# The Effect of Mental Training Levels of Athletes on Attitudes Towards Playing Digital Games

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**Abstract**

This study aimed to investigate the correlation between athletes' mental training levels and their attitudes toward playing digital games. The research group consisted of 211 active athletes from the province of Bitlis who volunteered their time. In the study, the "Personal Information Form" served as the data collection instrument, the "Mental Training Inventory in Sports" was used to assess the mental training levels of the athletes, and the "Digital Gaming Attitude Scale" was employed to determine their attitudes toward playing digital games. Following the research findings, it has been determined that there is a positive and marginally significant correlation between the athletes' mental training level and their attitudes toward playing digital games. As a result of the research, it can be concluded that the mental training levels of athletes positively influence their cognitive, affective, and psychomotor attitudes toward playing digital games.

**Keywords:** Sports, Mental Training, Digital Game

## Introduction

Today, sports sciences exert considerable effort to increase athletic endeavors. As time passes, new understandings, techniques, and strategies are tested in practices involving speed, power, conditioning, and agility, and efforts to make the athlete more successful continue. As a result of all of these practices, it is understood that the mental and physical equipment used in competitions influences the ability of the athlete to reach their peak (Erdoğan, 2021; Vurgun, 2010). In addition to improving the athlete's motor skills, numerous studies have been conducted to enhance other attributes. In recent years, the function of sports psychologists in performance enhancement has increased for this reason. Sports psychology, mental applications, and digital environments (simulation) are believed to contribute significantly to athletes' success.

Optimal athletic performance necessitates morale, motivation, concentration, goal setting, self-confidence, attention, imagery, thought and emotion control, positive thinking, etc. It is a planned and systematic procedure involving acquiring and developing psychological skills (Erdoğan, 2020; Yilmaz, 2019). The brain must transmit commands to the body for the body to reveal the movements we intend to perform consciously (Yildiz & Erhan, 2019). Athletes use mental animation in both competitions and training, but in competitions, they use it faster (Doğan, 2019).

Digital activities contribute to the mental animation process required of athletes. Thus, it provides the athlete with the necessary perceptual experience by allowing the athlete to sense, hear, and anticipate (Güvendi, Işim, & Güçlü, 2018). Digital natives, the youth of our generation who were born and raised in the era of technology, have distinct mental structures, interests, and habits from the previous generation (Prensky, 2001). While digital technology is defined as activities that display, record, and transmit information in a virtual electronic environment (Emine, 2016), digital games have become one of the most important pursuits of the digital native generation (Demïr & Hazar, 2018).

The games and habits of today's youth, born and reared in the age of technology and science, distinguish them from the previous generation and are preferred as cognitive, affective, and psychomotor (Bozkurt, Dursun, & Arı, 2019). During the mental training process, these distinctions are believed to bring athletes together with digital games in the digital environment. In this context, this study aims to investigate the relationship between athletes' attitudes toward mental training and digital gaming.

## Method

### Model of the Research

In this study, which examined the relationship between athletes' mental training levels and their attitudes toward

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playing digital games, the relational screening model, one of the best techniques, was employed. Karasar (2007) defines the relational screening model as "a research model that aims to determine the existence and/or degree of co-variation between two or more variables".

**Study Group**

In the province of Bitlis, there are 211 volunteer athletes, 72 female (34.1%), and 139 male (64.9%). Table 1 provides details on the demographic variables of the athletes.

**Table 1**

*Demographic Information of the Research Group*

| | | f | Percent (%) |
|---|---|---|---|
| Gender | Female | 72 | 34,1 |
| | Male | 139 | 65,9 |
| Age | 18-22 age | 132 | 62,6 |
| | 23-27 age | 79 | 37,4 |
| Sports Branch | Team sports | 110 | 52,1 |
| | Individual sports | 101 | 47,9 |
| Sporting Degree | Amateur | 144 | 68,2 |
| | Professional | 67 | 31,8 |
| Do You Play Digital Games? | Yes | 95 | 45 |
| | No | 116 | 55 |
| Do you play the sports branch you have done in the digital environment? | Yes | 66 | 31,3 |
| | No | 145 | 68,7 |
| Toplam | | **211** | **100,0** |

34.1% of the research group is female, 65.9% is male, 62.6% are between the ages of 18-22, 37.4% are between the ages of 23-27, and 52.1% participate in team athletics. It was determined that 47.9% of them participated in individual sports and that 68.2% of those individual sports were amateur. In addition, 55 percent of athletes did not play digital games, and 68.7 percent did not perform their sport in a digital environment.

