

# Recreational Area Preferences of Individuals with Different Body Mass Indexes

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## ABSTRACT

**Background:** The global pandemic has proven once again how important an active lifestyle is for human beings. There was intense participation in parks and recreation areas, with the stretching of partial or full closures around the world. We can say that this participation is a harbinger of the more intensive use of parks and recreation areas after the global epidemic.

**Aim:** This study aimed to investigate what individuals pay attention to when choosing the recreational areas they able to go to and the relationship between these factors and their field preferences.

**Methods:** Four hundred thirteen individuals participated in the study voluntarily. Three hundred ninety [18-63 years old ( $\bar{x}$ =36,32±12.34); 56.9% (224) female, 43.1% (166) male] of the data obtained from the study group were included in the study. The demographic information form, which was developed by the researcher and questioned some demographic information of the participants, Recreation area preference factors scale developed by Gümüř and Özgül (2017) were used as the data collection tool in the study. Recreation area preference factors scale consisted of a total of 24 items and had 5 sub-dimensions. In the analysis of the data, the distribution normality was tested and a normal distribution was observed. Independent samples t test and One-way ANOVA were used for statistical analysis.

**Results:** While the analysis results showed that there was a significant difference between the body mass indexes of the research group and the recreation area preference factors scale in terms of sportive diversity, personnel, physical facilities and activity sub-dimensions, no difference was detected in the location sub-dimension. Obese individuals attached more importance to the sports diversity, physical facilities and personnel working in the recreation areas compared to other groups. Individuals with normal body mass index attached more importance to social and artistic activities in recreation areas than other groups. In addition, it was determined that female participants attach more importance to all sub-dimensions than male.

**Conclusion:** it was determined that the body mass indexes of the individuals were effective in the recreation area preferences. This result is important in terms of knowing the expectations of the target audience in the modernization of parks and recreation areas or the construction of new ones.

**Keywords:** Body Mass Index, Recreation, Physical activity

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## INTRODUCTION

In the century we are in, the COVID-19 pandemic has proved that an active lifestyle how much important for the human being one more time. There has been intense participation in parks and recreation areas with the loosening of partial or full closes around the World. We can say that this participation is a harbinger that parks and recreations areas will be used more intensively after the global pandemic. These areas have become double important especially for people who have weight problems. Overweight and obesity, in almost all societies over the historical process, have been perceived as health and wealth. Considering that human beings have struggled with hunger, famine and poverty over history, being of this perception can be accepted naturally. Although hunger and poverty still exist in some societies today, now health problems due to nutritional deficiency and infectious diseases have been replaced by health problems caused by overnutrition and obesity in many places. In the beginning, while obesity is considered as a problem of developed countries, it has also become inevitable in developing countries with industrial developments, adoption of the western lifestyle, reducing energy expenditure while increasing energy intake and the fact that rural to urban migration at last<sup>1</sup>.

In parallel with the increasing obesity, the coming up

of many slimming method and publications about being harmful of them to break people's motivation about slimming. As the weight falls, the basic building blocks of the body's missing (muscle mass, bone mineral content) are observed at the beginning of the illnesses which are seen in the people using slimming prescriptions<sup>2</sup>. For this reason, terms of sports and exercise have become an indispensable part of these prescriptions. As a recreational style, the sport has undertaken many tasks, from individuals having ideal body sizes to psychological relaxation and regeneration. For this reason, the sports policies of the state and the management and administration of these policies have special importance in raising a healthy generation. It is seen that local governments have accelerated their studies in planning recreation areas that are directly or indirectly related to the concept of sports. Local governments, especially in metropolitan cities, teach the concept of recreation, which gives people the opportunity to make their leisure time productive, try to keep them away from work, life and livelihood problems, and aim to increase the quality of life. For these purposes, local governments keep offering options of sporting activities, entertaining games, training and knowledge-based games and activities, and recreation areas that apply the most efficiently for the public services<sup>3,4</sup>. This study aimed to examine the relationship

between body mass index and recreation area preference in terms of the use of recreation areas by more people.

