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Analysis of Perceptions Towards Individuals Who Exercise and Those Who do not Through Metaphors

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Abstract

The analysis of perceptions towards individuals who exercise and those who do not is important for determining the meaning and significance attributed to exercise. In this respect, the aim of the study was to examine the perceptions of individuals who exercise and those who do not through metaphors. The sample of the research consisted of 82 individuals residing in the province of Malatya, Türkiye. The study was designed qualitatively using a case study design, and the research data was collected through a semi-structured interview form. The obtained metaphors were analyzed using content analysis technique. In the study, a total of 29 metaphors were produced for individuals who exercise, and 10 themes were formed from these metaphors. For individuals who do not exercise, a total of 39 metaphors were produced, and 8 themes were formed from these metaphors. According to the research findings, the participants used the metaphors “iron” (n=18), “steel” (n=8), and “lion” (n=6) most frequently to describe individuals who exercise, while the metaphors “panda” (n=9), “sponge” (n=7), and “rusty iron” (n=6) were used most frequently to describe individuals who do not exercise. As a result, it was shown that the participants generally associated individuals who exercise with factors such as being strong, healthy, durable, and powerful, and had a positive perception towards them. On the other hand, it was suggested that the participants associated individuals who do not exercise with factors such as being lazy, weak, and dysfunctional, and had a negative perception towards them.

Keywords: Exercise, Sport, Metaphor, Health, Body perception

Introduction

The relationship between exercise and health has been studied and examined by researchers from various disciplines for many years. The studies emphasize that regular exercise plays an important role in combating obesity (Bouchard et al., 1993; Petridou et al., 2019), diabetes (Peirce, 1999; Zisser et al., 2011), osteoporosis (Todd and Robinson, 2003; Forwood and Larsen, 2000), and many other health problems. Additionally, it is a fact that exercise creates positive changes in individuals' physical appearances (Donaldson and Ronan, 2006; Teke and Karakuş, 2022) and thus has an effective role in body perception.

The body is a reflection of human existence and therefore a way for individuals to present themselves to the outside world (Okumuş, 2009). In patriarchal and heterosexist cultures, it is known that women are expected to have a “thin and sexy” body, while men are expected to have a “strong and muscular” body (Murnen and Don, 2012). In addition, the ideal male body in Western societies is defined as muscular and lean (Hausenblas and Fallon, 2002). The “V-shaped” muscular male body is presented as the ideal male body image in modern society and is also accepted as a symbol of many positive qualities such as happiness, success, and attractiveness (McCabe and Ricciardelli, 2005;

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Tiggemann, 2011). Therefore, exercise is an effective phenomenon that has the power to affect both individuals' external body perception and the perception of others (Dökmen, 2004; Karagöz and Karagün, 2015). In this context, examining the perceptions of individuals who exercise and those who do not is important for determining the meaning and significance attributed to exercise.

When reviewing studies related to perception, it is observed that the metaphor technique is frequently used (Di Tore, 2017; Kurtipek et al., 2017; Alan, 2021; Onag et al., 2021; Çar et al., 2022). The metaphor technique is defined as expressing emotions and thoughts about a phenomenon using a word or phrase. Particularly, the metaphor technique is considered an effective method to make a complex, abstract or theoretical concept more explanatory (Ortony, 1993; Kovecses, 2010; Saban, Koçbeker, & Saban, 2006). In the literature, it is also observed that the metaphor technique is frequently used in studies related to sports.

However, researchers in the field of sports have generally focused on the conceptual and perceptual aspects of sports in metaphor studies (Yetim & Kalfa, 2019; Arpa, 2014; Çar et al., 2022; Kaya et al., 2018; Koç et al., 2015; Sevinç & Ergenç, 2017). Additionally, studies examining individuals' perceptions of physical activity, sports branches, and sports management are also present (Baydar & Arıcan, 2021; Ceylan & Kozak, 2021; Güllü, 2021; Karakaya & Salici, 2016; Kurtipek & Gungor, 2019). In this context, a metaphorical study examining perceptions of individuals who engage in sports and those who do not engage in sports has not been encountered in the literature. Therefore, it is a matter of curiosity what the perception of the public is regarding individ-

uals who exercise and those who do not exercise in revealing the meaning and importance attributed to exercise. In this context, the aim of this study was to examine the metaphors created for individuals who exercise and those who do not exercise.