**Data Collection Tools**

The research data collection form consists of two sections. While the first section comprises the Personal Information Form created by the researcher, the second section includes the Validity and Reliability of Mental Resilience Inventory and Digital Gaming Attitude scales. Table 2 lists the coefficients of reliability for the instruments.

***Personal Information Form***

The researcher created it to ascertain the demographic characteristics of the athletes, such as gender, age, sport, sports degree, digital game-playing status, and the variables of playing the sport they are interested in in a digital environment.

***Mental Training Inventory in Sports (SZAE)***

It was devised by Behnke et al. (2019) to measure mental skills and techniques in the sports environment and translated into Turkish by Yarayan and Ilhan (2018). "Basic Mental Skills" consists of 4 items, "Mental Performance Skills" consists of 6 items, "Interpersonal Skills" consists of 4 items, "Talking to Yourself (Internal)" consists of 3 items, and "Mental Resuscitation" consists of 3 items. The 5-point Likert scale ranged from "I disagree" (1) to "I agree" (5). In the inventory adaptation study, the overall internal consistency coefficient ranged from 0.82 to 0.91 for the sub-dimensions. While the overall internal consistency coefficient of the inventory used in this study was 0.80, the item and internal consistency coefficients for the sub-dimensions were 0.83, 0.82, 0.81, 0.64, and 0.78, respectively. Researchers examined the validity and reliability of the Mental Training Inventory in Sports; the KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) value was.899, and the Bartlett Test value was 3247.940.

***Digital Gaming Attitude Scale (DOOTS)***

The "Digital Gaming Attitude Scale" was created by Demir and Bozkurt (2019); it consists of three sub-dimensions and 18 items: "Cognitive" (5 items), "Affective" (5 items), and "Behavioral" (8 items). The 5-point Likert scale ranged from "I disagree" (1) to "I agree" (5). The lowest possible number on the scale is 18, and the highest possible score is 90. The DOOTO items 2, 3, 5, 6, 7, 10, and 18 are reverse-coded. The internal consistency coefficient was determined to be 0.90 for the "Cognitive Sub-Dimension," 0.81 for the "Affective Sub-Dimension," and 0.91 for the "Behavioral Sub-Dimension" The coefficient of internal consistency for the entire scale was 0.82. In this study, the overall internal consistency coefficient of the inventory was 0.81, while the item and internal consistency

coefficients for the sub-dimensions were 0.69, 0.72, and 0.77, respectively. The researchers investigated the validity and reliability of the Digital Gaming Attitude Scale, and the KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) value was determined to be.894, Bartlett Test 2101,908.

**Table 2**

*Reliability Coefficients of the Scales*

| Ölçekler | Cronbach's alpha ( α) | Madde Sayısı |
|---|---|---|
| Mental Basic Skills | ,83 | 4 |
| Mental Performance Skills | ,82 | 6 |
| Interpersonal Skills | ,81 | 4 |
| Talking to Yourself (Internal) | ,64 | 3 |
| Mental Resuscitation | ,79 | 3 |
| Mental Training Inventory in Sports Total | ,80 | 20 |
| Cognitive Subdimension | ,69 | 5 |
| Affective Subdimension | ,72 | 5 |
| Behavioral Subdimension | ,77 | 8 |
| Digital Gaming Attitude Total | ,81 | 18 |

Reliability values determined by Ozdamar (1999) in the literature; 0.00< α <0.40 "not reliable," 41< α <0.60 "low confidence," 0.61< α <0.80 "moderately reliable," 0.81< α < 1.00 "high confidence" level of reliability". When Table 3 is examined, it is seen that Cronbach's alpha (α) values are highly sufficient for reliability.

**Analysis of Data**

Before analyzing the studies, it is necessary to provide statistical information regarding the researcher's provision of assumptions such as normality, homogeneity, linearity, and stationarity, as well as his preferred statistical analyses (Tozoğlu & Dursun, 2020). Before data analysis, skewness and kurtosis values were examined to determine which tests would be applied. Since the skewness and kurtosis values in Table 3 fell within limits (-1.5 to +1.5) established by Tabachnick and Fidell (2013), parametric analyses were utilized because the data set exhibited a normal distribution. According to the acquired values, parametric tests can analyze the data set. Initially, descriptive statistics were compiled to identify the demographic characteristics. Then, "T-Test for Independent Samples" was used to compare two groups, "One-Way Analysis of Variance ANOVA" was used to reach more than two groups, and "Tukey HSD" was used to determine the source of the difference. Utilizing descriptive statistical methods such as frequency (f), percentage (%), mean (X), and standard deviation (ss), the demographic characteristics of the research group's athletes were determined. The Pearson correlation test was used to determine the relationship between the mental training levels of sports participants and their attitudes toward digital gaming. The data were analyzed using the statistical program SPSS 22. When p <0.05, significance was acknowledged.

