

Music's Impact on Physical Performance: A Study of Individuals Engaging in Fitness Activities

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Abstract

This study aims to investigate the influence of music on individuals engaging in fitness activities at fitness centers in Izmir. A total of 249 individuals willingly participated in the study. The study utilized the personal information form and the impact of music on sportive activities scale, which were designed by Karayol and Turhan (2020), as data collection instruments. The scale comprises 18 items and is divided into 3 sub-dimensions, each measured using a 5-point Likert scale. The data was analyzed using the SPSS software package. The statistical procedures used in the data analysis included the "Independent samples t-test" and "One-way analysis of variance (ANOVA)" tests to examine intergroup differences. Additionally, the "Tukey Post Hoc" test was employed. According to the analyzed results, the research revealed a notable disparity in the sub-dimensions of the influence of music on age and overall total scores during physical activities ($p < 0.05$). The study found that there was no statistically significant difference in the effect of music on the physical strength and performance of persons during sports activities based on their gender ($p > 0.05$). However, there was a statistically significant difference in other aspects and overall scores ($p < 0.05$). The impact of music on motivation during sportive activity varied significantly based on people' marital status ($p < 0.05$). However, there was no significant difference in other sub-dimensions and overall total scores based on marital status ($p > 0.05$). A statistically significant difference was observed in the sub-dimensions of the influence of music on income level and overall total scores during physical activities ($p < 0.05$). The study found that there was no statistically significant difference in the effect of music on the motivation and physical strength and performance of individuals during sports activities, based on their regular participation in sports ($p > 0.05$). However, a significant difference was observed in the overall scores of psychological practice and the general scale ($p < 0.05$). Based on the research findings, it can be concluded that music has a substantial influence on persons who engage in fitness activities during sports. It is advisable to assess the influence of music on various sports disciplines as well as on individuals in non-sporting domains. This holds significance in assessing the influence of music on individuals.

Keywords: Sports, music, fitness

1. INTRODUCTION

Despite the global dissemination of the term "sport" through the English language, it is not originally an English word. The term originated from the Latin words "Disportere" or "Deportere", which signify the act of distributing or separating from one another. The term in question has undergone gradual deterioration and has come to be employed as "Disport". Starting in the 17th century, it adopted the shape of "Sport". Due to the influence of international language exchange, the Turkish language incorporated the term "Sport" into its lexicon, and it began to be utilized in the same manner as it is spoken (Dalbudak et al., 2020). Multiple definitions have been created about sports. Sport is a powerful instrument that shapes individuals' lifestyles and facilitates social interaction between societies (Yiğit and Dalbudak, 2022). Generally, it can be described as a form of individual amusement and a combination of physical and mental exertion aimed at attaining specific objectives (Acar, 2022). Sports and regular exercise have a positive impact on both the physical and mental well-being of individuals (Acar, 2022). They play a key role in the overall physical and mental development of individuals (Acar and Karavelioğlu, 2022).

Prior to engaging in physical activities, it is advantageous to examine the phenomena of "music" in a comprehensive manner. Due to the subjective nature of music, its interpretation and appreciation differ among individuals. Music has consistently been a universal language that has connected individuals and communities throughout history. It serves various purposes and is present in both local and large social groups (Küçüköncü, 2000). The concept of music, which has persisted for centuries, has naturally become closely connected with the history of music as a whole. Additionally, it has also intersected with various other fields such as mathematics, psychology, acoustic physics, philosophy, aesthetics, music sociology, linguistics, and more. These disciplines have all contributed to the study and exploration of music in different ways (Fubini, 2006). Music is a comprehensive art form that utilizes sounds arranged in a deliberate manner and adheres to a specific concept of beauty to convey emotions, thoughts, patterns, and impressions (Uçan, 1997). Music can be defined as a cohesive artistic composition created by the arrangement and blending of sounds, guided by a specific purpose, method, and appreciation of beauty (Uçan, 1994). According to Toksoy (2005), music is a powerful educational tool that may foster the development of creative, productive, critical-thinking individuals. Historical scholars, who recognized the fundamental components of music as being linked to the inherent rhythmic patterns and harmonious nature of the world, ascribed the organization and operation of the human body to the incorporation of rhythmic and harmonious elements, such as music (İlyasoğlu, 2001).

