good; and 0.9 and above are excellent (Dağlı, 2015). According to the criteria, it can be stated that the value reached is perfectly good. In this direction, the fact that the results are significant ($p<0.05$) proves that the matrix created for the variables is significant and the structure is suitable for factor analysis (Bayık &Gürbüz, 2016). In addition, the factorability of the correlation matrix to be formed with the data belonging to the study group was questioned, and the KMO statistic was obtained as 0.956 and it was concluded that the matrix was well factorable. Again, according to the results of Bartlett's Sphericity Test, which tests whether the relationships between the items in this matrix are different from 0, the null hypothesis was rejected ($\chi2 = 28323.027$, $p < 0.05$) and the related analysis was concluded

Table 1. Descriptive information about active athletes in terms of gender, sport category, international experience, level of sportsmanship, level of education and nationality status

		N	%
Gender	**Woman**	**360**	**38.7**
	Male	**570**	**61.3**
Sport Category	Individual	541	58.2
	Team	389	41.8
International Experience	Yes	147	15.8
	No.	783	84.2
Sportsmanship Level	Amateur	723	77.7
	Professional	207	22.3
Education Level	Before High School	88	9.5
	High School	439	47.2
	Preliminary bachelor	58	6.2
	Bachelor	310	33.3
	Postgraduate	35	3.8
National Team Appearance	Yes	109	11.7
	No	821	88.3
Total		930	100.0

Table 1 presents the descriptive statistics of the participant active athletes. Among the observations reached; 360 are female and 570 are male; 541 are individual sports athletes while 389 are team sports athletes; 147 have at least one international experience while 783 have no international experience; 723 are amateur athletes while 207 are professional athletes; 109 are national team athletes while 821 are not national team athletes. In addition, in terms of the most recent school graduation of the participants; 88 of them are pre-high school graduates, 439 of them are high school graduates, 58 of them are preliminary bachelors, 310 of them are bachelors, and 35 of them are postgraduate graduates.

To determine the psychological construct validity of the Athlete Identification Level Scale, data were collected again, and observations were obtained from 813 active athletes. For CFA, the estimated error variances standardized loading values and goodness of fit criteria for the factors of the scale were analyzed. In addition, cronbach alpha reliability analysis coefficients showing the internal consistency of the scale were calculated. In this context, the scale, which was reduced to 26 items before the CFA, was applied to the target group again and observations were obtained. Firstly, assumption analyses were performed for 813 observations and missing data analysis, linearity, normality, sample size and multicollinearity problems were analyzed.

In the analyses conducted for missing data, no missing data was found due to the online collection of the data. Accordingly, mode, median and arithmetic mean values were analyzed separately for normality assumption, and it was found that univariate normality was achieved. In addition, when the skewness and kurtosis values were analyzed, it was concluded that these values were generally close to negatively skewed values and took values between -1.271 and 0.230, while kurtosis values took values between -0.757 and 0.765. According to Bernstein's (2000) criteria, the skewness coefficient taking values between -3.3 and +3.3 meets the normality criterion, the results obtained indicate the conformity of the assumptions. Mahalanobis distances for multiple outliers and Z values for single outliers were analyzed to examine the outliers of the observations.

According to the analysis based on chi-square, Mahalanobis values of the items; multiple variable outliers of .001 and smaller ($\chi2$ 26;0,001=54.052), 34 observations producing values above this value were excluded from the analysis and 1 observation was excluded from the analysis due to Z values between 2.784 and -3.050, and the analysis continued with the remaining 778 observations.

To determine the multicollinearity problem, VIF and Tolerance values were analyzed. Inter-item VIF values were found to be between 3.141 and 1.336, while Tolerance values were found to be between 0.745 and 0.328. Since all Tolerance values were >0.20 and all VIF values were <5, it was found that there was no multicollinearity problem. As a result of these hypothesis analyses, 778 observations were obtained, and considering Tabachnick's criteria, it was decided that the observation set obtained was of appropriate size for CFA analyses (Tabachnick & Fidell, 2015). After the completion of the hypothesis analyses, the CFA application was run with the data set of 778 observations and the 26-item scale form.

3.FINDINGS

3.1. Validity Findings

CFA Findings

For the exploratory factor analysis, 930 observations were obtained, but the number of observations was reduced to 793after the analysis of the assumptions. As a result of the applied CFA, it was concluded that the explained variance ratio, which reveals the rate of representation of the variables in the data set of the scale by the sub-dimensions(Kara et al., 2023), produced values between .453 and .857. Considering the existence of a situation that may cause a problem if this indicator of the items takes a value lower than .10, it would be correct to state that the range of values produced is appropriate. On the other hand, it would be appropriate to obtain more information about whether the items work or not, with the assumption that it would not be sufficient to decide only according to the table values (Çokluk et al., 2012). In this context, in addition to these values, which can also be interpreted as the coefficient of determination, which is thought to explain most of the variance (Onyutha, 2020), to clarify the factors: "Slope-Slope Graph", "Percentage of Total Variance Method", "Kaiser Method" and "Explained Variance Criterion" methods were also employed.

While the slope graph, which is one of the preferred techniques to determine the factors of the scale, expresses the distance between two points as a factor (Kara et al., 2023), the plateaus reached can be expressed as the formation centers of a new factor. In this direction, according to the slope graph obtained according to the analysis and presented in Figure 1; the clear presence of a plateau after the 5th point is obvious.

In the light of the information expressed, it is seen that the scale has a 4-factor structure. According to Kaiser's method, when the eigenvalue is greater than 1, the presence of a factor is indicated, and when Figure 1 is analyzed, there are 4 values with eigenvalues greater than 1. The results of the two analyses are consistent and the existence of a four-factor structure is clear. However, when Figure 1 is analyzed in more detail, the eigenvalues have a decreasing momentum since the beginning, but the acceptance of a 4 or 5-factor structure may require personal criticism and interpretation. For this reason, to avoid any criticism and to present the main breaking points of the scale more objectively, the total explained variance table is presented for reference.

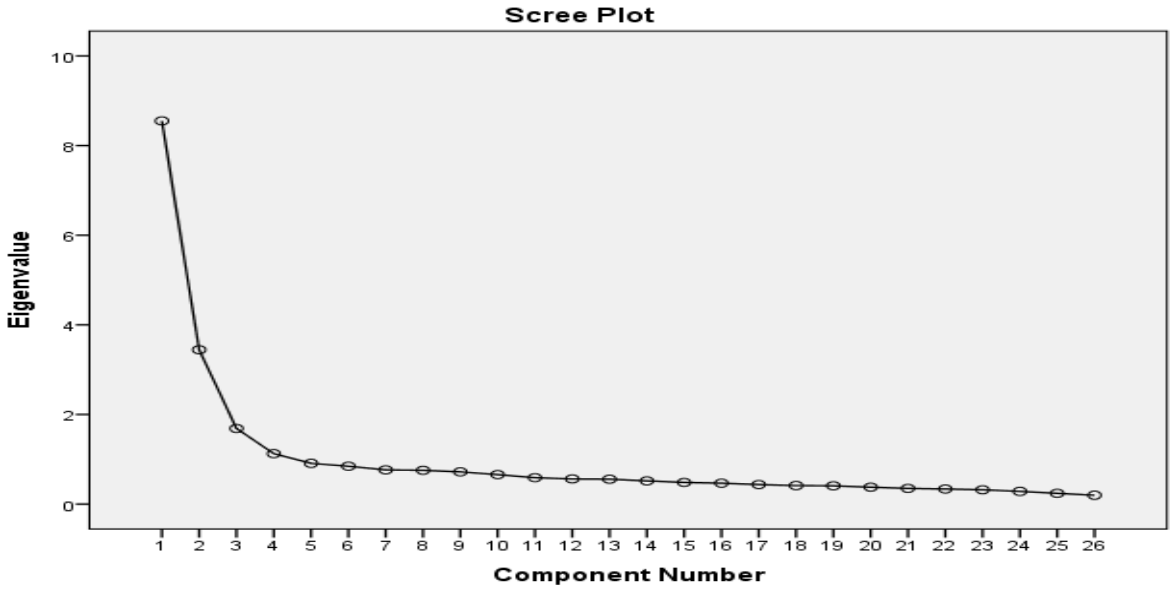


Table 2 Slope Graph

The Percentage of Total Variance method can be expressed as a statistical criterion used in various fields to understand the contribution of different factors to the overall variability in a data set. According to this technique, which helps to identify the main factors, the fact that the additional contribution falls below 5% is an indicator of the maximum number of factors that can be reached (Kalaycı, 2010). In this direction, the existence of a four-factor structure was determined in Table 3.

Table 3. Total Variance Explained

Component	Initial Eigenvalues			Total subtraction of squared loads		
	Total	Variance %	Cumulative%	Total	Variance %	Cumulative%
1	8,550	32,885	32,885	6,573	25,281	25,281
2	3,444	13,248	46,133	3,266	12,560	37,841
3	1,688	6,491	52,624	2,666	10,255	48,096
4	1,126	4,331	56,955	2,303	8,859	56,955
26	,198	,761	100,000			

Within the scope of the explained variance criteria; Chen et al. (2014) emphasized that the percentage of variance explained may fall below the recommended threshold of 30%, Büyüköztürk (2018) suggested that the ratio of variance explained for unidimensional scales should ideally be 30% or higher, but considering that the general acceptance in social studies should take a value between distinctly, a 4-factor structure is obtained. On the other hand, when the randomly distributed experimental indicators are compared with the eigenvalues and evaluated according to the total variance explained table with Horn's (1965) parallel analysis, a 4-factor structure with eigenvalues greater than 1 and explaining approximately 57% of the total structure is revealed. 40% and 60%, it can be stated that the 56.955% obtained within the scope of the research is quite good.In this context, when all criteria are considered. When Table 3 is analyzed, it is seenthat factor 1 explains 25.281% of the variance, factor 2 explains 12.560% of the variance, factor 3 explains 10.255% and factor 4 explains 8.859%. In addition, the items not included in the analysis and their reasons are detailed in Table 4.

Table 4. Exploratory Factor Analysis Item Inferences

Communalities<0.30 (Articles)	**Factor Loadings above 0.45 Substances Underneath**	**Binary Substances Items with less than 0.10 difference between them**	**Rational Reasons (Factor Nomenclature, Language and Expression)**
35-36-39	2-13-38	1-3-4-7-9-10-12-22-24-25-27-28-31-32-33-34-37-40-41-42-43-44-48-50-51-52-53-62-63-64-65-66	20-21

According to the analyses performed, items 20 and 21 were excluded from the analysis because the two items could not form a factor. Items 35-36-39 were excluded because their commonalities were less than 0.30. On the other hand, items 2-13-38 with factor loadings below 0.45 were found appropriate for exclusion. The other items (1-3-4-7-9-10-10-12-22-24-25-25-27-28-31-32-33-34-34-37-40-41-42-43-44-44-48-50-51-52-52-53-62-63-64-65-66) were considered as overlapping due to the difference between them being less than 0.10 and were excluded from the analysis. In this context, the 66-item form before CFA was obtained as a structure with 26 items and 4 factors explaining 57% of the variance.

Table 5. Common Variances, Factor Loadings And Aggregated Factors Of The Items

No	***Article***	***Factor 4***	***Factor 3***	***Factor 2***	***Factor 1***	***Common Factor Variance (h2)***
M5	**Harmony with club**	,526				,368
M6	**Positive media appearance**	,724				,603
M8	**Being respected by competitors**	,453				,337
M11	**Positive interactions on social media**	,680				,610
M14	**Respect for cultural values**		,766			,647
M15	**Demonstrating exemplary behavior in social life**		,753			,709
M23	**Sensitivity to social issues**		,596			,733
M26	**Care for spiritual values**		,716			,780
M16	**Clothing style**			,805		,581
M17	**Hairstyle image**			,857		,655
M18	**Compliments I've heard about**			,631		,585
M19	**Charisma**			,808		,615
M29	**Aesthetic movements**			,472		,411
M30	**Trophies and medals**			,471		,449
M45	**Energy during the performance**				,675	,539
M46	**Interest in the improvement of young athletes**				,561	,478
M47	**Competitive attitude**				,754	,582
M49	**Game mentality and strategy**				,745	,577
M54	**Demonstrating that sport is not only a physical activity**				,626	,478
M55	**Ability to sustain performance under pressure**				,791	,627
M56	**Taking responsibility at critical moments in competitions**				,805	,657
M57	**Commitment to profession**				,762	,636
M58	**Encouraging young people to play sports**				,686	,568
M59	**Contributing to team spirit**				,689	,573
M60	**Leadership qualities**				,626	,484
M61	**High level of knowledge about branch**				,700	,525
	Explained Variance Values	8,859	10,255	12,560	25,281	
	Cronbach's Alpha Values	,70	,85	,82	,94	

In Table 5, item definitions and total variance values for the items are presented. When the obtained values were analyzed, it

was found that the total variance explained was approximately 57% and the Cronbach alpha internal consistency reliability coefficients of the items

Were .94 for factor 1, 82 for factor 2, .85 for factor 3 and .70 for factor 4. Table 6 shows the items' naming, number of items and reliability values considering the relationship status, language and expression features of the items and in consideration of the literature.

Table 6. Factor Names and Reliability Coefficients

Number of Factors	Factor Names	Number of Items	Cronbach's Alpha
1. Factor	Athletic Identity	12	,94
2. Factor	Image and Career Maturity	6	,82
3. Factor	Social Values	4	,85
4. Factor	Communication Skills	4	,70
For the whole scale			,90

According to Table 6, factor 1 was named "Athletic Identity", factor 2 was named "Image and Career Maturity", factor 3 was named "Social Values" and factor 4 was named "Communication Skills". It was revealed that all factors were above (>0.60), which is expressed as the acceptance critical point for the reliability coefficient, and the measurement tool produced reliable measurements.

CFA Findings

As a result of the CFA, the standardized loadings of the 1st sub-dimension named "Athletic Identity" produced values between .79 and .65 and items 56 and 57 explained the factor at its best. The standardized loadings of the 2nd factor named "Image and Career Maturity" produced values between .88 and .37 and item 17 explained the factor best. The standardized loading values of the 3rd factor named "Social Values" produced values between .82 and .62 and item 15 explained the factor at the best level, while the standardized loading values of the 4th factor named "Communication Skills" produced values between .68 and .45 and item 11 explained this factor at the best level.

Considering that the values of the observations included in the analysis, that is, the T values obtained to reveal the differences of the participants who are at the extremes in terms of responding positively or negatively to the items and to determine the item discrimination properties, are suitable for the scale (Kara et al., 2023), it is clear that all the values of the study meet the condition. It was also revealed that the T values, which are additional evidence for this study, provide evidence for all 26 items to be included in the final scale form. In this context, standardized values are given in Table 7 and t values are given in Table 8.

Table 7. Standardized Values of the Tested Model

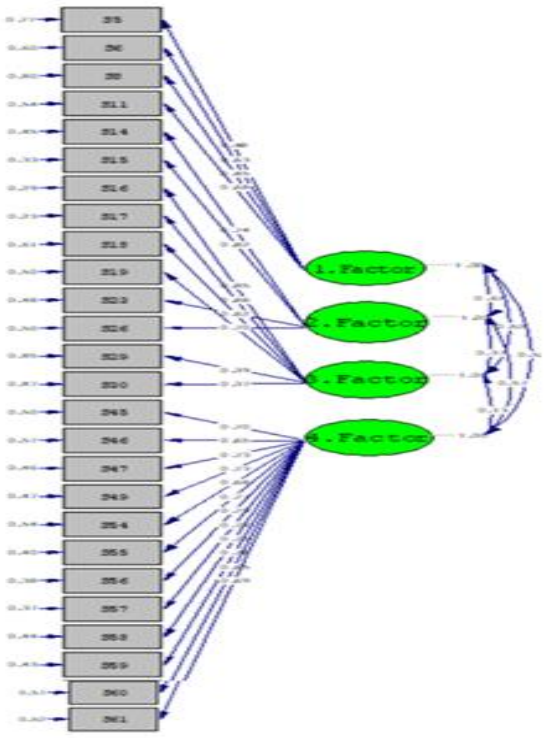
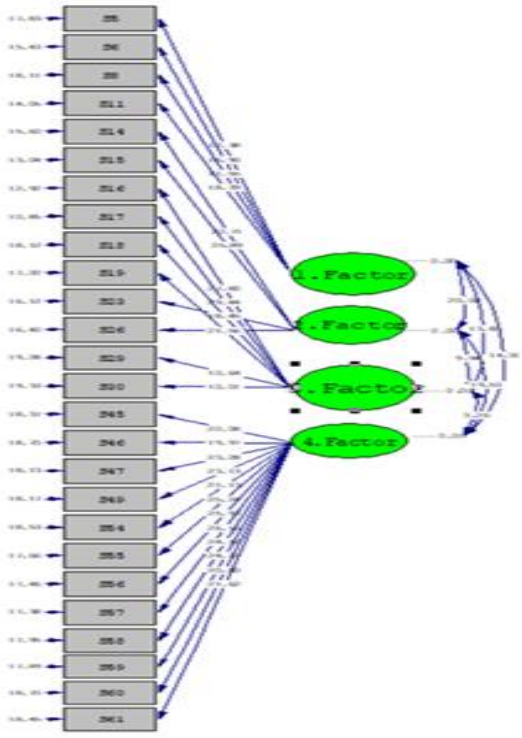


Table 8. Significance levels of t values (p<=.05)



It was found that all the standardized relationship coefficients obtained after the CFA and given in Table 7 produced high values and all t values obtained for the items given in Table 8 were significant. In addition to these indicators, when the model goodness criteria are taken into consideration, it would not be wrong to state that the model fit was achieved in the study group (Çokluk et al., 2012).

Table 9. Goodness of Fit Criteria and Generated Values

Compliance Measurement	Perfect Fit	Good-Acceptable Fit	Value Obtained
χ2/sd	<2	<5	4.69
RMSEA	0≤RMSEA≤ .05	.05≤ RMSEA≤ .08	.05≤ .078 ≤ .08
SRMR	0 ≤ SRMR ≤ .05	.05≤ SRMR ≤ .10	.05≤ .077 ≤ .08
NFI	.95 ≤ NFI ≤ 1.00	.90 ≤ NFI ≤ .95	.95 ≤ .95≤ 1.00
NNFI	.97 ≤ NNFI ≤ 1.00	.95 ≤ NNFI ≤.97	.95 ≤ .95 ≤ .97
CFI	.97 ≤ CFI ≤ 1.00	.95 ≤ CFI ≤ .97	.95 ≤ .95 ≤ .97
GFI	.95 ≤ GFI ≤ 1.00	.90 ≤ GFI ≤ .95	.90 ≤ .90 ≤.95
AGFI	.90 ≤ AGFI ≤ 1.00	.85 ≤ AGFI ≤ .90	.85 ≤ .85≤ .90

Sources: (Munro, 2005; Schreiber et al., 2006; Şimşek, 2020; Hooper and Mullen 2008; Schumacker and Lomax, 2004; Lenz et al., 2010; Wang and Wang, 2019).

Within the framework of the findings obtained to analyze the results of model fit, it was revealed that the (χ2/sd) indicator (χ2:1377 and sd:5.72) was 4.69. Considering that a low value indicates a good model fit (Kline, 2014; Sumer, 2000), it can be stated that the value obtained in the study is at an acceptable level. Other values obtained within the scope of model fit are as follows; RMSEA=.078, SRMR=.077, NFI=.95, NNFI=.95, CFI=.95, GFI=.90, AGFI=.85. The fact that the values produced are between perfect and acceptable critical points is an indication that the model will serve the purpose as desired (Jöreskog et al.,2016). In this direction, the model fit of the 4-factor 26-item structure of the Identification in Sport Scale was confirmed.

Following the validated psychological construct validity of the Identification in Sport Scale, which is planned to serve the field as a valid and reliable measurement tool, the factor values of the scale; the square of the maximum shared variance (MSV), the average variance explained (AVE), the average of the square of the maximum shared variance (ASV) and the convergent reliability values (CR) are given in Table 10 below. Since it is aimed that the 4 dimensions of the scale converge to each other and explain at least half of the relevant factor, AVE values in all 4 sub-dimensions should be greater than 0.5 (AVE>0.5) and all CR values should be above AVE values in line with convergent validity evidence (Yaşlıoğlu, 2017), all CR values are above AVE values, but AVE values of the 1st and 3rd sub-dimensions produced values above .50. Accordingly, the condition that the CR values, which are considered as the basic criterion for convergent validity, should be greater than the AVE values, which are the average of the variance explained, was also clarified (CR>AVE).

In addition, within the scope of the study, the scope of divergent validity, which is expressed as the possible relationships between factors being lower than the relationships within factors in multi-factor structures, was also targeted. In other words, this situation can be explained as the divergence of separate factors. Based on this definition, the MSV values of the study are larger than the ASV values. On the other hand, the condition within the framework of the goal of AVE values being greater than MSV values as required by the divergent validity evidence was met for the 1st and 3rd sub-dimensions. Within the scope of the values obtained, it can be stated that the criteria for divergent validity are largely met.

In addition, when the combinatorial reliability values (CR), which are expressed as another form of evidence for the study, are analyzed, it is seen that all the values obtained meet the requirement of .70. Accordingly, the criteria and values are given in Table 10 below.

Table 10. Convergent and Divergent Validities and Combining Reliability Values of the Scale

Factors	AVE	MSV	ASV	CR
1	0,53	0,50	0,185	0,93
2	0,44	0,50	0,185	0,81
3	0,56	0,50	0,185	0,83
4	0,40	0,50	0,185	0,70
Criteria	**AVE>,50 CR>AVE**	**MSV<AVE**	**ASV<MSV**	**CR>,70**

Cronbach alpha for the whole scale: ,90

Cronbach alpha reliability analysis coefficients obtained from 778 observations included in the analyses within the scope of the scale applied to the target group consisting of active athletes and the 26-item final scale form; for the factors respectively for the 1st sub-dimension: .94, for sub-dimension 2: .82, for sub-dimension 3: .85, for the 4th sub-dimension: .70 and for the whole scale: .90. In the light of the data obtained in this context, the Identification in Sport Scale should be stated to be a measurement tool with high reliability.

4. CONCLUSION AND RECOMMENDATIONS

4.1. Conclusion

The concept of identification in sports is a multifaceted concept with a wide range from fan behavior to sports marketing, from the sports industry to athlete identity. Understanding and benefiting from identification is as important for sports organizations and marketers as it is for determining the tendencies of athletes.

The dynamic and competitive spirit of sports always creates a bond between athletes. The level of this bond between athletes depends on some characteristics that can be influenced voluntarily or unwittingly by the athlete. The characteristics of athletes such as the geography they live in, available opportunities, etc. can create a selective situation in their perceptions and mediate a psychological bond between athletes

and other athletes. Starting from this point, it was aimed to examine what these bonds might be and at what level the athletes have these bonds with the athlete-athlete identification level scale.

Within the scope of the study, various process steps were applied. In this direction, research steps such as focus group interviews with experts and target group athletes, writing essays expressing their feelings, and how identification evolved in the literature were followed. In the first stage, the opinions of the experts were evaluated for the item pool and Likert type obtained. Then CFA and CFA were applied. For CFA, 930 observations were reached, and 813 observations were reached for CFA. The 4-factor 26-item structure obtained as a result of CFA with 930 observations was confirmed by CFA with 813 observations. According to the final form, "Athletic Identity", "Image and Career Maturity", "Social Values" and "Communication Skills", which are compatible with the items, were named.

In the items belonging to the Athletic Identity sub-dimension, it was concluded that the idolized athlete's mental and physical characteristics such as his/her understanding of the game strategy, energy, responsibility-taking skills and being a team player were important for identification. Within the scope of the second factor, Image and Career Maturity, it can be stated that the characteristics of the idolized athlete such as charismatic features, hairstyle, image and experiences are influential. On the other hand, within the scope of Social Values, characteristics such as knowing and acting according to the values of the society in which the idolized athlete lives and being a caring person are important. Finally, it was found that in the Communication Skills factor, elements such as the idolized athlete having a positive perception by other individuals, being successful in communication-related aspects and being appreciated by his/her rivals are determinative.

As a result of the analyses performed, the cronbach alpha internal consistency coefficients examined in the quantitative context were calculated as .94 for Athletic Identity consisting of 12 items, .82 for Image and Career Maturity consisting of 6 items, .85 for Social Values sub-dimension consisting of 4 items, .70 for Communication Skills sub-dimension consisting of 4 items, and .90 for the whole scale. In addition, as a result of CFA, the variance ratio explained by the 4-factor 26-item structure is 56.95. When the results were analyzed according to the model goodness of fit criteria after CFA; $\chi 2/sd=4.69$, RMSEA=.078, SRMR=.077, NFI=.95, NNFI=.95, CFI=.95, GFI=.90, AGFI=.85. It was revealed that all values produced had excellent or acceptable fit.

There are, naturally, some limitations of the study. In addition to cronbach alpha and composite reliability coefficients applied for reliability and validity evidence, criteria such as similar scale validity could have been used for additional evidence. However, the absence of a measurement tool for detecting athlete-athlete identification in the literature eliminated this possibility. On the other hand, applying a test-retest technique to determine the consistency of the scale over time would undoubtedly have provided additional evidence. However, due to the changing dynamics and the fact that the target group is not fixed, this technique was not preferred as well.

4.2. Recommendations

Determining the identification levels of athletes provides information to researchers and coaches about the identity of athletes. In this direction, determining the information about identification in talent screenings or active athletes, determining the level of identification of the individuals concerned, and determining the level of identification with which characteristics they are connected, provides an idea for the right guidance. If an athlete does not have an idol or has a low level of identification, he/she may not find sufficient motivation. Because every athlete, whether a child or a young person, tends to reflect and identify with objects and people who satisfy his/her motives, and taking parts from the person he/she identifies with motivates him/her (Köknel, 1985). Wearing the numbered jersey symbolizing the athlete, running like him/her, carefully watching his/her sportive or non-sportive but noticeable movements on the field, and hanging posters of athletes on the wall are exemplary identification behaviors (Zelyurt, 2019).

In addition, with the help of the present scale, researchers can determine the differences between athletes at the individual or team level, at the level of branch differences, and in terms of gender. In addition, identification levels can be examined in terms of different sports activities such as shooting, target field games, net or racket sports, water sports, extreme sports, hitting and catching games, and defence sports and the reasons for athletes' preferences related to the sports they are involved in can be linked.

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Loneliness and Social Health: A Study in Individuals Participating in Recreational Activities

Ersan Tolukan[1] Aydıner Birsin Yıldız[2] [3]Buket Etlioğlu

[1]Ankara Yıldırım Beyazıt University, Faculty of Sport Sciences, Ankara-Turkey, 0000-0002-7769-9580, ersan_et@hotmail.com
[2]Ankara Yıldırım Beyazıt University,Faculty of Sport Sciences, Ankara-Turkey, 0000-0002-3767-1057, aydinerbirsinyildiz@hotmail.com
[3]Ankara Yıldırım Beyazıt University, Institute of Health Sciences, Ankara-Turkey, 0009-0000-6714-9975
Corresponding Author: aydinerbirsinyildiz@hotmail.com

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ABSTRACT

In this study, it was aimed to examine the relationship between loneliness level and social health in individuals participating in recreational activities. The research group consisted of 300 people who participated in the study by random sampling method on the basis of volunteerism. Personal Information Form, Loneliness Scale and Recreational Social Health Scale were used as data collection tools. All analyses were performed using the SPSS 22 package program, taking into account the significance level of "p<.05". According to the findings obtained, it was determined that the study group did not have any participants with poor social health and the loneliness levels of the participants were concentrated in the medium and not lonely class. In the dimensions of time, communication, happiness/satisfaction and social health, it is seen that the scores of men are higher than women. There was a significant difference between the scores obtained in time and social relationship dimensions in terms of age and weekly leisure time variables. In terms of the time of participating in recreational activities, it was found that there was a significant difference in the dimensions of social and emotional loneliness and time, social health and loneliness. On the other hand, it was determined that loneliness and social health had an inverse relationship. As a result, it can be said that women feel more lonely and have lower levels of social health compared to men and that time spent participating in recreational activities may have positive effects on loneliness and social health.

Keywords: Recreation, Loneliness, Social Health

INTRODUCTION

Although the concept of health is a concept that every society has emphasised since the existence of man, the meaning attributed to it has changed in terms of conditions, society, culture and time. While it was initially accepted only as "being physically healthy", it has changed over time and the psychological and social status of the individual has also started to be taken into account (Erkoç, 2019). Today, health is not only considered as "the absence of disease or disability" but also as "a state of complete physical, mental and social well-being" (WHO, 2006). According to this definition, health consists of three dimensions: physical, social and spiritual. These three dimensions directly affect each other. However, although social health is one of these three dimensions, it is still a dimension that is less understood and therefore less taken into account compared to physical and mental health dimensions (Turancı and Eşiyok, 2021). For this reason, research centred on the concept of social health is important for the literature and its results are important for social life.

Social health is the absence of negative situations that will impair health in the environment where people live, work, etc. (Yuvalı, 2015). In other

words, it is the ability of the individual to communicate with the society and to exhibit common behaviours (Ulutürk, 2015). Although these conditions are shaped by political, social and economic forces (Islam, 2019), the individual should be able to cope with changing conditions and create the best social system to be in happiness and peace (Şener, 2021).

According to the National Health Portal (NHP, 2019), social health is a state of well-being. In order for the individual to be prosperous in this sense, instead of living a life based on loneliness and selfishness, he/she should live a life based on communication and empathy with others. Because selfishness poses a threat to both the individual and the environment as a cause of stress and depression (Erkoç, 2022; NHP, 2019). In fact, humans are social beings by nature and need to interact with other individuals. Individuals feel loneliness (Uzuner and Karagün, 2014; Park et al., 2006) when they establish fewer relationships than they desire or when they cannot achieve the closeness they desire (De Jong Gierveld, 1987).

