



ISSN Print: 2664-7281  
ISSN Online: 2664-729X  
Impact Factor: RJIF 8.15  
IJSEPE 2026; 8(1): 09-17  
<https://www.sportsjournals.net>  
Received: 08-10-2025  
Accepted: 13-11-2025

**Hussein Rashid Ghyaidh**  
General Directorate of  
Education, Al-Qadisiyah  
Governorate, Ministry of  
Education, Iraq

## **Self-concept and its relationship to athletic achievement motivation among middle school sports teams, according to the two personality types (extroversion-introversion)**

**Hussein Rashid Ghyaidh**

**DOI:** <https://www.doi.org/10.33545/26647281.2026.v8.i1a.312>

### **Abstract**

This research aims to determine the level of self-concept and athletic achievement motivation among students in school sports teams, based on two personality types (extroversion and introversion). It also seeks to identify the correlation between these two variables and any differences between them based on personality type (extroversion and introversion). The researcher employed a descriptive survey methodology, utilizing a questionnaire to collect data from a random sample of 15% of the research population of 654 students. These students represent the students in school sports teams at the intermediate level in the Al-Qadisiyah Education Directorate who were attending regular classes during the 2021-2022 academic year. The final sample size was 100 student athletes. Appropriate statistical methods were used in this research. The results indicate that the students in the intermediate school sports teams possess a high level of self-concept and athletic achievement motivation, exhibiting extroversion. Furthermore, a significant positive relationship was found between self-concept and athletic achievement motivation. The sample members with the extroverted personality type also exhibit a high level of self-concept. High achievement motivation was observed, while the introverted group exhibited high self-concept and low achievement motivation.

**Keywords:** Self-concept, athletic achievement motivation, extroversion, introversion

### **Introduction**

Education focuses on the individual and aims to develop them in all aspects: emotional, psychological, social, psychomotor, and intellectual. It emphasizes the quality of education rather than its quantity, thus enabling the student to become an active participant in building their society. The school is a formal educational institution through which the educational goals set by society can be achieved to prepare the student for life. The preparatory stage is one of the educational phases and is a very important age and educational stage in a student's life. It helps in adjustment and success in life, especially in sports. Neglecting this stage can have negative repercussions, and its negative effects may even extend into later years. At this stage, the school works through its curricula and both curricular and extracurricular activities to develop students' cognitive, emotional, and affective personalities. It equips students with essential skills and knowledge, fosters positive attitudes related to attendance, and ensures appropriate educational opportunities for all. Among the extracurricular activities organized by the school are sports activities outside the prescribed curriculum. Physical education classes are central to these activities, allowing for the discovery of personal talents and abilities, the development of various skills and aptitudes, the cultivation of teamwork, the instilling of a competitive spirit, and the breaking down of psychological barriers among students <sup>[1]</sup>. An individual's self-concept, whether positive or negative, and their level of satisfaction, have a profound impact on their behavior, feelings, and thoughts. This self-concept can be understood through self-awareness, and it develops through interaction with others and the surrounding environment. The school also plays a vital role as a social institution, and through physical education classes, it influences self-concept by preparing school teams for organized games, track and field events, or any other athletic activity in which students participate.

**Corresponding Author:**  
**Hussein Rashid Ghyaidh**  
General Directorate of  
Education, Al-Qadisiyah  
Governorate, Ministry of  
Education, Iraq

"The physical education lesson is considered the microcosm that builds and achieves the curriculum's goals and content in a sequential and consistent manner. Practicing sports activities through the implementation of lessons is one of the most effective ways to provide students with a balanced and integrated education" [2].

The motivation for athletic achievement plays a role in preparing the student to bear responsibility and strive for athletic excellence in any competitive sport in which they participate within school sports teams. It also motivates them to seek self-realization and affirmation through their accomplishments in athletic competitions. The strong motivation for achievement drives the student-athlete to increase their skills and knowledge until they become proficient in their favorite sport and develop a deep interest in it. Motivation helps young athletes, parents, coaches, and sports leaders understand how to achieve optimal participation in sports. For sports to be fruitful, they must provide a sense of satisfaction [3]. On the other hand, achievement motivation is not a physical thing; it is not a state or force that can be directly observed. Rather, it is a state within the organism, the existence of which is inferred from different behavioral patterns and the organism's own activity. For example, people are divided into introverts and extroverts. An introvert is defined as someone with high intelligence, creativity, and innovation, and stable emotions, but who struggles to find ways to connect with others. An extrovert is someone with average intelligence, high motor skills, variable emotions, and sufficient flexibility and adaptability. This does not mean that achievement motivation is the behavioral pattern we observe. Rather, it is a state behind this behavior; it is the state that arouses, activates, and directs the behavior itself, and ensures its continuation.