Methods

Research Model

This research was designed using the phenomenological approach of qualitative research methodology (Patton, 2002), while a semi-structured interview form was used for data collection. A content analysis technique (Braun and Clarke, 2006) was employed to evaluate the obtained data. The findings were documented and presented in a report. The adherence of the research to ethical principles was approved by the İnönü University Non-Interventional Clinical Research Ethics Committee with decision number 2022/3569. All participants were informed about the research and included in the study voluntarily by signing a consent form.

Sample of respondents

The sample group for the research was determined using convenience sampling technique (Stratton, 2021). In qualitative research, large sample groups are not necessary since data collected from interview and observation techniques tend to repeat themselves after a certain point (Morse, 2016; Shenton, 2004). In this context, 82 individuals residing in Malatya were included in the study. The demographic characteristics of the participants are presented in Table 1.

Table 1. Demographic characteristics of the participants

Variable	F	
Sex	Female	40
	Male	42
Age	18-24	33
	25-30	29
	31-36	20
Marital Status	Single	58
	Married	24
Education Level	Bachelor's Degree	41
	Associate's Degree	21
	Master's Degree	13
	Doctorate	7
Exercise Status	Does exercise	43
	Does not exercise	39

Data Collection Tool

The demographic information of the participants and their metaphoric perceptions towards individuals who exercise and those who do not were collected through a semi-structured interview form. The semi-structured interview form was developed based on the relevant literature (Başarır & Sarı, 2015; Topuz & Erkanlı, 2016; Ateş & Karatepe, 2013; Dikme et al., 2019) by examining previous studies in the field. Metaphoric perceptions of the participants towards individuals who exercise and those who do not were collected through open-ended questions added to the semi-structured interview form, as follows: "Individuals who exercise are like... because..." and "Individuals who do not exercise are like... because...". By using the phrase "like" in the first sentence and "because" in the second sentence, participants were encouraged to create metaphors and to provide a logical reason for their

metaphors. The research data was collected through a Google Form between October 11, 2022 and October 19, 2022.

Data Collection Process and Analysis

For the study, a semi-structured interview form was sent to the participant group via Google Forms, and they were asked to answer the relevant questions. The data obtained through Google Forms was downloaded and saved in the Microsoft Excel program. The output of the document in Excel format was sent to two field experts for evaluation of the data. The experts individually examined the documents, taking into account the explanations after the "Because, ..." expression, where the justifications for the metaphors were expressed, and first determined the categories and then the themes. If there were multiple themes/categories relevant to the metaphor in the comprehensive justifications provid-

ed by the participants, the experts added the metaphor to multiple themes/categories. Later, two researchers came together to test the compatibility of the metaphors with the identified categories and themes. In addition, 17 forms were excluded from the study because they were incomplete or insufficiently filled out.

The data was analyzed using content analysis. In content analysis, similar data is organized and interpreted under certain concepts and themes (Yıldırım and Şimşek, 2011). The obtained data was primarily conceptualized through content analysis and grouped under specific categories. Then, categories that were deemed to be related to each other were combined under certain themes. The findings were grouped into categories and themes were quantified and analyzed.

The reliability of the research was tested by the formula Reliability = [Agreement / (Agreement + Disagreement) x100] of Miles and Huberman (1994), to ensure consistency in coding among the researchers. A near or above 90% agreement percentage among the researchers indicates the reliability of the study (Miles and Huberman, 1994). In the examination conducted on the themes created for individuals who exercise, it was shown that there was 9 agreement and 1 disagreement, and in the examination conducted on the themes created for individuals who do not exercise, there was 8 agreement and 0 disagreement. Then, the experts came together and any themes and categories with conflicting opinions that arose during the interview and analysis

were resolved through consensus, and the analysis was concluded. Thus, with the agreed-upon categories and themes, a final form was obtained.

In this context, the reliability of the themes created for individuals who exercise has been tested using Miles and Huberman's (1994) formula of Reliability = [Agreement / (Agreement + Disagreement) x100]. The analysis showed that the agreement was 9 and the disagreement was 1, resulting in a reliability level of 90% (9/ (9 + 1) x 100) for the themes created for individuals who exercise. Similarly, the reliability of the themes created for individuals who do not exercise was found to be 100% with an agreement of 8 and no disagreement (8/ (8 + 0) x 100 = 100). Afterwards, the experts reconciled their differences regarding the themes and categories, and the analysis was concluded. Thus, the categories and themes were finalized based on the agreement reached. Based on these results, the research has achieved the desired level of reliability.