Loneliness is analysed in two dimensions: social and emotional. Social loneliness is the lack of a social network with which an individual can share his/her feelings and thoughts or world view. Emotional loneliness is caused by the lack of a really close bond such as a lover, spouse, parent, child (Sawir et al., 2008). The feeling of loneliness can adversely affect people's social, physical and mental health. In this respect, it is considered as a growing public health problem today (Eres et al., 2021). In order to stay away from these conditions, individuals can participate in recreational activities (Aksu et al., 2022).

The word recreation comes from the Latin word "recreation", which means "renewal, recreation". It is a means of life in which the individual can fulfil his physical, social and spiritual needs without feeling an obligation (Beltekin and Ilkım, 2020). Individuals can participate in recreational activities actively or passively according to their own wishes (Lu and Hu, 2005). Recreational activities are of great importance for individuals, as individuals participating in recreational activities can get away from their environment, renew themselves and return to their daily lives with high motivation (Emel, 2016). Individuals turn to recreational activities in order to live healthy and relax both physically, socially and mentally. While participating in recreational activities, they can meet their needs such as acceptance, closeness and socialisation from the people or groups they interact with (Demir et al., 2012). In line with meeting these needs, it can provide great benefits, especially in coping with loneliness and indirectly in the name of protecting social health.

Based on this information, when the relevant literature is examined, it is seen that the existing studies were initially focused on topics such as leadership in recreation, recreation and psychological perceptions, recreation education, recreation and gender, while after 2011, studies have addressed topics such as tourism and outdoor recreation, recreation management, leisure time attitude and motivation (Lapa et al., 2018). There are also studies on the evaluation of recreation activities, sports and physical recreation participation, leisure time and recreation in rural areas (Gözen, 2020). Recent studies on the relationship between health and recreation try to determine the relationship between mental health and access to recreational opportunities (Lee, 2020; Kwon et al., 2019; Thomsen et al., 2018; Litwiller et al., 2016). However, today, research on recreational activities within the scope of social health is still insufficient. In this context, the research was conducted with the idea that the results to be obtained by examining the relationship between the loneliness levels of individuals participating in recreational activities and social health will be useful in terms of literature and social life practices.

METHOD

Research Model

The research is descriptive research conducted within the framework of the Scientific Research and Publication Ethics Directive of Higher Education Institutions in accordance with the decision dated 07.05.2024 and numbered 05-715 given by Ankara Yıldırım Beyazıt University Rectorate Ethics Committee Coordinatorship.

Data Collection Tools

The data used in the study were collected through Personal Information Form, Recreational Social Health Scale and Jong Gierveld Loneliness Scale. The Personal Information Form was created by the researchers to determine some characteristics of the participants. The Recreational Social Health Scale was developed by Georgian and Lorand (2016) and adapted into Turkish by Öztürk (2019). It is a 21-question, 3-grade Likert scale consisting of 4 sub-dimensions: Time, Social Relationship, Communication, Happiness/Satisfaction. De Jong Gierveld Loneliness Scale was developed by De Jong Gierveld and Kamphius (1985) and adapted into Turkish by Çavdar et al. (2015). It is an 11-question, 4-point Likert scale consisting of 2 sub-dimensions: Social Loneliness and Emotional Loneliness.

Data Analyses

Firstly, the internal consistency of the responses obtained within the scope of the research was determined by Cronbach Alpha coefficient (Crα). In order to evaluate the distribution of the obtained data, graphs, skewness and kurtosis values were analysed. It was determined that the responses obtained within the scope of the research were reliable and showed normal distribution (Table 1). In this direction, independent groups t-test and one-way analysis of variance (ANOVA) were performed, and Pearson correlation coefficient was calculated. All analyses were performed using SPSS 22 package programme subject to "p<.05" significance level. Some descriptive information about the answers obtained in the research is given in Table 1

Table 1. Some Descriptive Information on the Responses Obtained in the Study

Dimension	Min	Max	Mean	Sd	Skewness	Kurtosis	Crα
Social Loneliness	1.00	4.00	1.88	.652	.607	.063	.828
Emotional Loneliness	1.00	4.00	2.96	.650	-.555	.356	.793
Time	1.00	3.00	2.15	.676	-.332	-1.16	.803
Social Relationship	1.00	3.00	2.69	.365	-1.63	3.03	.583
Contact	1.00	3.00	2.59	.341	-1.01	1.23	.596
Happiness	1.00	3.00	2.34	.462	-.321	-.729	.629

Participants

The study group consisted of 300 people who participated in the study by random sampling method based on volunteerism. Of the participants, 143 (47.7%) were female and 157 (52.3%) were male. When the age ranges of the participants are analysed, there are 67 (22.3%) participants between the ages of 18-25, 17 (5.7%) between the ages of 26-33, 73 (24.3%) between the ages of 34-41, and 147 (47.7%) between the ages of 42 and above. 15 (5.0%) of the participants completed secondary school, 70 (23.3%) high school and 215 (71.7%) undergraduate education. When the weekly leisure time intervals are analysed, it is seen that 36 (12.0%) participants have 1-3 hours, 75 (25.0%) participants have 4-6 hours, 36 (16.0%) participants have 7-9 hours, and 25 (47.0%) participants have 10 hours or more of leisure time. Considering the frequency of using the recreation area in these free times, 161 (53.7%) participants use the recreation area for 1-3 hours, 78 (26.0%) participants for 4-6 hours, 36 (12.0%) participants for 7-9 hours, and 25 (8.3%) participants for 10 hours or more. When the social health scores are analysed, it is seen that 17 (5.7%) participants have an average social health score and 283 (94.3%) participants have a good social health score. Looking at the loneliness scores, 174 (58.0%) participants could be classified as not lonely, 111 (37.0%) as moderately lonely, 12 (4.0%) as severely lonely, and 3 (1.0%) as very severely lonely. Information about the participants is given in Table 2.

Table 2. Demographic Information of Participants

Variables	Group	n	%
Gender	Woman	143	47.7
	Male	157	52.3
Age	18-25 Years	67	22.3
	26-45 Years	144	48.0
	46-65 Age	89	29.7
Level of Education	Middle School	15	5.0
	High School	70	23.3
	Licence	215	71.7
Weekly Leisure Time	1-3 hours	36	12.0
	4-6 hours	75	25.0
	7-9 hours	48	16.0
	10 hours and over	141	47.0
Time for Participation in Recreational Activities	1-3 hours	161	53.7
	4-6 hours	78	26.0
	7-9 hours	36	12.0
	10 hours and over	25	8.3
Type of Recreational Activity	Domestic Activities	196	65.3
	Indoor Activities	36	12.0
	Physical Activities	145	48.3
	Social Activities	96	32.0
	Open Space Activities	124	41.3
	Other	12	4.0
Social Health	Not Good	0	0.0

	Average	17	5.7
	Good	283	94.3
	Not Good	0	0.0
Loneliness	Not Alone	174	58.0
	Centre	111	37.0
	Seriously Alone	12	4.0
	He's Seriously Alone	3	1.0

RESULTS

Table 3. T-Test Results in Terms of Gender Variable

Dimension	Gender	n	Mean	Sd	t	p
Social Loneliness	Female	143	2.94	.694	-.486	.627
	Male	157	2.98	.609		
Emotional Loneliness	Female	143	1.89	.688	.239	.811
	Male	157	1.87	.620		
Loneliness	Female	143	2.96	2.84	1.64	.101
	Male	157	2.45	2.47		
Time	Female	143	2.07	.689	-1.98	**.048**
	Male	157	2.22	.654		
Social Relationship	Female	143	2.66	.387	-1.62	.105
	Male	157	2.72	.343		
Contact	Female	143	2.55	.342	-2.22	**.027**
	Male	157	2.63	.336		
Happiness/Happiness	Female	143	2.24	.485	-3.67	**.000**
	Male	157	2.43	.422		

Table 3 shows the comparison results of the participants in terms of gender variable. When the test results are analysed, it is seen that the happiness/peace, time and communication scores of male candidates are significantly higher than female candidates. At the same time, it was determined that male candidates had significantly higher scores in social health scores compared to female candidates.

Table 4. ANOVA Results in terms of Age Variable

Dimension	Age	n	Mean	Sd	F	p	Tukey
Social Loneliness	18-25 Age1	67	3.02	.650	.457	.634	
	26-45 Age 2	144	2.95	.669			
	46-65 Age 3	89	2.92	.622			
Emotional Loneliness	18-25 Age1	67	2.01	.750	1.80	.167	
	26-45 Age 2	144	1.82	.632			
	46-65 Age 3	89	1.87	.597			
Loneliness	18-25 Age1	67	3.06	2.73	.821	.441	
	26-45 Age 2	144	2.60	2.55			
	46-65 Age 3	89	2.56	2.80			
Time	18-25 Age1	67	2.32	.598	3.47	.032	1>2
	26-45 Age 2	144	2.06	.705			
	46-65 Age 3	89	2.16	.665			
Social Relationship	18-25 Age1	67	2.59	.438	4.06	.018	1>3
	26-45 Age 2	144	2.70	.353			
	46-65 Age 3	89	2.75	.307			
Contact	18-25 Age1	67	2.57	.301	.837	.434	
	26-45 Age 2	144	2.58	.356			
	46-65 Age 3	89	2.63	.345			
Happiness/Happiness	18-25 Age1	67	2.25	.473	1.49	.226	
	26-45 Age 2	144	2.37	.465			
	46-65 Age 3	89	2.35	.447			
Social Health	18-25 Age1	67	51.61	6.48	.713	.491	
	26-45 Age 2	144	51.74	6.91			
	46-65 Age 3	89	52.70	6.27			

Table 4 show the results of one-way analysis of variance conducted to compare the participants in terms of age variable. When the results of the analysis were analysed, it was determined that time scores differed significantly in terms of age variable. This difference was found to be between 18-25 and 26-45 years old in favour of 26-45 years old. On the other hand, social relationship scores also differ significantly in terms of age variable. The difference in this dimension shows a difference between 18-25 and 46-65 years of age in favour of 46-65 years of age.

Table 5. ANOVA results in terms of Weekly Leisure Time Variable

Dimension	Weekly Leisure Time	n	Mean	Sd	F	p	Tukey
Social Loneliness	1-3 hour1	36	2.88	.719	.781	.506	
	4-6 hour 2	75	2.97	.593			
	7-9 hour 3	48	2.86	.634			
	10 hours and over4	141	3.00	.667			
Emotional Loneliness	1-3 hour1	36	1.98	.779	1,18	,318	
	4-6 hour 2	75	1,97	.657			
	7-9 hour 3	48	1.85	.612			
	10 hours and over4	141	1.82	.626			
Loneliness	1-3 hour1	36	3.22	3.02	1.28	.280	
	4-6 hour 2	75	3.00	2.68			
	7-9 hour 3	48	2.58	2.55			
	10 hours and over4	141	2.43	2.58			
Time	1-3 hour1	36	1.79	.711	7.65	.000	1<4 2<4
	4-6 hour 2	75	2.03	.692			
	7-9 hour 3	48	2.09	.663			
	10 hours and over4	141	2.32	.615			
Social Relationship	1-3 hour1	36	2.53	.496	2.83	0.39	1<3 1<4
	4-6 hour 2	75	2.69	.346			
	7-9 hour 3	48	2.75	.315			
	10 hours and over4	141	2.72	.345			
Contact	1-3 hour1	36	2.63	.317	.272	.846	
	4-6 hour 2	75	2.58	.320			
	7-9 hour 3	48	2.61	.357			
	10 hours and over4	141	2.58	.354			
Happiness/Happiness	1-3 hour1	36	2.36	.482	.110	.954	
	4-6 hour 2	75	11.78	2.04			
	7-9 hour 3	48	11.79	2.49			
	10 hours and over4	141	11.63	2.38			
Social Health	1-3 hour1	36	50.14	7.68	1.60	.190	
	4-6 hour 2	75	21.48	5.92			
	7-9 hour 3	48	52.25	7.22			
	10 hours and over4	141	52.66	6,44			

Table 5 shows the results of one-way analysis of variance conducted to compare the participants in terms of weekly free time variable. When the results of the analysis were analysed, it was found that time scores differed significantly in terms of weekly free time variable. This difference was found to be in favour of the participants who had 10 hours and more weekly free time between 1-3 hours and 4-6 hours. On the other hand, social relationship scores also differ significantly in terms of weekly leisure time variable. The difference in this dimension shows a difference between 10 hours and above and 1-3 hours in favour of 10 hours and above, and between 7-9 hours and 1-3 hours in favour of 7-9 hours.

Table 6. ANOVA Results in terms of Time of Participation in Recreational Activities

Dimension	Time to Participate in Recreational Activities	n	Mean	Sd	F	p	Tukey
Social Loneliness	1-3 hour1	161	2.85	.687	5.45	.001	1<3
	4-6 hour 2	78	2.97	.569			
	7-9 hour 3	36	3.28	.566			
	10 hours and over4	25	3.16	.580			
Emotional Loneliness	1-3 hour1	161	1.95	.697	2.86	.037	1>3
	4-6 hour 2	78	1.88	.604			
	7-9 hour 3	36	1.62	.509			
	10 hours and over4	25	1.77	.606			
Loneliness	1-3 hour1	161	3.09	2.98	3.85	.010	1>3
	4-6 hour 2	78	2.55	2.29			
	7-9 hour 3	36	1.53	1.68			
	10 hours and over4	25	2.28	2.23			
Time	1-3 hour1	161	2.04	.660	4.62	.004	1<4
	4-6 hour 2	78	2.17	.697			
	7-9 hour 3	36	2.35	.619			
	10 hours and over4	25	2.48	.645			
Social Relationship	1-3 hour1	161	2.64	.394	2.20	.088	
	4-6 hour 2	78	2.74	.324			
	7-9 hour 3	36	2.78	.248			
	10 hours and over4	25	2.69	.408			
Contact	1-3 hour1	161	17.91	2.45	1.87	.135	
	4-6 hour 2	78	18.28	2.42			
	7-9 hour 3	36	18.88	2.21			
	10 hours and over4	25	18.52	1.91			
Happiness/Happiness	1-3 hour1	161	11.46	2.32	1.90	.130	
	4-6 hour 2	78	11.91	2.20			
	7-9 hour 3	36	12.41	2.29			
	10 hours and over 4	25	11.72	2.52			
Social Health	1-3 hour1	161	50.83	6.49	4.54	.004	1<3
	4-6 hour 2	78	52.65	6.76			
	7-9 hour 3	36	54.67	5.77			
	10 hours and over4	25	53.64	6.85			

Table 6 shows the results of the one-way analysis variance conducted to compare the participants in terms of the time of participation in recreational activities When the results of the analysis were examined, it was determined that social loneliness scores differed significantly in terms of the time of participation in recreational activities. This difference was found to be between 7-9 hours and 1-3 hours in favour of 7-9 hours. On the other hand, emotional loneliness scores also differ significantly in terms of the time of participation in recreational activities. The difference in this dimension shows a difference between 1-3 hours and 7-9 hours in favour of 1-3 hours. It is seen that the significant difference between 10 hours and more and 1-3 hours in terms of the time of participation in recreational activities is in favour of the time of participation in recreational activities of 10 hours and more. When the results of the analysis are analysed, it is concluded that the time of participation in recreational activities is a determinant in terms of social health scores. It is seen that the difference obtained here is between 7-9 hours and 1-3 hours in favour of 7-9 hours. In addition, loneliness scores also differ significantly in terms of the time of participation in recreational activities. The difference in this dimension shows a difference between 1-3 hours and 7-9 hours in favour of 1-3 hours.

Table 7. Correlation Results for the Relationship between Loneliness and Social Health

	Pearson	Social Health
Loneliness	r	-.438**
	p	,000
	n	300

Table 7 shows the results of the correlation analysis conducted to examine the relationship between loneliness and social health. When the results of the analysis are analysed, it is seen that there is a moderate negative relationship between loneliness and social health in line with the Pearson Correlation Cofficient values.

DISCUSSION AND CONCLUSION

In this study, the relationship between loneliness level and social health in individuals participating in recreational activities was examined. In addition, the relationships of some variables with loneliness and social health levels in individuals participating in recreational activities were investigated. In this context, loneliness and social health scores of individuals participating in recreational activities were compared in terms of gender variable. According to the results obtained, it was determined that the loneliness scores of individuals participating in recreational activities did not differ significantly according to the gender variable. When the literature is examined, research results are encountered that there is no relationship between loneliness and gender. Uğurlu (2021) examined the loneliness levels of students studying at the Faculty of Sports Sciences and found that there was no significant difference between gender and loneliness levels. Uzuner and Karagün (2014) reported that there was no significant difference between gender and loneliness levels in the study conducted by Uzuner and Karagün (2014) in individuals who do recreational sports. Bingül and Çelik (2021), on the other hand, found that there was no significant difference between gender and loneliness levels in the study in which individuals aged 19 and over were taken as a sample. Along with these studies that support our study, there are also studies that have determined that loneliness differs depending on gender. Çakır and Oğuz (2017) found that the loneliness levels of men were higher than women in their study. Bohnert et al. (2013) conducted a study on individuals participating in physical activities and found that women had lower loneliness levels compared to men participating in physical activities. When the relationship between social health and gender was analysed, no significant difference was found for the social relationship dimension, while a significant difference was found in the dimensions of time, communication, happiness/peace and social health. It was determined that time, communication, happiness/peace and social health scores of male participants were higher than female participants. It is thought that some of the reasons for the difference between men and women may be that women have different responsibilities (home, children, etc.) in daily life compared to men and some social limitations that apply to women today. However, it can be stated that more research is needed to make a judgement on whether gender is a determinant in terms of loneliness and social health, and the results may differ depending on the study group.

Within the scope of the research, it was also examined in terms of loneliness variable and it was determined that there was no significant difference in loneliness levels in terms of age variable. When the literature was examined, Uzuner and Karagün (2014) found that there was no significant differentiation when they examined the loneliness levels of individuals who do sports for recreational purposes in terms of age variable. Ekinci et al. (2019) concluded that age was not a determinant of loneliness level. Koçak (2006) also found that there was no significant difference in terms of age variable in his study on amateur football players.

When social health and age variables were analysed, no significant difference was found in social health levels. When the sub-dimensions were examined, no significant difference was observed in terms of communication and happiness/peace scores, while significant differences were found in the time and social relationship dimensions. In this context, it is seen that participants aged 18-25 have higher time scores than participants aged 26-45, while participants aged 46-65 have higher social relationship scores than participants aged 18-25. Based on these findings, it can be said that the majority of the participants in the 18-25 age range differ significantly from the other age ranges in the time dimension due to the fact that they are students, they are not yet involved in working life and the majority of them are single. On the other hand, for the 46-65 age group with high social relationship scores, it can be stated that their social environment has been shaped due to the fact that they now have a certain background in private and working life, and that the results are formed due to the fact that they have left behind many difficulties and obligations in daily and professional life compared to other age groups.

When the weekly leisure time variable of the participants in terms of loneliness and social health

was examined, it was seen that loneliness did not differ significantly according to the weekly leisure time variable. In contrast to this finding, Aksu et al. (2022) found a significant difference between loneliness and weekly free time. In this context, it was stated that there was no difference between participants with 1-3 hours and 3-5 hours of free time, but people with 5 hours or more of free time had a high level of loneliness. Randall and Bohnert (2012) found that loneliness was low in participants with 1-3 hours of leisure time, while loneliness was high in participants with 7 hours or more of leisure time. Based on these findings, it can be stated that high leisure time may be related to the feeling of loneliness.

When social health and weekly free time were analysed, no significant difference was found in social health scores. When the sub-dimensions of social health were analysed, no significant difference was found in communication and happiness/peace dimensions, while a significant difference was found in time and social relationship dimension. In this context, it was observed that the time and social relationship levels of the participants with 7 hours and more free time were higher than the participants with 1-3 hours of free time. Based on these findings, it is thought that the results obtained for the differentiation of the social relationship dimension are important, although it is a possible result that participants with high weekly free time obtain high time scores. Based on the results obtained, it can be suggested that individuals with high weekly free time can improve their social relations if they participate in recreational activities like the participants who make up the research group.

When the frequency of using recreational areas in terms of loneliness and social health of the participants was examined, it was determined that loneliness differed in terms of the frequency of using recreational areas. In this context, the social loneliness levels of the participants who used recreational areas between 1-3 hours were determined to be lower than those who participated in recreational activities between 7-9 hours. When the literature was examined, no research results were found on loneliness and frequency of using recreational areas in individuals participating in recreational activities. When social health and frequency of using recreational areas were examined, no significant difference was observed in the dimensions of social relationship, communication and happiness/peace, while in the time dimension, it was determined that individuals who used recreational areas for 10 hours or more had higher scores than individuals who used recreational areas for 1-3 hours. When social health and loneliness scores were analysed, it was determined that participants who used recreational areas between 1-3 hours had lower social health scores than those who used recreational areas between 7-9 hours. Based on this information, it can be stated that more research is needed to make a judgement on whether the frequency of using recreational areas is a determinant of loneliness and social health. However, based on the results of the research, it can be suggested that high time of participating in recreational activities may have positive effects on loneliness. In this context, it can be said that it may also have positive effects on social health directly or indirectly.

The last finding is that loneliness and social health have an inverse relationship. This finding provides evidence that loneliness level may negatively affect social health. Previous limited literature provides evidence that there is a negative inverse relationship between social support and loneliness, that loneliness decreases as social support increases, and that social well-being increases with decreasing loneliness (Hombrados-Mendieta et al., 2012). On the other hand, there are also results that loneliness is related to emotional intelligence and that high emotional intelligence contributes to overcoming loneliness (Özdemir and Tatar, 2019; Lee and Ko, 2018; Saklofske, Austin, and Minski, 2003). It is also reported to have a linear relationship with social health (Extremera and Fernandez-Berrocal, 2006).

Based on all this information, it can be concluded that women feel lonelier and have lower social health levels than men, and age and weekly leisure time variables are not effective on loneliness and social health. In addition, it can be stated that the time of participating in recreational activities may have positive effects on loneliness and social health.

Conflict of Interest

We declare that this article we wrote is not involved in any particular conflict of interest.

Ethics Statement

This research was conducted within the framework of the Scientific Research and Publication Ethics Directive of Higher Education Institutions in accordance with the decision dated 07.05.2024 and numbered 05-715 given by Ankara Yıldırım Beyazıt University Rectorate Ethics Committee Coordinatorship.

Author Contributions

Study Design, ABY, BE; Data Collection, BE; Statistical Analysis, ABY, BE; Data Interpretation, ET, ABY and BE; Manuscript Preparation, ET, ABY and BE; Literature Search, ABY, BE. All authors have read and agreed to the published version of the manuscript.

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The Contribution of Applicable Smart and Sustainable Technologies in Recreation to City Happiness

Rıza Tayfur ÖZKAN[1] Aytekin ALPULLU[2] William D. RAMOS[3]

[1]Marmara University, Health Sciences Institute, Sports Management Sciences, İstanbul-Turkiye, tayfurozkan@gmail.com, https://orcid.org/0000-0002-8048-2120

[2]Marmara University, Faculty of Sports Sciences, İstanbul-Turkiye, aytekin.alpullu@marmara.edu.tr https://orcid.org/0000-0002-8048-2120

[3]Indiana University, School of Public Health, Indiana-USA, wramos@indiana.edu https://orcid.org/0000-0002-2911-8083

Corresponding Author: tayfurozkan@gmail.com

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ABSTRACT

It is known that using time efficiently is important for individuals. The presence of the developing technology in the world in our individual lives is indisputable. Because; being able to match the availability of technology with smart equipment at suitable locations in cities that citizens can enjoy and use in a sustainable manner will contribute to social happiness. This study will enable us to understand the contribution of recreational smart technology in cities to urban happiness. Comparative information sources were provided with concrete data and semi-structured interviews with 17 experts who served the concepts of smart cities, recreation and happy cities in 4 different cities of the world (Istanbul, Indiana, Amsterdam, Shanghai) and were formed with the non-probability purposeful sampling method. Our qualitative research with a phenomenology pattern was conducted in Turkish and English. Audio and video recordings were transferred to the computer as text (transcription), approximately 5-6 pages each. Interview data were analyzed through Maxqda Analysis Program. Agreement between coders was found with different formulas. Research validity and purpose reliability were ensured for the themes formed through content analysis. An attempt was made to obtain comprehensive data, the responses in the data were coded, the relationships between each other were evaluated and divided into themes and sub-themes. 42 subthemes were found in the study. As a result, in 4 different cities; Comments and information from experts in the fields of smart city, technology, recreation and happy city are presented in sub-themes, and these sub-themes are suitable for the use of cities that want to use the relationship between the mentioned concepts.

Keywords: Leisure, Smart technology, Recreation, Happy City, Smart City

INTRODUCTION

In this study, where the concepts of smart city, technology, recreation, and happy city are addressed together, the relationship, bonds, and effects between these concepts have been examined. The aim is to identify both the tangible existence of the concepts of smart city and happy city in four major cities of the world (Istanbul, Indiana, Amsterdam, Shanghai) and their reflections on urban residents through recreational technologies. Therefore, experts who serve the concepts of smart technology and design, recreation, and happy city have been collaborated with in these cities. The purpose of the sample group is to gather information about urban recreational technology studies from individuals serving recreational city technologies, and to examine their perspectives on smart urbanism, urban technologies, recreational life, and urban happiness through them. This study aims to demonstrate that the concept of recreation can coexist with each of the concepts of smart city, technology, and happy city, or all of them simultaneously, serving as an important guide or companion for the development of these concepts in cities or societies. The goal is to identify the areas of study that can be developed in smart and happy

urbanism with the emerging sub-themes. When the research conducted in the literature is examined, it is observed that these concepts have not been addressed together, and when addressed separately, they have not been conducted through different continent, country, and city data sets as in our study. One of the important aspects that ensures the originality of the study is the simultaneous consideration of the concepts of smart city, technology, recreation, and happy city. Another significant feature of the study is that these concepts have been explored with experts living in those cities across three different continents.

It has provided the opportunity to compare perspectives of different cultures through findings, and it is also hoped to assist in the formation of a theme and sub-theme model database in terms of "recreational smart and happy urbanism" for Turkish cities. When this model is implemented in cities, it can have significant positive effects on the physiological, psychological, and social aspects of public health by influencing individuals (city dwellers) in terms of quality time, socialization, and happiness.

Factors affecting the results of the study, which cause similarities and differences in the perspectives of cities, countries, and cultures, can be evaluated as the management structure of cities, the density of the city, the expectations of the city dwellers, the pace of life in the city, working hours, and time spent commuting for work.

LITERATURE REVIEW

Concepts of Leisure Time and Recreation

Efficient use of time is of great importance for an individual to meet the needs and desires brought by their existence, as well as to cope with life's obligations. This is because the healthy nourishment of the body-mind balance is also affected by how an individual uses their time (Özkan, 2018).

When we categorize time management under three processes for its beneficial aspects, aside from obligations and needs, our third heading is the term "leisure time" (Erdemli, 2008). The term "to be free" is expressed as "licere" in Latin, and the English equivalent of the concept of leisure time, "leisure," is derived from this word. Similarly, the French word "loisir," which also carries the meaning of leisure time, originates from "licere" (Edginton et al., 1989).

Leisure time is defined as activities that are carried out outside of obligations imposed by one's family, profession, or society, such as sleep, household chores, or work activities that we are required to perform (Takiguchi et al., 2023; Iso-Ahola & Baumeister, 2023).

Kesim (2016) describes leisure time activities as recreational periods in which individuals participate by their free will to develop and reconstruct themselves outside of obligations. This shows that recreation is not limited only to sports and physical activities but also includes social, mental, playful activities and aspects of existence. According to Juniu and Henderson (2001), however, these choices may not always be free. Conditions may restrict choices. If we assume that conditions affect choices, it can be observed that the efficient use of time enables recreational choices to evolve into healthier conditions.

In his study, Kılbaş (2001) conveys Descartes' view that one of the factors determining the intelligence of societies is to work by valuing time and then to be able to renew oneself. In this case, it is important for individuals and society to be able to live their time with the value and awareness of leisure time for developed or developing societies.

According to Veal (2004), in its simplest definition, recreation is the experiences and activities that an individual chooses and sustains during their leisure time. Specifically, the sought-after experiences and sustained activities literally "restructure" the individual so that they can feel refreshed and fulfill their daily obligations (Veal, 2004).

Recreation, with its functions such as exploring different places, traveling and seeing, getting to know and learn about different cultures, expanding and broadening one's existing environment, and having fun, is evaluated in line with individuals' participation purposes and consists of activities that provide satisfaction (Altuntaş et al., 2022; Heckel et al., 2023; Yousip et al., 2024).

Thus, existence during leisure time, for both children and adults, will open up new paths in an individual's or urban resident's social perspective and perhaps in their career plans (Gürbüz, 2006; Koçak et al., 2018). In this case, when the inherent active presence of recreation is consciously combined with the concepts of technology and happiness in cities, it can make positive contributions to community health and well-being.

Although advancing technology has made our lives easier, it has also brought some negative aspects. Examples include a decrease in physical activity, deterioration in individuals' connections with one another, and as a result, family members who become alienated from each other or communication breakdowns. This change and development, along with popula tion growth, have led to an increase in

demand for recreational activities and areas (An et al., 2023;Gumus et al., 2018; Öztürk, 2021). These demands also increase the importance of recreation.

The significance of leisure time and recreation is not only a concept that we encounter today; it also influenced the course of individuals' lives in various dimensions in the past. In line with increasing technological advancements and scientific studies, the replacement of human labor with technology significantly affects the importance of recreation and leisure time.