The importance of motivation lies in its ability to help us understand and interpret individual behavior, increase our comprehension of it, and assist in modifying behavior by controlling it. Motivation to achieve desired behavior also helps in diagnosing and identifying the behavior, striving to find the optimal solution for it, and understanding the motivations reduces effort and saves time in learning the appropriate educational skill.

Considering the above, psychological preparation plays a crucial and fundamental role in maintaining the student's performance level in school sports teams during competitions. There is now a pressing need to pay attention to the student-athlete as a whole and not neglect any aspect of their personality.

### Research Problem

Many school sports teams possess a high level of physical, technical, and tactical training. However, their performance during competitions falls below expectations due to the pressures and psychological burdens they face. These pressures include a lack of positive self-concept and high motivation for athletic achievement, which can hinder their ability to excel and win in school sports competitions despite their good training. Therefore, the current research problem focuses on answering the following questions:

- What is the level of self-concept among students in middle school sports teams?
- What is the nature of the relationship between self-concept and athletic achievement motivation among students in middle school sports teams? Does a high self-concept translate to high athletic achievement? Conversely, does a low self-concept lead to poor athletic achievement?

### Research Objectives

- To measure the level of self-concept among middle school sports teams according to two personality types.
- To measure the level of athletic achievement motivation among middle school students on school sports teams.
- To measure the level of the two personality types (extroversion and introversion) among middle school students on school sports teams.
- To identify the relationship between self-concept and athletic achievement motivation among middle school students on school sports teams.
- To identify statistically significant differences in the correlation between self-concept and athletic achievement motivation among middle school students on school sports teams, according to the two personality types (extroversion and introversion).

### Methodology and Procedures

#### Research Methodology

The nature of the problem and the research objectives determine the appropriate research methodology. Therefore, the researcher used the descriptive survey method, as it is the most suitable approach for the current research.

#### Research Population and Sample

The research population consisted of students in sports teams at the intermediate level in the Al-Qadisiyah Education Directorate, totaling (654) students for the academic year (2021-2022). The research sample was selected randomly, and its number reached (100) students, representing (15%) of the original population.

#### Main Research Procedures:

The following are the procedures followed in preparing the research instruments:

#### Self-Concept Scale

##### Preparing the initial version of the self-concept scale

Considering "the definition of self-concept and after reviewing psychological scales developed in this field, the researcher was able to collect a number of items. After excluding similar and unclear items, the number of items reached (30) items (see Appendix 1). These were presented to (11) experts in educational and sports psychology, testing, and measurement. Upon receiving the questionnaire forms from the experts, the researcher collected and processed the data. The chi-square test was used to identify valid items, and the results showed the validity of all items, "as shown in Table 1.

**Table 1:** The use of the chi-square test to analyze expert opinions on the validity of the self-concept scale demonstrates

Paragraphs	Approved	Agreement percentage	Calculated chi-square value	Tabulated chi-square value	Statistical significance
1-2-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-22-26-28-30 0.05	11	100%	11	3.84	Statistically significant

### Correcting the self-concept scale

To achieve the research objective of identifying the self-concept of middle school students in sports teams, the scale consisted of (30) items, including (15) negative items and (15) positive items (Appendix 1). Five alternatives were provided for each item: (Accords to me very much, Accords to me to a large extent, Accords to me to a moderate extent, Accords to me to a small extent, does not apply to me). The weights of the alternatives ranged from (1-5) points for

positive items and vice versa for negative items. This scale was corrected according to these weights assigned to the scale items. The respondent was given a total score on the entire scale to represent their self-concept. The highest score was set at (150) and the lowest at (30), noting that the theoretical mean of the scale was (90). The higher the respondent's score on the scale, the stronger the indication of a high self-concept, and vice versa. Table 2 illustrates this.