Among all genres of art, music has a far more noticeable impact on our sense of self due to its abstract expression and internal structure. In a sense, music traps our consciousness and the scope of our consciousness is dragged by this sound stream, relations with the outside world are completely cut off, a person lives in a world built on his dreams and memories. The positive impact of music on the human soul has led people to different searches for thousands of years and due to this feature, it has been used for therapeutic purposes in physical and especially mental disorders. The use of music for therapeutic purposes dates back to ancient times. The impacts of music on people are divided into two as psychological impacts and physical impacts. It is known that the analysis of the physiological and psychological impacts of music is quite difficult. Music is an abstract art. It has different impacts on each listener. The reactions of individuals with different psychologies to the same music will be different from each other in parallel. Many of us listen to music without being fully aware of its impact. Sometimes it is stimulating, sometimes it can be very stimulating or even disturbing. Whatever our reaction is, music creates mental and physical impacts. Music is a life full of secrets that surround our whole selves, empty our minds, revive our memories by making us feel the most beautiful emotions that activate our bodies, open the door of a world woven with dreams from the environment we are in,

solve us with its magic, but cannot be solved like the universe. The rhythm of the music regulates the heartbeat and enables that person to regain physical, mental and mental health (Khan, 1994). Music covers unpleasant sounds and feelings, affects breathing, affects heart rate, pulse and blood pressure, reduces muscle tension, improves body movements and coordination, affects body temperature, can raise endorphin levels and regulate stress-related hormones. These examples show us the power of music in self-developed healing systems of the body and in returning to the stronger rhythms of life (Campbell, 2002).

Although the purpose and means of sports, which emerged with the presence of human beings, have changed from past to present and have developed in many ways, the performance that emerges with sports activities is affected by various factors such as the biological, physiological and psychological state of the person. The interaction of music in physical and mental performances and competitions on athletes, however, increases the motivation power of athletes with the increase in reflex movements. Since movement is inherent in human nature, sports have been an indispensable part of our lives since the past. Each of us has dealt with or wanted to deal with any sport at some point in our lives. Because sports have many physical and mental benefits (www.psikolojidenoku.com/spor-vemuzik, 23.04.2022). In scientific researches, the relationship between rhythmic character and physical skills has revealed that music is impactive in perceiving the environment and increasing motor skills. It has been determined that music with brisk, strong beats listened by the athlete affects the heart rhythm, and there are considerable similarities between the rhythm in music and human movement. When the results of these studies are examined, it is seen that the use of music by athletes during exercise positively affects athletes in terms of self-confidence, self-worth, focus on the subject, and exercising more. One of the newest ideas in sports is the idea of utilizing musical memory in performance enhancement and relaxation. Today's research shows that music has fruitful impacts on exercise and relaxation. In order to create a state of self-awareness, it is necessary to provide "individual attention", "focusing on the inner world", "not being interested in the outer world". In the exercise with and without music, it was found that music had positive impacts on the whole mechanism as an external factor (Erdal, 2005). Listening to music has a similar impact on mental health as exercise. Performance can also be influenced by the preferred type of music. It has been determined that music with fast-paced and strong beats listened by the athlete affects the heart rhythm and it has been understood that there are significant similarities between the rhythm in the music and the human movement.

This study aimed to assess the influence of music on individuals engaging in physical fitness activities at gyms. The findings indicate that music has a significant impact on individuals participating in fitness during sportive activities. It is advisable to investigate the effects of music on individuals in various sports disciplines and non-sporting contexts. This research is crucial for understanding the impact of music on individuals.

2. MATERIAL & METHOD

Study Group

A total of 249 individuals who engaged in physical activities at gyms in İzmir were selected for the study using a simple random sampling procedure. The participants willingly agreed to take part in the study. An online questionnaire was administered using Google form.