Concept of Smart Cities and Sustainable Technology

The concept of smart cities was first used in the 1990s, and in the subsequent period, it was addressed and defined in various dimensions. Briefly reviewing these definitions:

According to Komninos, these are regions built on the digital infrastructure for managing creativity, institutions of knowledge creation, communication, and information, with a high capacity for learning and innovation (Abadía, 2022).

They are complex cyber-socio-technical systems where humans, cyber products, and technical systems interact together to achieve a goal related to quality of life in urban areas (De Nicola & Villani, 2021).

They are city management strategies aimed at increasing the competitive performance of cities in socio-economic, ecological, logistical, and economic terms, with high information density (Kourtit & Nijkamp, cited in Özdemir, 2022).

According to Caragliu and colleagues, they are cities that invest in human and social capital, traditional and modern network infrastructure, supporting a sustainable economy and a high quality of life, and managing natural resources wisely through citizens' political participation (Abadía, 2022).

The definitions emphasize that the concept of a smart city has three main goals: sustainability, improvement of quality of life, and efficiency, rather than a sole focus on technology (Perez-Prada et al., cited in Ünsal, 2023).

The concept of smart cities, which has existed for many years, underscores the importance of communication infrastructure in production and development. However, the differentiation of technologies due to artificial intelligence in recent years has expanded this definition. The Smart City concept has also reflected on significant areas such as the Olympics, with an Energy Monitoring System established in the city prior to the 2018 PyeongChang Winter Olympic Games, a first in the 122-year history of the Olympics (Karaman et al., 2019). Therefore, it would not be correct to expect today's definitions of smart cities to withstand the test of time. In his study, Alkan (2015) states that city economist Andrea Caragliu defines a smart city as a city that invests in human and social capital, establishes traditional and modern information and communication technology (ICT) infrastructure, achieves sustainable economic growth and high quality of life, and manages natural resources through participatory governance. In this context, the concept of a smart city encompasses smart economy, smart mobility, smart environment, smart society, smart living, and smart governance.

A Smart City (UN Commission on Science and Technology for Development, 2016) is a city with at least one or more initiatives related to the following six smart features, urban intelligence guidelines (China Development Bank Capital, 2015), design, and related applications:

- Smart Mobility: e.g., emission-free transportation, improved parking and accessibility
- Smart Economy: e.g., high-tech industry, ease of doing business, and innovation culture
- Smart Living: e.g., e-health, public safety, and intermodal transportation
- Smart Governance: e.g., e-government services, open data, and transparency
- Smart People: e.g., agile civil society, social inclusion, and e-learning
- Smart Environment: e.g., green environment, sustainable building, and water management

According to Paskaleva (2011), the concept of a smart city exists for outcomes, while it is used for the process of innovation and change. Nam and Pardo (2011b) view a smart city as an urban innovation in technological, network, and policy terms. According to Zygiaris (2012), a smart city is the intellectual capability of that city, addressing various innovative socio-technical and socio-economic perspectives of development.

It is known that smart cities fundamentally stem from the idea of "information and communication technologies" as the focal point for future cities (Batty et al., 2012); however, smart cities have many aspects in reality. Defining an area as "smart" does not solely depend on the presence of information transfer infrastructure. In a smart city, "intelligence" is generally competence, ability, IQ, and social cohesion (Batty et al., 2012). In this

sense, a smart city is expected to be a sustainable city (Batty, 2013). In this context, the coming together of individuals with a consciousness of leisure time, along with the presence of technologies, may lead to the existence of sustainable technologies and thus smart cities.

According to Hassanein (2014), smart city designs and furniture have this facilitating aspect. Smart cities that use technology to improve the design and services of smart street furniture to reduce costs and resource consumption have become a symbol of the concept of public spaces, enabling city dwellers to interact with each other in an effective and active way. In fact, the impact of designs on individuals can also be seen in sports disciplines, and when examining the variables affecting success in sports clubs, the structure of the facilities is among the internal factors (Karaman & Karagözoğlu, 2021).

Concept of Urban Happiness and the Happy City

In the first Global Happiness Policy Report (2017) by the "World Happiness Council," as part of the World Government Summit in Dubai, recommendations were made to increase happiness globally through smart cities, social welfare, job welfare, education, and other sectors. These developments in many urban designs in Dubai, including new livelihoods and infrastructure, help people maintain their livelihoods, increase their incomes, and support their families. Efforts to increase happiness are making significant progress through the reorganization and innovations in workplaces, shopping centers, medical facilities, recreational amenities, and even spaces where people can walk and meet (Gökçek, 2019).

The concept of a happy city is a phenomenon that considers the emotional infrastructure in the city as the most important infrastructure. However, happy cities can only exist in infrastructures that provide welfare, comfort, and the exchange of ideas and thoughts, thus creating a healthy emotional environment. A happy city is also part of the concept of a good city, like a green city or a smart city. However, there is a small difference between this concept and others. A smart city is equipped with the latest technology-based resources for the benefit of society. In contrast, a happy city is built on emotional connection and collective joy with the smart city (Jain, 2019).

Jain (2019) lists the elements of the concept of a happy city as follows:

• Public Transport System: Happy cities are those with efficient public transport systems. A low-carbon transport system ensures less pollution and a healthier life.

• Infrastructure: Effective infrastructure is key to happy cities. Essential elements of infrastructure include waste disposal systems, water recycling systems, general cleanliness, information technology infrastructure, wireless internet points, disaster management systems, and providing sufficient numbers of stadiums, recreational parks, and other public spaces for the general welfare and community health.

• Emotional Connection: As a biological being, humans are social beings with neural circuits such as the mirror neuron system, oxytocin neurotransmitter, and enhanced empathy capability (Altınbaş et al., 2010). A happy city allows people to form bonds in line with their nature as social beings. Recreational activities and experiences serve this unique biological infrastructure of humans, functioning to create bonds, integrate, unite, include, and connect, thereby being an important component of individual and community happiness (Pakiş, 2020).

• Cultural Practices: Cultural practices refer to various practices and rituals that connect the city. In this context, they also serve urban happiness.

• Sense of Security and Safety: The general security and safety of people living in the city form the essence of happiness. There must be a strong and pervasive sense of safety for people to enjoy their stay.

• Safety for Women: Issues concerning the safety of women have become very important. Can a woman walk alone at midnight? If a city is happy, it has adequate facilities to ensure the safety of women. • Safe Lanes for Pedestrians: Happy cities not only provide good transportation but also ensure favorable conditions for pedestrians. This way, people can walk comfortably in the city and enjoy being there.

• Eco-Friendly Practices: Factors such as greenery, water recycling systems, the provision of alternative energy sources (including solar energy), etc., generally constitute eco-friendly cities. If a city is green, it contributes to being a happy city. Montgomery (2013) argues that a happy city is the same as a green city or a low-carbon city. Therefore, adequate investment in green infrastructure is essential.

• Gardens and Public Libraries: Cities become pleasant living spaces when they have enough gardens and public libraries for city residents.

• Theaters and Entertainment Centers: People need entertainment centers for enjoyment. The presence

of sufficient entertainment centers, theaters, amusement parks, restaurants, etc., is important for the concept of a happy city.

• Culture of Sharing: The most important thing that makes a city happy is the general culture of cooperation and sharing among its residents.

The Relationship between Recreational Smart Technologies and the Happy City

Since the consciousness of leisure is not forced and relies entirely on the free choice of the individual, such activities and habits can take a sustainable form. Smart recreational technologies, with their facilitating, unifying, sustainable, and functional characteristics, can contribute to the happiness of urban dwellers with a consciousness of leisure. In today's digital age, the integration of recreational products and applications with technology offers urban residents opportunities in terms of speed, accessibility, convenience, and functionality to integrate recreation into their lives (such as accessing, benefiting from, and sharing recreational products and services). In this way, smart recreational technologies can serve individual and urban happiness with their sustainable, meaningful, and functional nature. In cities where smart technologies are present, urban residents with a consciousness of leisure can establish a connection with technology through its sustainable and free structure, leading to happiness. The presence of this connection in many parts of the city contributes to the formation and development of happy cities.

Studies on leisure activities, especially those in a social context, have found that serotonin release occurs, leading to feelings of happiness. In other words, a strong relationship has been identified between serotonin release and happiness through leisure activities (Miller et al., 2024; Robertson, 2016).

Positive psychology defines frequent positive affect, high life satisfaction, and infrequent negative affect as the three main components of happiness (Lyubomirsky et al., 2005; Yan et al., 2023). Lyubomirsky et al. (2005) explain that the genetic component factor for happiness accounts for approximately 50% of the variation in happiness among individuals. This component remains stable over time. A person’s living conditions (such as place of residence, age, and factors arising from the individual's personal history) account for approximately 10 % of an individual’s happiness. The remaining 40 % determining a person's happiness is linked to voluntarily chosen leisure activities and practices.

Recreational activities play an important role in meeting individuals' needs and expectations, thereby enhancing their quality of life. Through recreational activities, people experience positive emotions by establishing social relationships and gain various additional skills and knowledge. According to Spiers and Walker (2009), recreational activities are among the strongest determinants of happiness. In today’s urban life, possessing knowledge about these recreational activities and producing solutions that facilitate participation in these activities can contribute to individuals’ quality of life.

In his 2015 study, Nijholt examined the concept of the "playable city." According to Nijholt (2015), "The Playable City is a city that allows urban residents and visitors to reconstruct and rewrite their life stories." The idea of making cities playable was first introduced in the city of Bristol (England). According to Nijholt (2015), a playable city requires smart technology adapted to a smart city environment. Sensors, applications, screens, smart tangible objects, and wearable devices can be used to improve city management efficiency (e.g., traffic, public transportation, security, public events) while also offering fun elements in the city. Playability brings forth the need for smart technology. From this perspective, the planning of recreation adapted to smart technologies is likely to contribute to transforming the city into a playable, enjoyable, and happy city

METHOD

Primary Research Question

Which smart technologies and technological applications can be beneficial for the existence of sustainable recreational technological spaces and activities in cities that can engage individuals, thereby contributing to the concept of a happy city?

Research Model

If an in-depth understanding of a topic and/or phenomenon is required, the qualitative research model may be appropriate as a research model. It can be said that qualitative studies are beneficial choices for the detailed examination and recognition of the research in an activity-focused manner (Strauss & Corbin, 1998).

Qualitative researchers should determine their research objectives after deciding on the appropriate design and then select data collection techniques that best allow them to examine these objectives. They should then orient themselves on how to analyze the data set they will collect. Although our research is shaped by fieldwork and interactions in interviews, we use the phenomenological research design, which seeks to convey to us "what" the

phenomenon is, "how" it is, "what it means," and "the common meanings by which it is represented by those who experience it" (Çelik et al., 2020).

First, analysis results were supported by observations accompanying video interviews. Second, as is suggested in many qualitative studies, consensus among advisors was utilized. Third, expert opinion was sought, with two PhD-level experts in recreation and smart city research confirming the themes and categories throughout the study. Fourth and finally, the member checking approach was used. The results of two interviews were shown to two participants from the sample group, and after they made minor corrections, the interview results were confirmed (Creswell, 2013; Malterud et al., 2016).

Sample Group

Qualitative researchers who tend to use non-probability purposive sampling methods seek expertise or interest in the focal subject rather than representation of the population (Neuman, 2012). If the selection of a sample depends on the researcher's knowledge of the population or the purpose of the study, this type of sampling is called non-probability (purposive) sampling (Marczyk et al., 2005). In this research, we used intensity sampling, a type of non-probability (purposive) sampling, which provides a rich description of the events and phenomena under investigation without going to extremes (Silverman, 2013). Intensity sampling focuses on the best or richest information without including unusual cases (Morgan & Morgan, 2008).

In our study, the sample group consists of individuals engaged in the smart technology and design sector, leisure and recreation activities, and the organization of happy city initiatives in four major cities (Istanbul, Indiana, Shanghai, and Amsterdam). Participation of research participants was based entirely on a voluntary basis. The sample included individuals aged 23-58, who are interested in the concepts mentioned above and work in smart technology and recreational city technologies, with 4 or 5 participants from each city, totaling 17 individuals. The purpose of this group's inclusion is to obtain information about recreational city technology studies from individuals who serve recreational city technologies and to examine their perspectives on urban technologies and urban happiness. All interviews have been completed.

The commonly used method for determining sample size is data saturation, also known as the saturation point. If adding a new sample does not produce any new findings or data in the research findings and if the research begins to repeat itself, this indicates data saturation. Various studies address data saturation. However, Bertaux (1981) suggested that a minimum of 15 could be appropriate. Mason's (2010) examination of doctoral theses showed that 80 % of the dissertations achieved data saturation at the sample size specified by Bertaux.

The strength of the sample depends on respondents' knowledge, experiences, or specific facts related to the research topic. In determining the sample size in this study, researchers applied saturation during data collection as a guiding principle (Glaser & Strauss, 2017). Since the collected data did not generate new insights on the subject, the data collection process in this study was concluded with 17 participants.

Designed according to the qualitative research method and using the semi-structured in-depth interview technique, all interviews were completed over approximately 12 months. Data were collected from September 2020 to September 2021.

Through the reference of academicians in the departments related to leisure and recreation at universities, interviews with the sample group in relevant countries were planned and conducted.

As part of the research, online video interviews were conducted with 17 participants from 4 different countries across 3 continents. Prior to the interviews, consent was obtained from participants for recording. Participants were assured that the data would only be used in this academic study. During the interviews, an environment was aimed to be comfortable and tension-free, with conversations and sharing before moving to semi-structured questions. The date and time of the interview were chosen by the interviewee. Each interview lasted a minimum of 50 minutes and a maximum of 77 minutes, with an average interview duration of 67 minutes.

Online video interviews with each participant were recorded using the Zoom program, and the audio and video recordings of the interviews were transcribed into text files, each consisting of 5-6 pages. Following interviews with the sample group, the raw transcripts totaled 102 pages, and after processing the raw interviews, the data file totaled 68 pages. Through content analysis, a thematic study was conducted in line with the sub-problems arising from the research problem.

The in-depth interview data collection technique, which involves asking open-ended questions, listening, recording responses, and asking additional related questions, allows for a detailed examination of the research topic and accurate information acquisition (Kümbetoğlu, 2008).

Analysis, Coding, and Interpretation

Content analysis was used to analyze the research data. The primary purpose of content analysis is to reach relationships that can present the data in the clearest manner. In content analysis, the data undergo a thorough coding process. To this end, the data are first coded. Codes are logically organized according to emerging concepts, and

themes are identified (Drisko & Maschi, 2016). The purpose of content analysis is to bring together similar codes within themes. Certain processes are carried out in conducting content analysis.

These steps, as noted by Yıldırım & Şimşek (2013), are as follows:

- Coding of data
- Identifying themes
- Organizing and defining codes according to themes
- Interpreting the findings

The steps above are generally used in studies employing content analysis (Stemler, 2015). The steps in content analysis can be explained as follows:

Coding of Data: This is the most critical stage in content studies. Coding can be performed on elements like sentences, paragraphs, and images. Coding is defined as assigning a word or short phrase that is symbolically descriptive, attention-grabbing, essence-capturing, and/or evocative (Saldana, 2021). Data obtained in the coding process are examined, divided, compared, and related. Each piece of the conversation is analyzed for meaning, and sections that form a coherent whole are named and coded by the researcher with reference to the literature or an element most appropriate for that unit (Yıldırım & Şimşek, 2013). Although the study's conceptual and theoretical framework is taken into account during coding, codes not included in the study framework may emerge. The appearance of separate codes here is related to the data itself. Consequently, the coding stage of content analysis is the initial search, the meaningful segmentation of data, and the naming of what relevant sentences, paragraphs, and structures conceptually represent.

Identifying Themes: At this stage, commonalities among codes are sought. By identifying the similarities of emerging codes, related codes are brought together, and themes are identified. Themes differ from codes as they are represented by a more general concept that can represent the codes (Saldana, 2021). Creating themes, or thematic coding, is the second stage of content analysis.

Organizing and Defining Codes According to Themes: After the initial coding and theming processes, the researcher moves to organize and define codes according to themes. Here, the researcher associates the codes they created with the theme that represents them. As a result, the collected data is presented to the reader more systematically.

Interpreting Findings: In the first three steps, data are defined (coding), classified, and associated with specific themes. Especially in qualitative research, interpreting findings is important. In this step, the researcher provides detailed descriptions related to the results obtained, aiming to make sense of the research topic and explain the relationship between findings and make inferences from them. Coding and theming are frequently used in this stage, as research findings (codes and themes) are important parameters in interpreting findings.

Data obtained from interviews were analyzed using the Maxqda Analysis Program. Maxqda is software designed for text and multimedia analysis, suitable for qualitative and mixed-method data.

Validity and Reliability/Credibility of the Research

In the relevant literature, validity in the qualitative paradigm has been defined in various ways by different researchers, but these definitions have many common points. Researchers believe in the necessity of making objective observations to ensure validity in qualitative research (Yıldırım & Şimşek, 2013) and think that it is related to whether the research findings align with reality in the external world (Roberts & Priest, 2006). Validity is as important as reliability in qualitative research methods. Although validity is well-suited to quantitative research models and methods, validity should also be considered in qualitative studies where interview and observation models are applied. Maxwell (2005) proposes the application of 8 criteria to ensure validity. The following eight models, briefly defined for validity, have different levels of importance. These models were used to ensure the validity of the research, drawing from different levels (Maxwell, 2005; Korkankorkmaz, 2006):

- Intense and Long-Term Engagement: Besides providing sufficient information, intense and long-term engagement in the qualitative research method enables more direct access to sources and data through interviews and observations. This situation gives a beneficial impression in terms of validity.

- Rich Data: The deep involvement and expertise of the sample group on these subjects appear to be the correct method to reach rich data. Transcribing the analysis (transcription) of interviews as they are allows for more data to emerge. Observational forms, photos, and videos from 17 participants from 3 different continents and 4 different cities in this study are indicators of the presence of rich data.

- Respondent Validity: Having experts in the sample group is valuable for establishing a connection with the research topic. Receiving regular, encouraging feedback from the sample group on the data and results indicates respondent validity.

- Intervention: In some qualitative research, interventionist approaches may be necessary to clarify certain points and obtain deeper data. In this study, semi-structured in-depth interviews applied this method when needed.

- Investigating Different Evidence and Negative Cases: Analyzing different evidence or negative examples related to the subject is another stage of testing validity in qualitative research. Qualitative studies can present evidence about components that are not the main part of the topic or negative

elements when discussing examples related to the topic.

• Method Triangulation: Different types of data on the same subject can be presented to enhance the quality of the research and increase validity, as well as for understandability and data analysis (Mays & Pope, 2000). Method triangulation was a method used in this study.

• Statistical-Like Approach: Since qualitative studies mostly rely on inferential results, supporting the prevalence of a specific phenomenon with quantitative results like frequency or percentage can strengthen the interpretation of findings.

• Analogy and Comparison: Comparisons (e.g., between experiment and control groups) are widely used to assess validity in qualitative research. This method was used in the interpretation and evaluation of study results.

In qualitative research findings, criteria have been established to build the confidence of both the researcher and the practitioner in the quality of the research. Evaluating validity and reliability in quantitative research models may not be realistic in qualitative studies. Therefore, Denzin & Lincoln (1998), who proposed their list of four-point criteria for "natural research," indicated member check as the most important criterion. The purpose is to achieve trustworthiness through the member check process (Porter, 2007). Upon completing the content analysis, the data were verified by consulting 5 participants to enhance the "credibility" of the findings. The research findings were shown to 5 randomly selected participants to assess the degree of theme relevance and gain perspectives, thus achieving participant validity.

In this context, consistency was sought with the relevant literature, and attempts were made to find similar and different results in the research. In addition, during video conference interviews, participants' facial expressions, tones of voice, and response time were observed by the researcher, and relevant notes were taken for evaluation in the data analysis (Guba, 1981). One of the techniques that enables the researcher to understand what is fundamental or characteristic, "persistent observations," is used to identify common qualities and eliminate irrelevant features. Therefore, the researcher spent time in the field to support the interpretation of the research topic.

Inter-rater reliability can be calculated using various formulas and can also be done via software. The most common formula is the percentage agreement. Two individuals independently code the same interview, and the extent to which these two experts' coding results align is assessed. Agreement and disagreement are calculated using the formula Agreement/(Agreement + Disagreement)*100 via the Maxqda program (Sevilmis & Yildiz, 2021). In this study, attention was given to whether both coders assigned the same code in the document. Consequently, which codes would fit the research purpose was discussed by two academic personnel. Then the same interview was coded by two different experts, achieving agreement on 14 codes, while 2 codes remained unresolved. Based on the formula Agreement/(Agreement + Disagreement), 14/(14+2) * 100 = 87 % agreement was found, demonstrating inter-coder reliability (Sevilmis & Yildiz, 2021).

Linguistic Equivalence

For the questions to ensure semantic integrity in both languages, the questions were translated from Turkish to English and back to Turkish (back translation) by two academicians who have served in the field of sports management and recreation for many years and completed their undergraduate and graduate studies in English-speaking schools. Semantic integrity was found in both languages.

FINDINGS

The thesis writing is directly affected by the writing of significant sections, namely findings and discussion. The study was completed with 17 participants, 5 of whom are female and 12 male; 64 % are graduates, 18 % have postgraduate degrees, and 18 % hold doctoral degrees. Participants range in age from 23 to 58. Of the participants, 14 work in local governments, and 3 work in both local governments and universities.

The interviews, conducted to learn about the benefits that smart technologies and designs could provide in forming sustainable recreational spaces in the city that engage with individuals and contribute to the concept of a happy city, yielded the following findings through content analysis.

When Figure 1 is examined, it shows that the contribution of smart recreation technologies to happiness is organized into five sub-themes according to the participants in the study. These sub-themes are labeled "Saving Time," "Making Life Beautiful," "Making Life Easier," "Problem Solving," and "Connecting – Communication."

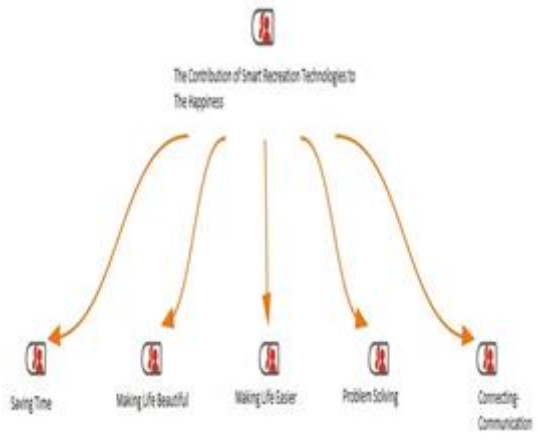

Figure 1. Contribution of smart recreation

technologies to happiness hierarchical code subcode model

Participants expressed their views on the "Contribution of Smart Recreation Technologies to Happiness" as follows:

Saving Time: "…By increasing time savings, a source of happiness is created. In return, it also indirectly rewards itself to some extent… Since they spend less time and have more time for themselves…" (I_H).

Making Life Beautiful: "…They experience greater efficiency in their own lives by establishing a sense of belonging and connection through these applications. For example, if we consider groups such as trekking or the concept of "Walk Istanbul" I mentioned earlier, you enable people to see different parts of Istanbul, you make them move, which itself is another source of happiness. By providing small rewards, you also create another source of happiness…" (I_H).

Making Life Easier: "…They help people stay safe and do everything quickly. An easier life leads to happiness…" (S_ZD).

Problem Solving: "For me, the most important thing is the ability of smart city products or applications to meet citizens' urgent needs. In traditional society, if there was a problem, people would ask the government, and this took a long time and a lot of effort. However, with the smart city, it is much easier for citizens to connect with each other and with the government. Problems are resolved more efficiently and easily, making citizens happier. For example, when problems are solved easily through smart technologies and applications, people are happy, and this contributes to the happiness of the city" (S_WG).

Connecting-Communication: "…However, with the smart city, it is much easier for citizens to connect with each other and with the government…" (S_WG).

When evaluating participants' opinions on the contribution of smart recreation technologies to happiness by city:

In Istanbul, the main factors contributing to happiness were seen to be the facilitation of life, saving time by allowing people to spend less time on certain tasks and more time on themselves and their loved ones. Other sources of happiness mentioned included socialization, opportunities for activities, rewards, physical activity and mobility, relaxation and stress relief in green spaces, and establishing a sense of belonging and connection.

In Shanghai, it was found that the efficient and easier resolution of citizens' urgent needs and problems, along with easy access to government and local administration, contributed to both the happiness of citizens and, as a result, to the happiness of the city. It was noted that online healthcare, hospital, and doctor applications provided time savings for residents. It was also highlighted that artificial intelligence (AI) applications and robots in public places such as terminals, train stations, parks, airports, and hotels brought convenience and added color to public spaces. Talking with robots was especially noted as a source of happiness for children. Additionally, residents' ability to connect easily with each other and the sense of security provided by monitoring, control, and tracking systems were also cited as factors contributing to happiness.

In Amsterdam, smart technologies were associated with easy, sedentary lifestyles, excess weight, obesity, and unhealthy eating habits. Accordingly, there was a preference for technologies that support work compatible with nature (such as tree planting and bike trails) over those focused on technology-based solutions. It was also noted that a mobile application cannot replace the physical reality of an activity with spatial grounding. While examples of technology use exist, it was emphasized that more attention should be given to the importance of activity and recreation concepts than to technology itself. Additionally, concerns regarding individual rights and freedoms, such as moving in public space without surveillance, and privacy were highlighted. The sale of personal data to private companies was another criticism evaluated within an ethical framework.

In Indiana, it was stated that the integration of technology into recreational spaces contributes to the happiness of the city. Life-facilitating applications, such as internet-based applications related to recreational programs, GPS-based route map applications, instant access to information and services, and environmentally friendly applications that promote active living (e.g., stationary cycling that allows mobile phone charging through generated kinetic energy) play a significant role in city happiness. Recreational activities were associated with less stress and a better mood. The value of parks and the concept of recreation was emphasized with particular importance in this city sample.

When Figure 2 is examined, the participants' views on smart city design and applications are organized into seven sub-themes. These sub-themes are labeled "Clean Energy," "Smart Traffic and Public Transport Systems," "Smart Garbage Collection," "Online Appointment and Registration," "Smart Transit," "Smart Meteorological Measurement System," and "Digital Kiosks."

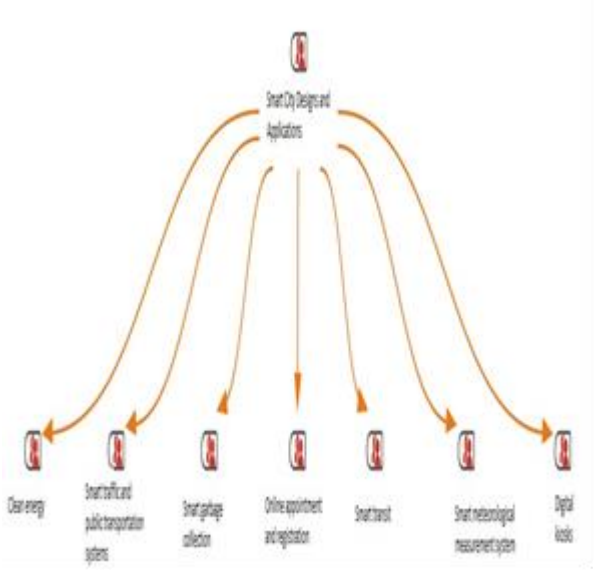

Figure 2. Smart city design and applications hierarchical code subcode model

Participants expressed their opinions regarding "Smart City Design and Applications" as follows:

Clean Energy: Another example: Clean mobility is a big issue at taxi stands in Amsterdam. Cameras are used to scan plates and electric taxis. Green taxis are prioritized. They block taxis that are more polluting. This is an example provided by the use of cameras and technology (A_CD).

Smart Traffic and Public Transport Systems: In smart cities, we are primarily working on systems that can make life easier for people, enabling them to use their time more efficiently. Systems like signaling. When we talk about signaling, it applies to both rail and road transportation (I_H).

Smart Garbage Collection: …We have an app for waste collection. You receive reminder notifications about which bin to take out according to the day. Separate bins and days are designated for the recycling of paper, plastic, glass, vegetable greens, and general waste (A_B).

Online Appointment and Registration: Our city makes extensive use of technology: computers, software, and applications are used for registering for every program, reserving a facility in our department, or purchasing a gym membership. Bill payments can be made online (I_C).

Smart Access: Every building has facial recognition entries—facial recognition systems (S_SD).

Smart Meteorological Measurement System: Second, there are meteorological measurement points. Results such as wind and air temperature have been turned into applications. Early ice warning systems on highways, for example, inform about icy spots in certain locations early, allowing drivers to ensure safe driving. Most of the applications we discussed are actually fundamental smart city applications (I_H).

Digital Kiosks: The municipality conducts surveys. This is done through a white desk. It collects requests, complaints, and satisfaction feedback. It doesn't only collect complaints; it also collects positive feedback. Although the white desk may appear to be a complaint system, it also collects positive feedback. For instance, for any given topic or investment in a certain place, the municipality can make decisions based on these comments or ask the public's opinion on the matter (I_SM).

I would like to contribute comments on the findings related to this theme:

For Istanbul, examples of basic smart city solutions, such as traffic navigation systems, meteorological measurements, signaling systems, public transportation, smart meters for water and natural gas consumption, and renewable energy applications like solar/wind/waste energy, were mentioned. Additionally, examples were given under the categories of human, economy, environment, governance, life, mobility, and energy, including robotic and coding courses, open data for participatory governance, online education, card applications for aid, and video panel applications for tobacco use.

