

# The relationship between physical education and sports school students' positive thinking skill levels and their attitudes to learning: Comparison by gender and years of exercising

Alparslan Ince

Physical Education and Sports, Ordu University, Turkey.

Accepted 13 October, 2020

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## ABSTRACT

The aim of this study was to compare the relationship between physical education and sports high school students' positive thinking skill levels and attitudes of learning in terms of gender and years of doing sports. The study is a descriptive method, one of the quantitative research methods. The study group consisted of 280 (age:  $20.98 \pm 1.390$ ) university students from School of Physical Education and Sports in Ordu university. As a result, it was concluded that the students' positive thinking skills were at a high level, and the nature of learning, anxiety, expectation, and openness to learning sub-dimensions of the attitude to learning scale were at high levels. It was concluded that there is a statistically significant and positive relationship between the nature of learning, Expectation, and openness to learning, and positive thinking skill from sub-dimensions of the attitude to learning scale, but there is a negatively significant relationship between anxiety and positive thinking skills.

**Keywords:** Positive thinking, attitude to learning, sports.

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E-mail: academicman@yaani.com.

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## INTRODUCTION

Psychology works with multiple sciences. Psychology, which tries to find solutions to social problems, encourages individuals to think positively. For this reason, it has been used widely by people. So psychology is a kind of the basis of behavioral Science (Peterson, 2000; Sheldon and King, 2001). Positive thinking which is a part of psychology, is very important to learn at schools for all groups. All students before the learning should gain the positive thinking skills; hope, determination, psychological resilience, courage, forgiveness, happiness, subjective well-being, optimism, and meaning of life can be given as examples of these concepts (Akin and Tas, 2015; Duckworth and Seligman, 2005; Eryilmaz and Atak, 2011; Seligman, 2002). Students thinking well and feeling happy are willing to learn (Sapmaz and Dogan, 2012). Students, being

thought how to think of positively, will be able to synthesize events throughout their lives and be motivated to learn. It is an important fact that positive thinking has great contributions to the person both physically and mentally. Studies have confirmed the fact that there are many athletes and patients who overcome their problems by thinking positively (Akin et al., 2015). A person thinking positively is the one using his/her mind positively. If people want to use their behavior in a nice and positive way, they need to have the power to control the mind. We need to know that this power will only be by thinking positively. Continuous thinking in this way ensures the acquisition of behavior. In the absence of acquisition, it causes encounters with negativity (Peiffer, 1997; Teach, 2004).

In this sense, learning is the process of creating

permanent changes in individuals' understanding, attitude, knowledge, abilities and skills and behaviors through life (Mayer, 1987; Woolfolk, 1990). Individuals' attitudes and tendencies to learning a subject or situation affect their learning outcomes either positively or negatively. It has been supported by the researchers that individuals perform better in learning something when they have positive attitudes (Ozden, 2009; Duarte, 2007; Guven, 2008; Tsai and Kuo, 2008; Sparrt, 1999). In a study conducted by Karagiannopoulou and Christodoulides (2005) examining the effects of students' learning environments on academic achievement, it was found that the academic outcomes of students perceiving the learning environment positively were also positively affected, and this result was supported by other studies (Lizzio et al., 2002; Prosser and Trigwell, 2001). Learning and thinking positively are related with sport. Students doing Sports feel happy and get motivated naturally. Sport is an important social phenomenon (Yetim, 2000). If A student both physically and mentality feels well and powerfully, he/she gets all barriers from the mind. So, they are success with the lessons (Temel and Nas, 2019). Because of that, in these days, all athletes are trying to get them powerful psychologically and physically (Nas and Temel, 2018). Students enabling of thinking positively develop positive attitudes to learning. Attitude, in the broadest sense, is an individual's mental readiness or attitude towards a particular object or person and an important predictor of human behavior (Allport, 1935; Anderson, 1988).