Results

The participants generated 29 metaphors in total for individuals who engage in exercise, which were then grouped into 10 themes. Among these themes, the participants predominantly used "animal" (n=19), "element" (n=18), and "object" (n=12) metaphors (Table 2). It is observed that the metaphors produced by the participants for individuals who engage in exercise are positive in nature.

Table 2. Metaphors of the participants towards individuals who exercise

Themes	Metaphors	f	Number of metaphors
Animal	Ant (2), bird (1), horse (4), cheetah (3), lion (6), Gazelle (1), eagle (1), tiger (1)	19	8
Plant	Radish (4), tree (1)	5	2
Alloy	Steel (8), gunmetal (2)	10	2
Element	Iron (18)	18	1
Vehicle	Ferrari car (2)	2	1
Nature	Stone (4), stream (1), water (1), sun (2)	8	4
Abstract	Monster (1), superhero (1)	2	2
Human	Dependent (3), warrior (1), investor (1)	5	3
Object	Machine (6), arrow (1), statue (1), stock (1), armor (3)	12	5
Food	Cream biscuits (1)	1	1
Total		82	29

Animal theme; Participants produced the most metaphors related to animals (n=8) for individuals who engage in sports. In this theme, the metaphors "lion" (n=6) and "horse" (n=4) stand out (Table 2).

Plant theme: In this theme, the participants compared exercise enthusiasts to "radishes" (n=4) the most.

Alloy theme: Participants used the "steel" (n=8) metaphor the most to describe exercise enthusiasts.

Element theme; With this theme, the participants compared the individuals who exercised to "iron" (n=18) the most.

Vehicle theme; The participants compared the exercisers to "Ferrari" (n=2) with this theme.

Nature theme; Participants used the metaphor of stones (n=4) the most for individuals who exercise.

Abstract and food theme; While the metaphors that the participants produced within the context of the abstract theme for individuals doing sports were "monster and superhero" (n=2), they produced the metaphor of "creamy biscuit" (n=1) in the food theme.

Human theme; In this theme, the participants compared the

individuals who exercised to "addicts" (n=3) the most.

Object theme; In this theme, the participants describe the individuals who exercise with the most "machine" (n=6).

The metaphors produced by the participants for individuals who do not exercise are shown in Table 3.

According to Table 3, the participants have produced a total of 39 metaphors for individuals who do not exercise and have created 8 themes from these metaphors. In these themes, the participants have used the "panda" (n=9), "sponge" (n=7), and "rusty iron" (n=6) metaphors the most to describe individuals who do not exercise. It can be observed that the metaphors used by the participants to describe individuals who do not exercise are negative.

Animal theme; In this theme, the participants compared the individuals who do not exercise to "panda" (n=9) the most.

Plant theme; It was determined that the metaphors produced by the participants within the scope of the plant theme for individuals who do not exercise were mostly "potato and tree" (n=4).

Element theme; In this theme, individuals produced the most "rusty iron" (n=6) theme for individuals who did not exercise.

Table 3. Metaphors of Participants for Non-Exercise Individuals

Themes	Metaphors	f	Number of metaphors
Animal	Horse (1), koala (3), panda (9), lion (1), butterfly (1), bear (1), cicada (1), bat (1), turtle (1), Sheep (1)	20	10
Plant	Potato (2), cotton (1), tree (2), pear (1), rotten fruit (1), tomato (1), dry branch (1)	9	7
Element	Rusted iron (6)	6	1
Vehicle	car (3), truck (1)	4	2
Nature	Field (1), moon (2)	3	2
Human	Prisoner (5), sluggish (1), dead (3), carrion (1), sick (3), clumsy (1)	14	6
Object	Machine (5), pillow (2), wood (2), battery (1), sponge (7), spring (1), sack (2), ball (2), nylon (2)	24	9
Food	Loaf of bread (1), gum (1)	2	2
Total		82	39

vehicle contact; In this theme, the participants compared the individuals who do not exercise to a “broken car” (n=3) the most.

Nature theme; In this theme, individuals who do not exercise are most likened to the “Moon” (n=2). The explanations of the participants are as follows.

Human theme; Within the scope of the human theme of the participants for individuals who do not exercise, they mostly produced the metaphors of “convict” (n=5) and “sick” (n=3).