In Shanghai, it was mentioned that platforms monitor the environment in urban spaces, such as traffic and environmental conditions, using cameras and screen displays (e.g., bus stops), providing information flow regarding the environment. In this sense, monitoring, tracking, supervision, and control-focused public order and safety applications are predominant. Additionally, smart parks based on smart landscaping and lighting within park automation, autonomous driving applications, facial recognition entrance technology in buildings for security purposes, and recreation-focused facial (emotion-based interaction) and motion recognition technologies (such as sculpture parks) are also in use. Robotic applications for information, service, and entertainment purposes are present. In this context, technologies such as 5G, the Internet of Things (IoT), and Artificial Intelligence (AI) are used more heavily. Sharing-based economy applications (e.g., bicycles, umbrellas) and sports applications (shared gym platforms and street kiosks with QR codes for exercise) are also noted.

In Amsterdam, interviewees mentioned applications for waste collection for the recycling of paper, plastic, glass, vegetables, greens, and general waste, as well as solar panels on buildings. Within the framework of clean mobility, cameras are used to manage vehicles entering the city, identify older polluting vehicles, and specifically scan electric/green taxis. Bicycling (e.g., rental bikes) is one of the prominent concepts within the framework of green and clean mobility in this city. In this sense, we see that eco-friendly applications are prioritized

in the Amsterdam sample. Establishing connections among people, spending leisure time together, engaging in physical activity or sports activities are considered important for motivation, and relevant websites and applications have been mentioned. Accordingly, applications such as community biking events for activities are highlighted as examples of smart technology. The city card application, providing access to gyms, football, or swimming, indicates the importance given to physical activity. Another point to highlight is that, based on examples of environmental and green movement, high technology is not always considered necessary. There is no tendency to bring high technology into the city; rather, simple smart solutions compatible with nature are considered sufficient.

In Indiana, it was noted that technology usage that facilitates daily tasks, communication, and duties is more prominent. Thus, web-based software, Zoom meetings, YouTube educational videos, social media, and internet applications are mentioned for registering facilities, memberships, and services, paying bills, and obtaining information about programs. Interviewees emphasized the importance of solar panels, energy plants converting waste into usable materials, renewable energy sources, collecting rainwater on building roofs for irrigation, and environmentally friendly applications such as eco-scooters based on apps as alternative transportation tools to prevent fossil fuel use, thereby reducing carbon footprint. The use of technology to monitor existing street trees and adaptation programs for climate change, considering the city's designation as a "tree city," was also noted. In a similar vein, biological surveys (BioBlitzes) conducted to record species using the mobile app iNaturalist are valued in terms of the environmental concept. Numerous BioBlitzes aim to increase public and volunteer participation in recognizing, protecting, and informing about biodiversity to foster interest in biodiversity. In addition, the web-based JobForm for outdoor volunteer programs for parks and recreation, and the internet-based uReport warning/problem reporting program are other applications mentioned to involve the public in processes to protect natural resources and the environment and to encourage care for nature.

When Figure 3 is examined, the participants' descriptions of their cities are organized into seven sub-themes. These sub-themes are labeled as "Having Many Alternatives," "Fast, Complex, Tiring," "Natural," "Safe and Livable," "Comfortable," "Having a Pleasant Time," and "Live."

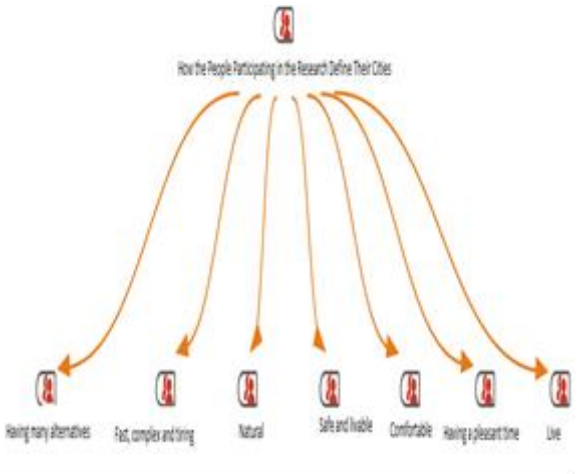

Figure 3. How would you describe your city hierarchical code subcode model

Participants expressed their views on "How they would describe their city" as follows:

Having Many Alternatives: You can do many things—from leisure activities to sports, culinary experiences, or visiting tourist sites like Madame Tussaud, Amsterdam Dungeon, or museums like the Rijksmuseum and Van Gogh Museum (A_B).

Fast, Complex, Tiring: It's a city with an intense work life. People spend most of their time commuting, working, and returning from work. People have limited leisure time. It's a city where life moves very fast (I_H).

Natural: A city rich in everything, in terms of its population, culture, nature, and plant diversity (I_Ş).

Safe and Livable: A magnificent city. The buildings are splendid. Very safe (A_D).

Comfortable: Metropolis/lots of people/ exciting/ yet the comfort level is relaxed (S_ZD).

Having a Pleasant Time: You can enjoy good times, thanks to numerous cultural activities along with quality healthcare and social systems (A_C).

Live: Very lively. Many things are happening (A_B).

When looking at the descriptions of the cities:

For Istanbul, the city descriptions appear diverse. Each participant evaluated the city based on different aspects and characteristics. Besides being a cosmopolitan metropolis with an intense work life and the involvement of various socio-economic and ethnic groups, it stands out for its historical,

architectural, cultural elements, and natural features.

Shanghai is mostly characterized as a large and modern city associated with economic and job opportunities but with few or limited green spaces.

Amsterdam is described as a vibrant city within the context of leisure, cultural activities, and fine arts museums.

Indiana, on the other hand, is highlighted for its green spaces, geographic features, natural resources, and recreational vision, underscoring its identity as a "forest city." It is also described as a lively and social city, owing to its status as a university city.

When Figure 4 is examined, the participants' views on the concept of the smart city are organized into four sub-themes. These sub-themes are labeled as "Applications that Provide Convenience," "User-Friendly Technologies," "Smart Living Space and Conditions," and "A Comfortable and Good Life."

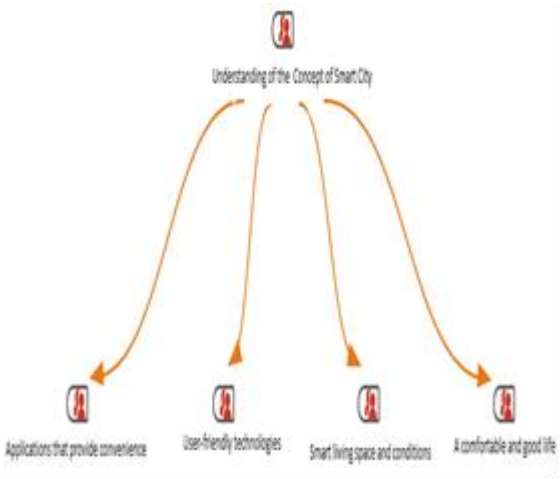

Figure 4. Views on the smart city concept hierarchical code subcode model

Participants expressed their views on the "Smart City Concept" as follows:

Applications that Provide Convenience: A smart city is a smart way of life; a smarter lifestyle. It means that if you need something, you can easily find it in some electronic devices, networks, or information technologies. A smart city means smarter living conditions (S_WG).

User-Friendly Technologies: A city that uses sustainable technologies to function better. I think of Singapore as the smartest city, using sustainable technology and green energy. A smart city uses technology to function (I_RS).

Smart Living Space and Conditions: For me, the most important aspect of a smart city is not its infrastructure. The city should make its residents feel better, empower them, make the environment more suitable for people's lives, and create more opportunities for people of all ages (S_ZW).

Comfortable Living: However, using technology to make people more comfortable or to make life easier for those living there and for visitors would be an advancement (A_B).

In this theme, functional features such as life-facilitating, comfort-providing, and user-friendly applications, systems, and technologies emerged as the primary shared language among all cities. The ultimate goal, emphasized across all cities, is to use technology to raise the standard of living, add value to the city, and improve services and experiences for residents' well-being, making them efficient and accessible.

In Istanbul, the terminology of essential smart city services is notable, focusing on the central management of urban dynamics based on data, such as transportation networks, traffic density, monitoring of meteorological and natural events, core life components (water, electricity, natural gas), and managing human circulation (controlling foot traffic).

In Shanghai, a technical language focused on hardware and software (such as network/device or computer language) is more predominant, with an emphasis on the idea of social governance and security. The focus is on delivering the philosophy of happiness through recreation (happy city) via software. Additionally, inclusive and varied applications for different needs, addressing everyone, were highlighted as another aspect of the smart city concept.

In Amsterdam, more focus is on applications that bring people together, such as bike rental/drop-off, choosing a gym, and mobile apps focused on physical activity or nutrition for a healthy lifestyle.

In Indiana, both eco-friendly applications (green energy use, rainwater management, electric cars, etc.) and sustainability for continuous efficiency are emphasized. The focus is on not only preserving natural areas but also raising public awareness of nature through environmental education programs and applications. The use of online technology to communicate with local governments was also highlighted as another important point.

When Figure 5 is examined, participants' views on how technologies used in recreation and leisure areas in their cities interact with the public are organized into four sub-themes. Participants provided examples such as "Cultural and Arts Websites," "User-Friendly Technologies," "QR Codes," "Safety Applications," "Museum Applications," "Rental Applications," "Online Reservation Applications," "Zipline," "Job Form," "Zoom," "Fitness Garden," "Charging Applications," "Bombay," and "Map Applications."

These sub-themes are labeled as "Social Media," "Parks and Gardens," "Sports and Recreational Activities," and "Mobile Applications."

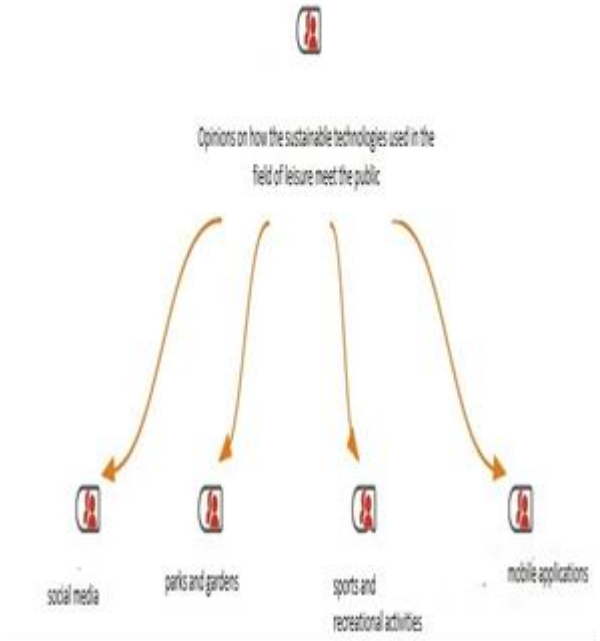

Figure 5. How do the technologies used in recreation and leisure in your city meet with the public hierarchical code subcode model

Some of the participants' views on "How technologies used in recreation and leisure areas in their city interact with the public" are expressed as follows:

Mobile Applications: "Bike sharing could be an example. There is an app across Shanghai that you can use on your phone, and with a QR code, you can rent and park bikes anywhere. Payment is made automatically via the app" (S_Z). / "We have a social mobile app provided by the city that connects people and encourages them to exercise by utilizing the city's open sports infrastructure" (A_C). / "There are cultural and arts-related websites of the municipality that announce cultural and arts events to citizens. If interested, residents can download it as an app on their phones; there are also websites. Many websites offer online reservations and sales" (I_SM).

Sports and Recreational Activities: "Projects were carried out to encourage people to exercise more in parks and create entertainment and interaction at the stadium's arena boulevards, with the involvement of the University of Applied Sciences" (A_C). / "We have examples at the airport of riding a bike while charging your phone" (A_C).

Social Media: "These days, we have to use technology and social media to promote these events. Using Facebook and Instagram is our number one way to reach the public" (I_R).

Parks and Gardens: "In parks and gardens, they use sensors to know a child's location. For safety purposes, they use GPS and report to the police" (S_Zhiang). / "There's a simple Fitness Garden that emerged during the Corona period for people to exercise in public spaces" (A_C).

My observations on the views of participants on how technologies used in recreation and leisure areas in their cities engage with the public, by city, are as follows:

For Istanbul, although it is noted that such technologies are not very widespread, examples focused on sports and mobility as well as culture and arts were provided. Barcode applications in recreational green spaces, app-based walking events encouraging a competitive spirit and rewarding with points/benefits, orienteering route applications, exercise equipment in coastal/sports/outdoor areas, energy generation through equipment use, camping organizations, culture and arts websites, online reservation/ticket sales websites, and mobile applications were mentioned.

In Shanghai, mobile applications are also prominent. Interviewees mentioned QR code-based applications. Sensor-based safety measures for children, GPS-based smartwatches, and button applications for the safety of the elderly were also highlighted. Such applications could be considered important technologies to ensure the safety of children's recreation and leisure time.

In Amsterdam, mobile applications were also mentioned, including public transportation apps, museum applications, a "trash hunt" app, and canal tours. An example of an initiative that connects people through sports using the city's open sports infrastructure is the SportySpots social app. Other examples include a regional bike route designed to connect different municipalities, with applications that allow users to control lighting in tunnels and along routes beyond commuting. Managing crowd/traffic density was another point raised. Examples included RFID technology bracelets used at festivals and a Fitness Garden equipped with lighting algorithms for smart distance measurement, density monitoring, control, and warning during the COVID period to ensure safe exercise in public spaces. Programs for open data and open map applications, park projects using Bluetooth beacons for instant messaging and device-to-device communication to encourage more exercise in parks (Fitness Garden), and airport-based stationary bikes for charging phones, data collection, and innovative data-driven technologies were also mentioned.

In Indiana, the pandemic brought forth virtual races, where people competed on their own and later recorded their times in a database, and programs such as fitness and yoga classes on Zoom with instructors to enroll people in programs. Technologies used for simple tasks, such as supervising playgrounds, entering information into

databases, and virtual experiences and applications based on remote access, such as social media, were among the topics mentioned by participants.

In terms of recreation and entertainment spaces, interviewees noted mobile applications like Outerspatial, which manages parks, trails, and other outdoor locations and provides a recreation information library. Parks Mobile App was also mentioned, as it connects parks, the community, and park users, facilitating communication about routes and traffic conditions to parks. Other examples include internet-based applications like JobForm, developed in collaboration with the company Image Matters to create curated tours for learning about wildlife, offering another way to interact with people in parks.

When Figure 6 is examined, the participants' views on the drawbacks of using smart technologies in recreation areas are organized into six sub-themes. These sub-themes are labeled as "Electromagnetic Fields and Negative Impact on Health," "High Technology Investment," "Causing Communication Breakdown," "Technical Malfunctions and Maintenance Requirement," "Threat to the Security of Personel Data," and "Inequality of Opportunity in Accesibility Access to Technology."

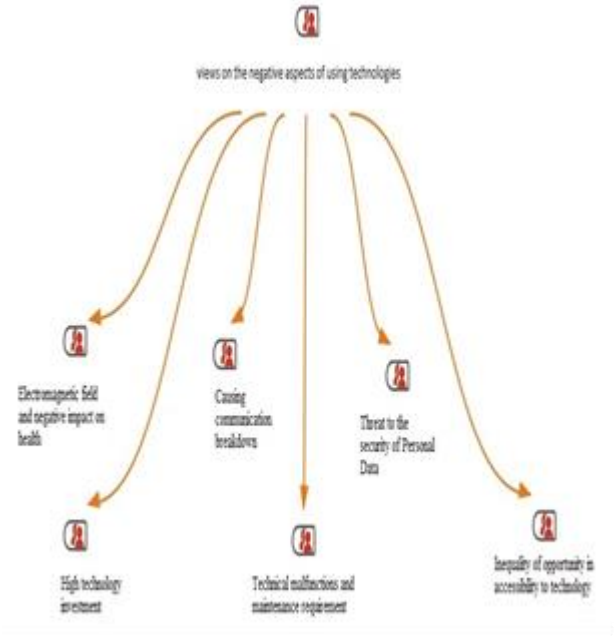

Figure 6. Negativities of using smart technologies in the field of recreation hierarchical code subcode model

Participants expressed their views on the "Drawbacks of Using Smart Technologies in Recreation Areas" as follows:

Electromagnetic Fields and Negative Health Impacts: "Is there a balance between being very smart as a population and looking at blue-light screens all day, and filling public spaces with these kinds of things? I wouldn't advocate putting more technology on the streets. Just as there are adverse outcomes for children who don't exercise enough or eat healthily, there are also obesity-related consequences. This issue is primarily seen among immigrant families in poorer areas of the Netherlands. I think smart technology is making people overweight" (A_E).

High Technology Investment: "Technology belongs to large companies. It's a major investment. Being owned by big companies is challenging" (S_Zheng).

Causing Communication Breakdown: "There are disadvantages of technology. It keeps people more at home; for instance, young people using technology to avoid going out into public spaces and not communicating with each other. In their private lives, they do everything online at home" (I_H). / "I definitely see the decrease in social interaction as a negative" (I_J).

Technical Malfunctions and Maintenance Requirement: "Let's say you can see the schedule at the bus stop, but from my personal experience, sometimes there's an issue with the smart system, you're waiting there, and there's no one to ask. And you feel deceived. You lack face-to-face communication. So you shouldn't rely too much on a smart city. Or if the power is out, that's a big problem" (S_W).

Threat to the Security of Personel Data: "In Amsterdam, I think we discuss privacy and ethics a lot because we don't want to adopt China's state surveillance model. / Also, we don't want your personal data (American model) sold to private companies. / An important issue is that you may not be aware that you are allowing the use of technologies like thermal imaging and Wi-Fi monitoring. Therefore, people need to be informed about how these technologies are used. / Crowd management is a hot topic; because in Amsterdam, we already have a system, but there are many questions about privacy and ethics. How do you inform people that data about them is being collected in public spaces?" (A_C).

Inequality of Opportunity in Accesibility Access to Technology: "If I'm in a place without good Wi-Fi or if I don't have a smartphone or the economic means to participate, this is obviously a disadvantage. It can widen the gap between people who can afford things and those who cannot" (I_L).

My findings regarding the participants' views on the drawbacks of using smart technologies in recreation areas are as follows:

In Istanbul, concerns were raised about negative impacts on human health, such as electromagnetic fields and blue light exposure. It was also mentioned that guiding and influencing people can dull their intellectual and creative abilities. Other downsides included the possibility of being non-

functional/effective, obstructing flow in public transport spaces with urban furniture and related technologies, durability issues, the threat of turning the city into a mass of sensors, and unnecessary high-tech investments instead of simple solutions.

In Shanghai, participants highlighted the need for secure use of personal data, good protection from large corporations, and government guarantees. Concerns included people staying at home more, not communicating with each other, and an isolated society, along with technical malfunctions in smart systems (e.g., power outages, system component failures), and the substantial power private companies hold to reshape society in smart city production and design within public-private partnerships. It was suggested that the government itself, rather than private companies, should directly operate in this field.

In Amsterdam, within the framework of individual rights, freedoms, privacy, and ethics, discussions focused on the use of technologies such as thermal imaging, cameras, and online surveillance for crowd management. Topics included the right of individuals to move in public spaces without surveillance, the possibility that people may not be aware they are consenting to be monitored, the obligation to inform people about how these technologies are used, personal data protection, and concerns over data being sold to private companies.

In Indiana, negative impacts on health, such as disruption of concentration due to blue light exposure, and the elimination of face-to-face communication needs leading to more isolated living and mood disorders, were highlighted. Other concerns included lack of universal access to technology, deprivation of internet capabilities when access is unavailable, the barrier between those who can afford technology and those who cannot, reduced social interaction, and a disconnection from the rest of society.

When Figure 7 is examined, the participants' views on the concept of a happy city are organized into nine sub-themes. These sub-themes are labeled as "Social Bond," "Respect to Adversity Differences," "Health Services," "Physical Activity Programs," "Clean and Green City," "Inclusive Applications," "Time to Spare for Private Life," "Fun," and "Reliable."

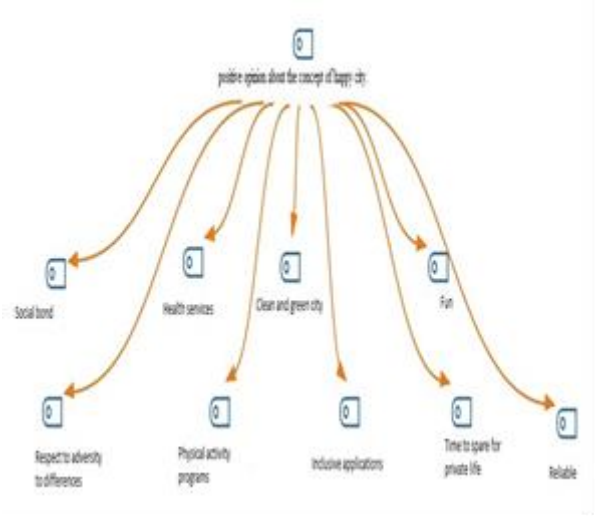

Figure 7. Happy City Concept hierarchical code subcode model

Participants expressed their views on the "Concept of a Happy City" as follows:

Social Bond: "We're known for organizing numerous community events; that's why we're building an amphitheater. Events in our community have grown. People love going out and meeting neighbors" (I_C).

Respect to Adversity Differences: "We also consider all types of people in our community. Not just people with children. Not just for the elderly or young adults" (I_R).

Health Services: "This is part of our work; we are certainly aiming to create a happy city. Making it a place where people are happy, where they can raise healthy children, and have access to healthy lifestyles and services. Good schools and healthcare services are essential to provide the best environment and the best community" (I_L).

Physical Activity Programs: "There are programs that encourage activity and sport. Additionally, there's an entire department working to promote sport and better nutrition habits as a way to prevent obesity, particularly in immigrant communities, to address the issue of obesity" (A_C).

Clean and Green City: "People are happier when they have high-quality green parks and facilities where their children can play" (I_C).

Inclusive Applications: "The most important feature of a happy city is that it cares not only for yourself but also for others. You should care about others and make everything accessible to them: healthcare, sports activities, and entertainment" (A_D).

Time to Spare for Private Life: "Giving people a chance to enjoy life outside of work. So how can people stay happy? By finding hobbies and ways to enjoy themselves when not at work, which then

makes them a better employee. If you consider your mental health, it will also make you a better person in society. Stop and enjoy life's moments, whether it's taking a walk outside or playing bocce" (I_R). / "A work-life balance, a place where people work hard but then go out and have fun. More people are realizing that life should be this way" (I_S).

Fun: "The meaning of life is happiness. Bloomington understands how important parks and recreation are to people's happiness. So, we believe we are mature or educated enough to know that getting out and having fun is important" (I_S).

Reliable: "Regarding the concept of happiness, I think more about smart applications in terms of security, control, and speeding things up" (S_Zheng).

My findings on the participants' views on the concept of a happy city are as follows:

In Istanbul, the importance of the concept of a happy city is notably high. Participants mentioned a happiness approach ranging from the micro to the macro level: from individual happiness to community happiness, and from community happiness to city happiness. The idea of a productive city was also mentioned, where if services are delivered well and quickly, and people have time for themselves and their private lives, they will be happy. Inclusive applications that can cater to different expectations and needs were highlighted by all participants, and they stated that a city able to fulfill these would be close to the definition of a happy city. Given the significant traffic issues in this city, reducing the time between home and work and/or making this time enjoyable with recreational applications was stated to contribute significantly to the happiness of the city.

In Shanghai, the concept of a happy city was cited as the ultimate goal. Participants described the concept of a happy city as one that is safe and fun.

In Amsterdam, participants defined a happy city as one that is clean, provides opportunities for leisure and recreational activities, creates opportunities for residents to participate in recreation, makes healthcare, sports, and entertainment accessible, and plans programs that encourage green living, physical activity, and sports. It was described as a livable and sustainable city.

In Indiana, a happy city was defined as one with a high quality of life, equal access to health and education, rich in recreational parks, connecting people, and respecting everyone regardless of their differences.

RESULTS

Istanbul

Within the framework of the relevant concepts, Istanbul offers a broad range of applications and examples in areas based on smart technology, including transportation, traffic, governance, human interaction, nature, environment, energy, entertainment, and events. Accordingly, Istanbul holds promising potential for smart recreational technologies and does not appear to be limited to specific areas of application.

In 2016, the Istanbul Metropolitan Municipality (IMM) established the Smart City Office. The first project introduced by IMM's subsidiary, ISBAK, was smart recycling containers. Based on the amount of waste collected, rewards are transferred to the Istanbul card as monetary credits. This initiative fosters environmental awareness and reduces pollution, while also creating a connection between the individual and the city (Smart Cities White Paper, n.d.). Increasing these connections contributes to individual value and, ultimately, community value, thereby enhancing individual, community, and city happiness.

To mitigate the city's traffic problems, IMM offers the "IMM Traffic" and "Traffic Density Map" applications, enabling residents to view traffic conditions and estimate their travel time. These applications also provide information on accidents, weather, and parking availability (Şener, 2019).

Another transportation application, "ITaksi," enables central monitoring of taxi system quality. This project aims to reduce empty taxi circulation, decreasing traffic congestion and making taxis easier to find, thus saving time. The application also integrates Istanbul card payments, expanding the card's use (Baraçlı, 2017).

IMM's "Istanbul Senin" application provides easy, centralized access to various services, including cultural and arts events. Users can add credit cards and Istanbul cards to the digital wallet within the app, which supports bill and debt payments, as well as shopping and transportation (Istanbul Senin, n.d.).

The "Walk Istanbul" project promotes activity, city exploration, sustainable tracking, and recreational socialization, contributing to urban happiness and public health. As a part of IMM's 2021 "Sports Master Plan," this initiative exemplifies technology's transformation, aiming to create an active, happy, and healthy community with a strong sports culture (Sports Master Plan, n.d.).

These applications aim to enhance social life by promoting public participation in events and interactions, connecting people with similar interests, and offering data analysis capabilities. They highlight transparent and participatory governance through open data, interactive feedback, gamified applications, and citizen satisfaction measures. These applications enable residents to

better use and enjoy their time, leading to greater happiness.

In a city like Istanbul, which attracts large populations, urban growth and transformation emphasize not only technological needs but also human-centered and managerial approaches. Sustainable smart city applications require coordinated efforts among central and local governments and stakeholders.

Shanghai

In 2020, Shanghai won the "World's Smartest City" award from the Smart City Expo World Congress (SCEWC), attributed to its advanced use of technology across various sectors. The city is distinguished by its surveillance, monitoring, and intervention technologies for security, as well as its interactive sensing-based technologies for providing information, services, and feedback.

Shanghai envisions itself as a global digital city, driven by big data for smart city management and public services supported by extensive telecommunication infrastructure. In 2017, fiber coverage was achieved citywide (Boz & Çay, 2019).

The "Citizen Cloud" system in Shanghai offers 104 public services across six categories, including personal information, medical and health services, transportation, social security, and community life. With over 7.6 million registered users, the platform aims to provide rapid, reliable, and easy access to public services (Smart Cities, n.d.).

A comprehensive traffic management network in Shanghai includes road traffic information, public transportation, and public park information services. The shared-bike company "Ofo" provides location and distribution data to city management, enabling the optimization of bicycle redistribution in crowded areas (Boz & Çay, 2019).

Additionally, more than 1,600 LCD screens and 1,700 solar electronic station signs have been installed at bus stops to inform passengers about real-time bus arrivals. Ongoing developments aim to allow passengers to purchase metro and bus tickets using facial recognition technology (Smart Cities, n.d.).

Amsterdam

Despite being environmentally conscious and prioritizing renewable energy, waste management, green/clean mobility (electric cars, taxis, and bike paths), climate adaptation, and tree planting, Amsterdam is cautious about the overuse of technology. Nature-friendly solutions are prioritized over excessive use of technologies like sensors.

Amsterdam's smart city applications have accelerated over the past 20 years. Established in 2007, the "Amsterdam Smart City Program" aims to address the city's environmental challenges and create a sustainable environment through information and communication technologies (ICT). Amsterdam Smart City Platform (ASC), developed as a social platform, promotes over 100 projects in economic development, mobility, circular economy, governance, education, citizen engagement, and quality of life (Smart Cities White Paper, n.d.).

To facilitate innovation, Amsterdam has launched platforms such as Datapunt, which manages data sharing for city innovation, and Transformcity, an online tool for sustainable and inclusive urban development (Smart Cities, n.d.).

Amsterdam's smart lighting poles can adjust brightness via sensors and provide traffic, parking, and pollution information. The Smart Traffic Management Project enables collaboration among stakeholders, while IoT Living Lab supports local economic initiatives by fostering the development of IoT innovations. City-Zen, an EU-funded FP7 project, seeks to design a fossil fuel-free city, integrating new energy solutions like solar, wind, biomass, and geothermal energy into daily life (Smart Cities White Paper, n.d.).

Indiana

Indiana, like Amsterdam but on a larger scale, emphasizes environmental sustainability with eco-friendly applications. A participant noted that "natural resources have been a driving force for more sustainable designs." The state promotes public education on biodiversity, environmental protection, and active citizen engagement through programs like BioBlitzes and volunteer initiatives focused on parks and recreational spaces.

Indiana uses technologies such as solar panels, waste-to-energy plants, and eco-friendly e-scooters. In addition, Indiana promotes environmental awareness through apps like iNaturalist, which tracks biodiversity, and JobForm, used for volunteer-driven park and recreation programs.

Indiana highlights the importance of leisure time in the context of work-life balance, pointing out that high living standards are not solely defined by hard work or financial gain. Quality of life is associated with recreational parks and facilities that allow people to connect with one another.

Suggestions

Smart applications vary in purpose, with individual technologies for public transportation, metro, taxis, weather updates, and online healthcare appointments widely used in all cities.

Mobile applications (especially QR code-based) are the most commonly used technologies in both smart city and recreational areas. However, Shanghai's public security surveillance systems,

which use cameras, are not met with criticism there. In contrast, in Amsterdam and Indiana, concerns about personal rights and privacy arise.