Table 1. Distribution of participants' demographic characteristics

| Variable | Frequency (n) | Percentage (%) |
|---|---------------|----------------|
| Age | | |
| 15 – 20 | 27 | 10.8 |
| 21 – 25 | 42 | 16.9 |
| 26 – 30 | 24 | 9.6 |
| 31 – 35 | 30 | 12.1 |
| 36 – 40 | 48 | 19.3 |
| 41 and above | 78 | 31.3 |
| Total | 249 | 100.0 |
| Gender | | |
| Female | 94 | 37.8 |
| Male | 155 | 62.2 |
| Total | 249 | 100.0 |
| Marital status | | |
| Married | 102 | 41.0 |
| Single | 147 | 59.0 |
| Total | 249 | 100.0 |
| Income level | | |
| Low | 48 | 19.3 |
| Medium | 195 | 78.3 |
| High | 6 | 2.4 |
| Total | 249 | 100.0 |
| Status of doing sports regularly | | |
| Yes | 119 | 47.8 |
| No | 130 | 52.2 |
| Total | 249 | 100.0 |

From the population of 249 individuals

- 27 individuals, accounting for 10.8% of the total, belonged to the 15-20 age group. Similarly, 42 individuals (16.9%) were in the 21-25 age group, 24 individuals (9.6%) were in the 26-30 age group, 30 individuals (12.1%) were in the 31-35 age group, 48 individuals (19.3%) were in the 36-40 age group, and 78 individuals (31.3%) were in the 41 and above age group.
- There were 94 individuals, accounting for 37.8% of the total, who were female. On the other hand, there were 155 individuals, making up 62.2% of the total, who were male.
- Out of the total number of individuals, 102 (41.0%) were married, while 147 (59.0%) were single.
- Out of the total sample, 48 individuals (19.3%) had a low income level, 195 individuals (78.3%) had a medium income level, and 6 individuals (2.4%) had a high income level.
- Out of the total respondents, 119 individuals (47.8%) reported engaging in sports regularly, whereas 130 individuals (52.2%) reported not engaging in sports regularly.

Data Collection Tools

In the research, personal information form and impact of music on sportive activities scale (IMSAS) were applied the data collection tools.

Personal Information Form

The personal information form consisted of 5 questions including the participants' age, gender, marital status, income level and status of doing sports regularly.

Impact of Music in Sportive Activities Scale (IMSAS)

The "IMSAS" questionnaire, developed by Karayol and Turhan (2020), assesses the influence of music on sports activities. Each of the 18 questions in the questionnaire can be rated on a scale of 1 to 5, with 1 indicating strong disagreement and 5 indicating strong agreement. The total score on the questionnaire can range from 18 to 90. A higher total score indicates a greater impact of music during sports activities. Increasing total scores suggest a stronger influence of music during individual sports practice. It is important to note that the questionnaire does not include any items with reverse scoring.

IMSAS comprises three sub-dimensions:

- The sub-dimension of motivation (Item 1-2-3-4-5) might yield a score ranging from 5 to 25.
- The sub-dimension of Physical Strength and Performance (Item 6-7-8-9-10-11) can be measured on a scale of 6 to 30.
- The sub-dimension of psychological resilience (Item 12-13-14-15-16-17-18) yields a score ranging from 7 to 35.

The total alpha coefficient is 0.0885. The psychological resilience alpha value is 0.806, with scores of 17, 16, 12, 13, 18, 15, and 14. The physical strength and performance alpha value is 0.785, with scores of 8, 7, 9, 10, 11, and 6. The motivation alpha value is 0.718, with scores of 4, 3, 2, 5, and 1.

IMSAS Reliability refers to the degree of dependability and consistency

The reliability of the "IMSAS" scale is directly influenced by the responses provided by the sample group of 249 individuals. Inconsistent or superficial answers diminish the reliability of the questionnaire. To assess the scale's reliability, the internal consistency coefficient value known as Cronbach's Alpha (α) is employed. As the Cronbach's Alpha (α) value increases, the questionnaire's reliability also increases. A reliability coefficient close to 1 suggests that the scale is a highly dependable measurement tool (Tavşancıl, 2002). For measurement tools designed for intergroup comparisons, reliability typically falls within the range of 0.60 to 0.80. However, when making decisions about individuals, a reliability above 0.80 is expected, and if the decision carries significant consequences, a reliability above 0.90 is preferred (Özçelik, 1989).