**Table 3**

*Descriptive Analysis of the Scales*

| Alt Boyut | n | Min. | Max. | X̄ | Ss | Medyan | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|---|
| Mental Basic Skills | 211 | 6,00 | 20,00 | 15,3 | 3,39 | 16,00 | -,734 | ,009 |
| Mental Performance Skills | 211 | 7,00 | 30,00 | 21,6 | 5,10 | 22,00 | -,646 | ,439 |
| Interpersonal Skills | 211 | 4,00 | 20,00 | 16,0 | 3,55 | 16,00 | -1,07 | 1,09 |
| Talking to Yourself (Internal) | 211 | 4,00 | 15,00 | 11,1 | 2,82 | 11,11 | -,384 | -,642 |
| Mental Resuscitation | 211 | 3,00 | 15,00 | 11,4 | 2,39 | 11,00 | -,713 | ,931 |
| Mental Training Inventory in Sports Total | 211 | 28,00 | 100,00 | 75,6 | 14,4 | 77,00 | -,830 | ,781 |
| Cognitive Subdimension | 211 | 5,00 | 25,00 | 16,5 | 4,69 | 17,00 | -,524 | ,090 |
| Affective Subdimension | 211 | 5,00 | 25,00 | 15,3 | 4,48 | 16,00 | -,320 | ,215 |
| Behavioral Subdimension | 211 | 8,00 | 40,00 | 22,0 | 9,24 | 24,00 | -,020 | -1,08 |
| Digital Gaming Attitude Total | 211 | 18,00 | 90,00 | 53,9 | 15,2 | 54,00 | -,378 | ,373 |

When the averages obtained from the sub-dimensions of the Athlete Mental Training Inventory in Athletes are examined, the highest average is in the "Mental Performance Skills" sub-dimension (X̄=21,6±5.10), and the lowest average value is in the "Talking to Yourself (Internal)" sub-dimension (X̄= 11,1±2.82). When the averages of the Digital Game Playing Attitude scale are examined, the highest average is in the "Behavioral Subdimension" (X̄=22,0 ±9,24), and the lowest average value is in the "Affective Subdimension" (X̄=15,3±4,48).

## Findings

**Table 4**

*T-Test Analysis of the Athletes by Gender Variable*

| | | Gender | | t | p |
|---|---|---|---|---|---|
| | | *X* | sd | | |
| Mental Basic Skills | Female | 14,37 | 3,48 | 3,050 | 0,00* |
| | Male | 15,84 | 3,24 | | |
| Mental Performance Skills | Female | 19,68 | 4,93 | 4,300 | 0,00* |
| | Male | 22,74 | 4,88 | | |
| Interpersonal Skills | Female | 15,23 | 4,25 | 2,298 | 0,02* |
| | Male | 16,41 | 3,07 | | |
| Talking to Yourself (Internal) | Female | 10,88 | 2,71 | ,833 | 0,40 |
| | Male | 11,23 | 2,87 | | |
| Mental Resuscitation | Female | 10,94 | 2,54 | 2,211 | 0,02* |
| | Male | 11,70 | 2,27 | | |
| Mental Training Inventory in Sports Total | Female | 71,12 | 15,31 | 3,332 | 0,00* |
| | Male | 77,93 | 13,38 | | |
| Cognitive Subdimension | Female | 15,11 | 4,45 | 3,360 | 0,00* |
| | Male | 17,34 | 4,64 | | |
| Affective Subdimension | Female | 14,62 | 4,58 | 1,587 | 0,11 |
| | Male | 15,65 | 4,40 | | |
| Behavioral Subdimension | Female | 18,47 | 9,16 | 4,247 | 0,00* |
| | Male | 23,95 | 8,75 | | |
| Digital Gaming Attitude Total | Female | 48,20 | 15,21 | 4,084 | 0,00* |
| | Male | 56,95 | 14,51 | | |

p<0,05

Analyzing Table 4, it was determined that there was a statistically significant difference (p<0.05) between the gender variable and the total and sub-dimensions of the mental training scale basic mental skills, mental performance skills, interpersonal skills, and mental animation total score averages for the research group. However, there was no statistically significant difference between the (internal) subdimensions (p>0.05). Furthermore, there was a statistical difference between the gender variable of the athletes and the total and sub-dimensions of the cognitive and behavioral total scores (p<0.05). Still, there was no statistical difference between the gender variable and the affective sub-dimension (p>0.05).