The broad scope of the smart city concept encompasses evolving goals, with recreational sustainability as a fundamental strategic objective. Meeting the unlimited needs of cities with limited resources requires proper resource management and precise identification of needs.

This study examines the contribution of smart recreational technologies to urban happiness. Its primary motivation is to pave the way for new research on the growing use of technology in cities. Future studies could include broader samples by involving users of recreational technology applications.

This research provides practical insights and applications for city managers on how smart recreational technologies contribute to urban happiness. Local government officials in departments such as parks, recreation, and smart and happy city initiatives are encouraged to develop projects focusing on smart recreational technologies.

Smart recreational technologies that focus on social connections, engagement, playability, safety, respect for diversity, clean and green environments, inclusive and connecting applications, entertainment, and physical activity should be prioritized. City managers should plan smart technologies to foster the happy city concept and contribute to human and community well-being.

Limitations

This study is to explore the application of smart recreational technologies in four different cities. However, it has its limitations. The study involved volunteers, which is noteworthy considering the challenging circumstances in interviewing deicicon makers in 4 different cities.

The structure of the online interviews was designed to include decision makers and implemeters but wider participation was somewhat limited. Therefore, it is recommended to develop this topic wth a wider participation embracing the whole city, students, chidren, etc. as well.

This study draws on previous work in different fields and highlights the potential for smart recreational technologies. However, further research and measurement-based studies are needed to scientifically support the relationship between these two important disciplines. To better understand the impact of smart recreational technologies, field measurements on a wide range of activities are necessary.This section includes research findings.

Conflict of Interest

No potential conflict of interest was reported by the authors.

Ethical Approval

For this type of study, formal consent is not required.

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Psychometric Properties Evaluation of the Turkish Version of the Brief-Caffeine Expectancy Questionnaire (B- CaffeQ): An Adaptation Study in Recreationally Active Individuals

Anıl Onur Mercanoğlu[1] Celil Kaçoğlu[2]

[1]Eskişehir Technical University, Faculty of Sport Sciences, Eskişehir-Turkey, https://orcid.org/0000-0002-7812-9870, aomercanoglu@eskisehir.edu.tr
[2] Eskişehir Technical University, Faculty of Sport Sciences, Eskişehir-Turkey, https://orcid.org/0000-0002-1817-5234 , ckacoglu@eskisehir.edu.tr

Corresponding Author: aomercanoglu@eskisehir.edu.tr

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A B S T R A C T

Caffeine is a psychoactive substance that is widely consumed in the world and Turkey. It is seen that its widespread consumption is related to expectancies of consumption as well as cultural factors. Recreationally active individuals may have various expectations from caffeine consumption in line with their lifestyles and goals such as physical, social and/or other aspects. It can be stated that caffeine consumption expectancies have an important role in the process of evaluating consumption patterns. However, in the literature, it seems to be very limited information about expectancies related to caffeine consumption. In this direction, the aim of the research was to test the compatibility of Brief-Caffeine Expectancy Questionnaire (B-CaffeQ) to Turkish culture and language. In the study, data were collected from two separate participant groups and were analyzed. Participants were composed of recreationally active individuals. To reveal the structure in the first group (n=278) data, Exploratory Factor Analysis (EFA), and to verify the structure in the second group (n=313) data, Confirmatory Factor Analysis (CFA) was used. Reliability was assessed by performing test-retest and internal consistency analyzes on both the two data groups. The findings show that the existing 7-dimensional structure contains good values in terms of validity and reliability, and it overlaps with the original B-CaffeQ structure. As a result, the data obtained shows that B-CaffeQ-TR is a valid and reliable measurement tool that could be used to evaluate the expectancies of caffeine use in the Turkish language and culture.

Keywords: Adaptation study, caffeine, caffeine expectancies, B-CaffeQ, factor analysis**.**

INTRODUCTION

Caffeine is a behavioral and psychoactive substance that stimulates the central nervous system and is being used by approximately 80% of the world population on a daily basis (Benowitz, 1990; Fredholm et al., 1999; Ogawa & Ueki, 2007; Han & He, 2012). Caffeine is found in certain leaves, beans and many fruits worldwide like cola nut and cacao and while tea and coffee being the main sources of caffeine in our diet, it can also be found in energy drinks with three times more caffeine content than cola drinks, chocolate-like nutrition with cocoa in them and in the content of many drugs sold with or without a prescription (Çelik, 2006; Amini, 2012; O'Brien, 2018).

Caffeine (1,3,7-trimethylxanthine) is most commonly found in coffee as the main pharmacologically active ingredient. In general, brewed coffee has the highest content among foodstuffs containing caffeine. Coffee (230-250ml), depending on the preparation method, the type of beans, roasting, grinding type and brand, contains 35-250 mg of caffeine while tea (150 ml) 24-50 mg, cola drinks (180 ml) 15-30 mg, cocoa (150 ml) 2-7 mg, chocolate (28 g) 1-36 mg, and the foods containing chocolate mostly contain less than 15 mg caffeine (Gray, 1998; Fredholm et al., 1999; Barone & Roberts, 2012).

Doses of up to 300-400mg per day in healthy adults (19 and over) are specified as safe upper limit without any harmful effects. This amount corresponds to 4-5 cups of medium coffee. However, it is stated that caffeine consumption equal to 6 cups of dark coffee generally does not cause any side effects. It is stated that the daily limit for adolescents and children is 100 mg and this limit should not be exceeded. However, coffee is not the only source of caffeine, and other sources caffeine consumed should also be taken into account (Gray, 1998; Nawrot et al., 2003; Seifert et al., 2011; Temple et al., 2017).

The average daily caffeine consumption in Turkey for adolescents and children aged 15 and below is an average of 197 mg and 202 mg for 18 and older. The source of caffeine for adolescents is mostly tea, carbonated soft drinks and instant coffee consumption (Küçükkömürler & Kurt, 2018). Average daily caffeine consumption in adult working individuals is 247 mg, and this is due to the consumption of carbonated soft drinks, chocolate, instant coffee, respectively (Khorshid & Dilek, 2013). It is seen that 20% of university students who consume caffeine have an average daily consumption of 250 mg and above, and this mostly due to the consumption of tea, coffee, Turkish coffee, carbonated soft drinks and chocolate (Aydın & Eryılmaz, 2019). In USA, while the main source of caffeine is coffee for the age of 18 and above, it is caffeine-containing soft drinks for the age of 2-17 (Frary et al., 2005).

Today, coffee, especially Turkish coffee as a part of everyday life in Turkey, is a cultural, social and historical value of Turkish society that is dating back to the Ottoman Empire and spreading all over the world (Yılmaz et al., 2017; Eren & Sezgin, 2018; Yücebalkan & Yurtsever, 2018; Karaman et al., 2019). The opening of the first coffeehouses in Istanbul goes back to 1553-1555s (Arıpınar, 1966; Bostan, 2001). Even though there is no coffee production in Turkey, Turkish coffee tradition was listed in UNESCO's representative list of intangible cultural heritage in 2013 (UNESCO, 2013). Looking at coffee consumption in recent years in Turkey, according to the International Coffee Organization data, while average annual coffee consumption between 2016-2018 was 76.000 tons, in just the year 2019, that amount went up to about 112.000 tons and that shows the interest for coffee has risen even more (ICO, 2019). The most preferred varieties of coffee, as the most consumed beverage after tea, are primarily Turkish coffee, then soluble coffee, filter coffee, iced coffee and new generation coffees whose consumption is gradually increasing (Karaman et al., 2019; Kaya & Toker, 2019). In fact, "let's have coffee", "let's have tea" is used instead of "let's meet". So many different expectations with recreational purposes like this lie behind these two main drinks.

Leisure can be understood as a historical-cultural manifestation intrinsic to the complexities of life in society and, as well as other dimensions of human experience, it is constituted by and in the relationships that people establish with their peers and with the structures that make up the uniqueness of each social scenario (Soutto Mayor & Isayama, 2017). Therefore, thinking about youth based on leisure experiences reflects the dialogue established between different sociologies, with a view to valuing the wealth and diversity that make up human activities. In this perspective, youth is taken as asocial category that has gained prominence in the last decades, making comprehensive studies necessary to be able to encompass the different youths in a contextualized and dialogical way with the different social aspects that comprise them.

Youth is understood as a social historical category and, therefore, presents itself from age markers only due to methodological criteria established in data collection, without being its main determinant. Thus, youth take place in the plural sense, comprising all youth formed by diversity and plurality, recognized in a country of continental proportions, such as Brazil. Likewise, it is necessary to consider that the line that demarcates the different phases of life, according to Pais (2009), appears increasingly tenuous, undoing age marks and rites of passage.

Currently, the features that define the boundaries between the different life stages are more fluid and discontinuous (Pais, 2009, p.373), and the age factor only is not enough to classify this phase of human development. The complexity that accompanies the topic in line with the lack of consensus among scholars makes it difficult to construct a concept of youth. Approaching more a diverse set of ways of life than the age limits, youth constitute a socially constructed category and subject to the countless and constant transformations of its time.

Research carried out with young people from Catalonia (Spain) by Lopes-Sintas, Gharaman, and Rubiales (2017) demonstrated that youth is not a homogeneous category. The authors concluded that leisure habits varied according to social class and, within the same class by age and gender. It is in this regard that cultural practices and specifically leisure take a privileged position in the lives of young people, insofar as they provide sociability, identity construction, and human development.

There is evidence that some individuals' expectancies of caffeine's effects on physical performance and mood may affect the magnitude of these effects. There are studies showing that caffeine anticipation effect affects mood, attention,

and vitality (Dawkins et al., 2011). In the case of caffeine expectancy, placebo administration stimulates changes in the dopaminergic system in the brain. The neurobiological mechanisms of caffeine and placebo caffeine were similar in the brain, but somewhat more limited in placebo caffeine (Kaasinen et al., 2004). It is stated that the expectancy of the individual may manage the placebo effect and accordingly, the expected effect of caffeine or the drug consumed may change the response to placebo (Fillmore & Vogel-Sprott, 1992). Beyond the pharmacological effects of a drug, an individual's expectancies of it may also contribute to the intensive experiences of the drug in question (Heinz et al., 2009). The fact that individuals who are told they had decaffeinated coffee but are given caffeine perform worse than those who do not consume caffeine, support the view that the pharmacological effects of caffeine act synergistically with anticipation (Elliman et al., 2010). In addition, it has been stated that the effects caused by caffeine withdrawal may also be caused by the negative expectancies (nosebo) of an individual (Juliano et al., 2019). These results provided evidence that the subjective and behavioral effects of caffeine consumption may be positive or negative depending on the individual's expectancies from caffeine. These expectancies may arise from the individual's previous experiences with caffeine (Oei & Hartley, 2005; Harrell & Juliano, 2009). The effects of caffeine depend on the individual's expectancies, so if the individual consumes a beverage expecting that it has caffeine in it, these expectancies may be generalized as placebo conditions (Smith, 2002). In placebo studies, it is stated that one of the factors that cause an individual to respond to a treatment may be caused by the type of individual who may respond to treatment via expectancies. In other words, this view is not specific to the treatment of the practice applied, rather that the response may be shaped according to the expectancies of the individual, that expectancies may cause a placebo (or nosebo) effect (Geers & Caplandies, 2020). When there is confidence in the drug effect of a drug in a particular activity, an expectancy of a specific behavioral effect of that drug may also be formed. Based on expectancies about the effects of caffeine, the behavioral response to this drug derivative can be predicted (Fillmore, 1999). However, this expectancy theory is insufficient to explain the fact that some individuals without expectancies not showing stimulating effects when they consume caffeine for the first time (Oei & Hartley, 2005). There are other studies which do not observe expectancy affects in caffeine consumption, suggesting placebo and expectancy effects are caused by introspection (Schneider et al., 2006). The results showed that both pharmacological and expectancy factors affect the actual and expectancy effects of caffeine in an individual's behaviour (Lotshaw et al., 1996).

Some of the performance enhancing effects of caffeine appear to be linked to expectancies. Since the bitter taste of caffeine may act as a signal that caffeine has been consumed, it seems possible that some anticipatory effects of caffeine consumption may be driven by this bitter taste (Pickering, 2019). It is said that consuming 300-400 mg caffeine a day, equivalent of 3-4 cups of coffee daily, may have positive effects on the well-being of an individual and may partially improve mental-physical disorders (Fatolahi et al., 2020). Performance increases were also observed with individuals who consume coffee regularly when they are given decaffeinated coffee. This suggests a caffeine related stimulus causes a caffeine related effect. This result also indicates, other features of coffee such as its smell and taste rather than caffeine itself, may also be effective in the development of these expectancies. It has been observed when these individuals who consume coffee regularly do not wish to consume caffeine yet want to benefit from its performance enhancement effects, decaffeinated coffee also creates a good effect on performance enhancement (Fukuda & Aoyama, 2017). In addition, the expectancy for the positive effects of caffeine consumption is an indicator of how much and how often caffeine will be consumed (Lau-Barraco & Linden, 2014).

Since caffeine consumption is rather widespread in Turkey, it can be seen that an instrument to be used in research on caffeine consumption expectancies such as caffeine expectancy survey is needed. Accordingly, the purpose of this research is to adapt and verify the Breif-Caffeine Expectancy Questionnaire (B-CaffeQ) which has been developed by Kearns et al. (2018) and consists of seven dimensions: withdrawal / dependence, energy / work enhancement, appetite suppression, social / mood enhancement, physical performance enhancement, anxiety / negative physical effects, and sleep disturbance, to Turkish culture and language.

METHOD

Research Model

The protocol of the study was registered at clinicaltrials.org with the identifier NCT06038903. This study was supported by Eskişehir Technical University Scientific Research Projects Commission under grant no: 24ADP064. This research model includes a methodological process in which the Brief-Caffeine Expectancy Questionnaire is evaluated through the validity and reliability analysis of the Turkish language and culture. This process includes

some steps deemed necessary for the adaptation of the questionnaire. These stages were followed in the following order (Hambleton & Patsula, 1999; Seçer, 2015):

- Survey translation.
- Evaluating the items and making the necessary corrections.
- Testing the items.
- Creating the initial form of the questionnaire.
- Implementation of the survey.
- Conducting analyses.
- Finalizing the questionnaire.
- Examination of the measurement model.
- Reporting of the process.

Research Group

The participants in this study are recreationally active individuals who do physical activity for at least 20 minutes 3 times a week. Many people consume caffeine consciously for certain purposes. Recreationally active individuals may have various expectations from caffeine consumption in line with their lifestyles and goals such as physical, social and/or other aspects. When increasing recreational activity participation and caffeine consumption are considered together, it becomes important to examine expectations. In line with this idea, caffeine consumption expectancies have an important role in the process of evaluating consumption patterns. Data were collected from two different groups for validity and reliability assessments. Data were obtained from the first group, in which the processes related to Exploratory Factor Analysis (EFA) were carried out, and the processes related to Confirmatory Factor Analysis (CFA) were carried out with the data collected from the second group. Groups consist of participants selected by the purposive sampling. For the purpose of this research, individuals who consume products containing caffeine such as coffee, tea, and soft drinks constitute the research group. Accordingly, data were collected from 278 participants for EFA process and from 313 participants for CFA process. When these numbers are evaluated in terms of sample size, it can be said that they are close to good for EFA and good for CFA (Comrey & Lee, 1992; Hoyle, 2000). Demographic information of the participants are presented in Table 1.

Table 1. Demographic characteristics of participants.

	Sample 1		Sample 2	
Variable	**n=278**	**%**	**n=313**	**%**
Biological sex				
Male	148	53.2	163	52.1
Female	130	46.8	150	47.9
Age				
20 or under	31	11.2	91	29.1
21-30	123	44.2	132	42.2
31-40	74	26.6	48	15.3
41-50	38	13.7	31	9.9
>51	12	4.3	11	3.5
Education				
High school or leaving	38	13.7	36	11.5
Associate or Undergraduate	185	66.5	230	73.5
Postgraduate degree	55	19.8	47	15
Primary caffeine type				
Coffee	173	62.2	213	68.1
Soft drinks	20	7.2	24	7.6
Tea	43	15.5	44	14.1
Caffeine in general	42	15.1	32	10.2

Data Collection Tools

During the data collection phase, a questionnaire form consisting of three parts was used. In the first part, explanations about the research and caffeine containing product information which the participant based their answers on were included. In the second part of the questionnaire, Brief-Caffeine Expectancy Questionnaire, which is a simplified version of the caffeine expectancy questionnaire developed by Huntley and Juliano (2012), was included. This questionnaire, whish has been simplified by Kearns et al. (2018) by carrying out validity and reliability studies, has a 7-factor structure, consisting of 20 articles (Huntley & Juliano, 2012; Kearns et al., 2018). The rating of this questionnaire, which was created in six Likert type, was defined as "1 = Strongly Disagree" to "6= Strongly Agree". In the last part of the questionnaire, there were questions

from which the demographic information of the participants such as age, gender, educational status, etc. obtained.

Aforementioned questionnaire form was prepared on an online platform and the connection link was provided. This link was conveyed to participants through posts shared on these social media accounts.

Language Equivalence

In the process of adapting B-CaffeQ to Turkish language and culture, back translation method has been used in order to provide language equivalence (Brislin & Freimanis, 2001). Accordingly, both the English to Turkish and Turkish to English translations were made independently by two different linguists who are adept in both languages and cultures. Finally, the articles translated back into English were compared with their original forms.

Data Analysis

EFA was used in order to determine what kind of a structure pattern the survey constitutes in Turkish language and culture. CFA was used to test the accuracy of the structure resulting from EFA. Reliability tests of the questionnaire were performed through Cronbach Alpha coefficient and test-retest analysis.

RESULTS

Construct Validity

In order to test the construct validity of the questionnaire, the suitability of the first group data for EFA was evaluated. Accordingly, the data obtained from Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity were analyzed. It was determined that KMO value was .800 and Bartlett's Test of Sphericity (3305.583 df: 190, p: .00) was significant. MSA (Measures of Sampling Adequacy) values in the anti-image correlation matrix were examined in order to check the suitability of each item for factor analysis. It was observed that the MSA values of the substances ranged from .546 to .909. In the analysis process, principal component analysis was used as the factor extraction method. The cut-off point for factor loadings was processed as .50 and the lowest factor loading was found to be .788 (Hair et al., 2014). Findings of factor loadings and communalities emerging accordingly are presented in Table 2.

Table 2. Factor loadings and communality percentages of the EFA.

Items and Factors	Factor loadings	Communalities
Physical performance enhancement		
4. Caffeine improves my athletic performance.	.919	.894
7. Workouts are better after having caffeine.	.904	.899
17. I can exercise longer if I have caffeine.	.842	.840
Energy/work enhancement		
1. Caffeine picks me up when I am feeling tired.	.836	.798
10. Caffeine makes me feel more alert.	.816	.853
18. Caffeine makes me feel more energetic.	.788	.836
Withdrawal/dependence		
8. I would experience caffeine withdrawal if I went without caffeine.	.853	.836
12. I need to have caffeine every day.	.843	.828
15. I would get a headache if I went without caffeine.	.798	.703
Appetite suppression		
5. Caffeine suppresses feelings of hunger.	.828	.762
13. Caffeine allows me to skip meals.	.825	.770
19. Caffeine decreases my appetite.	.875	.810
Anxiety/negative physical effects		
3. I am easily stressed after having caffeine.	.809	.670
6. Caffeine makes me jittery.	.877	.787
9. Caffeine makes me feel nervous.	.833	.747
Social/mood enhancement		
2. Conversations are better when using caffeine.	.609	.641
11. Caffeine makes me friendlier.	.805	.795
16. I feel more sociable after having caffeine.	.820	.801
Sleep disturbance		
14. I have difficulty sleeping after having caffeine.	.916	.871
20. Caffeine late in the day gives me insomnia.	.911	.864

As a result of the analysis, it was determined that the items in the questionnaire constitute a 7-factor structure with eigenvalues above 1. Parallel to this, when the screeplot graph is examined, it can be seen that the sharp decline ends after the 7th factor (Figure 1). The explained variance of the 7-factor

structure was found to be 80.03%. [Figure 1 near hear].

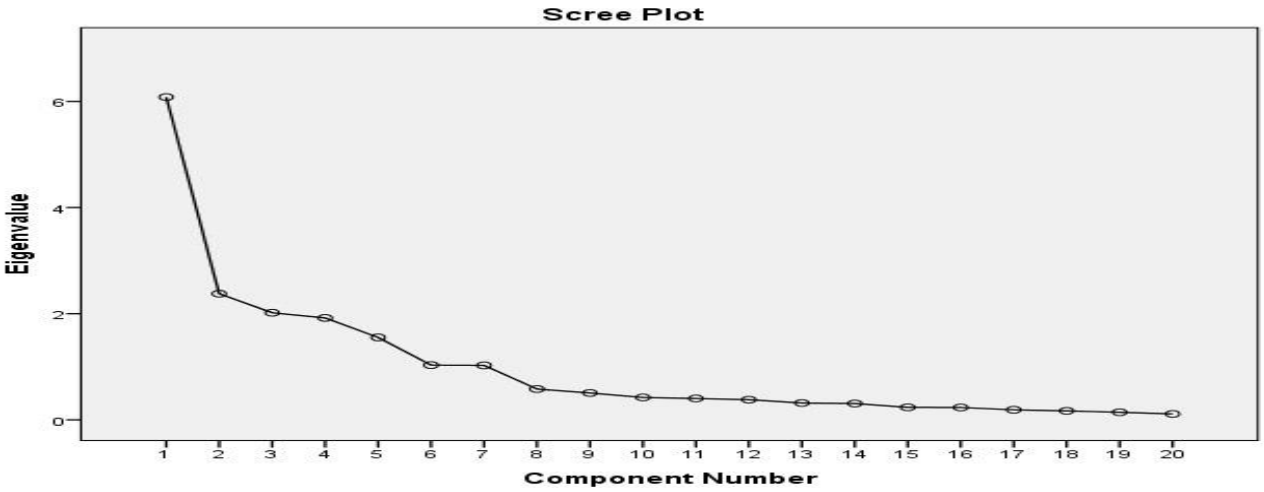

Figure 1. Screeplot for the EFA.

In addition, Horn's (1965) parallel analysis applied and when the simulative data were compared with the real data, a five factor structure emerged (Table 3). However, considering the sharp decrease in eigenvalues and the clarity of the simulative difference, the original seven factor structure was considered appropriate (Tabachnick & Fidel, 2013). [Table 3 near hear].

Table 3. Eigen Values of the Actual Data and the Simulative Data.

Factor	Eigen values of the actual data	Eigen values of the simulative data
1	6.081	1.505
2	2.377	1.416
3	2.018	1.345
4	1.920	1.283
5	1.553	1.228
6	1.031	1.174
7	1.026	1.126
8	.580	1.084
9	.506	1.043
10	.422	0.999

In order to verify the structure emerged as a result of EFA, CFA processes were performed on the second group data. After the first analysis, considering the program suggestion, the modification was performed between the 4th and 7th items in the physical performance enhancement factor and they were analyzed once more. As a result of the analysis, Chi-Square ($\chi 2$) = 382.81. Degrees of Freedom (df) = 148.$\chi 2$ / df = 2.587; RMSEA = .071; RMR = .11; SRMR = .050; NFI = .95; NNFI = .96; CFI = .97; GFI = .89; AGFI = .84 were calculated. The path diagram, the factor loadings of the items and the modification performed as a result of the CFA processes are given in Figure 2. [Figure 2 near hear].

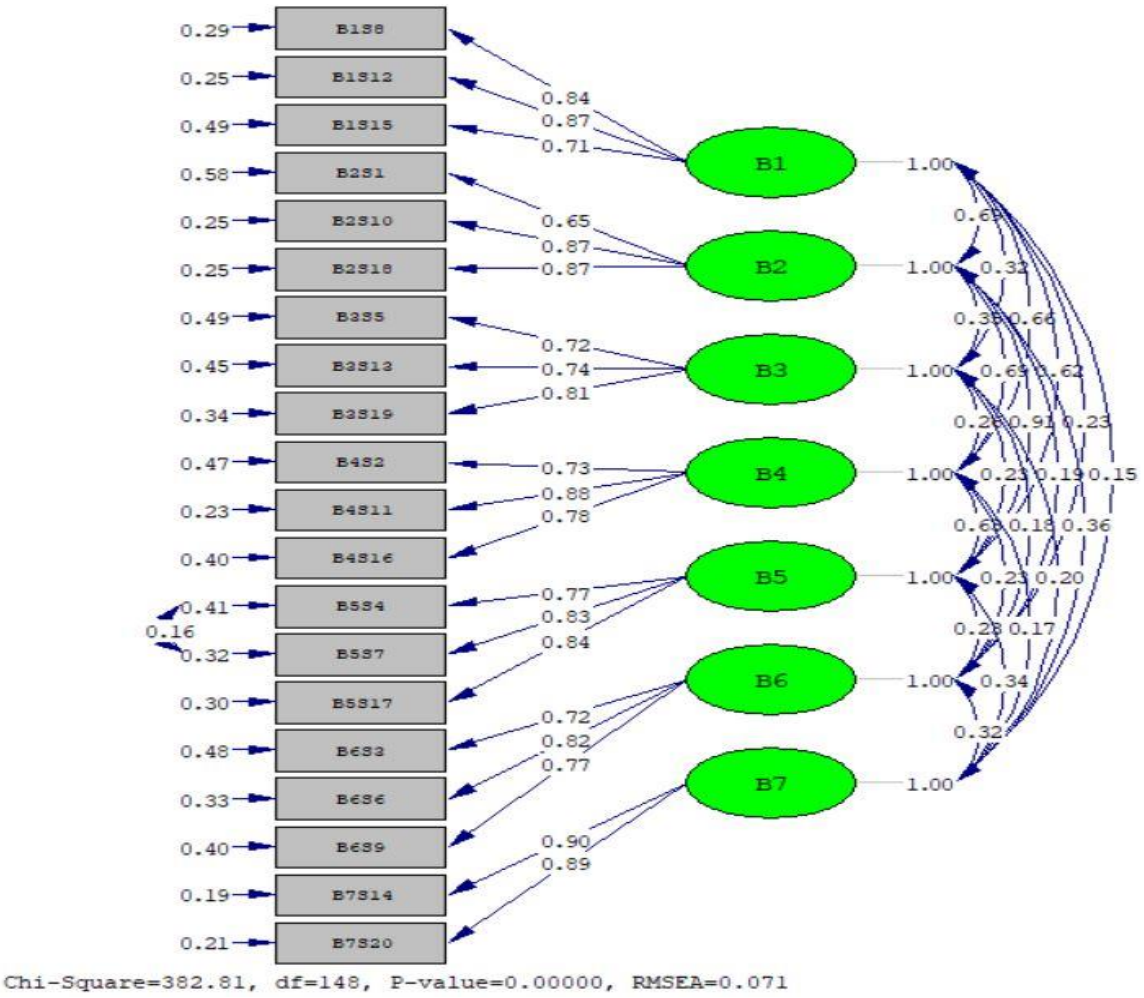

Figure 2. The path diagram of CFA.

Convergent Validity

Factor loadings were examined in order to evaluate the convergent validity of the structure. The lowest factor loadings were found to be .788 as a result of EFA and .650 as a result of CFA. Considering these values, it can be stated that convergent validity was achieved (Hair et al., 2014).

Discriminant Validity

Correlation analysis was conducted to evaluate the discriminant validity of the structure. It has been determined that among EFA factors the highest value belong to social / mood enhancement and energy / work enhancement factors, and among CFA factors, the highest correlation values were between energy/work enhancement and physical performance enhancement factors. The correlation values between the factors for both data sets are presented in Table 4. In addition, AVE, CR, MSV and ASV values are presented in Table 5. [Table 4 near hear]. [Table 5 near hear].

Table 4. EFA and CFA factor correlations for samples 1 and 2.

Factors	1	2	3	4	5	6	7
1. Withdrawal/dependence	-	.611**	.302**	.571**	.514**	.207**	.152**
2. Energy/work enhancement	.505**	-	.323**	.606**	.747**	.143*	.294**
3. Appetite suppression	.261**	.215**	-	.226**	.203**	.142*	.166**
4. Social/mood enhancement	.495**	.560**	.244**	-	.504**	.191**	.144*
5. Physical performance enhancement	.230**	.477**	.229**	.422**	-	.184**	.286**
6. Anxiety/negative physical effects	.064	.006	.061	.113	.078	-	.276**
7. Sleep disturbance	.102	.175**	.114	.091	.165**	.200**	-

Table 5. AVE, CR, MSV, and ASV values.

	Withdrawal/ dependence	Energy/work enhancement	Appetite suppression	Social/mood enhancement	Physical performance enhancement	Anxiety/ negative physical effects	Sleep disturbance
AVE	.692	.662	.711	.564	.790	.706	.834
CR	.871	.854	.880	.792	.919	.878	.910
MSV	.476	.628	.123	.476	.628	.102	.130
ASV	.246	.345	.070	.243	.305	.055	.073

Internal Consistency

Internal consistency was evaluated considering the Cronbach's Alpha coefficient for each factor in B-CaffeQ and for the entire B-CaffeQ. It was determined that the alpha values for the dimensions ranged between .798 and .923. All Cronbach's Alpha values for factors and B-CaffeQ for EFA and CFA are presented in Table 6. [Table 6 near hear].

Table 6. Cronbach's Alpha coefficients for B-CaffeQ and factors.