Table 2. Cronbach's Alpha values of "IMSAS" and "sub-dimensions"

| Scale and Subscales | Cronbach's Alpha |
|-----------------------------------|------------------|
| IMSAS | 0.934 |
| Motivation | 0.779 |
| Physical Strength and Performance | 0.872 |
| Psychological Resilience | 0.911 |

The table shows that the Cronbach's Alpha value for the IMSAS scale applied to the sample group was $\alpha=0.934$. The motivation sub-dimension had a Cronbach's Alpha value of $\alpha=0.779$, the physical strength and performance sub-dimension had a value of $\alpha=0.872$, and the psychological resilience sub-dimension had a value of $\alpha=0.911$. Both the IMSAS scale and its sub-dimensions are considered highly reliable.

Data analysis

Table 3. Summary statistics on IMSAS and sub-dimension scores

| IMSAS and its sub-dimensions | Minimum | Maximum | Average | Standard Deviation | Skewness | Kurtosis |
|-----------------------------------|---------|---------|---------|--------------------|----------|----------|
| IMSAS | 54.00 | 90.00 | 77.63 | 11.08 | -0.491 | -0.811 |
| Motivation | 15.00 | 25.00 | 22.78 | 2.73 | -0.950 | -0.143 |
| Physical Strength and Performance | 16.00 | 30.00 | 25.35 | 4.49 | -0.485 | -1.056 |
| Psychological Resilience | 13.00 | 35.00 | 29.50 | 5.26 | -0.828 | 0.525 |

- The mean total score of the IMSAS scale was 77.63 and the standard deviation was 11.08. The lowest total score is 54 and the highest total score is 90. The skewness value of the total score values is -0.491 and the kurtosis value is -0.811.
- The mean total score of the motivation sub-dimension is 22.78 and the standard deviation is 2.73. The lowest total score is 15 and the highest total score is 25. The skewness value of the total score values is -0.950 and the kurtosis value is -0.143.
- The mean total score of the Physical Strength and Performance sub-dimension is 25.35 and the standard deviation is 4.49. The lowest total score is 16 and the highest total score is 30. The skewness value of the total score values is -0.485 and the kurtosis value is -1.056.
- The mean total score of the Psychological Resilience sub-dimension is 29.50 and the standard deviation is 5.26. The lowest total score is 13 and the highest total score is 35. The skewness value of the total score values is -0.828 and the kurtosis value is 0.525.

When the skewness and kurtosis values of the Scale and Subscales are examined, it is seen that all of them are between -2 and +2. If the skewness and kurtosis values are between -2 and +2, the normal distribution assumption can be accepted for the total score values of the scale (George and Mallery, 2010).

Since the "IMSAS" and sub-dimension scores provide the assumption of normal distribution, the relationship between the mean scores of the scale and sub-dimension was measured with the help of the Pearson Correlation coefficient. The correlation coefficient takes values ranging from -1 to +1. A positive value indicates the same direction between two variables, and a negative value indicates an inverse relationship between two variables. As the correlation value approaches -1 and +1, the severity of the relationship between them increases. The fact that the correlation coefficient is 0 indicates that there is no relationship between the two variables. As it approaches 0, the severity of the relationship decreases. In the table below, Pearson correlation coefficient values between all subscales and the general scale are given. The value in the cell shows the Pearson correlation coefficient, and the value in parentheses shows the p-value of whether the relationship is significant or not. There is a statistically significant relationship at the 95% confidence level if the P-value is less than 0.05 and at the 99% confidence level if it is less than 0.01. The fact that the correlation coefficient between the two variables is not statistically significant indicates that the two variables are independent of each other.

| | IMSAS | Motivation | Physical Strength and Performance | Psychological Resilience |
|-----------------------------------|-------|--------------------|-----------------------------------|--------------------------|
| IMSAS | 1.000 | 0.783** (0.000) | 0.895** (0.000) | 0.934** (0.000) |
| Motivation | | 1.000 | 0.565* (0.000) | 0.647** (0.000) |
| Physical Strength and Performance | | | 1.000 | 0.737** (0.000) |
| Psychological Resilience | | | | 1.000 |

Chart 1. Interpretation of the Relationship Between "IMSAS" and Sub-Dimension Total Scores with Pearson Correlation Coefficient

Upon examination of the chart, a statistically significant, positive, and robust correlation is observed between the total scores of "IMSAS" and the total scores of all sub-dimensions, with a confidence level of 99%. Furthermore, there exists a statistically significant and robust correlation between the overall scores of the IMSAS sub-dimension, with a confidence level of 99%.