In this study, we investigate the relationship between physical education and sports high school students' positive thinking skill levels and attitudes of learning in terms of gender and years of doing sports. By means of this study, positive attitudes of learning will make students open to learning and will positively affect their behavioral tendencies in this direction. As a result; It is supported by numerous studies that sports attitudes to the learning a subject in any field greatly affect the academic success and behavior of students in that field, and it is of great importance to have positive thinking skills due to sports.

## **MATERIALS AND METHODS**

### **Sampling**

Data were collected from 280 volunteer university students (Age Mean:  $20.98 \pm 1.390$ ) including 155 Males (55.4%) and 125 Females (44.6%) studying at School of Physical Education and Sports, Ordu University in 2019-2020 academic year. For the purpose of this study, the participants were randomly selected and the scales of the study were applied on a voluntary basis, by hand-and face to face interviews. Survey method, one of the descriptive research methods, was used in the study. The screening method is used to determine past or current

situations (Buyukozturk et al., 2016).

### **Data collection**

First of all, the available information regarding the aim of the study was given systematically by scanning the literature. Thus, a theoretical framework was formed on the subject. Secondly, the "Positive Thinking Skills Scale" developed by Bekhet and Zauszniewski (2013) to measure students' positive thinking levels, "Attitudes to Learning Scale" developed by Kara (2010) and personal information form were used was used.

### **Data analysis**

The data were analyzed using SPSS 25.0 for Windows package program. Percentage and frequency method were used to determine the distribution of personal information of the participants. Skewness-Kurtosis normality distribution test was used. According to Tabachnick and Fidell (2013), kurtosis-skewness values should be in the range of +1.5 and -1.5. In this context, since the research is aimed at determining the relationship between variables, it is suitable for the relational scanning model, which is one of the general scanning models (Karasar, 2010). Besides, as a statistical method for data analysis; in order to decide which post-hoc multiple comparison technique will be used after t-test, one-way analysis of variance (ANOVA), firstly the Levene's test was used to test the hypothesis whether the variances of the group distributions were homogeneous, and it was determined that the variances were homogeneous ( $p > 0.05$ ). Complementary Post-Hoc test statistics (Tukey HSD) were used to determine which groups caused the significant difference after ANOVA. These statistical analyzes were carried out. Before the analysis, negative attitude expressions were reversed. The statistical error margin in the study was taken as 0.05.

### **Data collection tools**

The data collection tools are given below:

#### **Personal information form**

So as to get information about the personal characteristics of the participants and to create the independent variables of the research, an information form consisting of three items (Gender, Doing Sports Year, Class) was prepared by the researcher.

#### **Positive thinking skills scale (PTSS)**

The positive thinking skills scale, developed by Bekhet

and Zauszniewski (2013), is a measurement tool consisting of 8 items in order to evaluate how often the positive thinking skills, which have an important effect on the compatibility of the individual's functionality and the improvement of the quality of life, are used. The scale has a scale of 4 ("0" Never, "1" Rarely, "2" Usually, "3" Always). There are no reverse-coded items in the scale. High scores indicate that positive thinking skills are used more frequently. The highest score that can be obtained from the scale is 24 and the lowest score is 0. In the study conducted for the consistency validity of the scale, it was found that between positive thinking skills and depression ( $r = -.45$ ,) negative; Positive relationships were found between general well-being ( $r = .40$ ) and resourcefulness ( $r = .63$ ). Corrected item-total correlations of the scale range from .54 to .68 (Akin et al., 2015). Cronbach's alpha internal consistency reliability coefficient of the scale was found as .79.

In this study; the internal consistency (Cronbach Alpha) reliability coefficient of the scale, the positive thinking skill scale of the participants was found to be as 0.88.