There is no doubt that scientific and technological developments affect people's lifestyles and health. Technological developments caused not only led people to inactivity but also changes in people's eating habits and affected their health negatively. In the literature, starting from the last quarter of the 20th century, obesity has become one of the important problems that face not only in developed countries but also worldwide<sup>5</sup>. In Turkey, as in many countries of the world, inadequate and unbalanced nutrition has become an important problem. The widespread use of "fast food" habits, which are called rush nutrition, and the reduction of physical activity and maintaining a more inactive life are among the underlying reasons for the increase in obesity, which is the most important result of unbalanced nutrition<sup>6</sup>.

Obesity treatment aims to reduce the morbidity and mortality risks related to obesity by targeting a realistic body weight loss, giving the individual an adequate and balanced diet and increasing the quality of life. A 10% reduction in body weight over 6 months provides significant benefits in preventing health problems caused by obesity<sup>7</sup>. Studies in the literature show that not only people with high body mass index but also individuals with low body mass index constitute risk factors for many diseases<sup>8-10</sup>. In the study investigating the relationship between physical activity and body mass index in adults, it has stated that regular exercises have a very important role in keeping the BMI at normal levels while helping to maintain the ideal body weight of adults, for this purpose, the importance of informing adult individuals living inactive about BMI is emphasized<sup>11</sup>. Balanced nutrition and physical activity come to the fore rather than medical interventions at the point of keeping the BMI at the ideal level.

According to the world health organization; it is stated that there has been a significant decrease in the level of physical activity with the technological development and accordingly, more than 2 million people die each year<sup>12</sup>. Recreation areas have an important mission to increase the physical activity level of individuals. In the current century, the living spaces that have become more concrete, the industrialized and increasing population of cities, where people can move freely, do sports, participate in recreational activities and more importantly, get rid of the stress of the city and relax; increase the importance of public and green recreational areas. Although recreation areas are perceived as "sexed places" belonging to the male world, where hegemonism occurs, the intense demand of urban residents trapped between concrete piles for clean, decent, diverse activities and as many green recreation areas as possible is an und desirable fact<sup>13</sup>.

Studies have shown that individuals in Turkey spend their leisure mostly with inactive activities<sup>14-17</sup>. For an active lifestyle, local governments, as institutions and organizations that have the responsibility to meet the needs of individuals to participate in recreational activities, have recently embarked on the construction of modern parks and recreation areas and the modernization of the old ones<sup>18</sup>. Therefore, knowing the factors affecting the recreation area preferences of individuals will contribute to the target mass's more intensive and active use of these

areas and eliminate a deficiency in this regard in the literature.

## MATERIAL & METHODS

The universe of the study consisted of individuals over 18 years old living in Ankara. Purposive sampling method was used for sample selection. Four hundred thirteen individuals voluntarily participated in the study. When the data were examined the answers of some participants were deemed invalid (23 participants) and the sample group consisted of 390 participants at the last point ( $\bar{x}$ : 36,32±12,34). Demographic information form and recreation area preference factor scale were used as data collection tools. There were questions regarding age, height, body weight, gender, marital status, education, and income levels to obtain personal information. Although there were many methods in the diagnosis and determination of obesity, a simple observation was usually sufficient to make a diagnosis. However, body mass index (BMI) and waist circumference were often measured to classify and determine the type of obesity. BMI can be calculated easily by dividing body weight in kilograms by the square of height in meters [Body weight / height<sup>2</sup>] and its unit was kg/m<sup>2</sup>. A BMI of less than 18.5 kg/m<sup>2</sup> was considered slim, 18.5-25 kg/m<sup>2</sup> was normal, 25-30 kg/m<sup>2</sup> excess weight, robust, bulk or preobese. BMI greater than 30 kg/m<sup>2</sup> indicates obesity. Obesity can be divided into stage I (BMI 30-40), stage II (BMI 40-50) and stage III (BMI > 50)<sup>1</sup>. The recreation area preference factors scale was a 5-point Likert-type (1: Not important, 5: Very important) scale consisting of 5 sub-dimensions (Sportive Diversity, Personnel, Location, Physical Facilities, Activity) and a total of 24 items, developed by Gümüş and Özgül (2017) and measuring what individuals pay attention to when choosing the recreation area they will go<sup>19</sup>. Data collection forms were applied to individuals living in 9 different districts of Ankara. Before the data collection tools were applied, the researchers also stated that the application took an average of 6 minutes, each question should be answered, and the information obtained would only be used within the scope of this study. The information obtained by the data collection tool was transferred to the SPSS 21 package program and Independent samples t test and One-way ANOVA were used as well as descriptive statistics (percentage, frequency).