**Table 2:** Shows the numbers of the positive and negative items in the self-concept scale

Positive paragraph numbers	Negative paragraph numbers
2-4-6-8-10-12-14-16-18-20-22-24-26-28-30	1-3-5-7-9-11-13-15-17-19-21-23-25-27-29

### Statistical analysis of items

#### The two extreme groups method

"To conduct the statistical analysis using this method, the researcher administered the Self-Concept Scale to a sample of (100) students from the research population. After distributing the questionnaires to the sample members, they were collected and corrected. The total scores of the sample members were then arranged in descending order from highest to lowest. From these, (27%) of the highest scores

and (27%) of the lowest scores were selected, with (27) questionnaires in each group. An independent samples t-test was then administered to test the significance of the differences between the two extreme groups. The mean and standard deviation were calculated for both the upper and lower groups. It was found that all items on the scale were significant at a significance level of (0.05) and with (52) degrees of freedom, "4 as shown in Table 3.

**Table 3:** Shows the calculated t-values for the items of the self-concept scale

Paragraph sequence	Upper Group		Lower group		Calculated T-value	Paragraph sequence	Upper Group		Lower group		Calculated T-Value
	Mean	SD	Mean	SD			Mean	SD	Mean	SD	
1	2.00	0.82	1.41	0.62	5.93	16	1.14	0.41	1.62	0.74	7.16
2	1.81	0.82	2.23	0.80	4.63	17	1.79	0.79	2.13	0.81	3.79
3	2.24	1.72	1.31	0.54	10.66	18	3.91	1.19	2.58	1.41	6.81
4	1.31	0.51	1.94	0.74	8.86	19	2.37	0.71	1.58	0.65	8.40
5	4.18	1.05	3.66	1.24	3.30	20	1.62	0.65	2.41	0.68	10.66
6	2.29	0.64	1.59	0.64	8.03	21	1.96	0.83	2.52	0.67	4.41
7	2.40	0.25	1.45	0.61	7.12	22	2.92	1.38	1.43	0.77	9.75
8	3.10	1.31	1.69	1.07	8.63	23	2.26	0.73	1.46	0.61	8.74
9	1.85	0.75	2.32	0.74	5.62	24	2.57	2.15	2.15	0.67	11.86
10	1.84	0.72	1.23	0.48	7.27	25	2.30	0.72	1.45	0.58	7.78
11	2.10	0.78	1.34	0.59	7.99	26	2.32	3.06	1.25	0.48	3.56
12	1.47	0.66	2.30	0.77	10.41	27	1.20	0.43	1.74	0.69	8.28
13	1.87	0.73	1.37	0.57	5.56	28	1.74	0.77	2.56	0.65	10.26
14	1.17	0.38	1.94	0.77	11.27	29	2.41	1.62	1.62	0.57	8.26
15	2.52	0.66	2.00	0.76	5.43	30	2.09	0.78	2.31	0.80	3.43

The tabulated t-value at a significance level of 0.05 and 52 degrees of freedom equals 2.009

### Psychometric Properties of the Scale:

#### First: Validity

Two types of validity were verified for this scale, as follows:

- **Face Validity:** This type of validity was verified by presenting the scale to a group of experts specializing in sports and educational psychology, and their opinions were used to determine the suitability of the items, as mentioned previously in Table 1.
- **Construct Validity:** This type of validity was established by statistically analyzing the scale items using the extreme groups method.

#### Second: Reliability

The scale's reliability was established using the split-half method. Pearson's correlation coefficient was calculated, yielding a value of 0.82, indicating the scale's reliability. However, since split-half reliability only accounts for half of the test, the correlation coefficient should be corrected using the Spearman-Brown formula. The corrected reliability coefficient was 0.90.

(Note: The text abruptly ends here, so the corrected value is unclear.) 2- The Sports Achievement Motivation Scale: The researcher followed the same steps previously followed in building the Self-Concept Scale, which are as follows:

#### Preparing the initial version of the sports achievement motivation scale

In light of the definition of sports achievement motivation and after reviewing the psychological scales that were built in this field, the researcher relied on the scale prepared as it is more suitable for the current research and is appropriate to the nature of the current research population. 5 It met all the psychometric conditions of validity, reliability and discrimination. The number of items reached (20) items. It was presented to the same experts who were presented to the items of the Self-Concept Scale. Upon the researcher retrieving the questionnaire forms from the experts, he collected and processed the data. The (Chi-square) test was used to identify the valid items, and the results showed the validity of all items, and Table 4 shows this.