### Attitude to Learning scale (ALS)

The Attitude to Learning scale developed by Kara (2010) was used. The Attitude to Learning scale consists of 4 sub-dimensions: Nature of Learning, Anxiety about Learning, Expectations for Learning, and Openness to Learning. Cronbach's Alpha value, calculated to determine the reliability of the scale, was found to be as 0,87 and it was deemed appropriate to be used in the study. The second scale is the Attitude towards Learning Scale. The validity and reliability study of this scale was conducted by Ahmet Kara (2010) and the reliability coefficient was determined as 0.72. The five-point Likert type scale; 5 for "I totally agree" (4.20 to 5.00), 4 for "I mostly agree" (3.40 to 4.19), 3 for "indecisive" (2.60 to

3.39), 2 for "I partially agree" (1.80 to 2.59) and 1 (1.00 to 1.79) for "totally disagree". In order for the data collected with both scales to be compared and interpreted properly, a parallelism was provided between the levels determined according to the scales and the scores related to these levels. As a result of the pre-application, the internal consistency coefficients of the scales were calculated by using the Cronbach Alpha technique for the reliability study of the scales. According to this; The reliability coefficient of the Individual Innovativeness Scale was 0.789, and the reliability coefficient of the Attitude towards Learning Scale was 0.775.

In the subscales of the attitude to learning scale of the scale, the nature of learning internal consistency (Cronbach's alpha) reliability coefficient was as 0.72, anxiety internal consistency reliability coefficient was as 0.78, expectation internal consistency reliability coefficient was as 0.89, and openness to learning internal consistency reliability coefficient was as 0.80.

## RESULTS

### Personal characteristics of the research group

Data and comments on the demographic characteristics of the students participating in the study are given in Table 1.

The demographic characteristics of the sample group participating in the study can be seen on the Table 1. According to this distribution, 44.6% of the students is female and 55.4% is male. 21.1% of the students does regular sports between 0-2 years, 22.1% does regular sports between 3-5 years, 26.8% does regular sports between 6-8 years and 30.0% of them does sports regularly for 9 and over years. 23.2% of the students is 1st grade students, 33.6% is 2nd grade students, 24.3% is 3rd grade students and 18.9% is 4th grade students.

**Table 1.** Distribution of the sample group participating in the study by demographic characteristics.

|                   |         | n   | %    |
|-------------------|---------|-----|------|
| Gender            | Female  | 125 | 44.6 |
|                   | Male    | 155 | 55.4 |
| Doing sports year | 0-2     | 59  | 21.1 |
|                   | 3-5     | 62  | 22.1 |
|                   | 6-8     | 75  | 26.8 |
|                   | 9 and + | 84  | 30.0 |
| Class             | 1.Class | 65  | 23.2 |
|                   | 2.Class | 94  | 33.6 |
|                   | 3.Class | 68  | 24.3 |
|                   | 4.Class | 53  | 18.9 |

In Table 2, positive thinking skills of the students participating in the study are at a high level with a mean score of 15.09. From the sub-dimensions of the attitude to learning scale, it is understood that they have a high level of learning nature with an average score of 27.50, anxiety average score of 33.71, expectation point average of 37.41, and openness to learning score average of 44.37.

As seen in Table 3, as a result of the independent group t test conducted to determine whether the positive thinking skills scale scores of the students constituting the sample differ significantly according to the gender variable of the students, the difference between the arithmetic averages of the positive thinking skill scale dimension by gender variable was not found to be statistically significant ( $t = -.429$ ;  $p > 0.05$ ). However, when the averages are examined, it can be said that male participants have more positive thinking skills than female participants.

As a result of the independent group t test performed to

determine whether the nature of learning scores from the sub-dimensions of the students' attitude to learning scale differ significantly according to the gender variable, the difference between the arithmetic averages of the nature of learning dimension according to the gender variable was found to be statistically significant ( $t = -2.128$ ;  $p < 0.05$ ). Accordingly, it is understood that the difference is in favor of men. (Table 4).

As a result of the one-way analysis of variance (ANOVA) to determine whether the arithmetic mean of the Positive Thinking Skills Scale dimension differs significantly according to doing sports year, the difference between the Positive Thinking Skills dimension and the arithmetic mean of doing sports year variable groups was found to be statistically significant ( $p < 0.05$ ). Accordingly, the difference occurred between those who did sports for 0 to 2 years and those who did sports for 9 and more years, and resulted in favor of those who did sports for 9 and + years.