3. RESULTS

The tables below present summary statistics for the demographic characteristics of the scale score averages. Furthermore, the differences between the groups were tested using the "Independent samples t-test" and "One-way analysis of variance (ANOVA)" tests, assuming a normal distribution of the scale and subscale mean scores. The "Tukey Post Hoc" test was also conducted. These analyses were carried out with a confidence level of 95%.

Table 4. Analysis of IMSAS and sub-dimension scores according to the demographic characteristics of Individuals

| | | Motivation | Physical Force and Performance | Psychological Resilience | IMSAS |
|----------------|----------------------|------------|--------------------------------|--------------------------|-------|
| Age | Average | 25.00 | (27.78) | 32.70 | 85.48 |
| | St. Deviation | 0.00 | 3.32 | 3.11 | 6.36 |
| 15 - 20 | Average | 21.57 | 25.14 | 30.00 | 76.71 |
| | St. Deviation | 3.28 | 5.50 | 5.82 | 13.19 |

| | | | | | |
|---|---------------|--------|--------|--------|--------|
| 26 – 30 | Average | 20.25 | 19.75 | 22.25 | 62.25 |
| | St. Deviation | 3.01 | 1.82 | 6.19 | 7.65 |
| 31 – 25 | Average | 23.40 | 25,60 | 30,40 | 79.40 |
| | St. Deviation | 1.88 | 4.92 | 3.89 | 9.26 |
| 36 – 40 | Average | 24.63 | 25.88 | 30.50 | 81.00 |
| | St. Deviation | 1.00 | 4.21 | 3.35 | 7.67 |
| 41 and above | Average | 22.08 | 25.92 | 29.38 | 77.38 |
| | St. Deviation | 2.54 | 3.42 | 4.79 | 9.96 |
| | p-value | 0.000* | 0.000* | 0.000* | 0.000* |
| Gender | | | | | |
| Female | Average | 24.04 | 25.98 | 31.53 | 81.55 |
| | St. Deviation | 2.04 | 4.72 | 4.40 | 10.29 |
| Male | Average | 22.02 | 24.97 | 28.26 | 75.25 |
| | St. Deviation | 2.82 | 4.31 | 5.37 | 10.89 |
| | p-value | 0.000* | 0.085 | 0.000* | 0.000* |
| Marital status | | | | | |
| Married | Average | 23.29 | 25.76 | 29.59 | 78.65 |
| | St. Deviation | 2.17 | 3.75 | 4.27 | 8.83 |
| Single | Average | 22.43 | 25.06 | 29.44 | 76.93 |
| | St. Deviation | 3.02 | 4.92 | 5,87 | 12.38 |
| | p-value | 0.014* | 0.225 | 0.822 | 0.229 |
| Level of Income | | | | | |
| Low | Average | 20.63 | 22.63 | 25.13 | 68.38 |
| | St. Deviation | 3.34 | 4.19 | 5.77 | 11.38 |
| Medium | Average | 23.25 | 25.88 | 30.47 | 79.59 |
| | St. Deviation | 2.31 | 4.32 | 4.62 | 9.86 |
| High | Average | 25.00 | 30.00 | 33.00 | 88.00 |
| | St. Deviation | 0.00 | 0.00 | 0.00 | 0.00 |
| | p-value | 0.000* | 0.000* | 0.000* | 0.000* |
| Status of doing regular exercise | | | | | |
| Yes | Average | 23.08 | 25.56 | 30.46 | 79.11 |
| | St. Deviation | 2.98 | 5.12 | 5.01 | 12.37 |
| No | Average | 22.51 | 25.15 | 28.62 | 76.28 |
| | St. Deviation | 2.47 | 3.82 | 5.35 | 9.60 |

| | | | | |
|----------------|-------|-------|---------------|--------------|
| p-value | 0.097 | 0.474 | 0.006* | 0.044 |
|----------------|-------|-------|---------------|--------------|