**Table 4:** Shows the use of the chi-square test to analyze expert opinions on the validity of the athletic achievement motivation scale

Paragraphs	Approved	Agreement percentage	Calculated chi-square value	Tabulated chi-square value	Statistical significance
1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20	11	100%	11.00	3.84	Statistically significant (0.05)

**Scale Correction:** The response alternatives were as follows: (Accords to me to a very large extent), (Accords to me to a large extent), (Accords to me to a moderate extent), (Accords to me to a small extent), (Does not apply to me). This scale includes items related to the achievement motivation for success, assigned values of (5, 1, 2, 3, 4). These values are reversed when answering the items related

to the failure avoidance motivation, resulting in values of (5, 4, 3, 2, 1). The scores for all items (achievement motivation for success and failure avoidance motivation) are then added together to obtain the total scale score. The highest possible score is (100), the lowest is (20), and the theoretical mean is (60), Table 5 illustrates this.

**Table 5:** Shows the item numbers for the achievement motivation for success and the failure avoidance motivation in the sports achievement motivation scale

Paragraph numbers for the motivation to achieve success	Paragraph numbers for the motivation to avoid failure
2-4-6-8-10-12-14-16-18-20	1-3-5-7-9-11-13-15-17-19

### Statistical analysis of items

#### The two extreme groups method

To conduct the statistical analysis using this method, the researcher administered the Sports Achievement Motivation Scale to the same sample (100) students from the research population who had received the Self-Concept Scale, following the same procedures. Then, an independent

samples t-test was administered to test the significance of the differences between the two extreme groups. The mean and standard deviation were calculated for both the upper and lower groups. It was found that all items on the scale were significant at a significance level of (0.05) and with (52) degrees of freedom, as shown in Table 6.

**Table 6:** Shows the calculated t-values for the items of the sports achievement Motivation Scale

Paragraph number	Upper Group		Lower Group		Calculated t-value	The ruling
	Mean	SD	Mean	SD		
1	3.10	1.41	3.63	1.35	2.45	Sig.
2	4.32	0.76	3.62	1.11	4.71	Sig.
3	4.47	0.78	2.80	0.94	12.30	Sig.
4	3.68	0.97	2.98	1.06	4.40	Sig.
5	4.56	0.63	3.00	0.82	13.50	Sig.
6	4.37	0.80	2.69	1.21	10.42	Sig.
7	4.69	0.58	2.96	0.81	15.54	Sig.
8	4.56	0.71	3.90	1.38	3.79	Sig.
9	2.95	1.13	2.37	1.11	3.30	Sig.
10	3.70	1.38	3.60	1.20	4.49	Sig.
11	4.41	0.70	3.22	1.00	8.73	Sig.
12	4.69	0.77	2.75	1.03	13.56	Sig.
13	4.05	0.76	2.62	1.16	9.32	Sig.
14	3.98	1.06	2.35	1.17	9.27	Sig.
15	3.83	1.27	2.52	1.24	6.64	Sig.
16	4.41	0.83	2.47	1.27	11.51	Sig.
17	3.64	1.21	2.94	1.36	3.48	Sig.
18	4.27	0.77	3.38	0.81	7.11	Sig.
19	4.53	0.65	3.37	0.98	8.86	Sig.
20	4.51	0.82	3.09	0.91	10.41	Sig.

The tabulated t-value at a significance level of 0.05 and 52 degrees of freedom equals 2.009

### Psychometric Properties of the Scale

**First: Validity:** Two types of validity were verified for this scale, as follows:

- **Face Validity:** This type of validity was verified by presenting the scale to a group of experts specializing in sports and educational psychology. Their opinions were used to determine the suitability of the items, as mentioned previously in Table 4.
- **Construct Validity:** This type of validity was established by statistically analyzing the scale items using the extreme groups method.

**Second: Reliability:** The scale's reliability was determined using Cronbach's alpha. The formula was applied to all 100

sample forms, and the alpha value for the current scale was 0.87. This reliability is considered good for psychological scales in general.