**Table 5**

*T-Test Analysis of Athletes by Age Variable*

| | | Yaş | | t | p |
|---|---|---|---|---|---|
| | | *X* | sd | | |
| Mental Basic Skills | 18-22 age | 15,18 | 3,55 | -,866 | 0,38 |
| | 23-27 age | 15,60 | 3,10 | | |
| Mental Performance Skills | 18-22 age | 21,37 | 5,22 | -1,199 | 0,23 |
| | 23-27 age | 22,24 | 4,88 | | |
| Interpersonal Skills | 18-22 age | 15,87 | 3,83 | -,690 | 0,41 |
| | 23-27 age | 16,22 | 3,04 | | |
| Talking to Yourself (Internal) | 18-22 age | 11,12 | 2,86 | ,100 | 0,92 |
| | 23-27 age | 11,08 | 2,76 | | |
| Mental Resuscitation | 18-22 age | 11,40 | 2,43 | -,285 | 0,77 |
| | 23-27 age | 11,50 | 2,33 | | |
| Mental Training Inventory in Sports Total | 18-22 age | 74,97 | 15,02 | -,826 | 0,41 |
| | 23-27 age | 76,67 | 13,34 | | |
| Cognitive Subdimension | 18-22 age | 16,21 | 4,58 | -1,458 | 0,14 |
| | 23-27 age | 17,18 | 4,82 | | |
| Affective Subdimension | 18-22 age | 15,33 | 4,42 | ,125 | 0,90 |
| | 23-27 age | 15,25 | 4,60 | | |
| Behavioral Subdimension | 18-22 age | 20,98 | 9,43 | -2,256 | 0,02* |
| | 23-27 age | 23,92 | 8,67 | | |
| Digital Gaming Attitude Total | 18-22 age | 52,53 | 15,21 | -1,769 | 0,07 |
| | 23-27 age | 56,36 | 15,22 | | |

p<0.05

Examining Table 5, it has been determined that there is no statistically significant difference (p>0.05) between the age variable of the athletes, the total Mental Training Inventory in Sports score, and the mean score across all subdimensions. In addition, while there was a statistically significant difference between the age of the athletes and the behavioral sub-dimension of the digital gaming attitude scale (p<0.05), there was no statistically significant difference between the cognitive and affective total score averages of the total and sub-dimensions of the digital gaming attitude scale (p>0.05).

**Table 6**

*T-Test Analysis of Athletes According to Sports Branch Variable*

| | | Branch | | t | p |
|---|---|---|---|---|---|
| | | *X* | sd | | |
| Mental Basic Skills | Individual sports | 15,61 | 3,55 | 1,099 | 0,27 |
| | Team sports | 15,10 | 3,23 | | |
| Mental Performance Skills | Individual sports | 22,17 | 5,42 | 1,316 | 0,19 |
| | Team sports | 21,25 | 4,77 | | |
| Interpersonal Skills | Individual sports | 16,18 | 3,23 | ,699 | 0,48 |
| | Team sports | 15,84 | 3,82 | | |
| Talking to Yourself (Internal) | Individual sports | 11,06 | 2,75 | -,219 | 0,82 |
| | Team sports | 11,15 | 2,88 | | |
| Mental Resuscitation | Individual sports | 11,48 | 2,43 | ,230 | 0,81 |
| | Team sports | 11,40 | 2,35 | | |
| Mental Training Inventory in Sports Total | Individual sports | 76,53 | 14,57 | ,891 | 0,37 |
| | Team sports | 74,47 | 14,27 | | |
| Cognitive Subdimension | Individual sports | 16,03 | 5,04 | -1,619 | 0,10 |
| | Team sports | 17,08 | 4,30 | | |
| Affective Subdimension | Individual sports | 14,91 | 4,91 | -1,219 | 0,22 |
| | Team sports | 15,66 | 4,04 | | |
| Behavioral Subdimension | Individual sports | 20,77 | 9,77 | -1,990 | 0,04* |
| | Team sports | 23,29 | 8,60 | | |
| Digital Gaming Attitude Total | Individual sports | 51,72 | 16,78 | -2,062 | 0,04* |
| | Team sports | 56,03 | 13,54 | | |

p<0.05

Analyzing Table 6, it was determined that there was no statistically significant difference (p>0.05) between the sports branch variable, the total score averages, and all subdimensions of the Mental Training Inventory in Sports. In addition, while there was a statistically significant difference between the sub-dimensions of the digital game-playing attitude scale, there was no statistically significant difference between the cognitive and affective total score averages (p>0.05).