Object theme; In this theme, the participants mostly used the metaphors of “sponge” (n=7) and “machine” (n=5) to describe individuals who do not exercise.

Food theme; In this theme, the metaphors used by the participants for individuals who do not exercise are the metaphors of “loaf of bread and gum” (n=2).

Discussion

This study examined the metaphorical perceptions of individuals who exercise and those who do not. Animal, plant, alloy, element, vehicle, nature, abstract, human, object, and food themes were created, and evaluations were made within the scope of these themes. Although the participants generated metaphors for both individuals who exercise and those who do not in the same themes, when the justifications for the generated metaphors were examined, it was understood that the metaphors created for individuals who exercise were positively oriented, while the metaphors created for individuals who do not exercise were negatively oriented.

When animal, plant, alloy, element, nature, and object themes were examined, the metaphors generated for individuals who exercise emphasized that they are strong, healthy, resilient, and powerful. The metaphor “iron” (n=18) was used the most for individuals who exercise. According to the relevant literature, in the study conducted by Baydar Arıcan (2021), metaphors generated for physical activity were determined to be mostly under the theme of need, and the most frequently used metaphors were listed as lifestyle, water, and breathing. In another similar study by Koç (2020), health, need, and entertainment metaphors were used. In addition, in studies conducted on the concept of exercise, it was found that participants mostly generated need, movement, and health metaphors (Çar et al., 2022; Kurtipek & Sönmezoglu, 2018; Yetim & Kalfa, 2019). Furthermore, in Güllü’s (2021) study, participants used quality of life, lifestyle, and freedom metaphors, while Sevinç and Ergenç’s (2017) study found peace, happiness, and satisfaction metaphors. Based on all this information, it seems that concepts such as sports, physical activity, and exercise have a positive perception in society. Additionally, Arslan et al.

(2011), İnal (2003), and Yıldız and Çetin (2018) suggested that individuals who exercise are in a better mental, physical, and spiritual state. Moreover, studies have reported a positive relationship between physical activity and happiness (Toptaş Demirci, 2019; Zhang & Chen, 2019). Therefore, it is believed that the positive perception of exercise in society is related to these findings.

When examining other similar studies related to the topic, it has been shown that there are studies conducted on various sports activities and branches. For example, in studies that examine the perceptions of individuals actively participating in zumba, metaphors related to psychological benefits, health, pleasure, happiness, and socialization were produced for individuals participating in zumba (Ceylan and Kozak, 2021; Domene et al., 2016; Lakoff and Johnson, 2005). In addition, according to the results of our study, the participants created the metaphors “iron” (n=18), “steel” (n=8), and “lion” (n=6) most frequently to describe individuals who exercise. Therefore, it is understood that exercise is widely accepted in society and holds great importance in terms of the benefits it provides.

When the metaphors produced by participants regarding individuals who do not exercise were examined, it was shown that the most commonly produced metaphors were “panda” (n=9), “sponge” (n=7), and “rusty iron” (n=6). In this context, it seems that the metaphors were created for individuals who do not exercise by emphasizing laziness, weakness, and dysfunction. However, as Dixon (2007) also stated, in sports, qualities such as perseverance, hard work, pushing one’s limits, or gaining superiority over competitors are always at the forefront. Therefore, it is thought that the metaphors produced by participants regarding individuals who do not exercise are negative.

Additionally, previous evidence indicates that exercise, physical activity, and sports not only affect individuals’ external perceptions but also their internal perceptions, that is, self-perceptions (Jetzke and Mutz, 2019; Mutz et al., 2021; Zhang and Chen, 2019). For instance, Avan (2015) examined body perceptions of individuals in a sports center, and reported that overweight, normal, and thin male and female individuals were more satisfied with their bodies, as well as found themselves more attractive compared to overweight individuals. In another similar study, Merdinoğlu et al. (2017) reported a significant difference in body perception between individuals who exercise and those who do not, especially in exercising women. Weinberg and Gould (2003) found that sedentary individuals had low body perception. Furthermore, there are studies that demonstrate the positive change in individuals’ self-perceptions of their bodies when they start engaging in physical activity (Durmaz and Özcan, 2021; Kuru and Baştuğ,

2008; Küçükapan and Civan, 2021). Therefore, it is believed that in addition to the positive perceptions of individuals who engage in physical activity and sports towards those who exercise, the reason for the negative metaphors created by individuals who do not exercise towards those who do exercise, may be explained by previously mentioned findings.