### Personality Type Scale (Extroversion-Introversion) Preparing the initial version of the Personality Type Scale (Extroversion-Introversion)

After reviewing the scales that were built in this field, the researcher adopted the scale prepared for the two personality types (Extroversion-Introversion) because it is more suitable for the current research and is appropriate to the nature of the population of the current research and it met all the psychometric conditions of validity, reliability and



discrimination.6 This scale included (18) items, and three alternatives were placed in front of each item. The researcher adapted it for the research sample after consulting with experts in educational and sports psychology in this regard by making some modifications to its items to suit the

sports field after its items were general. After the researcher retrieved the questionnaire forms from the experts, he collected and processed the data, where the (Chi-square) test was used to identify the valid items. The results showed the validity of all items, and Table 7 shows this.

**Table 7:** Shows the use of the chi-square test to analyze expert opinions on the validity of the two personality types of scale (extroversion-introversion)

Paragraphs	Approved	Agreement percentage	Calculated chi-square value	Tabulated chi-square value	Statistical significance
1-2-3-4-5-6-7-8-9-10-11-12					

### Scale Scoring

The researcher used the three-point Likert scale for the personality type scale (extroversion-introversion). Scores of 3, 2, and 1 were assigned to the scale's alternatives (always, sometimes, never) when the items were positive, and the opposite was true when the items were negative. The scores were then totaled after tabulation to obtain the total scale score. The highest possible score for a respondent is 54, and the lowest is 18. The theoretical meaning for the scale is 36. 3- Pilot Study: Verifying the validity of the contexts used to measure self-concept, athletic achievement motivation, and personality types (extroversion and introversion), and determining the availability of the specific measurement conditions and their implementation, is a fundamental requirement. To achieve this, a pilot study was conducted on Thursday, December 2, 2021, with a sample of (20) middle school students randomly selected from the research population. The results obtained by the researcher showed that all the objectives for which the pilot study was conducted were met, indicating the students' positive

response and enthusiasm in completing the three tests, the suitability of the allotted time, and the effectiveness of the study's execution and organization, as well as its validity in measuring the three research concepts.7

### Statistical analysis of items

**The Two Extreme Groups Method:** To conduct the statistical analysis using this method, the researcher administered the Personality Type Scale (Extroversion-Introversion) to the same sample of (100) students from the research population who had previously received the Self-Concept and Sports Achievement Motivation Scales, following the same procedures. Then, an independent samples t-test was administered to test the significance of the differences between the two extreme groups. The mean and standard deviation were calculated for both the upper and lower groups. This revealed that all items on the scale were distinct at a significance level of (0.05) and with (52) degrees of freedom, as shown in Table 8.

**Table 8:** Shows the calculated t-values for the items of the Personality Type Scale (Extroversion-Introversion)

Paragraph number	Upper Group		Lower Group		Calculated t-value	The ruling
	Mean	SD	Mean	SD		
1	4.10	1.41	4.63	1.35	3.15	Sig.
2	3.32	0.76	5.62	1.11	5.61	Sig.
3	6.47	0.78	3.80	0.94	2.30	Sig.
4	3.68	0.97	3.98	1.06	7.40	Sig.
5	3.56	0.63	5.00	0.82	10.00	Sig.
6	4.37	0.80	6.69	1.21	7.42	Sig.
7	5.69	0.58	3.96	0.81	5.54	Sig.
8	5.56	0.71	4.90	1.38	3.79	Sig.
9	3.95	1.13	2.37	1.11	3.30	Sig.
10	7.70	1.38	5.60	1.20	2.49	Sig.
11	5.41	0.70	3.22	1.00	8.73	Sig.
12	6.69	0.77	3.75	1.03	11.56	Sig.
13	7.05	0.76	4.62	1.16	5.31	Sig.
14	3.98	1.06	5.35	1.17	4.24	Sig.
15	3.83	1.27	3.52	1.24	3.63	Sig.
16	5.41	0.83	4.47	1.27	11.51	Sig.
17	4.64	1.21	3.94	1.36	4.41	Sig.
18	3.27	0.77	5.38	0.81	3.11	Sig.

The tabulated t-value at a significance level of 0.05 and 52 degrees of freedom equals 2.009.

### Psychometric properties of the scale

**First: Validity:** Two types of validity were verified for this scale, as follows:

- **Face Validity:** This type of validity was verified by presenting the scale to a group of experts specializing in sports and educational psychology, and their opinions were used to determine the suitability of the items, as mentioned previously in Table 7.