**Table 7**

*T-Test Analyzes of Athletes According to their Sporting Degree Variable*

| | | Sporting Degree | | t | p |
|---|---|---|---|---|---|
| | | *X* | sd | | |
| Mental Basic Skills | Amateur | 15,22 | 3,45 | -,732 | 0,45 |
| | Professional | 15,59 | 3,22 | | |
| Mental Performance Skills | Amateur | 21,63 | 4,81 | -,241 | 0,81 |
| | Professional | 21,82 | 5,70 | | |
| Interpersonal Skills | Amateur | 16,07 | 3,64 | ,400 | 0,68 |
| | Professional | 15,85 | 3,37 | | |
| Talking to Yourself (Internal) | Amateur | 11,07 | 2,87 | -,281 | 0,77 |
| | Professional | 11,19 | 2,72 | | |
| Mental Resuscitation | Amateur | 11,54 | 2,41 | ,918 | 0,36 |
| | Professional | 11,22 | 2,33 | | |
| Mental Training Inventory in Sports Total | Amateur | 75,56 | 14,35 | -,062 | 0,95 |
| | Professional | 75,70 | 14,48 | | |
| Cognitive Subdimension | Amateur | 16,87 | 4,75 | 1,329 | 0,18 |
| | Professional | 15,95 | 4,51 | | |
| Affective Subdimension | Amateur | 15,24 | 4,32 | -,285 | 0,77 |
| | Professional | 15,43 | 4,83 | | |
| Behavioral Subdimension | Amateur | 22,91 | 9,25 | 1,927 | 0,05 |
| | Professional | 20,29 | 9,05 | | |
| Digital Gaming Attitude Total | Amateur | 55,03 | 15,21 | 1,484 | 0,13 |
| | Professional | 51,68 | 15,33 | | |

p<0.05

The evaluation of Table 7 revealed no statistically significant difference (p>0.05) between the sportive degree variable and the total score averages of the Mental Training Inventory in Sports and all subdimensions of the research group. In addition, there was no statistically significant difference between the full mean scores of the dimensions (p>0.05).

**Table 8**

*T-Test Analyzes of Athletes by Digital Game Playing Variable*

| | | Digital Gaming Status | | t | p |
|---|---|---|---|---|---|
| | | *X* | sd | | |
| Mental Basic Skills | Yes | 15,20 | 2,87 | -,565 | 0,57 |
| | No | 15,46 | 3,77 | | |
| Mental Performance Skills | Yes | 21,06 | 4,80 | -1,639 | 0,10 |
| | No | 22,21 | 5,29 | | |
| Interpersonal Skills | Yes | 16,06 | 3,18 | ,198 | 0,84 |
| | No | 15,96 | 3,84 | | |
| Talking to Yourself (Internal) | Yes | 10,97 | 2,92 | -,627 | 0,53 |
| | No | 11,22 | 2,74 | | |
| Mental Resuscitation | Yes | 11,32 | 2,49 | -,654 | 0,51 |
| | No | 11,54 | 2,31 | | |
| Mental Training Inventory in Sports Total | Yes | 74,63 | 13,03 | -,893 | 0,37 |
| | No | 76,41 | 15,45 | | |
| Cognitive Subdimension | Yes | 17,20 | 3,71 | 1,738 | 0,08 |
| | No | 16,07 | 5,32 | | |
| Affective Subdimension | Yes | 15,55 | 3,63 | ,745 | 0,45 |
| | No | 15,09 | 5,08 | | |
| Behavioral Subdimension | Yes | 26,78 | 5,93 | 7,518 | 0,00* |
| | No | 18,23 | 9,70 | | |
| Digital Gaming Attitude Total | Yes | 59,54 | 10,32 | 5,066 | 0,00* |
| | No | 49,40 | 17,12 | | |

p<0.05

Examining Table 8 reveals no statistically significant difference between the digital game-playing status of the athletes and the total score averages and all subdimensions of the Mental Training Inventory in Sports (p>0.05). Furthermore, while there was a statistically significant difference between not playing digital games and the total and behavioral sub-dimension total scores of the research group (p<0.05), there was no statistical difference between the cognitive and affective scale sub-dimensions (p>0.05).