The influence of music on motivation during physical activity is lower in individuals aged 21-30 compared to other age groups. Furthermore, individuals aged 26-30 experience less impact on their physical strength, performance, and psychological resilience from music during physical activity compared to other age groups. When considering overall scores, individuals aged 15-20 have higher IMSAS total scores than others, indicating a greater impact of music during physical activity. Conversely, individuals aged 26-30 have lower IMSAS total scores, suggesting a lesser impact of music during physical activity compared to other age groups.

There is no statistically significant difference in the impact of music on the physical strength and performance of individuals during sports activities based on their gender. However, music has a greater impact on the motivation and psychological resilience of women compared to men during sports activities. Additionally, when considering the overall scores on the general scale, women have higher scores on the IMSAS (Impact of Music in Sport and Exercise Questionnaire) than men. Therefore, the impact of music during sports activities is higher for women than for men.

The influence of music on motivation during physical activity is more pronounced in married individuals compared to single individuals. Furthermore, there is no statistically significant difference in the total scores of physical strength and performance, psychological resilience sub-dimension, and general scale IMSAS based on marital status.

The scores for the sub-dimensions of "motivation", "physical strength and performance", and "psychological resilience", as well as the overall scores for the general scale "IMSAS", show an upward trend as income levels rise. Similarly, the influence of music during physical activity becomes more pronounced as individuals' income status improves.

There is no statistically significant difference in the impact of music on individuals' motivation and physical strength and performance during sportive activity based on their regular sports activities. However, the impact of music on psychological practice during sportive activity is greater in individuals who regularly participate in sports. When considering the total scores of the general scale (IMSAS), it is evident that the impact of music during sportive activity is higher in individuals who engage in regular sports compared to those who do not.

4. DISCUSSION AND CONCLUSION

This study aimed to examine the influence of music on individuals engaged in physical fitness activities during sports. It was hypothesized that there would be significant associations between music and the participants' performance.

Music has less impact on motivation during sportive activity in individuals between the ages of 21 and 30 than in other individuals. In addition, the impact of music on "physical strength and performance" and "psychological resilience" during sportive activity in individuals between the ages of 26 and 30 is less than in other individuals. When the overall scale total scores are examined, the IMSAS total scores of individuals between the ages of 15 and 20 are higher than the others. In these individuals, the impact of music during sportive activity is higher than that of other individuals. In addition, the IMSAS total scores of individuals between the ages of 26 and 30 are lower than the others. In these individuals, the impact of music during sportive activity is less than that of other individuals ($p < 0.05$). In the literature review, it was concluded that there were significant differences in the impact of music during sportive

practice according to different age groups of various participant groups (Şık et al., 2019; Tatlısu and Turan, 2021). These studies support the work we have done. We can say that they are affected by music at a different level compared to athletes in different age ranges. Since individuals in each age group have different feelings and thoughts, we can state that their level of influence on music is very different. We can explain that the fact that people in all age groups have different perspectives on life and are affected by music also differs.

The impact of music on the physical strength and performance of individuals during sportive activity does not show a statistically significant difference according to their gender ($P>0.05$). We can state that there is no significant difference between them since their physical strength and performance are impactive for men and women. The impact of music on "motivation" and "psychological resilience" during sportive activity in women is higher than in men. In addition, when the total scores of the general scale are examined, the total scores of IMSAS of women are higher than those of men ($p<0.05$). In the literature review, it was concluded that there were significant differences in the impact of music during sportive activity according to the gender of various participant groups (Vatansever et al. 2018; Tatlısu and Turan, 2021). These studies support the studies we have done. This situation has a significant impact on the impact of gender on music during sportive activities. The impact of music during sportive activity in women is higher than in men. We can say that women have a different feeling towards music than men.