- **Construct Validity:** This type of validity was established by statistically analyzing the scale items using the extreme groups method.

### Second: Reliability

The scale's reliability was determined using the split-half method. Pearson's correlation coefficient was calculated by summing the scores of the two halves of the test. However, these values represent the coefficients of the two halves.

Therefore, these coefficients had to be corrected using the Spearman-Brown formula to adjust the reliability

coefficient. After correction, the reliability coefficients are shown in Table 9.

**Table 9:** Shows the reliability coefficient for the two personality types scale (extroversion-introversion)

S	Field	Pearson connection	Spearman-Brown
1	Extroversion	0.83	0.87
2	Introversion	0.77	0.89

### Final Application

After completing the preparation of the research instruments (Self-Concept Scale, Sports Achievement Motivation Scale, Personality Type Scale-Extroversion-Introversion) and after verifying their validity and reliability, the researcher applied the instruments to a sample of (100) middle school students in the Al-Qadisiyah Education Directorate for the academic year (2021-2022). The application period lasted from (December 22, 2021) to (February 31, 2022).

### Results and Discussion

#### Measuring the level of self-concept among middle school students in sports teams

To achieve this objective, the researcher measured the level of self-concept among the sample members. After statistically processing the data for the sample of (100) students, their average score on the scale was (105.610) with a standard deviation of (15.023). This average was higher than the theoretical mean of the scale, which was (90). To determine the statistical significance of the differences between the mean and the theoretical mean, the researcher used a one-sample t-test, as shown in Table 10.

**Table 10:** Shows the results of the t-test for the significance of the difference between the mean and the theoretical mean of the self-concept scale

Variable	Number of individuals in the sample	Mean	SD	Theoretical average	T value		Level of significance
					Calculated	Tabulated	
Self-concept	100	105.610	15.023	90	12.2	1.98	0.05

The tabulated t-value, with 99 degrees of freedom and a significance level of 0.05, is 1.98.

Table 10 shows that the calculated t-value is 12.2, which is greater than the tabulated value of 1.98, at a significance level of 0.05 and 99 degrees of freedom. This indicates a statistically significant difference between the mean of self-concept and the theoretical mean of 90. This suggests that middle school students on sports teams possess a high level of self-concept. This result can be explained by the fact that middle school students have achieved a degree of intellectual, cognitive, social, and moral maturity [8]. This maturity allows them to view life from a broader perspective, leading them to move from a narrow, self-centered view to a more social one that considers the feelings and emotions of others. This is achieved through socialization and a school environment that fosters positive qualities such as initiative, self-confidence, and responsibility, all of which contribute to developing the entrepreneurial and athletic personality of student athletes on school teams. Furthermore, engaging in competitive

sports fosters a positive self-esteem in student-athletes [9]. "Players with a positive self-concept are characterized by clear confidence in themselves, their abilities, and their skills. They do not appear anxious, hesitant, or fearful of unexpected situations [10]. They are receptive to criticism from their coaches, highly motivated to achieve and excel, and able to make decisions quickly and easily" [11].

2- Measuring the Level of Achievement Motivation in Sports among Students in Preparatory School Sports Teams: "The research results showed that the mean score of the research sample on the Sports Achievement Motivation Scale was (90.02), with a standard deviation of (10.78). When compared to the theoretical mean of the scale (60) using a one-sample t-test, the calculated t-value (9.14) was found to be higher than the critical t-value (1.98) at a significance level of (0.05). This indicates that students in preparatory school sports teams possess a high level of athletic achievement motivation," as shown in Table 11.

**Table 11:** Shows the t-value for the significance of the differences between the mean and the theoretical mean of the sports achievement motivation scale

Sample number	Mean	SD	Theoretical average	DF	Calculated T	Tabulated T	Significance
100	90.02	10.78	60	99	9.14	1.98	Sig.

The tabulated t-value, with 99 degrees of freedom and a significance level of 0.05, is 1.98.

This result can be interpreted as indicating that middle school students on school sports teams possess a high level of ambition, reaching its peak. Their serious thinking and dedication to achieving their goals and fulfilling their desires are at their highest levels, as athletic excellence is one of their primary objectives. Furthermore, their character development is linked to the psychological characteristics of this age group, most notably independence and hard work. Students who participate in sports become more mature and persistent in reaching their desired goals. Their status as athletes on school teams also increases their motivation to achieve and excel in front of their peers and school administration [12].