## RESULTS

When Table 1 was examined, it was seen that 56.9% of the participants in the study were female, 50.7% were single, and 52.4% were between the ages of 18-29. Moreover, 39.3% of the participants consisted of individuals with normal body weight. Among the individuals participating in the study, the rate of university graduates was 69.1%.

The analysis results showed that there was a significant difference between the body mass indexes of the research group and the recreational area preference factors scale in terms of sportive diversity, personnel, physical facilities and activity sub-dimensions ( $p < ,05$ ). Moreover, no difference was detected in the location sub-dimension ( $p > ,05$ ). In this context, obese individuals attached more importance to the sports diversity of

recreation areas ( $\bar{x}$ = 4.47), physical facilities ( $\bar{x}$ = 4.09) and personnel working in the field ( $\bar{x}$ = 4.32) than other groups. Individuals with normal body mass index attached more importance to social and artistic activities in recreation areas ( $\bar{x}$ = 4.14) than other groups (Table 2).

When Table 3 was examined, as a result of the independent groups' t-test analysis to determine whether the recreational areas preference factors scale of the individuals participating in the study differ according to the gender variable, it was determined that gender was a variable that caused a significant difference in recreation area preference ( $p < .05$ ). The mean scores of female participants in many sub-dimensions in all sub-dimensions were higher than single individuals.

Table 1: Demographic information of the research group

| Variables          |                   | n   | %    |
|--------------------|-------------------|-----|------|
| Gender             | Female            | 224 | 56.9 |
|                    | Male              | 166 | 43.1 |
| Marital Status     | Married           | 192 | 49,3 |
|                    | Single            | 198 | 50,7 |
| Age                | 18-29             | 199 | 52,4 |
|                    | 30-42             | 119 | 28,6 |
|                    | 43-63             | 72  | 19,0 |
| BMI                | Underweight       | 48  | 11,9 |
|                    | Normal            | 152 | 39,3 |
|                    | Overweight        | 136 | 35,2 |
|                    | Obese             | 54  | 13,6 |
| Educational Status | Primary education | 46  | 11,9 |
|                    | High school       | 75  | 19,0 |
|                    | University        | 269 | 69,1 |

Table 2: Comparison of recreational areas preference factors scale sub-dimensions according to body mass index