Conclusion

In conclusion, exercising not only provides individuals with health, happiness, peace and a good physique, but also gives them a social identity and positively influences the perception of others.

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References

- Alan, Y. (2021). Metaphors of Academics in Turkey for Distance Education. *International Journal of Progressive Education*, 17(4), 171-187.
- Arpa, D.K. (2014). *Ortaöğretimdeki erkek sporcuların karate ve taekwondo branşına yönelme nedenleri ve beklentileri (Yüksek Lisans Tezi)*. Haliç Üniversitesi, Türkiye.
- Arslan, C., Güllü, M., Tural, V. (2011). Spor yapan ve yapmayan ilköğretim öğrencilerinin depresyon durumlarının bazı değişkenlere göre incelenmesi. *Beden Eğitimi ve Spor Bilimleri Dergisi*, 5(2), 120-132.
- Ateş, M., Karatepe, A. (2013). Üniversite öğrencilerinin "küresel ısınma" kavramına ilişkin algılarının metaforlar yardımıyla analizi. *Marmara Coğrafya Dergisi*, (27), 221-241.
- Avan, Z. (2015). *Özel bir spor merkezine devam eden 18-30 yaş arası bireylerin beslenme durumlarının ve beden algılarının değerlendirilmesi (Yüksek Lisans Tezi)*. Başkent Üniversitesi, Türkiye.
- Başarır, F., Sarı, M. (2015). *Kadın akademisyenlerin "kadın akademisyen olma" ya ilişkin algılarının metaforlar yoluyla incelenmesi*. Yükseköğretim ve Bilim Dergisi, (1), 41-51.
- Baydar Arıcan, H. Ö. (2021). Üniversite öğrencilerinin oyun ve fiziksel aktivite kavramlarına yönelik metaforik algılarının incelenmesi. *SPORMETRE Beden Eğitimi ve Spor Bilimleri Dergisi*, 19(4), 170-183.
- Bouchard, C., Depres, J. P., & Tremblay, A. (1993). Exercise and obesity. *Obesity research*, 1(2), 133-147.
- Braun, V., Clarke, V. (2006). Using thematic analysis in psychology. *Qual Res Psychol*, 3(2), 77-101.
- Ceylan, G., Kozak, M. (2021). Aktif zumbaya katılan üyelerin "zumba" kavramına ilişkin algıları: Bir metafor analizi çalışması. *Journal of Human Sciences*, 18(2), 233-242.
- Çar, B., Metin, S. N., Sünğü, B., & Konar, N. (2022). A Metaphorical View Regarding the Career and Sports Perceptions of University Students. *The Asian Institute of Research Education Quarterly Reviews*, 5(2), 133-143.
- Di Tore, P. A. (2017). Perception is a function of action: the sunset of computational metaphor and its implications for teaching of Physical Education. *Journal of Physical Education and Sport*, 17(s05), 2311-2315.
- Dikme, E., Toker Gökçe, A. (2019). Lise öğrencilerinin toplumsal cinsiyet algılarının incelenmesi. Y. Kondakçı, S. Emil ve K. Beycioğlu (Ed.), 14. Uluslararası Eğitim Yönetimi Kongresi Bildiriler Kitabı içinde (ss. 510-517). Ankara: Pegem Akademi Yayıncılık.
- Dixon, N. (2007). *On winning and athletic superiority*. In W.J. Morgan (Ed.), *Ethics in sport (2nd edition)*, (pp. 165-180). Champaign: Human Kinetics.
- Domene, P.A., Moir, H.J., Pummell, E., Knox, A., Easton, C. (2016). The health-enhancing efficacy of zumba fitness: an 8-week randomised controlled study. *Journal of Sports Sciences*, 34(15), 1396-1404.
- Donaldson, S.J., Ronan, K.R. (2006). The effects of sports participation on young adolescents' emotional well-being. *Adolescence*, 41(162), 369-389.
- Dökmen, Z.Y. (2004). *Toplumsal cinsiyet*. İstanbul: Sistem Yayıncılık.
- Durmaz, M., Özcan, A.K. (2021). Sosyolojik bağlamda fitness sporunun beden algısı üzerine etkisi: (Bursa örneği). *Munzur Üniversitesi Sosyal Bilimler Dergisi*, 10(2), 56-79.
- Forwood, M. R., & Larsen, J. A. (2000). Exercise recommendations for osteoporosis. *Aust Fam Physician*, 29(8), 761-764.
- Güllü, E. (2021). Metaphorical perceptions of physical education and sports: An evaluation from the perspective of preservice teachers. *African Educational Research Journal Special*, 9(1), 9-15.
- Hausenblas, H.A., & Fallon, E.A. (2002). Relationship among body image, exercise behavior, and exercise dependence symptoms. *International Journal of Eating Disorders*, 32(2), 179-185.
- İnal, A.N. (2003). *Beden eğitimi ve spor bilimi*. Ankara: Nobel Yayın Dağıtım.
- Jetzke, M., Mutz, M. (2019). Sport for pleasure, fitness, medals or slenderness? Differential effects of sports activities on well-being. *Applied Research in Quality of Life*, 15, 1519-1534
- Karagöz, N., Karagün, E. (2015). Profesyonel sporcuların beden imajı üzerine betimsel bir çalışma. *Sport Sciences*, 10(4), 34-43.
- Karakaya, E. D., Salıcı, O. (2016). Isparta'da öğrenim gören 11-13 yaş gurubu öğrencilerin popüler spor branşları hakkındaki metaforik algılarının belirlenmesi. *International Journal of Social Sciences and Education Research*, 2(3), 1059-1076.