"Students who live life with meaning and purpose enjoy effective adjustment and good mental health, unlike students who live without purpose" [13]. In recent years, there has been a growing interest in identifying methods and means to instill achievement motivation in athletes. Athletes need effective tools and mechanisms to maintain their abilities in the face of obstacles and difficulties they may encounter, such as fatigue, task complexity, performance challenges, and other difficulties and obstacles they face, whether during training or in athletic competitions [14].

Measuring the level of the two personality types (extroversion and introversion) among students in school sports teams at the preparatory stage:

**Table 12:** T-test for the significance of differences between the hypothetical mean and the mean of the research sample's scores on the (extroversion/introversion)

Sample number	Mean	SD	Theoretical average	Calculated T	Tabulated T	Level of significance	Significance
100	46.490	3.623	36	4.328	1.98	0.05	Sig.

The tabulated t-value, with 99 degrees of freedom and a significant level of 0.05, is 1.98.

To achieve this objective, the Personality Type Scale (Extroversion-Introversion) was administered to a sample of 100 middle school students from various school sports teams. After statistical analysis, the mean score for the sample on the Extroversion/Introversion scale was 490.46, with a standard deviation of 3.623. Comparing this mean to the hypothetical mean of the scale (36) and testing the significance of the difference using a one-sample t-test, the calculated t-value was 4.328. This is higher than the tabulated t-value (1.98) at a significance level of 0.05 and 99 degrees of freedom, indicating that the sample exhibits extroversion, as shown in Table 12.

This result can be attributed to the fact that middle school students in sports teams are able to regulate their psychological energy and direct it towards extroversion, despite the life pressures they face. They pay clear attention to the outside world and interact with it, which has a significant positive impact on the development of their personalities and compensates for the anxiety and stress caused by the circumstances the country experienced during the 2021-2022 academic year and the aftermath of the COVID-19 pandemic, which had a clear impact on the students' mental health in general. As Al-Watar and

Abdullah (1999) stated, "The state of stress and psychological tension resulting from the impact of work and social events on an individual's attitude is based on enjoyment through practicing sports". Extroverted individuals are distinguished by their engagement with life's experiences. Some interact directly by forming constructive social relationships, while others are introverted and do not react to any event. Extroverted individuals look forward to a better future under the current circumstances in the country, which aligns with Jung's view that "extroversion is the acquisition and direction of psychological energy to and from the outside world." From individuals, things, and actions, the extroverted person interacts with the environment and derives energy from the activities they engage in with people, events, and tasks. They enjoy socializing, fun, conversation, ease, and a desire to be noticed<sup>[15]</sup>.

#### Identifying the relationship between self-concept and athletic achievement motivation among middle school students in sports teams:

To determine if there is a significant relationship between the two variables, Pearson's correlation coefficient was used as a statistical tool. Significant correlations were found between the two variables, as shown in Table 13.

**Table 13:** Shows the correlation coefficients between self-concept and athletic achievement motivation

Variable	Self-concept	Motivation for athletic achievement	Tabulated value(r)
Self-concept	-	0.33	0.19
Achievement motivation in sports	0.33	0	

The table above shows a significant positive relationship between the scores of the sample members on the self-concept scale and their scores on the athletic achievement motivation scale. The correlation coefficient between the two variables was (0.33), which is significant at the (0.05) level. This result can be attributed to the research sample possessing psychological traits that increase the student-athletes' desire to progress and succeed, such as persistence in winning and aversion to defeat. This is because the most important characteristic of this stage in particular is the aversion to accepting defeat and hard work. Moreover, the constant thirst for practicing sports activities among student-athletes in the preparatory stage makes them spend a large amount of time practicing, which improves their athletic level. The achievement motivation is an important factor in directing and activating an individual's behavior and in their perception of the situation, as well as helping them understand and interpret their own behavior and the

behavior of those around them. The achievement motivation is a fundamental component in an individual's pursuit of self-actualization and self-affirmation, as the individual feels self-actualization through what they accomplish, the goals they achieve, and the pursuit of a better lifestyle and higher levels of their human existence.