**Table 9**

*T-Test Analysis According to the Variable of Playing the Sports Branch of the Athletes in the Digital Environment*

| | | Status of Playing Her Sports Branch in Digital Environment | | t | p |
|---|---|---|---|---|---|
| | | *X* | sd | | |
| Mental Basic Skills | Yes | 15,56 | 2,63 | ,619 | 0,53 |
| | No | 15,24 | 3,69 | | |
| Mental Performance Skills | Yes | 22,46 | 3,90 | 1,489 | 0,13 |
| | No | 21,34 | 5,53 | | |
| Interpersonal Skills | Yes | 16,19 | 3,01 | ,516 | 0,60 |
| | No | 15,92 | 3,77 | | |
| Talking to Yourself (Internal) | Yes | 11,46 | 2,70 | 1,238 | 0,21 |
| | No | 10,95 | 2,86 | | |
| Mental Resuscitation | Yes | 11,59 | 2,21 | ,595 | 0,55 |
| | No | 11,37 | 2,46 | | |
| Mental Training Inventory in Sports Total | Yes | 77,28 | 11,64 | 1,141 | 0,25 |
| | No | 74,84 | 15,48 | | |
| Cognitive Subdimension | Yes | 17,71 | 3,65 | 2,386 | 0,01* |
| | No | 16,06 | 5,01 | | |
| Affective Subdimension | Yes | 15,30 | 3,65 | -,001 | 0,99 |
| | No | 15,30 | 4,82 | | |
| Behavioral Subdimension | Yes | 27,46 | 6,45 | 6,192 | 0,00* |
| | No | 19,63 | 9,30 | | |
| Digital Gaming Attitude Total | Yes | 60,48 | 11,27 | 4,347 | 0,00* |
| | No | 51,00 | 15,98 | | |

p<0.05

Analyzing Table 9, it was determined that there was no statistically significant difference between the status of the research group's participation in the sports branch in the digital environment and the total score averages of the Mental Training Inventory in Sports and all subdimensions (p>0.05). In addition, while there was a statistically significant difference between the status of playing the sports branch in the digital environment and the total, behavioral, and cognitive sub-dimensions of the digital game-playing attitude scale (p<0.05), there was no statistically significant difference between the affective sub-dimension (p>0.05).

**Table 10**

*Pearson Correlation Analysis of the Scales*

| Scales (n:211) | | | Mental Basic Skills | Mental Performance Skills | Interpersonal Skills | Talk to Yourself | Mental Resuscitation | Mental Training Inventory in Sports Total | Cognitive Subdimension | Affective Subdimension | Behavioral Subdimension | Digital Gaming Attitude Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mental Training Inventory in Sports** | Mental Basic Skills | **r** | 1 | ,703** | ,689** | ,558** | ,643** | ,870** | ,143* | ,102 | ,062 | ,111 |
| | | **p** | . | ,000 | ,000 | ,000 | ,000 | ,000 | ,037 | ,141 | ,368 | ,106 |
| | Mental Performance Skills | **r** | ,703** | 1 | ,642** | ,463** | ,637** | ,874** | ,070 | ,004 | ,089 | ,076 |
| | | **p** | ,000 | . | ,000 | ,000 | ,000 | ,000 | ,312 | ,956 | ,198 | ,269 |
| | Interpersonal Skills | **r** | ,689** | ,642** | 1 | ,496** | ,729** | ,854** | ,140* | ,098 | ,065 | ,111 |
| | | **p** | ,000 | ,000 | . | ,000 | ,000 | ,000 | ,043 | ,157 | ,345 | ,108 |
| | Talk to Yourself | **r** | ,558** | ,463** | ,496** | 1 | ,539** | ,703** | ,313** | ,181** | ,155* | ,243** |
| | | **p** | ,000 | ,000 | ,000 | . | ,000 | ,000 | ,000 | ,008 | ,024 | ,000 |
| | Mental Resuscitation | **r** | ,643** | ,637** | ,729** | ,539** | 1 | ,828** | ,159* | ,144* | ,100 | ,151* |
| | | **p** | ,000 | ,000 | ,000 | ,000 | . | ,000 | ,021 | ,037 | ,146 | ,028 |
| | Mental Training Inventory in Sports Total | **r** | ,870** | ,874** | ,854** | ,703** | ,828** | 1 | ,181** | ,109 | ,109 | ,153* |
| | | **p** | ,000 | ,000 | ,000 | ,000 | ,000 | . | ,009 | ,115 | ,113 | ,026 |
| **Digital Gaming Attitude Total** | Cognitive Subdimension | **r** | ,143* | ,070 | ,140* | ,313** | ,159* | ,181** | 1 | ,667** | ,438** | ,767** |
| | | **p** | ,037 | ,312 | ,043 | ,000 | ,021 | ,009 | . | ,000 | ,000 | ,000 |
| | Affective Subdimension | **r** | ,142 | ,004 | ,98 | ,181** | ,144* | ,109 | ,667** | 1 | ,485** | ,791** |
| | | **p** | ,141 | ,956 | ,157 | ,008 | ,037 | ,115 | ,000 | . | ,000 | ,000 |
| | Behavioral Subdimension | **r** | ,062 | ,089 | ,065 | ,155* | ,100 | ,109 | ,438** | ,485** | 1 | ,881** |
| | | **p** | ,368 | 198 | ,345 | ,024 | ,146 | ,113 | ,000 | ,000 | . | ,000 |
| | Digital Gaming Attitude Total | **r** | ,111 | ,076 | ,111 | ,243** | ,151* | ,153* | ,767** | ,791** | ,881** | 1 |
| | | **p** | ,106 | ,269 | ,108 | ,000 | ,028 | ,026 | ,000 | ,000 | ,000 | . |