Data set	Withdrawal/ dependence	Energy/work enhancement	Appetite suppression	Social/mood enhancement	Physical performance enhancement	Anxiety/ negative physical effects	Sleep disturbance	B-CaffeQ (total scale)
EFA	.860	.899	.823	.801	.923	.800	.852	.861
CFA	.847	.836	.798	.834	.880	.816	.888	.894

Test-Retest Technique

Test-retest data were obtained from the certain group twice, at the beginning and end of the 3-week process. The correlation coefficient was found to be .786 ($p < .01$) by analysing the obtained data.

DISCUSSION AND CONCLUSION

It is stated that expectancy of caffeine has different effects and these effects are as important as the pharmacological effects of caffeine itself (Shabir et al., 2018). However, expectancies about the effects of caffeine may create an additional synergistic effect on the pharmacological effects of caffeine (Shabir et al., 2019). The original form of the Caffeine Expectancy Questionnaire (7 factors, 47 items), which is a measurement tool designed to determine the psychological, physiological, physical, social and performance expectancies of individuals' caffeine consumption, was developed by Huntley and Juliano (2012) and as a result of the study it has been demonstrated that caffeine consumption frequency and consumption amount are associated with withdrawal / dependence, energy / work enhancement, appetite suppression, social / mood enhancement, physical performance enhancement and lower expectancies for sleep disturbance and anxiety / negative physical effects and that adult individuals have either positive or negative expectancies about the effects of their caffeine consumption (Huntley & Juliano, 2012). There are also adaptations of this questionnaire in different languages such as Portuguese and German (Schott et al., 2016; Mendes et al., 2020).

Since the length of the questionnaire prevents its widespread adaptation, Kearns et al. (2018) simplified the original questionnaire (B-CaffeQ) and conducted a validity and reliability study on 975 university students with different ethnicities (Kearns et al., 2018). And the adaptation study was carried out on B-CaffeQ, considering that the short version of the questionnaire would be more suitable for application.

When the findings of EFA are examined, it is seen that the factor loadings exceed over .70. The fact that factor loadings are at this level indicates that the structure is well defined (Hair et al., 2014). As a result of a modification in the CFA process, the SRMR value has changed from acceptable to good fit (Byrne, 2016; Schermelleh-Engel et al., 2003). When the other fit indices were examined, it was found that $\chi 2$ / df, RMSEA, NNFI values showed good fit, NFI, CFI values were good. GFI and AGFI values are seen to be quite close to acceptable (Hu & Bentler, 1999; Hair et al., 2014; Byrne, 2016). It is seen that fit indices found as a result of CFA were at a similar level to the original KafBA (CFI = .98, NNFI

= .98 RMSEA = .06, SRMR = .08) developed by Huntley and Juliano (2012) and -KafBA ($\chi 2/df = 3.15$ RMSEA = .066, CFI = .953, SRMR = .040) developed by Kearns et al. (2018) fit indices (Huntley & Juliano, 2012; Kearns et al., 2018).

When the findings obtained from the research are examined, it is seen that other validity (convergent and discriminant) and reliability (internal consistency and test-retest) tests are accomplished (Bagozzi & Phillips, 1982; Bagozzi & Yi, 1988; MacKenzie et al., 2011; Hair et al., 2014; Kline, 2016).

The EFA and CFA results obtained from this study, which is aimed to adapt B-CaffeQ-TR to Turkish language and culture, show that the adapted questionnaire and the original (B-CaffeQ) share a similar structure. Accordingly, it has been concluded that B-CaffeQ-TR is a valid and reliable measurement instrument for Turkish language and culture. Researchers planning to do research on caffeine can use this as a suitable measurement tool to investigate the caffeine consumption expectancies of the participant groups whose native language is Turkish and who adopt Turkish culture.

The EFA and CFA results obtained from this study, which is aimed to adapt B-CaffeQ-TR to Turkish language and culture, show that the adapted questionnaire and the original (B-CaffeQ) share a similar structure. Accordingly, it has been concluded that B-CaffeQ-TR is a valid and reliable measurement instrument for Turkish language and culture. Researchers planning to do research on caffeine can use this as a suitable measurement tool to investigate the caffeine consumption expectancies of the participant groups whose native language is Turkish and who adopt Turkish culture.

LIMITATION AND FUTURE STUDIES

In this study, data were collected online using purposive sampling method. Although there has been an increase in internet use of older age groups in recent years, it was also seen to have a lower rate compared to the younger population (Ramón-Jerónimo et al., 2013; Saboor et al., 2015; Turkstat, 2020). Therefore by choosing a different sampling method (such as quota sampling) and environment, the participation rate of elderly individuals can be increased. In addition, its application with different samples would provide positive contributions in terms of generalizability.

It should also be taken into consideration that the findings of this research may differ in different age groups and/or different cultural groups. Accordingly, new validity studies specific to different groups or cultures can be conducted in the future. With that, considering that there may be different factors related to the expectancies of caffeine consumption, it can be considered that different factors can be added to this questionnaire, regarding the questionnaires carried out in different groups for different expectancies, such as expectancies from prescription and non-prescription stimulants (Aarons et al., 2001; Looby & Earleywine, 2010). Thus, this questionnaire could be verified in different and specific populations such as children, young people, elderly and athletes and it could be made to appeal to a wider population in determining the caffeine consumption expectancies.

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Appendix (Turkish Version of the Questionnaire)

Kafein Beklenti Anketi - Kısa Formu (KafBA-K)

Talimatlar: Kafeinin üzerinizdeki etkileri hakkındaki görüşleriniz ile ilgili bir araştırma yapmaktayız. Kafeinin olası etkilerinin listesi aşağıdadır. Lütfen aşağıdaki her bir ifadeyi kafein kullandığınızda sizin için olası veya olası olmamasına göre değerlendirin.

Yanıtlarınızı, seçtiğiniz kafein içeren ürüne göre veriniz. Eğer çok sayıda kafein içeren ürün kullanıyorsanız yanıtlarınızı sadece tercih ettiğiniz ürün için veriniz veya yanıtlarınızı "genel olarak kafein" seçeneğine göre veriniz.

Çok nadir kafein tüketseniz bile, lütfen kafein tüketirseniz sizi nasıl etkileyeceği ile ilgili beklentilerinize göre değerlendirin

Yanıtlarım aşağıdaki işaretli olana dayanmaktadır (lütfen bir tanesini işaretleyin):
☐ Kahve
☐ Alkosüz meşrubatlar
☐ Çay
☐ Kafein içeren ilaçlar (örneğin Excedrin, No-Doz)
☐ Genel olarak kafein
☐ Diğer (lütfen belirtiniz): _____

Maddeler		Çok düşük ihtimal	Düşük ihtimal	Biraz düşük ihtimal	Biraz yüksek ihtimal	Yüksek ihtimal	Çok yüksek ihtimal
1.	Yorgun hissettiğim zaman kafein beni canlandırır.	☐	☐	☐	☐	☐	☐
2.	Kafein tükettiğimde sohbetler daha iyi olur.	☐	☐	☐	☐	☐	☐
3.	Kafein aldıktan sonra kolay strese girerim.	☐	☐	☐	☐	☐	☐
4.	Kafein sportif performansımı arttırır.	☐	☐	☐	☐	☐	☐
5.	Kafein açlık hissimi bastırır.	☐	☐	☐	☐	☐	☐
6.	Kafein beni gerginleştirir.	☐	☐	☐	☐	☐	☐
7.	Kafein aldıktan sonra antrenmanlarım daha iyi geçer.	☐	☐	☐	☐	☐	☐
8.	Kafeinden mahrum kalırsam kafein yoksunluğu çekerim.	☐	☐	☐	☐	☐	☐
9.	Kafein beni asabi hissettirir.	☐	☐	☐	☐	☐	☐
10.	Kafein beni daha atik hissettirir.	☐	☐	☐	☐	☐	☐
11.	Kafein beni daha dost canlısı yapar.	☐	☐	☐	☐	☐	☐
12.	Her gün kafein almaya ihtiyaç duyarım.	☐	☐	☐	☐	☐	☐
13.	Kafein, öğün atlamamı sağlar.	☐	☐	☐	☐	☐	☐
14.	Kafein aldıktan sonra uyumada zorluk çekerim.	☐	☐	☐	☐	☐	☐
15.	Kafeinden mahrum kalırsam baş ağrısı çekerim.	☐	☐	☐	☐	☐	☐
16.	Kafein alıktan sonra daha sosyal hissederim.	☐	☐	☐	☐	☐	☐
17.	Kafein alırsam daha uzun süre egzersiz yapabilirim.	☐	☐	☐	☐	☐	☐
18.	Kafein beni daha enerjik hissettirir.	☐	☐	☐	☐	☐	☐
19.	Kafein iştahımı azaltır.	☐	☐	☐	☐	☐	☐
20.	Geç saatlerde aldığım kafein bana uykusuzluk verir.	☐	☐	☐	☐	☐	☐

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Performance Management of Clubs at 1st and 2nd League of the Disabled Basketball

Turan Sezan[1] Uğur Alemdar[2] Serhat Turan[3]

[1]Mardin Artuklu University, Faculty of Sport Sciences, Mardin-Turkey, https://orcid.org/0000-0003-4322-1703, turansezan@hotmail.com
[2]Sakarya University of Applied Sciences, Faculty of Sport Sciences, Sakarya -Turkey, https://orcid.org/0000-0002-7352-7108, uguralemdar@subu.edu.tr
[3]Balıkesir University, Faculty of Sport Sciences, Balıkesir- Turkey, https://orcid.org/0000-0001-6236-3825, serhat.turan@balikesir.edu.tr

Corresponding Author: turansezan@hotmail.com

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A B S T R A C T

The aim of this study is to investigate the performance management of clubs in the 1st and 2nd League of the disabled basketball. The study group of the consists of 107 volunteer athletes who are active in 11 clubs in the 1st and 2nd leagues of the disabled basketball for the 2023-2024 season. "Performance Management Scale" was used in the research. The personal information form of the research includes demographic characteristics such as sports age, league and athlete age. In the study, IBM SPSS 25 package program was used to analyze the data, and the results were evaluated at $p<0.05$ significance level. Independent samples t test was used for normally distributed data, ANOVA test was used for multiple comparisons was used to determine. In line with the data obtained, no significant difference was found in the variables of sports age, the league of the athletes and the age of the athlete. Looking at the descriptive statistics results, the answers given by the athletes to the questions were positive. As a result, it can be said that examining the performance management of clubs should not be limited to the opinions of athletes only, but other employees within the club should also be included in the performance management evaluation process.

Keywords: Performance Management, Disabled Athlete, Wheelchair Basketball, Sports club

INTRODUCTION

Disability is not a concept that is distant from people. Because every person is a candidate for disability. Disability is defined as the loss of basic characteristics of individuals such as movement, as well as some skills such as communication (Afacan, 2020; Akarsu et al., 2024). Güzel and Kafa (2016) define disability as the impairment of movement, thinking and behavior that restricts the normal life of individuals from birth or as a result of accidents experienced later. Disadvantage is the inequality between individuals and other individuals in their health status due to their disability (Afacan, 2023; Royana et al., 2024). Disadvantage is seen as a factor that disrupts individuals' participation in their social lives and prevents them from building their social structures in common living spaces with other individuals.

Today's world offers a wider area in people's social structures compared to past lives. Due to developing technology and world standards, human communities get into interaction more. This interaction is achieved both through social media tools and through sports, which are the unifying and uniting force of societies. Although sports are a set of movements performed by healthy individuals, it is seen that disabled individuals participate in sports today. It is known that there are legal regulations regarding the participation of disabled individuals in sports and that they are supported by the state.

When Yılmaz and Batu (2016) examined the legal regulations in Türkiye, they found that special education legislation is sufficient to meet the needs of disabled students and protect their rights.

The process of rehabilitation of disabled people through sports activities in the world began on February 1, 1945, when Dr. Guttman gave archery, bowling, billiards and table tennis training to soldiers injured in World War II. Later, these sports were followed by branches such as fencing, javelin, shot put, wheelchair racing, wheelchair slalom racing and weightlifting (Kahvecioğlu, 2019). This research study focuses on the performance management of clubs in the first and second leagues of disabled basketball. Sports enable individuals with disabilities to improve their physical, social and psychological well-being (Erbaş et al., 2021; Martin, 1999; Martin et al., 2020). Wheelchair basketball, one of the sports branches that is the subject of this study, along with other disability sports called "adaptive sports", has only become widely known to the public in the last few decades through television broadcasts and the media (Hardin and Hardin, 2003, Howe, 2008, Howe, 2011, Martin et al., 2018).

The establishment and development of disabled sports in Türkiye took place with the Disabled People's Federation, which was established at the beginning of 1990. Since the word disabled creates a negative perception on individuals and society, and also prevents disabled individuals from participating in society, the federation changed its name to Disabled Sports Federation in 1997. Since the federations carry out their work under the Ministry of Youth and Sports, it is seen that the management task for disabled sports in Türkiye is progressing especially depending on the state (Mumcu, 2018).

It is known that clubs focus on not only sports performance but management performance as well. In terms of sports, clubs evaluate successful results such as winning matches, winning cups, and advancing in the league from a sports perspective. These sporting successes offer importance for the club. Through these successes, clubs provide sustainability in terms of economic performance and management performance. The better the clubs are managed, the easier it will be for them to reach their goals. Because a club with a good management system will also exhibit a sustainable efficiency in terms of performance. No studies on performance management in disabled basketball were found in the literature. This emphasizes the importance of the study in terms of originality. The main purpose of this study is to examine the performance management of disabled clubs in the 1st and 2nd leagues of basketball.

METHOD

Research Model

This research was conducted using the descriptive scanning model, one of the quantitative research methods. According to this model, descriptive research is carried out without any intervention by the researcher in order to have a general perspective on the research topic (Karasar, 2020). In short, the existing situation is observed in its most natural state.

Population and Sample

The population of the study consists of wheelchair basketball team athletes competing in the Turkish 1st and 2nd Leagues. There are 23 teams competing in these leagues. There are 219 registered athletes in the teams in the 1st League, while there are 223 registered athletes in the teams in the 2nd League (WEB-1). In this study, 107 wheelchair basketball players, who actively compete in teams in both leagues, took part. In determining the sample, the stratified sampling method was used. In stratified sampling, the first stage is to divide the population into strata according to a specific criterion (Westfall, 2009). This method is applied by dividing the population into different groups or layers (such as dividing the business into different departments in its own field, dividing the league into different levels). In a population divided into different strata, equal amounts of randomly selected samples are taken from the strata and thus each stratum is equally represented (Walliman, 2006). The stratified sampling model is important because it produces separate results for each stratum and permits the researcher to carry out comparison between strata (Choi et al., 2024; Singh, 2007).

Ethics committee approval for the research was received from Sakarya University of Applied Sciences Rectorate Ethics Committee (11.07.2024-46 /13).

Information on the athletes participating in the study is given in the table below.

Table 1. Demographic Information Participants.

Variables		F	%
Sports Age	1-5 year	29	27,1
	6-10 year	38	35,5
	11-15 year	17	15,9
	16 and over	23	21,5
League	1st League	62	57,9
	2nd League	45	42,1
	Total	107	100,0
Athlete's Age	18-22	15	14,0
	23-27	27	25,2
	28-32	15	14,0
	33-37	7	6,5
	38-42	21	19,6
	43 and over	22	20,6
	Total	107	100,0

It is seen that the participants are mostly in the 6-10 sports age group (35.5%), while the least is in the 11-15 sports age group (15.9%). In the league variable, the number of athletes in the 1st League was determined as 62 (57.9%) and the number of athletes in the 2nd League was determined as 45 (42.1%). Regarding the age of the athletes, it was seen that the most athletes were in the age range of 23-27 (25.2%), while the least number of athletes was in the age range of 33-37 (6.5%).

Data Collecting Tools

The survey form used as a data collection tool consists of two parts. These parts are "Personal Information Form" and "Performance Management Scale".

Performance Management Scale in Sports: The scale was developed by Itai Beeri, Anna Uster & Eran Vigoda-Gadot in 2018 and adapted to Turkish by Demir, Sertbaş, and Sivrikaya (2020). The scale consists of 24 items and 3 sub-dimensions in a 5-point Likert type. These sub-dimensions are strategic planning stage, observation stage and review process, and lesson learning stage. There are no reverse scored items in the scale. Increasing scores received from the sub-dimensions of the scale indicate an increase in the level of engagement with the topic. In the study of adapting the scale to Turkish, Cronbach's Alpha values were found as α = .909 for the overall scale, α = .904 for the strategic planning sub-dimension, α = .864 for the observation stage sub-dimension, and α = .908 for the review process and lesson learning stage sub-dimension. In this study, Cronbach's Alpha values were found as α = .971 for the overall scale, α = .919 for the strategic planning sub-dimension, α = .936 for the observation stage sub-dimension, and α = .946 for the review process and lesson learning stage sub-dimension.

Data Analysis

The data obtained in the study were analyzed with IBM SPSS 25 package program. In the analysis of the data, descriptive statistical methods, namely standard deviation, arithmetic mean and percentage rates, were used. The skewness and kurtosis values of the scales were analyzed and the values are presented in Table 2. Since the skewness and kurtosis values were between -2 and +2, it was assumed that the data showed a normal distribution (George & Mallery, 2003). In order to detect differences in the league variable, independent sample t test, to determine differences in sports age, one-way anova test were performed. The findings were found by taking 95% confidence interval and $p<0.05$ significance level as reference.

Table 2. Kurtosis and Skewness Values Related to Normality Assumption

	N	Skewness	Kurtosis
Strategic Planning	107	-,908	,249
Observation	107	-1,011	,911
Review Process and Learning lessons	107	-1,386	2,000
Performance Management	107	-1,230	1,697

RESULTS

This section includes analyses conducted to determine whether the league and sport age variables make a difference in terms of performance management.

Table 3. Descriptive Statistic Results Regarding the Performance Management Scale

Scale	N	M	SD
Strategic Planning	107	3,51	0,93
Observation	107	3,55	0,86
Review Process and Learning lessons	107	3,66	0,84
Performance Management Average	107	3,59	0,81

According to Table 3. the attitude averages of disabled basketball players towards performance management were evaluated as M=3.51, SD=0.93, for the strategic planning sub-dimension, M=3.55, SD=0.86 for the observation sub-dimension, M=3.66, SD=0.84 for the review process and lesson learning sub-dimension and M=3.59, SD=0.81 for the performance management scale average.

Table 4. Results of the İndependent Sample t Test Conducted to Examine Performance Management and its Sub-Dimensions According to the League Variable

Scale	League	N	Mean	ss	t	p
Strategic Planning	1st League	62	3,60	,80	1,024	,309
	2nd League	45	3,40	1,08		
Observation	1st League	62	3,64	,70	1,141	,258
	2nd League	45	3,44	1,03		
Review Process and Learning lessons	1st League	62	3,77	,60	1,422	,160
	2nd League	45	3,51	1,08		
Performance Management	1st League	62	3,68	,60	1,304	,197
	2nd League	45	3,46	1,02		

As a result of the analysis, it was determined that performance management and its sub-dimensions did not show a significant difference according to the league variable (p>.05)

Table 5. One Way Anova Test Results for Examining Performance Management According to Sports Age Variable

Sport Age		Sum of squares	sd	Mean of Squares	F	p
Strategic Planning	Intergroups	2,557	3	,852	,991	,400
	Intragroups	88,585	103	,860		
	Total	91,142	106			
Observations	Intergroups	1,778	3	,593	,796	,499
	Intragroups	76,702	103	,745		
	Total	78,480	106			
Review Process and Learning lessons	Intergroups	4,387	3	1,462	2,132	,101
	Intragroups	70,658	103	,686		
	Total	75,045	106			
Performance Management	Intergroups	2,845	3	,948	1,466	,228
	Intragroups	66,628	103	,647		
	Total	69,473	106			

As a result of the analysis performed, it was determined that the sports age variable scores did not show a significant difference in terms of performance management perpective and its sub-dimensions (p>.05).

Table 6. One Way Anova Test Results for the Analysis of Performance Management According to the Athlete's Age Variable

Athlete Age		**Sum of Squares**	**sd**	**Mean of Squares**	**F**	**p**
Strategic Planning	Intergroups	3,04	5	,61	,70	,63
	Intragroups	88,11	101	,87		
	Total	91,14	106			
Observation	Intergroups	3,61	5	,72	,97	,44
	Intragroups	74,88	101	,74		
	Total	78,48	106			
Review Process and Learning lessons	Intergroups	2,50	5	,50	,69	,63
	Intragroups	72,55	101	,72		
	Total	75,04	106			
Performance Management	Intergroups	2,51	5	,50	,76	,58
	Intragroups	66,96	101	,66		
	Total	69,47	106			

DISCUSSION AND CONCLUSION

In this study, where the performance management of the clubs in 1st and 2nd leagues of the disabled basketball was investigated, it was determined that it was positive in terms of strategic planning, observation, review process and learning lessons and performance management. The performance management scale was evaluated in terms of age, sports age and the league variables of the athletes. When the literature was examined, no study was found regarding the performance management scale of disabled basketball players.

In the study, no statistically significant difference was found in the analysis results made according to the league variable of the athletes in the strategic planning, observation, review process and learning lessons and performance management sub-dimensions (Table 4). When the literature is examined, it is seen that in a similar study conducted by Demir (2021) on athletes in U15-U19 categories in football clubs, no significant difference was observed in the performance management scale, observation, review process and lesson learning and sub-dimensions, while a significant difference was determined in the strategic planning sub-dimension. It was observed that there was a significant difference between the athletes in U15 category and the athletes in U16 and U19 categories. When the sample group was examined in the study, it was seen that the age groups were between 18 and 43 years old and above. Compared to this study in the literature, it is thought that there will be a difference in the strategic planning skills of athletes depending on their development stages and training processes. Compared to the adult athletes in the study, it can be thought that athletes in the U15 category may have developed their strategic thinking and planning skills at an earlier age or that this age group may have been subjected to a different education and training program.

According to the analysis results made according to the sports age variable, no statistically significant difference was found in the sub-dimensions of strategic planning, observation, review process and learning lessons and performance management (Table 5). In the literature, as a similar study, in Demir's (2022) study on football clubs, no significant difference was found in the performance scale sub-dimension when the duration of athletes playing in the youth team was examined. Such findings reveal that more studies and under different conditions are needed to better understand the effects of age on athletes' performance. Additionally, the lack of significant differences in the subscales may suggest that age may have an impact not only on general performance, but perhaps on specific skills and strategies. In this context, the relationship between age and performance can be examined in more depth.

In the performance management analysis results according to the age variable of the athletes, no significant difference was observed in all sub-dimensions (Table 6). Contrary to the study, Demir (2021) found significant differences in all sub-dimensions in the analyses he conducted according to the age variable of the athletes. In the sub-dimensions of strategic planning, observation and review process and learning lessons, the 13-15 age range was found to be more significant than the 16-18 age range. In the performance management, strategic planning and observation sub-dimensions, the 13-15 age range was found to be more significant than the 16-18 age range. In the

examination process and learning lessons sub-dimension, it was determined that the 15-13 age range was more significant than the 16-18 age range, and the athletes aged 18 and over were more significant than the 16-18 age range. It is thought that the different results in the study were effective because the two studies had different branches and age groups.

As a result of the analyses, no significant differences were found in this study in terms of sports age, the league in which the athletes are and the age of the athletes. When evaluated within the framework of these results, it is thought that the performance management of the clubs will be analyzed better by not only limiting the opinions of the athletes to examine the performance management of the clubs, but also by including other employees within the club in the performance management evaluation process. In this study, which examined the performance management of the clubs in the 1st and 2nd leagues of the disabled basketball, the lack of studies related to disabled athletes in the literature constituted its strength in contributing to the literature; however, it was observed that it also had some limitations. The first limitation is that the study was limited to 11 clubs. The second limitation is that the study findings were compared with findings outside the sample of disabled basketball athletes. As a solution to these limitations, the scope of the study can be expanded, more clubs can be reached and different results can be obtained.

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Metaphorical Perceptions of the Concept of "Game" from the Perspective of Students Studying in the Department of Recreation

Pınar Güzel Gürbüz[1] Ezgi Abay Beşikçi[2] Melike Esentaş Deveci[3]

[1]Manisa Celal Bayar University, Faculty of Sport Sciences, Manisa-Turkey, https://orcid.org/0000-0001-5982-2816, pnrguzel@yahoo.com
[2] Manisa Celal Bayar University, Faculty of Sport Sciences, Manisa-Turkey https://orcid.org/0003-3230-3578, ezgiabay@outlook.com
[3] Manisa Celal Bayar University, Faculty of Sport Sciences, Manisa-Turkey, https://orcid.org/0001-8980-5662 , mel.esentas@gmail.com

*Corresponding Author: ezgiabay@outlook.com

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A B S T R A C T

Play is not just a form of entertainment and leisure activity; it is also one of the most important tools for socialization. Accordingly, the aim of this study is to reveal how students in the recreation department conceptualize their thoughts on "play" through metaphors. The study utilized qualitative research methods and employed a phenomenological design. The study group was selected using purposive sampling and determined through the convenience sampling technique. The study group consists of 32 students aged between 18-34 who are studying in the recreation department. Participants were asked one metaphor question. The findings revealed that the metaphors related to the concept of recreation included categories such as psychological well-being, learning by doing, fun, necessity, teamwork, socialization, time management, communication, and freedom. As a result, the concept of play was perceived by recreation students under various metaphorical categories as a multifaceted phenomenon that provides happiness, emphasizes the sense of pleasure, is considered necessary for making life livable, and is energizing.

Keywords: Game, Metaphor, Qualitative research

INTRODUCTION

Although the texts written throughout history are shaped by the influence of historical and cultural differences, they all state that the game has a history as old as humanity. The studies of archaeologists have also supported this situation and revealed how old games and toys are. It has been scientifically proven that many games known today date back to ancient times (Aral et al., 2000).

From the past to the present, people have brought many events, situations, substances and concepts to life by learning through imitation. Many things that people have done unconsciously or unconsciously by seeing, telling or telling each other with their experiences have led to the beginning of game activities. For example, a person who hunts has taught this hunting method to those who follow him through imitation, and this process has become a game and formed a beginning. Children who imitated hunting turned this activity into a game and passed it from generation to generation and from period to period. This has been a turning point for the games played (Yaşar, 2021).

Play has had an important place throughout history as an integral part of human culture. Man is a social being by nature. It can be said that play is one of the most important tools that enable human socialization. Play assumes important functions not

only for individuals but also for society (Zou et al., 2021). From the individual's point of view, play plays a major role in helping people get to know life, society, the world, things, rules and behaviours, and learn principles and forms that require practice (Koyuncu et al., 2024). This process contributes significantly to the individual becoming a member of society. In terms of society, play supports socialization with functions such as order, harmony, solidarity and division of labour, and contributes to the continuity of society by gaining new members (Soyoof et al., 2024). Play contributes to the development of individuals at both individual and social levels by encouraging their creativity, problem-solving skills and empathy. At the same time, play, combined with physical activity, becomes an important tool that increases the health and welfare level of individuals (Dinç et al., 2019). In today's societies, the continuation of play habits that start in childhood in adulthood has positive effects on physical, mental and emotional health as well as strengthening the social bonds of individuals.

Play is not only an entertainment and leisure activity, but also one of the most important means of socialization. From childhood to adulthood, individuals not only have fun through play, but also develop their social, cognitive and emotional skills (Smith & Jones, 2022). Play enables individuals to gain a place in the community, develop empathy and learn to cooperate within the group. These interactions, which form the basis of social relationships, strengthen individuals' sense of belonging and contribute significantly to the development of communication skills. Group games encourage acting towards common goals and understanding different perspectives, allowing individuals to better understand both their own roles and the contributions of others (Beşikçi et al., 2021).

The history of play, which is generally seen as an entertainment and leisure activity in daily life, is as old as humanity and its function is known to be wide enough to cover individual and social life (Özbey et al., 2018). Historical processes, scientific research and individual observations clearly show that play is a necessity of human nature (Koral & Alptekin, 2023). What changes over time is how and what is played with; games and toys have always existed. For this reason, one of the answers given to the question of what human beings are is that human beings are "Homo Ludens" (Playing Human). In other words, play is not only an individual and conscious choice, but also the result of a natural need. It contributes to the socialization of man, who is a social being, and the acquisition of an objective dimension to this sociality (Vatandas, 2020).

Play has had an important place in the lives of individuals since the beginning of human history. It is one of the indispensable moments for everyone from children to adults. Individuals of all ages turn to play from time to time to meet their different expectations. Even though it is played by adults, play is generally associated with children. To define it simply, play is an activity to get pleasure, to be happy and to utilise free time. In this direction, the aim of the research is to reveal how students studying in the department of recreation conceptualize their thoughts about "play" through metaphors.

METHOD

Research Model

In this qualitative research, it was aimed to examine how students studying in the Department of Recreation conceptualize their thoughts about "play" through metaphors from the perspective of students studying in the Department of Recreation. In the research, qualitative research method was used and phenomenology-phenomonology design was used (Fraenkel & Wallen, 2012; Leedy & Ormrod, 2015). This approach was adopted because the common points of the events subject to the research were tried to be defined, understood and described in depth.

Study Group

The study group of the current research was selected by purposive sampling method. In this direction, the study group of the research was determined by 'convenience sampling' technique within the framework of purposeful sampling method. The study group of the research consists of 32 people studying at Manisa Celal Bayar University, Faculty of Sports Sciences, Department of Recreation.

Data Collection Tools

In the study, a demographic information form regarding personal information (gender, age, grade, etc.) and a semi-structured metaphor form prepared by the researcher were used as data collection tools.

The metaphor question posed to the participants;

1. If you were to liken the concept of game to an animate or inanimate object, what would you liken it to?

The game is like ..... Because;..... Complete the sentence.

Example; The game is like a bird chirping for me. Because it relaxes and rests me. I am very happy

when I play games, I feel peaceful. I get rid of all the tiredness of the day I live, it gives me joy. I socialize when I play games.