| Sub-dimensions     | BMI         | N   | $\bar{x} \pm sd$         | F      | p     |
|--------------------|-------------|-----|--------------------------|--------|-------|
| Sportive diversity | Underweight | 48  | 4,16 ± 0,68 <sup>b</sup> | 35,321 | ,001* |
|                    | Normal      | 152 | 3,55 ± 0,64 <sup>c</sup> |        |       |
|                    | Overweight  | 136 | 3,67 ± 0,37 <sup>b</sup> |        |       |
|                    | Obese       | 54  | 4,39 ± 0,45 <sup>a</sup> |        |       |
| Personnel          | Underweight | 48  | 4,32 ± 0,51 <sup>a</sup> | 7,572  | ,001* |
|                    | Normal      | 152 | 4,13 ± 0,74 <sup>b</sup> |        |       |
|                    | Overweight  | 136 | 4,34 ± 0,65 <sup>a</sup> |        |       |
|                    | Obese       | 54  | 4,23 ± 0,48 <sup>a</sup> |        |       |
| Location           | Underweight | 48  | 3,87 ± 0,66              | 1,931  | ,130  |
|                    | Normal      | 152 | 3,46 ± 0,78              |        |       |
|                    | Overweight  | 136 | 3,87 ± 0,77              |        |       |
|                    | Obese       | 54  | 3,89 ± 0,90              |        |       |
| Physical facility  | Underweight | 48  | 3,83± 0,76 <sup>a</sup>  | 6,356  | ,001* |
|                    | Normal      | 152 | 3,78± 0,80 <sup>ab</sup> |        |       |
|                    | Overweight  | 136 | 3,65 ± 1,07 <sup>b</sup> |        |       |
|                    | Obese       | 54  | 4,56 ± 0,63 <sup>a</sup> |        |       |
| Activity           | Underweight | 48  | 3,94± 0,45 <sup>ab</sup> | 5,309  | ,001* |
|                    | Normal      | 152 | 4,56 ± 0,23 <sup>a</sup> |        |       |
|                    | Overweight  | 136 | 4,71± 0,67 <sup>ab</sup> |        |       |
|                    | Obese       | 54  | 3,59 ± 0,76 <sup>b</sup> |        |       |

\* $p < .05$ ; a,b,c: The differences between groups containing different letters are important.

Table 3: Comparison of sub-dimensions of recreational areas preference factors scale by gender variable

| Variables          |        | N   | $\bar{x} \pm sd$ | t     | p     |
|--------------------|--------|-----|------------------|-------|-------|
| Sportive diversity | Female | 224 | 3,39±0,58        | 1,977 | ,043* |
|                    | Male   | 176 | 3,18±0,51        |       |       |
| Personnel          | Female | 224 | 3,51±0,72        | 2,061 | ,041* |
|                    | Male   | 176 | 2,65±0,42        |       |       |
| Location           | Female | 224 | 3,43±0,60        | 2,213 | ,023* |
|                    | Male   | 176 | 2,67±0,64        |       |       |
| Physical facility  | Female | 224 | 3,74±0,70        | 2,257 | ,032* |
|                    | Male   | 176 | 3,28±0,42        |       |       |
| Activity           | Female | 224 | 3,02±0,53        | 1,953 | ,041* |
|                    | Male   | 176 | 2,71±0,57        |       |       |

\* $p < .05$ ;

## DISCUSSION

In this study, which aimed to examine the relationship between Body Mass Index and recreation area preferences, 390 individuals between the ages of 18-63 participated. When Table 2 examined, it was seen that

obese individuals had the highest value ( $\bar{x}$ =4,47) in the sportive diversity sub-dimension of the Recreation Area Preference Factors scale. This result can be interpreted as obese individuals attach more importance to sportive diversity in recreation areas compared to other individuals. Therefore, the fact that there were walking paths in the recreation areas, the existence of a bicycle path and the opportunity to do different types of sports would make these areas more preferable by individuals in the obese class. Another result of the study was individuals in the obese class have the highest mean ( $\bar{x}$ =4,44) of the personnel sub-dimension. This result showed that obese individuals attached more importance to the sub-dimension of personnel than other individuals when choosing their recreational areas. When the articles in the personnel sub-dimension were considered, it was thought to be beneficial to take measures such as having the trainers do sports, having a sufficient number of cleaning personnel, having enough security personnel and finding personnel to consult in the area for more intensive use of recreational areas by