When Table 10 was evaluated, it was determined that there was a significant and positive relationship between the Mental Training Inventory in Sports and digital game-playing attitudes scales and the sub-dimensions of the scales (R=.153; R2=.024; p>0.05).

**Table 11**

*Regression Analysis on the Prediction of Mental Training and Digital Gaming Attitudes*

| Independent variable | The dependent variable | B | Std. Error | β | t | p | R | $R^2$ | F | *P* |
|---|---|---|---|---|---|---|---|---|---|---|
| Mental Training Inventory in Sports | Digital Gaming Attitude Total | 67,812 | 3,612 | ,153 | 18,766 | 0,00 | ,153 | ,024 | 5,036 | *0,00* |

p<0,05*

When Table 11 is examined, it has been determined that there is a positive and low-level significant effect between the mental training level of the athletes and their attitudes to playing digital games (R=.153; R2=.024; p>0.05).

## Discussion and Conclusion

This study aims to investigate the relationship between mental training and the digital gaming attitude of athletes. The research group comprised 211 volunteer athletes from the province of Bitlis (72 females and 139 males). By analyzing the variables in the personal information form, the gender, age, type of sport, sports branch, whether they play digital games, and the sport they have done in the digital environment, and the relationship between the two measures were analyzed.

As a result of the initial analysis and research, it was determined that the mental training levels of the athletes and their attitudes toward playing digital games differed significantly by gender. In contrast, there was no significant difference in the emotional dimension of the mental training sub-dimensions (self-talk (internal) and the digital game-playing sub-dimensions. According to the analyses, the average scores derived from both scales favor men significantly. According to these findings, male athletes have greater mental training levels and attitudes toward playing digital games. It has been determined that digital sports activities have the most significant impact on the cognitive development of athletes (Cihan & Ilgar, 2019; Guneyli & Ozkul, 2013). Media Analysis Laboratory's (1998) research determined that males spend more time playing video games and that their preferred genres are action, fighting, racing, and sports, which are more appealing to men. Examining the relevant literature reveals some studies with similar results to ours. In their study of elite archers, Çiğdem and Cankurtaran (2020) discovered a significant difference between the mental training sub-dimensions of the gender variable. According to other research findings, gender is a factor that must be considered (Habacha, Molinaro, & Dosseville, 2014). In addition, another study, Nicholls et al. (2009) found favorable results for males. Cankurtaran (2020) found, contrary to the research findings, a significant difference between the gender variables of archers and mental training sub-dimensions in the sub-dimension of self-talk but not in the other sub-dimensions. In Karaca and Gündüz's (2021) study, when the mental training sub-dimensions of orienteering athletes were examined about the gender variable, no significant differences were found.

According to the age variable, the sum of the mental training scale and all of its sub-dimensions, the sum of the digital gaming attitude scale, and the cognitive and affective total score averages from the sub-dimensions, there was a statistically significant difference between the athletes' mental training level and their attitudes toward playing digital games has not been determined. The behavioral subdimension of the digital game-playing attitude scale revealed a significant difference. Yarayan and Ayan (2018) investigated the forms of imagery sub-dimension, one of the mental training sub-dimensions of athletes from diverse teams. According to the age variable, it was determined that there were no significant differences between the categories. According to the study, secondary school students play digital games for a longer duration per day than primary school students, and their attitude toward playing digital games will increase with age (Mustafaoğlu & Yasaci, 2018). According to these findings, age does not significantly influence mental training and playing digital games. Because mental training is a psychological skill, it has been asserted that it substantially enhances an athlete's performance (Altintaş & Akalan, 2008). However, a positive and statistically significant correlation exists between sports age and mental training (Çelik & Güngör, 2020).