The impact of music on "motivation" during sportive activity in married individuals is higher than in single individuals ($p<0.05$). We can say that married individuals are highly motivated compared to single individuals, and there are different results because they know what the wishes and desires of married people are, and they tend to where they want to do it. In addition, "physical strength and performance", "psychological resilience" sub-dimension total scores and general scale IMSAS total scores of individuals do not show a statistically significant difference according to the marital status variable ($p>0.05$). We can say that music has an impact on marital status since there is no difference in these sub-dimensions and general dimensions. We can explain that single and married people have the same feelings and thoughts towards music. It was concluded that it does not matter whether people are single or married. We can state that music has a high level of impact on every individual. Since there are no similar studies in this study, there are no findings to support it.

The total scores of the "motivation", "physical strength and performance" and "psychological resilience" sub-dimensions and the total scores of the general scale "IMSAS" increase as the income level increases ($p<0.05$). During sportive activity, the impact of music increases as the income status of individuals increases. As the income level of people increases, that is, as the welfare level increases, it will be comfortable for people to turn to different areas. If people have a high income level, they will feel the impact of music very comfortably during sportive activity. They will be able to comfortably give themselves to this area. If people have a low economic level, they cannot give themselves what they want to do and they fail in the plural. Even when the music is playing, they don't feel anything. Because they can't give it to themselves. Because the economy is in trouble. We can say that the economy has a great impact on individuals. Whether in the field of sports or in other areas, if people experience economic difficulties, they cannot benefit from their work and cannot give themselves to this field. Whether the music is played or something different, we can state that it has no impact. Since there are no similar studies in this study, there are no findings to support it.

The impact of music on individuals' "motivation" and "physical strength and performance" during sportive activity does not show a statistically significant difference according to their regular sports

activities ($p>0.05$). We can say that music is impactful on these two situations because there is no difference in these two sub-dimensions, whether it is regular sports or irregular sports. In addition, the impact of music on "psychological practice" during sportive activity is higher in individuals who do sports regularly. Music gives spiritual pleasure to its listeners (Altun-Ekiz and Atasoy, 2021). This leads to a high sense of pleasure in individuals who do sports regularly. When the total scores of the general scale (IMSAS) are examined, it is seen that the impact of music during sportive activity is higher in individuals who do sports regularly than in individuals who do not do sports regularly ($p<0.05$). It is seen that the impact of music is high in individuals who do regular sports. Stuart and Costas (2006) stated that simultaneous music used during sports performance results better than a performance without music (Ekiz and Atasoy, 2021). As a result of studies on the impacts of music in sports, it has been observed that music has healing and increasing impacts on sports performance, as well as clinical music treatments help to improve the quality of life related to health in various conditions. On the other hand, he pointed out that how well the treatments work significantly differs between individuals. (Rocheleau et al., 2004; Çelik and Karabilgin, 2022). We can say that as individuals do sports regularly, their performances increase as well as they enjoy music more. Since there are no similar studies in the literature, there are no findings to support it.

Based on the research findings, it can be concluded that music has a substantial influence on individuals during fitness activities. It is advisable to investigate the effects of music not only in various sports disciplines but also in non-sporting contexts. This is crucial for understanding the impact of music on individuals.

Author Contributions

All the authors equally contributed to the article.

Conflict of Interest

The authors declare no conflict of interest.