Data Analysis

Descriptive and content analyses were used in the study. In the research, descriptive analysis was used to examine and compare the themes by creating codes from the data obtained through semi-structured interview questions determined by the researcher. Since new themes were obtained from the answers given by the participants participating in the research, content analysis was used.

In order to ensure the confidentiality of the participants during the analysis process, the participants were coded as "T1, T2, T3....T32" instead of their real names. In the analysis of the data, the data were coded and themes were found in the first stage by 3 academicians who are experts in the field and qualitative research. After the analyses, the codes and themes were modelled and the stage of defining and interpreting the findings was started.

Validity-Reliability

In order to ensure the internal validity of the research, the participants were interacted with during the data collection process. At the end of the interviews, the data were shown to the experts. In order to avoid inaccuracies and deficiencies, they were checked and participant confirmation was obtained. Sample selection was made for the purpose, care was taken in the data collection process, the processes and results of the research were described in detail and external validity was ensured.

RESULTS

Findings related to the personal information of the participants;

Some information about the participants who participated in the study is given below. The study group of the research consists of a total of 32 participants, 11 female and 21 male. It is seen that the participants, whose age range is 18-24, are studying in the 1st, 2nd, 3rd, and 4th grades of the recreation department. In the personal information form, it was seen that 81,25% of the participants answered yes and 18,75% of the participants answered partially in the answers to the question "Do you like to play games?".

Figure 1. Findings related to the game phenomenon;

As a result of the analysis of the data obtained, in Figure 1, psychological well-being (P3, P6, P7, P9, P13, P15, P17, P19, P20, P23, P24, P27, P29), learning by doing (P1, P2, P19, P32), The codes of fun (P4), need (P5, P8, P11, P12, P21, P30), teamwork (P10), socialisation (P14), time management (P16, P25, P28, P31), communication (P18) and freedom (P22, P26) were found.

Participants were asked * Game ..... It's like. Because .....?'' Some of the participant opinions regarding the codes obtained from the participants regarding the question "Complete the sentence" and indicated in Figure 1 are given below. P3: Play is like energy. Because being energetic while playing a game makes it possible to pass the time in a better quality and enjoy the game more.

P4: Play is like a child. Because having fun is in the child's nature.

P6: Play is like happiness. Because every minute I play gives me pleasure and makes me very happy.
P10: The game is like a source of entertainment with a group for me. Because there is nothing better than having fun with my friends collectively.
P11: Play is like sleep. Because it is a need.

P14: Play is like a newborn baby for me. Because I have 8-month-old twins and every time I see them, I relieve my stress with the games we play and socialise through games. Seeing them happy makes me peaceful.

P18: Play is like learning. Because it expresses communication.

P26: Play is like a bird. Because I am free like birds.

DISCUSSION AND CONCLUSION

In the study conducted to analyse the perceptions of university students about the concept of 'game', it was revealed that university students created different metaphors for the concept of game. When the categories of the metaphors created for the concept of game are examined, it is seen that psychological well-being, learning by doing, entertainment, need, teamwork, socialisation, time management, communication and freedom.

Çakaroğlu & Ömür (2020), in their study conducted with 141 people to examine the metaphors related to the concept of play, concluded that play is a need. Çakmak et al. (2015) stated that play is as important a need as sleep and nutrition. Koç (2020) examined the metaphorical perceptions of university students towards the concept of physical education and concluded that physical education is a need like eating and drinking to maintain a healthy life and directs people to recreational activities through competitions and games.

As a result of the metaphor study conducted by Tok (2018), metaphors such as the game having a relaxing feature, giving happiness, reflecting life and being a need overlap with the findings obtained from this study. Therefore, it is possible to say that play is an important need in life for children and adults. Özdemir & Ramazan (2012) emphasised in their study that play is a means of entertainment for children and adults. Pilten & Pilten (2013) state that individuals consider entertainment as the main criterion when deciding whether an activity is a game or not. Roset et al. (2019), in a study investigating the effects of games on young people, concluded that it helps individuals to create a free environment and to improve themselves by getting rid of the usual flow of life and contributes to social development. Yılmaz et al. (2017), in a study on physical education course, concluded that the game helps individuals' physical development, increase their mental abilities and socialise.

It can be said that the results of these studies are similar to the findings of the current study. It has been concluded that individuals who play sports and games are psychologically relaxed, happier, their adaptation to life increases and they get away from stress (Sharma et al., 2009; Zuckerman et al., 2020). Çakaroğlu & Ömür (2020) concluded that the game is an important learning tool in the lives of individuals as a result of evaluating the meanings they attributed to the game.

Tuğrul (2012) states that the game is both a natural and structured learning environment that offers rich learning opportunities to individuals. Groos's (1901) acquisition of skills and knowledge seen as preparation for adult life also overlaps with Bandura's (1986) Social Learning Theory and Vygotsky's (1967) Socio-Cultural Development Theory. In this direction, it is possible to say that the game is an important learning tool in the lives of individuals. Savaş et al. (2021) stated that the innovations, methods and techniques, and tools brought by the game learning approach not only fulfil functions such as attracting attention, motivation, effective and permanent learning for the new generation, but also support skills such as learning by doing and teamwork. Kıran et al. (2019), in their study investigating the time management skills of university students according to their activity status, found that doing physical activity positively affects time management skills. Arıcan (2021), in his study examining the metaphorical perceptions of university students towards the concepts of game and physical activity, concluded that the game is mostly perceived as a means of education and training, a way of expressing emotions and a source of need. This perception shows how important the game is in terms of both individual development and social interaction and communication. In addition, it is possible to say that the communication skills gained through games benefit individuals in the process of establishing social relationships (Selçuk & Akdağ, 2020).

Within the scope of the research, data were collected in 9 conceptual categories with 32 different metaphors. As a result, the concept of play was perceived by the students of the recreation department under various metaphorical categories as a phenomenon that provides happiness to the individual, is versatile, brings the sense of pleasure to the fore, is thought to be necessary to make life livable and energising.

It is seen that the metaphors obtained overlap with game theories. As seen in this research, it can be said that the concept of game is an important factor. In order to better understand the concept of game, it is recommended to take the results of evaluation in applied activities. In addition, it is recommended to expand the study group and to carry out metaphorical studies on the concept of game with recreation department students in different universities.

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An Investigation of Perfectionism and Mental Toughness in Athletes

Ebru Kurtulgel[1] Fatma Çepikkurt[2]

[1]Mersin University, Faculty of Sport Sciences, Mersin-Turkey, ebrukurtulgel@hotmail.com https://orcid.org/0000-0001-8422-1377
[2]Mersin University, Faculty of Sport Sciences, Mersin-Turkey https://orcid.org/0000-0002-9096-2873 fcepikkurt@hotmail.com

*Corresponding Author: fcepikkurt@hotmail.com,

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A B S T R A C T

This study was conducted to examine the relationship between perfectionism and mental toughness in track and field athletes. A total of 280 track and fieldathletes participated in this study as voluntarily, 105 female and 175 male. "Sport Multidimensional Perfectionism Scale", "Sport Mental Toughness Questionnaire" and, Personal Information were used as data collection tools. Descriptive statistics, t-test, Pearson Correlation Analysis and canonical correlation analysis were applied in the analysis of the data. The results revealed that, male and female athletes did not differ between perfectionism and mental toughness scores. Further, it also shows that the perfectionism and mental toughness scores of track and field athletes do not differ according to their branch categories and injury status. But, according the nationality of athletes, there was a significant difference in favor of national track and field athletes in the personal sub-dimension of perfectionism and in the control sub-dimension of mental toughness. It was concluded as a result of the canonical correlation analysis conducted to determine whether there is a relationship between the perfectionism and mental toughness scores of track and field athletes which is the main problem of this study that, there was a significant relationship between the perfectionism and mental toughness scores of track and field athletes. In conclusion, considering the findings obtained in the study, it can be said that male and female track and field athletes reflect similar perfectionism characteristics and, their mental toughness are similar. National track and field athletes can be defined as mentally overcontrolled track and field athletes having high personal standards. It can also be said that track and field athletes with positive perfectionism tendencies have high mental toughness but, track and field athletes with negative perfectionism tendencies have less mental toughness.

Keywords: Perfectionism, Mental Toughness, Track and Field Athletes, Canonic Correlation.

INTRODUCTION

The intense physical and psychological effort required by athletes to achieve and maintain success in their sports are understood to affect their performance. Concepts such as effective coping in dealing with increasing pressure and expectations, being psychologically connected and strong, concentration/focus, and a solid character are associated with mental toughness for both athletes and trainers (Connaughton, Wadey, Hanton, & Jones, 2008; Crust, 2008; Crust et al., 2014; Gucciardi, Hanton, & Mallett, 2012). Mental toughness is a construct affecting people's evaluations of and attitudes towards events and the feelings they experience concerning those events, while also directing their associated efforts and behaviors (Gucciardi & Gordon, 2009). It is defined as the ability to struggle against or resist failure (Dennis, 1981; Goldberg, 1998; Taylor, 1989), to persist, be determined/undeterred, or refuse to quit (Dennis, 1981; Goldberg, 1998). Mental toughness is also defined as the ability to recover from adverse events, such as setbacks, conflict, increased

responsibility, or failure, and a positive psychological capacity that must be developed in order for an individual to recover (Luthans, 2002). It is furthermore considered a psychological structure that helps people to cope with stress, behave appropriately, maintain concentration under pressure, and be less sensitive to stressful situations (Jones, 2002). Individuals with mental toughness are more disciplined, self-confident, and flexible, and do not give up on their goals when they encounter difficulties (Middleton et al., 2004; Crust et al., 2014).

Jones, Hanton, and Connaughton (2002), who conducted studies on mental toughness in sports, noted that athletes possessing mental toughness shared a number of characteristics. Mentally tough athletes strongly believe that their individual goals are achievable, are more determined to overcome obstacles to success, and have greater self-confidence, believing themselves to possess greater abilities compared to their competitors. They exhibited a greater desire to be successful, could focus in the face of distractions, and continue concentrating even under circumstances in which they had no control. The mentally tough athletes participating in that study also stated that during competition they were able to maintain control, overcome emotional and physical pain, and cope by accepting the anxiety of competition, without letting the stress negatively affect their performance (Jones et al., 2002).

The findings of numerous studies in the field of sports psychology have identified mental toughness as a factor that improves athletic performance (Slimani, Miarka, Cheour, 2016; Cowden, 2016; Meggs, Chen & Koehn, 2019). In addition, it is also associated with increased physiological endurance (Crust and Clough, 2005), increased training time and efficiency (Ducworth & Quinn, 2009), and more appropriate reaction to negative feedback (Clough, Earle, & Sewell, 2002). Mental toughness also facilitates endurance in uncertain situations (Gümüşoğlu & Aşçı, 2020) and has the potential to indirectly affect performance.

In studies on mental toughness in sports, it has been negatively related to stress (Cowden et al. 2016) and burnout (Kurtulget, Kaplan, & Çepikkurt, 2018), while being positively correlated with coping with stress and pressure (Swann et al.2016; Ekmekçi & Miçooğulları, 2018), self-efficacy (Yıldız, 2017; Nicholls et al.2011), and self-confidence in athletics (Başer, 2019). One of the personality traits known to be associated with mental toughness is perfectionism, which reflects an individual's effort to achieve flawlessness and the tendency to set very high performance standards while being highly self-critical in evaluating one's own behaviors and performance (Flett & Hewitt, 2002). In other words, perfectionism emerges when the desire to set and reach high personal performance standards takes on an unhealthy form. (Çepikkurt, 2011). The theories of Hamachek (1978) provide the basis for studies on perfectionism. He argued that there are two types of perfectionism, positive (adaptive) and negative (maladaptive). While Hamachek (1978) explained positive perfectionism as the characteristics that contribute to a deep sense of satisfaction in the individual, he defined negative perfectionism as the characteristics that do not allow the individual to enjoy their own (high level) performance or make the necessary effort to experience this pleasure. Adaptive perfectionism expresses thoughts and behaviors oriented towards achieving high-level goals necessary to achieve positive results and is guided by positive empowerment and desire for success. Maladaptive perfectionism refers to thoughts and behaviors directed towards achieving certain high-level goals in order to avoid negative consequences and is guided by negative empowerment and fear of failure (Slade & Owens, 1998). In sports, some researchers see perfectionism as the ability to achieve high performance (Gould, Dieffenbach, & Moffett, 2002). In this context, being mentally tougher and having higher standards than one's opponent may be crucial in maintaining an optimal psychological state and thus improving one's chances for success (Cadenas et al., 2016).

Although numerous studies have been conducted on perfectionism and mental toughness, both of which are important topics in sports psychology, have been studied separately, there are relatively few studies examining the relationship between these two variables. In a study examining mental toughness and perfectionism, a positive relationship was found between positive perfectionism and mental toughness, and a negative relationship between negative perfectionism and mental toughness (Cadenas et al., 2016). Klibert et al. (2014) reported a negative relationship between socially imposed perfectionism and mental toughness in students. Sindik, Nazor, and Vokosav (2011) found a positive relationship between the personal standards subscale, a dimension of positive perfectionism, and mental toughness. In their study on the relationship between perfectionism and mental toughness in Iranian taekwondo athletes, Mohebi and Zarei (2016) observed a negative relationship between mental toughness and dealing with errors, perceived family pressure, and perceived trainer pressure, while reporting a significant positive relationship between personal standards and mental toughness. In other words, the maladaptive dimensions of perfectionism negatively affected mental toughness (Mohebi & Zarei, 2016). Cowden et al. (2019) concluded that mental toughness is a personality trait that facilitates meeting high standards and supports performance excellence and success (Cowden, Crust, Jackman, & Duckett, 2019).

As in the above mentioned research (for example, Cadenas et al., 2016; Klibert et al., 2014; Sindik, Nazor, and Vokosav, 2011; Mohebi and Zarei, 2016; Cowden et al., 2019) related to this topic suggests the importance of examining how perfectionism, understood to be a critical component in achieving a

high level of athletic performance, may be related to mental toughness, and of revealing the relationship between these two psychological factors.

The main purpose of the present study was to evaluate the relationship between perfectionism mental toughness in the participating athletes. The secondary objective was to determine whether the athletes' perfectionism and mental toughness scores differed with respect to different demographic characteristics such as gender, national status (membership in the Turkish national team or not), and age.

METHOD

Research Model

This study was conducted using a relational scanning model, a type of descriptive method, to assess the relationship between perfectionism and mental toughness. We also employed cross-sectional scanning methods aimed at determining whether athletes' perfectionism and mental toughness scores exhibited significant differences in terms of variables such as gender and national status.

Study Group

In this study, a purposive sampling method was used to make the most effective use of limited sample resources and to identify information-rich cases (Patton, 2002). With this method, individuals or groups of individuals who are particularly knowledgeable about a phenomenon or have experience with this phenomenon are selected and identified (Cresswell & Plano Clark, 2011). In this context, the study sample group consisted of athletes aged 18 and above who participated in the Turkish championships in 2019 in the sprint, middle-distance, and long-distance events and included 105 women ($\bar{X}$age = 20.89 ± 2:33) and 175 men ($\bar{X}$age = 21:22 ± 3:38) for a total of 280 subjects. While the mean number of years that the female athletes had participated in sports was 8.30 ± 3.15, the average for the male athletes was 7.86 ± 3.54. The number of hours per week that the athletes trained averaged 16.00 ± 6.78 for females and 16.40 ± 6.38 for males.

Table 1. Demographic Characteristics of the Study Participants

Gender	n	$\bar{X}_{age}$	$\bar{X}_{sport\ years}$	Duration of Weekly Training (hours)
Female	105	20.89	8.30	16.00
Male	175	21.22	7.86	16.40
Total	280	21.10	8.03	16.25

Data Collection Tools

Information concerning the measurement tools used for data collection is presented below.

The Sport Multidimensional Perfectionism Scale (Sport-MPS), developed by Dunn et al. (2002), consists of 30 items and four subscales (personal standards, excessive concern over mistakes, perceived family pressure, and perceived trainer pressure).

The validity and reliability study of the scale for Turkish athletes was conducted by Çepikkurt (2011), whose factor analysis determined that 19 items and 3 subscales explained 46.2% of the total variance.

The perceived trainer pressure subscale was revealed not to be a determinant in the population of Turkish athletes studied. The values calculated for Cronbach's alpha were .76 for the personal standards and excessive concern over mistakes and subscales and .77 for perceived family pressure. For the sample group in the present study, the internal consistency coefficients calculated for Cronbach's alpha were.72 for the excessive concern over errors subscale, .62 for personal standards, and .70 for perceived family pressure. These values obtained show that the The Sport Multidimensional Perfectionism Scale is sufficient for reliability level (Kayış, 2009).

The Sports Mental Toughness Questionnaire (SMTQ), developed by Sheard, Golby, and Van Wersch (2009) to determine the sports-specific mental toughness of athletes, is comprised of 14 items and 3 subscales: confidence, constancy, and control. The adaptation for Turkish athletes was performed by Altıntaş and Koruç (2015), who calculated reliability coefficients of .84, .79, and .51 for confidence, control, and constancy, respectively. In the present study, the internal consistency coefficients were .62, .52, and .58 for confidence, control, and constancy, respectively.

The Cronbach's alpha value calculated for overall mental toughness was .68. These values obtained seem to be compatible with the values obtained by Altıntaş and Koruç (2015)'s and the reliability level of the scale is accepted to be sufficient (Kayış, 2009).

Personal information form developed by the researchers were used to collect identifying information about participants.

Data Analysis

First, skewness and kurtosis values were examined in order to determine whether the participating athletes' perfectionism and mental toughness scores exhibited normal distribution. The t-test was used to evaluate whether the participants' mental toughness and perfectionist tendencies differed according to gender and national status. Canonical correlation analysis was performed to reveal the relationship between the athletes' perfectionism and mental toughness scores.

Canonical correlation analysis: Canonical correlation analysis is a technique used to examine the relationships between two sets of variables, each of which is comprised of at least two values, usually with one of the variable sets defined as the explanatory variable (or independent variable set), while the other set is considered dependent. However, the variable sets need not be defined in this manner. In this type of analysis, the objective is maximum correlation between variable sets; for this purpose, new (canonical) variable pairs are obtained from linear combinations of variables in both sets (Kalaycı, 2009).

In order to apply canonical correlation analysis to research data, the following criteria must be met:

1. The data points under consideration must exhibit normal distribution.

2. There should be no measurement errors with respect to the characteristics being examined.

3. Among the variables considered, no multicollinearity should be observed.

4. To ensure the reliability of the results obtained, the sample size should be as large as possible (exceeding the number of variables by a factor of at least 20).

RESULTS

We conducted tests to determine whether the mental toughness and perfectionism scores of the athletes participating in the study differed according to such variables as gender and national status. In addition, we examined the relationship between perfectionist personality traits and mental toughness, the main issue addressed by this study.

Table 2. Descriptive Statistics of the Participants' Scale Scores and Normality Test Results

SCALE / Subscale	n	Min	Max	$\bar{X}$	SD	Skewness	Kurtosis
Perfectionism							
Personal Standards	280	1,83	5,00	3.70	.734	-.146	-.726
Excessive Concern over Mistakes	280	1,00	5,00	2.84	.833	.063	-.451
Perceived Family Pressure	280	1,00	5,00	2.98	.848	.026	-.411
Mental Toughness							
Confidence	280	1,50	4,00	3.08	.503	-.378	-.056
Control	280	1,00	4,00	2.46	.614	-.164	-.477
Constancy	280	1,50	4,00	3.17	.576	-.388	-.577
Overall Mental Toughness	280	1,86	4,00	2.93	.391	.153	-.263

The participants' average subscale scores for the Sport Multidimensional Perfectionism Scale presented in Table 2 revealed a higher mean score for personal standards, considered a characteristic of adaptive perfectionism, than for excessive concern over mistakes and perceived family pressure, which are both considered characteristics of maladaptive perfectionism.

Regarding the subscale scores from the Sports Mental Toughness Inventory, the mean score for constancy was higher than those for confidence and control.

Taking into account the criteria that skewness values should fall between +1 and -1 and kurtosis values between +2 and -2 (Huck, 2008), skewness and kurtosis values indicated that the data for all subscales exhibited normal distribution, so parametric analysis methods could be used to analyze the data.

The t-test for independent groups was used to calculate whether the subscale scores of the Sport Multidimensional Perfectionism Scale differed in terms of gender.

Table 3. T-Test Results Comparing Subscale Scores for the Sport Multidimensional Perfectionism Scale and Sports Mental Toughness Questionnaire According to Gender

SCALE / Subscale	Gender	n	$\bar{X}$	SD	t	*p*
PERFECTIONISM						
Personal Standards	Female	105	3.70	.74	.059	.953
	Male	175	3.70	.74		
Excessive Concern over Mistakes	Female	105	2.75	.88	-1.311	.191
	Male	175	2.89	.80		
Perceived Family Pressure	Female	105	2.93	.79	-.691	.490
	Male	175	3.01	.88		
MENTAL TOUGHNESS						
Confidence	Female	105	3.06	-.53	.608	.544
	Male	175	3.10	.49		
Control	Female	105	2.52	.69	1.237	.217
	Male	175	2.43	.57		
Constancy	Female	105	3.21	.63	1.011	.313
	Male	175	3.14	.55		
Overall Mental Toughness	Female	105	2.95	.55	.645	.520
	Male	175	2.92	.34		

$p > .05$

As shown in Table 3, there were no statistically significant differences in terms of gender in the mean scores for the subscales of the Sport Multidimensional Perfectionism Scale and Sports Mental Toughness Questionnaire ($p > .05$). These findings can be interpreted as indicating similar levels of perfectionist tendencies and mental toughness among the participating female and male athletes. The athletes participating in this study also received higher average scores for personal standards, a positive (adaptive) dimension of perfectionism, than for the other subscales representing maladaptive traits. As for mental toughness, the participating athletes scored highest for constancy and lowest for control.

T-test analysis was conducted to determine whether the perfectionism and mental endurance scores of the athletes participating in the study differed according to their national status (whether competing internationally as a member of the Turkish national team or not); the results are presented in Table 4.

Table 4. Results of the t-test Comparing Perfectionism and Mental Toughness Subscale Scores According to National Status

Subscales	National status	n	$\bar{X}$	SD	t	*p*
Personal Standards	Yes	133	3.81	.712	2.384	.018*
	No	147	3.60	.741		
Excessive Concern Over Mistakes	Yes	133	2.77	.863	-1.401	.162
	No	147	2.90	.802		
Perceived Family Pressure	Yes	133	2.95	.868	-.486	.627
	No	147	3.00	.831		
Confidence	Yes	133	3.11	.514	.722	.471
	No	147	3.06	.493		
Control	Yes	133	2.55	.588	2.381	.018*
	No	147	2.38	.628		
Constancy	Yes	133	3.18	.586	.330	.741
	No	147	3.16	.568		
Overall Mental Toughness	Yes	133	2.97	.409	1.602	.110
	No	147	2.89	.372		

* $p < .05$

As indicated by the findings presented in Table 4, in terms of national status, those athletes on the national team scored significantly higher not only on the personal standards subscale of perfectionism (t = 2.384, $p < .05$) but also on the control subscale of mental toughness with respect to athletic pursuits.

The relationship between the participants' perfectionism scores and mental toughness scores was examined using canonical correlation analysis.

Accordingly, the subscales of the Sport Multidimensional Perfectionism Scale were determined to be the independent variable set (Set 1), consisting of excessive concern over mistakes (X1), perceived family pressure (X2), and personal standards (X3). The subscales of the Sports Mental Toughness Questionnaire were designated as dependent variables and named Set 2. The variables comprising the latter were confidence (Y1), control (Y2), and constancy (Y3).

The number of observations in the data sets exceeded the total number of variables by a factor of more than 20 (6 variables; n = 280). After ascertaining that the relationship between the variable sets was linear and that the data were normally distributed (see Table 2), it was determined that the first conditions for canonical correlation analysis had been met. In order to evaluate multicollinearity between variables, the remaining condition for canonical correlation analysis, we examined correlations between the variables of Set 1 and Set 2. The results of the Pearson correlation analysis are presented in Tables 5 and 6.

Table 5. Correlation Analysis Results for Perfectionism Variables

Variables	X1 (ECo/M)	X2 (PFP)	X3 (PS)
X1 (Concern Over Mistakes)	1		
X2 (Perceived Family Pressure)	.44	1	
X3 (Personal Standards)	.16	.28	1

COM: Concern Over Mistakes; PFP: Perceived Family Pressure; PS: Personal Standards

Table 6. Correlation Analysis Results for Mental Toughness Variables

Variables	Y1 (Confidence)	Y2 (Control)	Y3 (Constancy)
Y1 (Confidence)	1		
Y2 (Control)	.17	1	
Y3 (Constancy)	.33	.21	1

Regarding the results of the correlation analyses presented in Tables 5 and 6, as the correlation values between the variables were all below .70 and no multicollinearity between variables was observed, the data set was considered suitable for canonical correlation analysis.

The relationship between the dependent variables (Set 2) and independent variables (Set 1) is presented in Table 7.

Table 7. Correlation Results Between Perfectionism (Set 1) and Mental Toughness (Set 2)

Variables	Y1 (Confidence)	Y2 (Control)	Y3 (Constancy)
X1 (Concern Over Mistakes)	-.04	-.22**	-.25**
X2 (Perceived Family Pressure)	-.06	-.17**	-.09
X3 (Personal Standards)	.33**	-.04	.36**

** $p < .001$

As indicated by the correlation coefficients between the first and second canonical sets shown in Table 7, negative relationships were observed between "excessive concern over mistakes" and "control" (r = -.22) and the former and "constancy" (r = -.25), as well as between "perceived family pressure" and "control" (r = -.17). However, there was a weak positive relationship between "personal standards" and "trust" (r = .33) and between the former and "constancy" (r = .36).

The results of the canonical correlation analysis examining the relationships between the independent variables (perfectionism) and dependent variables (mental toughness), including the canonical coefficients, Wilks' lambda, R_c^2 values, and degrees of freedom, are presented in Table 8. As there was an equal number of variables (3) in both sets of variables, three canonical variables and three canonical correlation coefficients were obtained.

Table 8. Canonical Correlations and Significance

Canonical Correlation Coefficient (R_c)	R_c^2	Eigenvalue	Wilks' Lamda	F	SD	*p*
1	.52	.30	.37	.68	12.902	9	.000*
2	.26	.07	.07	.96	5.459	4	.000*
3	.10	.01	.01	.99	2.775	1	.097

* $p < .05$

In order to correctly interpret the results of canonical correlation analysis, canonical functions must be statistically significant (Tabachnick & Fidell, 2007). As can be seen in Table 8, the first and second canonical correlation coefficients were both statistically significant, with values of r = .52 (Wilks' λ = .677; R_c^2 = .30; p < .05) and r = .26 (Wilks' λ = .925; R_c^2 = .07; p < .05), respectively. The square of the canonical correlation coefficient (R_c^2) given in Table 8 indicates the explained shared variance between the dependent and the independent variable. The R_c^2 value given in Table 8 for the first canonical set showed a correlation of .30 (explaining 30% of the shared variance), while that of the second canonical set was only .07 (explaining 7% of the shared variance).

Further correlation analysis conducted for this study included the calculation of the standardized and canonical correlations for the raw values of each variable, the results of which are shown in Table 9.

Table 9. Canonical Correlation Coefficients for Standardized and Raw Values of Perfectionism (Set 1) and Mental Toughness (Set 2) Variables

	Standardized Canonical Correlations			**Canonical Correlations for Raw Values**		
	1	2	3	1	2	3
X1 (Concern Over Mistakes)	-,44	,85	,57	-,53	1,02	,69
X2 (Perceived Family Pressure)	-,24	,00	-1,12	-,28	,00	-1,32
X3 (Personal Standards)	,96	,41	,05	1,30	,56	,07
Y1 (Confidence)	,41	,65	,74	,81	1,30	1,47
Y2 (Control)	-,06	-,84	,60	-,09	-1,36	,97
Y3 (Constancy)	,80	-,31	-,65	1,39	-,53	-1,12

The loadings on canonical variables yielded by the perfectionism and mental resilience variables are presented in Table 10.

Table 10. Loadings on Canonical Functions Yielded by Set 1 and Set 2 Variables

	1st Canonical Function		**2nd Canonical Function**	
	Canonical loadings	**Cross-loadings**	**Canonical loadings**	**Cross-loadings**
X1 (Excessive Concern over Mistakes)	-.40	-.21	.91	.23
X2 (Perceived Family Pressure)	-.17	-.09	.49	.13
X3 (Personal Standards)	.82	.43	.54	.14
Y1 (Confidence)	.66	.34	.41	.10
Y2 (Control)	.18	.09	-.79	-.20
Y3 (Constancy)	.92	.48	-.26	-.07

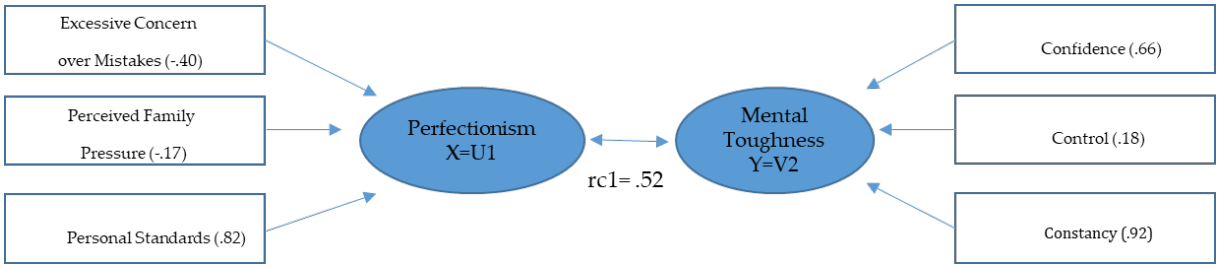
The findings shown in Table 10 represent the canonical loadings and cross-loadings on canonical functions yielded by the variables in each set. The value of .30 was accepted as the criterion in interpreting the loadings imposed by the variables on canonical functions.