obese individuals. Studies have shown that safety was an important obstacle based on both gender and ethnicity in participating in recreational activities<sup>20-22</sup>. In another result of the study, there was no significant difference was found between the groups in the location sub-dimension. This result indicated that articles such as the recreation area being close to the city center, being close to home and being accessible by public transportation have the same importance for all classifications. Zanon et al. (2013) stated that the dimension of location restricts young people from participating in recreation areas<sup>23</sup>. In addition, Yağmur et al. (2020) stated that female attached more importance to the position dimension than male because of their social roles and family obligations<sup>24</sup>. Another result showed that obese individuals have the highest mean ( $\bar{x}=4,09$ ) in the physical facilities sub-dimension in the recreation area preferences of the individuals. From this point of view, it can be said that obese individuals attach more importance to cleanliness in recreational areas, green areas, equipment that can be rented, and informative signs compared to other individuals. Kervankıran and Eryılmaz (2014) stated in their study that the regulations in the recreation area, cleanliness, the ecosystem in short physical facilities affect the number of visitors<sup>25</sup>. Sabbağ and Aksoy (2011) stated in their study that students could not participate in recreational activities due to the insufficiency of physical facilities<sup>26</sup>. Another result of the study showed that there was a significant difference was found in the activity dimension of the recreational area preference factors. Unlike other results, individuals in the obese class have the lowest mean ( $\bar{x}=3,68$ ) in this sub-dimension. This finding can be interpreted as socio-cultural activities (concert, theatre, etc.), sports organizations (tournament, competition etc.), conversation, congress, symposium etc. activities in recreation areas were not important for obese individuals compared to other individuals. In the activity sub-dimension, the highest mean ( $\bar{x}=4,14$ ) was found in normal individuals. This result showed that social activities in recreation areas were important activities for individuals with normal body size. The study conducted by Erbaş (2020) found that students with good socio-economic status participated in social recreational activities more often than other students<sup>27</sup>.

It was found that female care more about all sub-dimensions in recreation area preference factors. Ardahan and Lapa Yerlisu (2011) stated that men's recreation preferences were more active and comfortable due to the structures supported by social institutions such as work, family and social responsibilities, and female had more limited opportunities in recreational choices due to their roles<sup>28</sup>. Thapa, Confer and Mendelson (2004) stated that male participated in more activities than female in recreation areas<sup>29</sup>. Because males' sportive leisure time habits are higher than female<sup>30</sup>, it was thought that factors such as females' having more limited opportunities in recreational preferences compared to men, and easy accessibility of the area when choosing the recreational areas they go to, were thought to be taken into consideration. Kurdoğlu and Düzgüneş (2011) emphasized in their study that location has an important effect on the use of recreation area<sup>31</sup>. Emekli (2001), on the other hand, stated that the location of the recreational areas was

important depending on the periods people allocate for recreational activities, and even the walking distance can be considered as a reason for preference<sup>32</sup>. In addition, Çetinkaya, Erman, and Uzun (2015) stated that one of the criteria that most affects the satisfaction of people participating in recreational activities was the proximity of the recreational area and its easy accessibility<sup>33</sup>. Considering the responsibilities of female in housework such as being a mother, being a wife, cooking and cleaning, and the period to be allocated for them, it made it understandable that the location sub-dimension was more important for female participants.

## CONCLUSION

As a result, although many scientific studies revealed the physiological and psychological developments that recreational activities provide in individuals, it was an undoubted fact that we were not a very advanced society in terms of both the level of consciousness and establishment in terms of recreational opportunities. State institutions and local administrations, which should have the greatest responsibility in developing this awareness, should increase recreational opportunities and take necessary measures in this regard. While the policies developed by local governments regarding sports and physical activity for the public due to the increasing rate of facilities in our country in recent years<sup>34</sup>, local governments in America have been creating recreational areas for more than a hundred years to provide leisure and recreation services they claim, and this claim was mostly based on the positive contribution of leisure and recreation to quality of life. Many researchers argued that recreation and leisure services and programs were necessary because they can improve the quality of life of people in the community. Therefore, considering the effects of participation in recreation that protect or increase the quality of life of the society, it should be the primary responsibility of local governments to provide recreational services<sup>35</sup>. The recreation areas planned by local governments should be used by more individuals in order to create a healthy city and urban dwellers. To attract more people to recreation areas, it was extremely important to know the factors that affect the users' preference of recreation areas and to plan new recreation areas in the light of this information or to modernize the old ones in line with this information.

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