- Kaya, Ö. Cicioğlu, H.İ., Demir, G.T. (2018). The attitudes of university students towards sports: Attitude and metaphorical perception. *European Journal of Physical Education and Sport Science*, 5(1), 115-133.
- Koç, M., Murathan, F. Yetiş, Ü., Murathan, T. (2015). İlköğretim 7. sınıf öğrencilerinin spor kavramına ilişkin algıları. *Akademik Sosyal Araştırmalar Dergisi*, 3(9), 294-303.
- Koç, U. (2020). Metaphorical perceptions of physical Education of university students. *Uluslararası Bozok Spor Bilimleri Dergisi*, 1(1), 11-20.
- Kovceses, Z. (2010). *Metaphor: A practical introduction*. Oxford university press.
- Kurtipek, S., & Sönmezoğlu, U. (2018). Determination of the perceptions of sports managers about sport concept: A metaphor analysis study. *International Journal of Higher Education*, 7(4), 17-25.
- Kurtipek, S., Çelik, O. B., Gümüş, H., & Yılmaz, B. (2017). Metaphorical perceptions of camp leaders working under the ministry of youth and sports on the concept of youth. *Ovidius University Annals, Series Physical Education and Sport/Science, Movement and Health*, 17(2), 359-368.
- Kurtipek, S., Gungor, N.B. (2019). Determination of the perceptions of sport managers on the concept of organization: A metaphor analysis study. *Journal of Education and Training Studies*, 7(2), 57-63.
- Kuru, E., Baştuğ, G. (2008). "Futbolcuların kişilik özellikleri ve bedenlerini algılama düzeylerinin incelenmesi". *SPORMETRE Beden Eğitimi ve Spor Bilimleri Dergisi*, 6(2), 95-101.
- Küçükapan, H., Civan, A. (2021). Pilates egzersizlerinin beden algısına etkisi. *Türkiye Spor Bilimleri Dergisi*, 5(2), 54-62.
- Lakoff, G., Johnson, M. (2005). *Metaforla hayat, anlam ve dil (Çev. G. Y. Demir)*. İstanbul: Paradigma.
- McCabe, M. P. ve Ricciardelli, L. A. (2005). A prospective study of pressures from parents, peers, and the media on extreme weight change behaviors among adolescent boys and girls. *Behavior Research and Therapy*, 43(5), 653-668.
- Merdinoğlu, A., Gürsoy, R., Hazar, K., Dalli, M. (2017). Analysis of body perception and self-esteem values connected with aerobic exercise in female and male adults. *Beden Eğitimi ve Spor Bilimleri Dergisi*, 11(3), 333-339.
- Miles, M. B. ve Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks: CA.
- Morse, J. M. (2016). *Mixed method design: Principles and procedures* (1. baskı). Routledge.
- Murnen, S. K. ve Don, B. P. (2012). *Body image and gender roles*. In T. F. Cash (Ed.), *Encyclopedia of body image and human appearance*. (pp. 128-134). San Diego, CA: Elsevier Academic Press.
- Mutz, M., Reimers, A.K., Demetriou, Y. (2021). Leisure time sports activities and life satisfaction: Deeper insights based on a representative survey from Germany. *Applied Research Quality Life*, 16, 2155-2171.
- Okumuş, E. (2011). Bedene müdahelenin sosyolojisi. *Şarkiyat*, (2), 1-15.
- Onag, Z., Kaya, E., & Dönmez, E. (2021). Metaphorical Perceptions of Sports Management Students in Turkey with Regard to "Leadership" Notion. *African Educational Research Journal*, 9(3), 807-816.
- Ortony, A. E. (1993). *Metaphor and thought*. Cambridge University Press.
- Patton, M. Q. (2002). *Qualitative research & evaluation methods*. United Kingdom: Sage Publication.
- Pearce, N. S. (1999). Diabetes and exercise. *British journal of sports medicine*, 33(3), 161-172.
- Petridou, A., Siopi, A., & Mougios, V. (2019). Exercise in the management of obesity. *Metabolism*, 92, 163-169.
- Saban, A., Koçbeker, B. N., & Saban, A. (2006). Öğretmen adaylarının öğretmen kavramına ilişkin algılarının metafor analizi yoluyla incelenmesi. *Kuram ve Uygulamada Eğitim Bilimleri*, 6(2), 461-522.
- Sevinç, Ö.S., Ergenç, M. (2017). Düzce Üniversitesi'nin bazı fakültelerinde öğrenim görmekte olan lisans öğrencilerinin "spor" hakkındaki metaforları. *Düzce Üniversitesi Sosyal Bilimler Dergisi*, 7(2), 106-131.
- Sevinç, Ö.S., Ergenç, M. (2017). Düzce Üniversitesi'nin bazı fakültelerinde öğrenim görmekte olan lisans öğrencilerinin "spor" hakkındaki metaforları. *Düzce Üniversitesi Sosyal Bilimler Dergisi*, 7(2), 106-131.
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22(2), 63-75.
- Stratton, S.J. (2021). Population research: Convenience sampling strategies. *Prehospital and Disaster Medicine*, 36(4), 373-374.
- Teke, M.S., Karakuş, S. (2022). Sporun sosyal gelişim sürecine etkisi. *Journal of*