Correlations and loadings exceeding a value of 0.30 between variables and loadings are considered meaningful and interpretable. Cross-loadings, on the other hand, indicate the extent to which independent variables explain the canonical variable consisting of dependent variables (Tabachnick & Fidell, 2007).

Examination of the canonical loadings reveals that the variables "excessive concern over mistakes" (r = .- 40) and "personal standards" (r = .82) from the first canonical function and "confidence" (r = .66) in SET 2) and "constancy" (r = .92) from the second yielded significant loading to the first canonical function. Similarly, when the second canonical function is examined, all of the variables in Set 1 are shown to yield significant loading, while among the variables in Set 2, only "control" and "constancy" variables yielded negative but significant loading to the second canonical function.

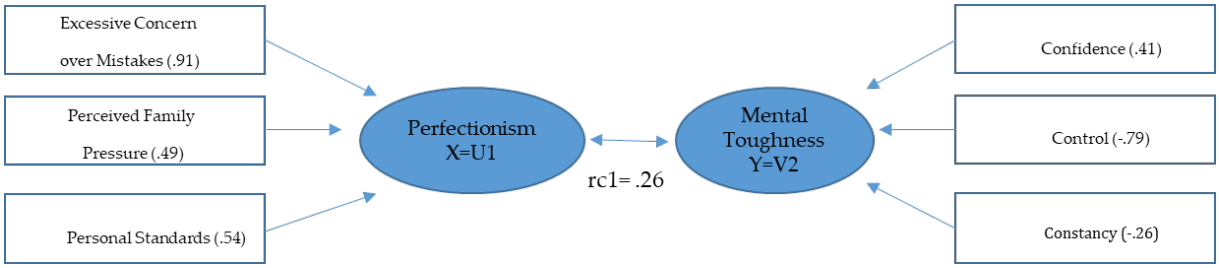
The structural coefficients related to the first canonical function and the canonical correlation coefficients between the perfectionism and mental toughness data sets related to this function are presented in Figure 1.

Figure 1. Canonical Variable Pairs Derived from the Relationships Between Perfectionism and Mental Toughness Data Sets in the First Canonical Function



The structural coefficients related to the second canonical function and the canonical correlation coefficients between the perfectionism and mental toughness data sets related to this function are presented in Figure 2.

Figure 2. Canonical Variable Pairs Derived from the Relationships Between Perfectionism and Mental Toughness Data Sets in the Second Canonical Function



As shown in Figure 1, in the first canonical function, the relationship between perfectionism and mental toughness (as represented by r_c1) was .52, with the personal standards variable contributing the most to perfectionism (.82) and constancy the most to mental toughness (.92). According to the results presented in Figure 2, in the second canonical function, the relationship between perfectionism and mental toughness (again represented by r_c1) was .26 and the main contributing factor to perfectionism was excessive concern over mistakes (.91), while the influential dimension in mental toughness was control (-.79), although the effect was negative.

DISCUSSION AND CONCLUSION

The main objective of this study was to examine the relationship between perfectionism and mental toughness in athletes. As a secondary objective, we aimed to determine whether the participating athletes' perfectionism and mental toughness scores differed according to gender and national status.

The results of the t-test, conducted with a view to the secondary objective, revealed that perfectionism scores did not significantly differ in terms of gender (see Table 3). The female and male athletes exhibited similar levels of perfectionism, set similarly high performance goals, and were similarly self-critical regarding their performance, enabling them to strike a balance in having high but achievable expectations. In fact, it is very beneficial for athletes, whether female or male, to set high personal standards for their performance and individual development. However, in the event that they do not achieve these standards, they may engage in harsh and ruthless self-criticism. Such negative self-criticism compromises athletic performance and impedes the ability to focus (Flett & Hewitt, 2005). The male and female athletes participating in this study were observed to maintain high personal standards, but their scores for excessive concern over mistakes and perceived family pressure, both of which reflect negative perfectionism tendencies, were low. This finding can be interpreted as a beneficial use of perfectionism on the part of the male and female athletes in our study.

The similar levels of perfectionism exhibited by the female and male athletes in the present study are consistent with some previous findings reported in the literature while contradicting others. Çepikkurt and Yazgan (2012) found that males scored higher than females in the perfectionism subscales of excessive concern with mistakes and perceived family pressure, interpreting this result as indicating that males would show more perfectionist tendencies in sports. In a study by Gözmen and Aşçı (2016) examining the role of perfectionism and personality traits in predicting optimal performance, no significant difference in the perfectionism levels of female and male athletes was observed. Similar

perfectionism scores were reported for male and female athletes by Gotwals, Dunn, and Wayment (2003), who evaluated college athletes, and by Mouratidis and Michou (2011) in their study with young athletes. Anshel et al. (2009) emphasized that women and men engaged in similar levels of self-criticism.

The present study also found that mental toughness scores did not differ with respect to gender and that both female and male athletes show similar characteristics when faced with challenges. Both male and female athletes who have reached a certain level have similarly focused thinking in coping with unexpected environmental conditions and physical and/or psychological fatigue. In situations where failure occurs, they also employ similar coping methods and mental strategies, share similar training and competition conditions, and exhibit comparable levels of mental toughness. Hammer (2012) explained the lack of any significant difference between the mental toughness scores of male and female athletes by their sharing similar athletic experiences. In studies by Crust (2009), Maraşlı (2018), and Dede (2019), no statistically significant difference was found in the mental toughness subscales in terms of gender. However, there have been studies reporting significant differences in mental toughness with regard to gender. For example, studies conducted by Masum (2014), Akılveren (2017), Orhan (2018), and Juan and Lopez (2015) all found that mental toughness scores differed according to gender, with the male athletes scoring higher. Conversely, Harmancı (2019), in his study on cyclists, reported that although no significant difference in terms of gender was observed for the confidence and constancy subscales of mental toughness, there was a significant difference in the control subscale in favor of men.

In this study, the perfectionism and mental endurance scores of the athletes were also compared on the basis of national status, i.e., whether one competed at the international level as a member of the Turkish national team or not. Among the participants' mean scores on the perfectionism subscales, there was a significant difference in personal standards with respect to national status, with athletes on the national team scoring higher (see Table 4). According to these findings, even when they achieve success, athletes at this level continue to strive and maintain high standards in order to be the best. Eravşar (2019) reported that the personal standards of athletes on the national team were higher than those of professional and amateur athletes.

Another finding obtained in the study was a statistically significant difference in favor of athletes on the national team (who compete at the international level) in the control subscale of mental toughness in sports (see Table 4). Based on this result, high-level athletes who have attained success at the international level are able to maintain their calm in the face of failure or unexpected problems and can achieve greater emotional and behavioral control. This finding suggests that in order to protect the position they have attained and create a positive image, national athletes will approach sporting events in a more controlled manner, are more likely to perceive results as being under their control, and are able to maintain their mental toughness due to increased expectations and responsibilities. A review of the relevant literature revealed numerous studies whose results aligned with our findings. Akılveren (2017) found a significant difference in the constancy and confidence subscales of mental toughness with respect to national status but reported no significant difference in the control subscale. In a study by Wieser and Thiel (2014), the mental toughness levels of non-national athletes were lower than those of athletes on the national team. The studies of Golby and Sheard (2004), comparing rugby players competing at the international level to those competing at the national level, and Bhardwaj, Singh, and Rathee (2014), comparing elite wrestlers to non-elite wrestlers, revealed that in both cases the former were mentally tougher than the latter.

The primary objective of this study was to determine the relationship between perfectionism and mental toughness in athletes. The results of the Pearson correlation analysis and canonical correlation analysis performed for this purpose revealed a significant relationship between perfectionism and mental toughness (see Tables 8, 9, and 10). Consistent with the literature, a negative significant relationship was found between the perfectionism subscale of excessive concern over mistakes and the control and constancy subscales of mental toughness, as well as between perceived family pressure and control, subscales of perfectionism and mental toughness, respectively. In addition, there was a positive significant relationship between the personal standards subscale of perfectionism and confidence and constancy subscales of mental toughness. These findings indicate that the negative aspects of perfectionism (i.e., excessive concern over mistakes and perceived family pressure) negatively affect mental toughness, whereas positive perfectionist tendencies (i.e., personal standards) enhance mental toughness. Cowden et al. (2019) investigated the mediating role of mental toughness in the relationship between perfectionism and motivation in sports, concluding that in competitive sports, mental toughness is a psychological structure associated with success, and that athletes with high personal standards of perfectionism can maintain their motivation by improving their mental toughness. Madigan and Nicholls (2017) found that mental toughness correlated negatively with burnout and that mentally tough athletes were less likely to experience a decreased sense of accomplishment and emotional exhaustion. Kurtulget et al. (2018) reported similar results, finding that the control and constancy subscales of mental toughness showed a significant negative relationship with burnout and that athletes with high levels of mental toughness experienced less emotional exhaustion and a less diminished sense of accomplishment. In a study by Cadenas et al. (2016), a strong positive relationship was observed between striving for perfection and

mental toughness, while a negative relationship was found between perfectionist anxieties and mental toughness. Fawver et al. (2020) in their study conducted with alpine skiers found that those who strove for perfection (i.e., skiers with high personal standards) devoted more time to individual work, resulting in better performance, whereas those who experienced intense family pressure exhibited low levels of mental toughness.

In this study, athletes who were observed to exhibit excessive concern over their mistakes could not maintain their coolness under pressure and when faced with the unexpected (reflected in low control scores), nor were they able to continue striving to attain the goals they had set (reflected in low continuity scores). Furthermore, athletes who perceived intense pressure from their families exhibited the same tendencies, losing control under pressure and failing to maintain their composure in the face of unexpected situations. However, athletes with high personal standards were similarly found to have high levels of self-confidence, believing in their ability to achieve their individual goals and thus able to continue focusing on attaining them. Upon examination of the results of this study as well as the findings of related research, a positive relationship is revealed between the positive (adaptive) dimension of perfectionism (e.g., personal standards) and mental toughness, whereas a negative relationship is observed between the latter and the negative (maladaptive) dimensions of perfectionism (e.g., excessive concern over mistakes and perceived family pressure). Stated more clearly, athletes with positive perfectionist tendencies exhibit greater mental toughness than those with negative perfectionist tendencies.

In conclusion, the findings obtained herein are noteworthy for demonstrating that the subscales of perfectionism represent the most powerful predictors enabling us to explain the feelings, thoughts, and behaviors of people, thus supporting the theoretical underpinnings of perfectionism.

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The Relationship Between Leisure Attitude and Happiness: The Mediation Effect of Recreational Flow Experience

Cihan Ayhan[1] Ersin Eskiler[2]

[1]Sakarya University of Applied Sciences, Faculty of Sport Sciences, Sakarya-Turkey, https://orcid.org/0000-0002-7633-1389, cihanayhan@subu.edu.tr
[2]Sakarya University of Applied Sciences, Faculty of Sport Sciences, Sakarya -Turkey, https://orcid.org/0000-0001-7617-2958, eeskiler@subu.edu.tr
✉Corresponding Author: cihanayhan@subu.edu.tr

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ABSTRACT

With technological advancements reducing workload, individuals have increasingly sought to spend their leisure time more efficiently and meaningfully. This trend has fostered a growing positive attitude toward recreational activities. Individuals who approach recreational events with a positive mindset are more likely to experience a state of flow during these activities. The flow experience contributes to individuals' physical, mental, and social well-being by generating positive outcomes. In this context, the study examined the relationship between leisure attitude and happiness among participants in nature sports, with flow experience identified as a mediating variable in this relationship. The research was conducted using a correlational survey model, involving 246 voluntary participants aged 18–74 ($Mean_{age}$ = 31.15 ± 11.93) selected through the purposive sampling method. Data analysis was performed using SPSS software with Pearson correlation analysis to examine the relationships between variables, and regression analysis based on the Bootstrap method through the PROCESS macro. Hayes' (2013) PROCESS Macro Model 4 was used to assess the mediating effect. The findings revealed a statistically significant relationship between leisure attitude and happiness, with flow experience serving as a mediator in this relationship. This result indicated that individuals' attitudes toward leisure activities significantly influence their happiness and the flow experience enhances this effect.

Keywords: Leisure attitude, Recreational flow experience, Happiness

INTRODUCTION

Pursuing happiness is one of the fundamental purposes of life. Defined as a positive emotional state (Kitayama, Markus, & Kurokawa, 2000), happiness is a state of mind characterized by joy and contentment, reflecting individuals' life satisfaction and subjective well-being (Lathia et al., 2017). Happiness has not only become a widely recognized indicator of societal well-being (Diener & Seligman, 2004) but is also reported in the relevant literature to be associated with individuals who exhibit higher productivity and creativity, demonstrate greater prosocial behavior, enjoy better health, live longer lives, and maintain stronger relationships (Jalali & Heidari, 2016; Myers & Diener, 2018; Oswald et al., 2015). While the determinants of happiness vary, it is generally accepted that happiness is triggered by positive mental and emotional states (WHO, 2011). Through leisure activities, individuals can find positive meaning by experiencing uplifting moments and discovering valuable insights (Folkman & Moskowitz, 2000; Fredrickson, 2002; Kleiber et al., 2002). The ability to find positive meaning contributes to overcoming depressive moods and improving well-being, enabling individuals to achieve positive emotional regulation through leisure activities (Keltner & Bonanno, 1997). In this context, the positive emotions experienced by individuals who continuously participate in leisure activities with a positive attitude, in line with the benefits they perceive, demonstrate a positive relationship between recreation and happiness. In the literature,

leisure activities have been considered an important factor in overall happiness (Hills & Argyle, 1998; Liu & Da, 2019; Newman et al., 2014). In this context, the idea that leisure activities contribute to happiness has garnered significant attention in international studies (Liu & Yu, 2015; Stebbins & Liu, 2012). Additionally, various studies have reported a positive relationship between recreation and happiness (Liang et al., 2013; Lin et al., 2020; Matsumoto et al., 2018; Tsaur, Lin, & Cheng, 2015; Wang & Wong, 2011). Although there is empirical support for a positive relationship between attitudes toward leisure activities and happiness, it has been overlooked that additional factors may play a role in enhancing happiness during or after the activity. In this context, within the framework of flow theory, recreational flow experience can be considered one of these factors.

This study aimed to support the relationship between existing leisure attitudes and happiness in outdoor sports and to define flow experience as a mediating variable. Leisure attitude is defined as the positive or negative tendencies that shape individuals' perceptions, emotions, and behaviors toward leisure activities (Freire & Teixeira, 2018). Leisure attitude consists of three components: the cognitive component, which includes knowledge and beliefs related to happiness, life satisfaction, and subjective well-being; the affective component, which addresses individuals' feelings toward activities; and the behavioral component, which covers how much money is spent on activities and how frequently individuals participate in them (Choi & Yoo, 2017; Ragheb & Beard, 1982; Teixeira & Freire, 2013). In this context, it is stated that leisure attitude is a significant predictor of happiness (Matsumoto, 2018). Based on these explanations, the following hypothesis was formulated:

H1: Leisure attitude affects happiness.

Recreational flow experience is defined as a positive experience during leisure activities in which participants undergo an optimal experience related to the balance between challenge and skill, characterized by intense focus, filtering out thoughts and environmental factors, and providing feelings of happiness and enjoyment (Ayhan, 2023). In other words, a recreational flow experience occurs when an individual becomes deeply engaged in an activity, and their personal skills match the challenges presented. Recreational flow experience allows individuals to relax mentally, forgetting their anxieties and immersing themselves in a temporary and subjective experience filled with pleasurable and positive emotions. At the end of the activity, individuals gain positive feelings and experiences, which contribute to the development of positive attitudes (Csikszentmihalyi, 1975). In this case, individuals developing a positive attitude toward leisure activities is an important indicator of experiencing recreational flow. In this context, the following hypothesis was proposed:

H2: Leisure attitude affects the recreational flow experience.

Csikszentmihalyi (1975) suggests that there is a significant relationship between flow experience and happiness. According to Tinsley, if an individual cannot experience flow by participating in an activity, it is not considered a true leisure activity (as cited in Tao et al., 2022). As a matter of fact, individuals who engage in nature sports report experiencing positive emotional states during the activity (Pomfret, 2006). Through the balance between skill and challenge, individuals participating in outdoor sports can experience flow, which triggers intense feelings of happiness. Walker et al. (1998) state that outdoor activities promote flow and also increase positive emotions and happiness.

Asakawa (2004) observed that the feeling of happiness is heightened in high-flow states and stated that flow can increase psychological happiness in this context. Therefore, happiness is a result of the cognitive and emotional assessments of the flow experience. As a result, during flow, individuals become so immersed in the activity that everything else seems to lose its significance, except for responding to clear goals and feedback and developing a sense of control over the activity performed through their skills (Csikszentmihalyi, 1975; Tao et al., 2022). The connection established between the individual and the activity contributes to the formation of feelings of happiness. In this context, it can be stated that flow experience is an important predictor of happiness. Based on these explanations, the following hypothesis was proposed:

H3: The recreational flow experience has a mediating effect on the relationship between leisure attitude and happiness.

METHOD

Research Model

Correlational research provides a framework for determining the nature of the relationship between two or more variables and is considered a useful model for making predictions about an outcome variable (Karasar, 2012). In this context, the study, conducted to examine the mediating effect of flow experience in the relationship between leisure attitude and happiness, is designed according to the correlational survey model, which is one of the quantitative research methods. In this context, the

study, conducted to examine the mediating effect of flow experience in the relationship between leisure attitude and happiness, was designed according to the correlational survey model, which is one of the quantitative research methods.

Data Collection Tools

The data were collected through face-to-face surveys conducted by researchers. The prepared questionnaire consists of two sections. The first section included questions aimed at identifying the demographic characteristics of the participants (gender, age). The second section included statements designed to measure the participants' leisure attitude, flow experience, and happiness levels. To assess the participants' leisure attitudes, the Leisure Attitude Scale (LAS), developed by Ragheb and Beard (1982) and adapted into Turkish by Akgül and Gürbüz (2011), was used. LAS was a 5 points Likert scale and consisted of 3 subscales and 36 items. In the study by Akgul and Gurbuz (2011), Cronbach's alpha values for the sub-dimensions ranged from 0.81 to 0.92 To measure the participants' flow levels, the Recreational Flow Experience Scale, developed by Ayhan, Eskiler and Soyer (2020), was used. The recreational flow experience scale consisted of 9 items and a single dimension. The items were measured on a 7-point Likert scale (ranging from 1 - strongly disagree to 7 - strongly agree). In the study by Ayhan et al. (2020) Cronbach's alpha value was .94. Finally, to assess happiness levels, the Oxford Happiness Scale, developed by Hills and Argyle (2002) and adapted into Turkish by Doğan and Akıncı Çötok (2011), was utilized. The scale consisted of 7 items and followed a 5-point Likert type. Items 1 and 7 were reverse-coded. Additionally, the Cronbach's alpha value of the scale was .74.

Table 1. Descriptive statistics

Variables	$\overline{X}$	SD	Skewness	Kurtosis
Leisure attitude	2.57	1.07	.292	-.839
Recreational Flow Experience	2.59	1.09	.177	-1.019
Happiness	3.13	.65	-.247	.582

N=246

Data Analysis

IBM SPSS 22 software was used for data analysis. First, the normality of the data was tested using skewness and kurtosis values. The obtained skewness and kurtosis values were found to fall within the range of +2 and -2 (George & Mallery, 2016). Descriptive statistics (such as mean, standard deviation, etc.) were used in the analysis, and regression analysis employing the Bootstrap method was applied to assess the mediation effect. For this analysis, the Hayes Process Macro plugin was utilized. The Bootstrap method involved 5.000 resampling iterations (Hayes, 2013). In evaluating the mediation effect, the effect size was assessed based on the K^2 value, with the following criteria: a value close to .01 indicates a small effect, around .09 indicates a medium effect, and close to .25 indicates a large effect (Preacher & Kelley, 2011).

RESULTS

The relationships between the research variables, and the hypothesis results were summarized in this section.

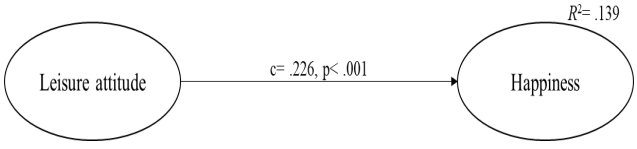

Figure 1. The direct influence of leisure attitude on happiness

The analysis results indicated that the direct effect of leisure attitude on happiness was statistically significant (c = .226, t = .318, p > .05, standardized effect = .373). These findings supported the acceptance of Hypothesis H1. It was observed that approximately 14% of the variance in the happiness variable was explained by the predictor variable (R^2 = .139, p < .001).

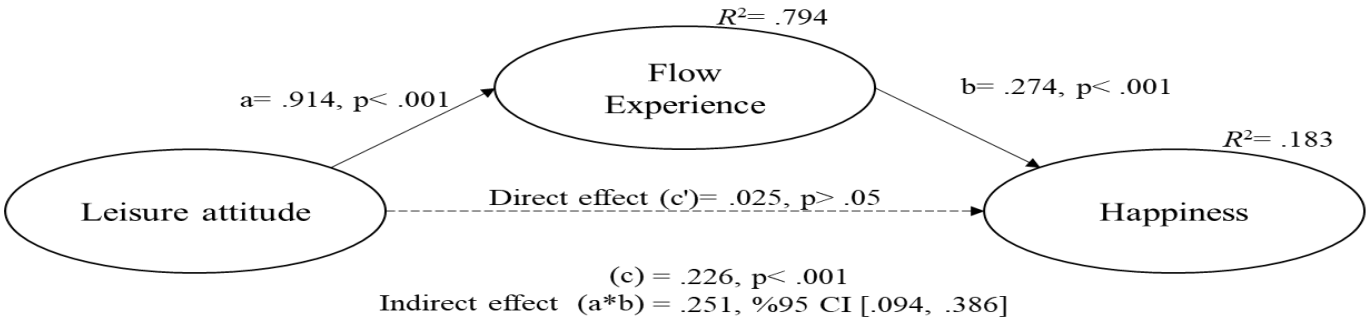

Figure 2. The mediating role of the recreational flow experience

H2 was tested using the mediation model presented in Figure 2. It was found that leisure attitude has a positive and statistically significant effect on the recreational flow experience (path a = .914, t = 5.344, p < .001). Furthermore, approximately 79% of the variance in recreational flow experience was explained by the predictor variable (R^2 = .794, p < .001). The results indicated that H2 was supported. Similarly, it was found that recreational flow experience had a positive and statistically significant effect on happiness (path b = .274, t = 3.627, p < .001).

RESULTS

Table 2. Regression Analysis Results of Variables

	Outcome Variables					
	Recreational Flow Experience			Happiness		
Prediction Variables		*b*	SE		*b*	SE
Leisure attitude (X)	a	.914***	.030	c'	.025	.078
Recreational Flow Experience (M)	-	-	-	b	.274***	.076
Constant	$İ_M$	.232	.083	$İ_Y$	2.481	.099
		R^2= .794			R^2= .183	
		$F_{(1; 244)}$= 943.60, p<.001			$F_{(2; 243)}$= 27.247, p<.001	

Note: ***p< .001; SE: Standard error, Unstandardized beta coefficients (*b*) are reported.

When the mediation test results of recreational flow experience were examined (Figure 2, Table 2), it was evident that the indirect effect of leisure attitude on happiness was statistically significant. Thus, recreational flow experience mediated the relationship between the two variables (a*b = .251, 95% CI [.094, .386], standardized indirect effect = .414). The direct path coefficient from leisure attitude to happiness (H1) significantly decreased from .37 (p < .001) to .04 (p = .751) when the mediator variable (i.e., recreational flow experience) was included in the model. Additionally, the results of the Bootstrap analysis indicated that the bias-corrected and accelerated confidence interval values (95% CI) did not include zero (0) (Hayes, 2009; Hayes, 2013). These findings supported the acceptance of the H3 hypothesis. Furthermore, approximately 18% of the variance in the happiness variable was explained by the predictor variables (R^2 = .183, F(2, 243) = 27.247, p < .001). The fully standardized effect size of the mediation was found to be K^2 = .414, which can be interpreted as representing a high effect size (Preacher & Kelley, 2011).

DISCUSSION AND CONCLUSION

This study contributes to the existing literature on the relationship between leisure attitude, flow experience, and happiness. Based on the tested model, it was found that leisure attitude has a positive effect on both recreational flow experience and happiness and that recreational flow experience mediates the effect of leisure attitude on happiness. The interpretations and discussions of the findings related to the research hypotheses were presented below.

According to the analysis results, leisure attitude was found to have a positive effect on happiness. Accordingly, it was observed that as participants' positive attitudes toward leisure activities increased, their levels of happiness also increased. This result supported the H1 hypothesis of the study. Studies in the literature conducted with individuals living in

China (Wei et al., 2015), Korea (Lee et al., 2020), and Japan (Shimamoto, 2020), as well as with motorcyclists (Ching-Te et al., 2021; Kruger & Venter, 2020; Yang et al., 2022), electric bicyclists (Lin et al., 2021), scuba divers (Matsumoto, 2018), and individuals aged 65 and older (Lin et al., 2020), have found that leisure attitude has a positive effect on happiness, supporting the findings of this study. The current study supported the findings of previous research. As a matter of fact, leisure activities help individuals reduce their stress levels and relax, allow time for their hobbies and personal development, enable quality time with family and friends, improve health through physical activities, enhance their sense of control over life, and promote creativity, leading to mental rejuvenation (Kim & Brown, 2018; Mansfield et al., 2020; Zhang et al., 2018). Moreover, the proper and balanced use of leisure plays an important role in increasing individuals' overall life satisfaction and happiness (Nawjin & Veenhoven, 2012; Schmiedeberg & Schröder, 2017). The positive outcomes derived from activities lead individuals to display a positive attitude towards the activity, which enhances their satisfaction with leisure activities and, in this context, contributes to the increase in their happiness levels (Yoo, 2022). Based on this information, it can be stated that leisure attitude is an important predictor of happiness.

The analysis results indicated that leisure attitude had a positive and significant effect on flow experience. Accordingly, it has been observed that as participants' positive attitudes towards leisure activities increase, they experience more flow during the activity. This finding supported the H2 hypothesis of the study. Similar results have been found in studies with individuals participating in sports (Lim, 2016) and other recreational activities (Ahn, 2012), university students (Khang & Chou, 2014), Pilates practitioners (Yoon et al., 2020), water sports participants (So & Ha, 2018), and bowling players (Hyung & Myoung, 2010), as well as five-star hotel employees (Cheon & Cheon, 2017). A positive attitude towards leisure helps individuals experience more positive outcomes through activities, contributing to greater involvement and satisfaction (Freire & Teixeira, 2018; Yoo, 2022; Wu et al., 2021). Therefore, perceiving leisure as an enjoyable process facilitates more frequent flow experiences (Cheng & Lu, 2015). The results indicated that participants' positive attitudes towards leisure activities served as a significant predictor of the recreational flow experience they experience during the activity.

Finally, the analysis results revealed that recreational flow experience mediated the relationship between leisure attitude and happiness. In this regard, it has been observed that recreational flow experience plays a significant role in enhancing participants' happiness levels through their positive attitudes towards leisure activities. This finding supported the H3 hypothesis of the study. According to flow theory, flow and happiness are significantly related phenomena (Csikszentmihalyi, 1975). Individuals participating in outdoor sports experience different emotional states (Pomfret, 2006), and it has been reported in the literature that outdoor recreational activities can trigger flow and enhance positive emotions and happiness (Walker et al., 1998). In addition, Asakawa (2004) reported that happiness arises in a high-flow state. Csikszentmihalyi (1990) suggested that flow experiences do not occur during passive moments, but when an individual is deeply engaged in a motivating activity, focused and challenged. This creates a sense of excitement, satisfaction and happiness in individuals. In this context, individuals who engage in outdoor sports as a leisure activity with a positive attitude and for recreational purposes may potentially experience flow through a balance between skill and challenge, leading to emotions that result in intense happiness. In conclusion, individuals who participate in activities with a positive attitude engage with full focus and motivation during the flow experience. This motivated participation evokes a sense of happiness in individuals (Asakawa, 2004; Csikszentmihalyi, 1975; Rogatko, 2009; Yoon et al., 2020). Having a positive attitude towards leisure activities encourages individuals to engage in such activities more frequently. However, the results of the current study indicated that the increase in happiness could not solely related to individuals' leisure attitudes. In other words, happiness can be experienced more intensely through the flow experience during the activity. The flow experience maximizes the satisfaction and enjoyment derived from the activity, thereby strengthening the increase in happiness.

Limitations and Suggestions

Like all other studies, this research had limitations that should be addressed along with suggestions for future research. First, only camping and mountaineering activities were examined in this study as nature sports. Future studies could include individuals who engage in rock climbing, orienteering, spelunking, mountain biking, rowing, swimming, surfing, diving, sailing, rafting, skiing, snowboarding, and paragliding. Studies conducted with participants from different activities would be meaningful and valuable in determining whether the mediation effect found in this study is applicable in different contexts. This research focused on the

variables of leisure attitude and recreational flow experience that affect happiness in individuals who participate in nature sports. Future studies could consider other factors such as leisure satisfaction, recreational benefits, and excitement seeking, among others. Diversification of this line of research by testing models that include different variables in the proposed samples could extend the benefits to recreational activity providers, participants, and theory to different cultural settings. Additionally, the current study was entirely quantitative; therefore, future use of a qualitative or mixed methods design could advance different perspectives on theory and practice

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