According to the sports branch variable, the sum of the mental training scale and all of its sub-dimensions, and the mean scores of the cognitive and affective dimensions of the digital gaming attitude scale sub-dimensions, there was no statistically significant difference found between the athletes' mental training levels and their attitudes towards playing digital games. However, the total score on the digital game-playing attitude scale was significantly different from the behavioral sub-dimension score averages. Based on this information, it can be concluded that the athletes' attitudes toward playing digital games to relax and relieve tension are favorable. Within the scope of the relevant literature are studies with results comparable to ours. In a study conducted by Salar, Hekim, and Tokgöz (2012), it was determined that, according to the sports branch variable of the mental training scale, the results of athletes participating in team sports were statistically indistinguishable from those participating in individual sports. In their study, they compared the mental training levels of students at the faculty of sports sciences according to the variable of the sports branch and found no significant difference (Erdoğan & Gülşen, 2020). Examining the literature regarding the branch variable reveals a study whose results are distinct from ours. This study found that male participants who are interested in individual sports are more likely to use their mental performance skills than those who are interested in team sports. The researcher attributed this to individual athletes having greater autonomy in self-decision and practice (Güngör & Çelik, 2020). In addition, he discovered a significant difference between the mental ability levels of active athletes in different branches and all mental ability dimensions in his study with elite-level athletes from various branches to evaluate their mental training levels and techniques (Güler, 2015).

As a result of the analysis and research, it was determined that there was no statistical difference between the mental training scale total and all of its sub-dimensions, the total score of the digital gaming attitude scale, and the total score average of all sub-dimensions based on the sportive degree variable of the athletes' mental training levels and their attitudes toward playing digital games. ($p>0.05$). They examined the relationship between digital games and attitudes toward sports. They discovered that the mental development sub-dimension, one of the sub-dimensions of attitude toward sports, is substantially greater among those who participate in sports than among those who do not (Namli & Demir, 2020). Therefore, it can be said that digital activities develop cognitive abilities. Furthermore, no significant difference was found in the study between the self-talk sub-dimension, one of the mental training sub-dimensions related to the nationality of martial athletes, and the level of sportsmanship (Güvendï & Pehlïvan, 2020). Similar studies corroborate the study's findings. In contrast to these studies, the analysis of a study investigating the year of sports participation in degrees revealed a statistically significant difference in the interpersonal skills sub-dimension of the mental training scale (Erdoğan & Gülşen, 2020). It was determined to be substantial in favor of athletes with 10 or more years of experience.

Fifthly, the analyses and research revealed no significant difference between the mental training scale total and all sub-dimensions of the mental training levels of the athletes and their attitudes toward playing digital games according to the variables of playing digital games and playing the sports branch in a digital environment. There was a statistically significant difference between the total score on the digital game-playing attitude scale and the mean score on the behavioral subdimension. Cïhan and Ilgar (2019) investigated the effects of digital sports activities on athletes and discovered both positive and negative psychomotor effects. Mentally intelligent digital sports games accomplish their goals by combining hand-eye coordination and mental processing, as evidenced by using their body organs efficiently. However, some athletes reported that excessive participation caused their bodies to become heavier and less sensitive. In a study conducted by Tüzün (2006), it was determined that violent computer games positively impact children's personalities, mental skills, attitudes, and behaviors. It has been discovered that games partially satisfy the child's need for instinctive achievement, progress, and development, and digital games improve hand-eye coordination, problem-solving, and multitasking skills (Kiran, 2011). In their study, Tel, Bozkurt, and Tan (2022) determined that athletes extensively use digital activities and social media. Long-term use demonstrates that it is a factor in developing certain mental, physiological, psychosocial, and musculoskeletal disorders (Oates, Evans, & Hedge, 1999). It has been determined that there is a significant, positive, and low-level relationship between the mental training inventory and digital game-playing attitudes scales and their sub-dimensions. Furthermore, athletes' mental training levels positively influence their cognitive, affective, and psychomotor attitudes toward playing digital games. Therefore, it can be said that supporting the mental training of athletes with digital games and allowing them to play them in controlled time frames will also positively impact their sporting success.

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