- Social, Humanities and Administrative Sciences*, 8(53), 733-736.
- Tiggemann, M. (2011). *Sociocultural perspectives on human appearance and body image*. T. F. Cash ve L. Smolak (Eds.) içinde *Body image: A handbook of science, practice, and prevention* (2nd ed.), (pp. 12-19). New York: The Guilford Press.
- Todd, J. A., & Robinson, R. J. (2003). Osteoporosis and exercise. *Postgraduate medical journal*, 79(932), 320-323.
- Toptaş Demirci, P. (2019). Recreational activities for with disability: School-aged children and adolescents. *International Journal of Recreation and Sports Science*, 3(1), 46-57.
- Topuz, S.K., Erkanlı, H. (2016). Toplumsal cinsiyet bağlamında kadın ve erkeğe atfedilen anlamların metafor yöntemiyle analizi. *Alternatif Politika*, 8(2), 300-321.
- Weinberg, R., Gould, D., (2003). *Psychological foundations in sport and exercise* (3. baskı). Champaign Il: Human Kinetics Press.
- Yetim, A.A., Kalfa, M. (2019). Üniversite öğrencilerinin sporla ilgili metaforik algıları ve spor etkinliği dersi. *SPORMETRE Beden Eğitimi ve Spor Bilimleri Dergisi*, 17(1), 41-54.
- Yıldırım, A. ve Şimşek, H. (2011). *Sosyal bilimlerde nitel araştırma yöntemleri*. Ankara: Şarkiyat.
- Yıldız, E., Çetin, Z. (2018). Sporun psiko-motor gelişim ve sosyal gelişime etkisi. *Hacettepe University Faculty of Health Sciences Journal*, 5(2) 54-66.
- Zhang, Z., Chen, W. (2019). A systematic review of the relationship between physical activity and happiness. *Journal of Happiness Studies*, 20(4), 1305-1313.
- Zisser, H., Gong, P., Kelley, C. M., Seidman, J. S., & Riddell, M. C. (2011). Exercise and diabetes. *International Journal of Clinical Practice*, 65, 71-75.