Ethics Information

University: Izmir Kâtip Çelebi University Social Research Ethics Committee

Date: 09.05.2023

Number: 2023/10-02

REFERENCES

- Acar, E. (2022). Investigation of psychological resilience and self-esteem of sports high school students. *International Journal of Early Childhood Special Education*, 14(5).
- Acar, E., & Karavelioğlu, M. B. (2022). Spor lisesi öğrencilerinin akıllı telefon bağımlılık düzeylerinin incelenmesi. *International Academic Social Resources Journal*, 7(35), 343- 348.
- Campbell, D. (2002). *Mozart etkisi* (Çev: Feryal Çubukçu). İstanbul: Kuraldışı Yayıncılık.
- Çelik, Ç., & Karabilgin, B. N. (2022). Müziğin sporcular üzerindeki etkilerinin incelenmesi. *Düzce Üniversitesi Spor Bilimleri Dergisi*, 2(1), 38-44.
- Dalbudak, İ., Yılmaz, T., & Yigit, Ş. M. (2020). Nomophobia levels and personalities of university students. *Journal of Education and Learning*, 9(2), 166-177.
- Erdal, G. (2005). Sporda performansın artırılmasında müziğin etkisi. Erişim: (http://www.muzikegitimcileri.net/bilimsel/bildiri/GERdal_2.html).
- Ekiz, M. A., & Atasoy, M. (2021). Sportif uygulamalarda müzik: Kırşehir Ahi Evran Üniversitesi beden eğitimi ve spor yüksekokulu öğrencileri üzerine bir araştırma. *Akdeniz Spor Bilimleri Dergisi*, 4(2), 241-250.
- Fubini, E. (2006). *Müzikte estetik*. Ankara: Dost Kitabevi Yayınları.

- George, D., & Mallery, M. (2010). *SPSS for Windows step by step: A simple guide and reference, 17.0 update* (10th ed.) Boston: Pearson.
- İlyasoğlu, E. (2001). *Zaman içinde müzik*. İstanbul: Yapı Kredi Yayınları.
- Karayol, M., & Turhan, M. O. (2020). Impact of music in sportive activities scale (IMSAS): Validity and reliability assessment. *African Educational Research Journal*, 8(2), 297-304.
- Khan, S. I. (1994). Müzik, insan ve evren arasındaki köprü (Çev: Kaan H. Ökten & T. Ökten). İstanbul: Arıtan Yayınevi.
- Küçüköncü, Y. (2000). Sınıf öğretmenliğinde müzik eğitimi. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 7(7), 8-12.
- Özçelik, D. A. (1989). Bilimsel araştırma gücü. *Kurgu*, 6(2), 192-201.
- Rocheleau, C. A., Webster, G. D., Bryan, A., & Frazier, J. (2004). Moderators of the relationship between exercise and mood changes: Gender, exertion level, and workout duration. *Psychology & Health*, 19(4), 491-506
- Stuart, D. S., & Costas, I. K. (2006). The effects of synchronous music on 400-m sprint performance. *Journal of Sports Sciences*, 24(10), 1095-102.
- Şık, A., Özdemir, A., & Vural, M. (2019). Karate sporcularının müzikten etkilenme ve akademik öz yeterliklerinin bazı demografik değişkenlere göre incelenmesi. *Atatürk Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi*, 21(3), 79-84.
- Tatlısu, B., & Turan, M. (2021). Bayburt Üniversitesi beden eğitimi ve spor yüksekokulu öğrencilerinin sportif uygulamalarda müziğin etkisi algılarının incelenmesi. *International Social Mentality and Researcher Thinkers Journal*, 7(52), 2954-2961.
- Tavşancıl, E. (2002). *Tutumların ölçülmesi ve SPSS ile veri analizi*. Ankara: Nobel Yayın Dağıtım.
- Toksoy, A. (2005). Günümüz müzik eğitiminde kullanılan metotlar ve yaklaşımlara genel bir bakış. *Müzik ve Bilim*, 4.
- Uçan, A. (1997). *Müzik eğitimi temel kavramlar-ilkeler yaklaşımlar*. Ankara: Müzik Ansiklopedisi Yayınları.
- Uçan, A. (1994). *Müzik eğitimi*. Ankara: Müzik Ansiklopedisi Yayınları.
- Vatansever, S., Şahin, Ş., Akalp, K., & Şentürk, F. C. (2018). Müziğin maksimal koşu performansına ve egzersiz sonrası toparlanma hızına etkisi. *Türkiye Spor Bilimleri Dergisi*, 2(2), 61-66.
- Yiğit, Ş. M., & Dalbudak, İ. (2022). Sporda şiddet ve önlenabilirliği. İçinde Yiğit ve ark. (Edts.), *Toplumsal araştırmalar 2* (ss: 350-353). Erzurum: Atatürk Üniversitesi Yayınevi.

Submitted : 04.06.2023

Accepted : 06.09.2023

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