**Table 2.** Descriptive statistics of the positive thinking skills scale of the students used in the study and the attitude scale to learning.

|                          | N   | Mean   | Ss    | Min.  | Max.   | Skewness | Kurtosis |
|--------------------------|-----|--------|-------|-------|--------|----------|----------|
| Positive thinking skills | 280 | 15.09  | 4.52  | .00   | 24.00  | -.156    | .112     |
| The nature of learning   | 280 | 27.50  | 5.06  | 11.00 | 35.00  | -.891    | .263     |
| Anxiety                  | 280 | 33.71  | 8.36  | 13.00 | 49.00  | -.283    | .466     |
| Attitude to learning     | 280 | 37.41  | 6.96  | 11.00 | 45.00  | -.464    | .252     |
| Expectation              | 280 | 37.41  | 6.96  | 11.00 | 45.00  | -.464    | .252     |
| Openness to learning     | 280 | 44.37  | 7.44  | 26.00 | 55.00  | -.340    | .051     |
| Total                    | 280 | 142.98 | 15.77 | 84.00 | 175.00 | -.515    | .209     |

**Table 3.** The relationship status between the positive thinking skills scale and the attitudes to learning scale scores between the gender variables of the participants.

|                          | Groups | N   | Mean  | Ss   | Shg  | t Test |     |              |
|--------------------------|--------|-----|-------|------|------|--------|-----|--------------|
|                          |        |     |       |      |      | t      | Sd  | p            |
| Positive thinking skills | Female | 125 | 14.96 | 5.00 | .447 | -.429  | 278 | .669         |
|                          | Male   | 155 | 15.19 | 4.11 | .330 |        |     |              |
| The nature of learning   | Female | 125 | 26.78 | 5.51 | .493 | -2.128 | 278 | <b>.034*</b> |
|                          | Male   | 155 | 28.07 | 4.61 | .370 |        |     |              |
| Anxiety                  | Female | 125 | 33.39 | 8.14 | .728 | -.565  | 278 | .572         |
|                          | Male   | 155 | 33.96 | 8.56 | .688 |        |     |              |
| Attitude to learning     | Female | 125 | 36.98 | 7.78 | .695 | -.913  | 278 | .362         |
|                          | Male   | 155 | 37.75 | 6.23 | .500 |        |     |              |
| Expectation              | Female | 125 | 36.98 | 7.78 | .695 | -.913  | 278 | .362         |
|                          | Male   | 155 | 37.75 | 6.23 | .500 |        |     |              |
| Openness to learning     | Female | 125 | 44.81 | 7.43 | .665 | .881   | 278 | .379         |
|                          | Male   | 155 | 44.02 | 7.46 | .599 |        |     |              |

\*p < .05.

**Table 4.** The relationship status between the scores of the positive thinking skills scale and the attitude scale towards learning scale of the participants' duration of doing sports.

| <i>f, x and ss Values</i> |              |          |             |           | <i>Anova Results</i> |           |           |           |          |              |
|---------------------------|--------------|----------|-------------|-----------|----------------------|-----------|-----------|-----------|----------|--------------|
|                           | <b>Group</b> | <b>N</b> | <b>Mean</b> | <b>ss</b> |                      | <b>KT</b> | <b>Sd</b> | <b>KO</b> | <b>F</b> | <b>p</b>     |
| Positive thinking skills  | 0-2 Year     | 59       | 13.76       | 4.64      | <b>Bet. Groups</b>   | 175.94    | 3         | 58.65     | 2.92     | <b>.034*</b> |
|                           | 3-5 Year     | 62       | 14.72       | 4.11      | <b>In groups</b>     | 5538.83   | 276       | 20.07     |          |              |
|                           | 6-8 Year     | 75       | 15.73       | 4.49      | <b>Total</b>         | 5714.77   | 279       |           |          |              |
|                           | 9 Year +     | 84       | 15.71       | 4.61      |                      |           |           |           |          |              |
| The nature of learning    | 0-2 Year     | 59       | 26.73       | 4.84      | <b>Bet. Groups</b>   | 180.71    | 3         | 60.24     | 2.38     | .070         |
|                           | 3-5 Year     | 62       | 26.81       | 6.13      | <b>In groups</b>     | 6971.28   | 276       | 25.26     |          |              |
|                           | 6-8 Year     | 75       | 27.36       | 4.55      | <b>Total</b>         | 7151.99   | 279       |           |          |              |
|                           | 9 Year +     | 84       | 28.67       | 4.64      |                      |           |           |           |          |              |
| Anxiety                   | 0-2 Year     | 59       | 34.37       | 8.56      | <b>Bet. Groups</b>   | 38.46     | 3         | 12.82     | .18      | .909         |
|                           | 3-5 Year     | 62       | 33.50       | 6.73      | <b>In groups</b>     | 19485.52  | 276       | 70.60     |          |              |
|                           | 6-8 Year     | 75       | 33.73       | 9.56      | <b>Total</b>         | 19523.99  | 279       |           |          |              |
|                           | 9 Year +     | 84       | 33.37       | 8.29      |                      |           |           |           |          |              |
| Attitude to learning      | 0-2 Year     | 59       | 35.10       | 6.72      | <b>Bet. Groups</b>   | 557.60    | 3         | 185.87    | 3.96     | <b>.009*</b> |
|                           | 3-5 Year     | 62       | 37.06       | 8.16      | <b>In groups</b>     | 12963.98  | 276       | 46.97     |          |              |
|                           | 6-8 Year     | 75       | 37.64       | 6.50      | <b>Total</b>         | 13521.59  | 279       |           |          |              |
|                           | 9 Year +     | 84       | 39.07       | 6.16      |                      |           |           |           |          |              |
| Openness to learning      | 0-2 Year     | 59       | 42.49       | 6.49      | <b>Bet. Groups</b>   | 404.96    | 3         | 134.98    | 2.47     | .062         |
|                           | 3-5 Year     | 62       | 45.42       | 7.36      | <b>In groups</b>     | 15052.41  | 276       | 54.54     |          |              |
|                           | 6-8 Year     | 75       | 43.76       | 7.59      | <b>Total</b>         | 15457.37  | 279       |           |          |              |
|                           | 9 Year +     | 84       | 45.46       | 7.79      |                      |           |           |           |          |              |

\*p &lt; .05.

As a result of the one-way analysis of variance (ANOVA) to determine whether the arithmetic mean of the expectation dimension sub-dimensions of the Attitude to Learning Scale differ significantly with respect to doing sports year, the difference between the expectation dimension and the arithmetic mean of doing sports year variable groups was found to be statistically significant ( $p <$

0.05). Accordingly, the difference occurred between those who did sports for 0 to 2 years and those who did sports for 9 and more years, and resulted in favor of those who did sports for 9 and + years.

As a result of Pearson Product Moment Correlation analysis, which was conducted to determine the relationship between the scores of

the nature of learning dimension, one of the sub-dimensions of the attitude to learning scale, and the scores of the positive thinking skill scale test, there was a statistically significant positive relationship at  $p < 0.05$  level between the scores ( $r = 0.417$ ;  $p < 0.05$ ) (Table 5).

As a result of the Pearson Product Moment Correlation analysis conducted to determine the

**Table 5.** Pearson's product moment correlation analysis results table to determine the relationship between the scores obtained from the sub-dimensions of the attitude to learning scale and the positive thinking skills scale test scores.

| Positive thinking skills        |                        | N   | r       | p    |
|---------------------------------|------------------------|-----|---------|------|
| Attitude towards learning scale | The nature of learning | 280 | .417**  | .000 |
|                                 | Anxiety                | 280 | -.231** | .000 |
|                                 | Expectation            | 280 | .441**  | .000 |
|                                 | Openness to learning   | 280 | .369**  | .000 |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

relationship between the scores obtained from the anxiety dimension and the positive thinking skills scale test scores of the students, there was a statistically significant negative relationship between the scores at the level  $p < 0.05$  ( $r = -0.231$ ;  $p < 0.05$ ).

As a result of the Pearson Product Moment Correlation analysis conducted to determine the relationship between the scores obtained from the expectation dimension and the students' positive thinking skills scale test scores, there is a statistically significant positive relationship between the scores at the level  $p < 0.05$  ( $r = 0.441$ ;  $p < 0.05$ ).

As a result of the Pearson Product Moment Correlation analysis conducted to determine the relationship between the scores obtained from the openness to learning dimension and the students' positive thinking skills scale test scores, it was found that there was a statistically significant positive relationship between the scores at the level  $p < 0.05$  ( $r = 0.369$ ;  $p < 0.05$ ).

## DISCUSSION AND CONCLUSION

The results of the Positive Thinking Skills Scale (PTSS) and the Attitude to Learning Scale (ALS) applied to the students of the School of Physical Education and Sports and the explanations on it are presented below.

In line with the results, it was concluded that the positive thinking skills of the students were at a high level, and the nature of learning, anxiety, expectation, and openness to learning sub-dimensions of the attitude towards learning scale were at high levels. The reason for this can be said to be the relaxing feature of not doing sports. When the literature was examined, results supporting this study were found in different sample groups. According to the study of Temel and Nas (2018), the fact that teachers' positive thinking average score was over average supports the current study. Seligman and Pawelski (2003) study results show parallelism with the current study. According to the study conducted by Temel (2019), the fact that the coaches working in the city of Istanbul have a high average score of positive thinking is similar to the current study. According to the results of the study titled "Attitudes towards learning" conducted by Adıguzel and Dolmacı (2018) for

prospective teachers, it was concluded that the whole scale was highly positive. These results support the current study. Again, the results of the present study show similarities with the findings of the studies conducted by Karasakaloglu (2012), Akturk (2012) and Adıguzel (2014).

When the difference between the arithmetic averages of the positive thinking skill scale dimension according to the gender variable is examined, it is observed that male participants have more positive thinking skills than female participants, and when the difference between the arithmetic averages of the nature of learning scores from the sub-dimensions of the attitude to learning scale is examined, it is observed that male participants are more than female participants. It was concluded that they have a learning nature related to learning. Temel and Nas (2018) study result; revealed that male participants have more positive thinking skills than female participants. This result supports the current study. According to the study conducted by Adıguzel and Dolmacı (2018), it is understood that there is a significant difference in favor of female teacher candidates, which does not support the current study. Again, some studies don't show parallelism with the studies conducted by Kazazaoglu (2013), Aydın (2016), Adıguzel (2014) and Uzun and Keles (2010).

When the difference between the Positive Thinking Skills dimension and the arithmetic averages of the duration of doing sports variable groups was examined, it was found that students who have done sports for 9 years or more have more positive thinking skills than those who have done sports for 0 to 2 years. According to the difference between the arithmetic mean of the duration of doing sports variable groups, it can be concluded that students who have done sports for 9 years or more have higher expectations of learning than those who have done sports for 0 to 2 years. The reason for this can be called the effect of sports on learning. According to the study conducted by Temel (2019), it is understood that the trainers working in Istanbul have less positive thinking skills than the coaches who are in the range of 0-5 years according to the variable of Service year. These results appear to support the current study.

According to the result of Pearson Product Moment Correlation analysis conducted to determine the

relationship between sub-dimensions of the scale of attitude to learning and the dimension of positive thinking;

From the sub-dimensions of the scale of attitude towards learning, it can be concluded that there is a statistically significant and positive relationship between nature of learning, Expectation, and openness to learning and positive thinking skill, but there is a negatively significant relationship between anxiety and positive thinking skill.

As a result of the literature review, no study comparing students' positive thinking levels and attitudes towards learning has been encountered. Therefore, it is thought that this study will make a great contribution to the literature and will set an example for more comprehensive studies to be carried out from now on.

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**Citation:** Ince, A. (2020). The relationship between physical education and sports school students' positive thinking skill levels and their attitudes to learning: Comparison by gender and years of exercising. *African Educational Research Journal*, 8(4): 754-760.

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