"One of the most important variables affecting children's achievement motivation is their self-concept. Children with low self-concept tend to fail and perform poorly. Furthermore, they do not strive for success, tend to avoid difficult tasks, and give up when faced with any challenging task"<sup>[15]</sup>.

Identifying the statistically significant differences in the correlation between self-concept and athletic achievement motivation among middle school students in sports teams, according to the two personality types (extroversion and introversion).

**Table 14:** T-test for the significance of the difference between the hypothetical mean and the mean of the research sample's scores regarding self-concept and athletic achievement motivation, according to the two personality types (extroversion and introversion)

Personality style	Sample number	Self-concept						Motivation for athletic achievement				
		Mean	hypothetical mean	Calculated T-value	tabulated T-value	DF	Type	Mean	hypothetical mean	Calculated T-value	tabulated T-value	Type
Extroversion	100	114.655	90	2.20	1.98	99	High	120.675	60	2.104	1.98	High
Introversion	100	130.23		2.243		99	High	52.144		2.481		Low

To achieve this objective, a t-test was used to determine the significance of differences between the mean scores of the research sample for self-concept on the extroverted personality type. The results showed that the mean score for self-concept on the extroverted personality type was 114.655, higher than the hypothetical mean of 90. The calculated t-value was 2.20, higher than the critical value of 1.98 at a significance level of 0.05 and 99 degrees of freedom. Similarly, the mean score for athletic achievement motivation on the extroverted personality type was 120.675, higher than the hypothetical mean of 60. The calculated t-value was 2.104, higher than the critical value of 1.98 at a significance level of 0.05 and 99 degrees of freedom. This indicates that the extroverted individuals in the sample possess a high self-concept and achievement motivation, as shown in Table 14.

The researcher can attribute these results to the fact that middle school students on school sports teams acquire and direct psychological energy to and from the external world, including individuals, objects, and people. They interact with the environment and utilize energy through activities. As Boeree states, "An extrovert is characterized as sociable, enjoys engaging in sports activities, has many friends, dislikes playing alone, acts quickly and decisively, takes things simply, and generally does not accurately control their emotions or can sometimes be relied upon."<sup>15</sup>

Using a t-test to determine the significance of differences between the mean scores of the research sample on the self-concept dimension of the introverted personality type, the mean score was found to be 130.23, higher than the hypothetical mean of 90. The calculated t-value was 2.243, higher than the expected value of 1.98 at a significance level of 0.05 and 99 degrees of freedom, indicating that... The introverted individuals in the sample exhibited a high self-concept. The mean score for athletic achievement motivation within the introverted personality type was (52.144), which is lower than the hypothetical mean of (60). The calculated t-value was (2.481), which is higher than the critical value of (1.98) at a significance level of (0.05) and (99) degrees of freedom. This indicates that the introverted individuals in the sample have low achievement motivation, as shown in Table 14.

The researcher can attribute these results to the fact that middle school students on school sports teams acquire and direct psychological energy to and from the external world, including internal thoughts, experiences, and imagination. Introverted individuals tend to distance themselves from close friends, prefer planning ahead, and do not place much importance on engaging in sports activities. They lack motivation to participate in sports or achieve athletic success. Introverts tend to think internally before expressing their thoughts to others, and spending long periods in activities can cause them fatigue and decreased motivation unless they have time for solitude and introspection.<sup>16</sup>

### Conclusions

- Middle school students on school sports teams possess a high level of self-concept and a high degree of motivation for athletic achievement. They are also characterized by extroversion.
- There is a significant positive relationship between the participants' scores on the self-concept scale and their scores on the scale Athletic Achievement Motivation

- The sample members with an extroverted personality type exhibit high self-concept and achievement motivation, while those with an introverted personality type exhibit high self-concept and low achievement motivation.

### Recommendations

- Develop positive psychological qualities in middle school sports teams, such as self-control and emotional regulation during sports competitions, self-concept, and athletic achievement motivation, given their positive and effective role in shaping and strengthening leadership skills.
- Provide the necessary sports equipment to facilitate participation in sports activities and, consequently, achieve athletic excellence.
- Increase attention to middle school sports teams by helping them identify their problems and difficulties, find solutions, and overcome them to achieve their aspirations. This will enhance their self-concept and lead them to a high level of achievement, motivation and athletic excellence.
- Cultivate an awareness of the importance and status of middle school athletes and their role in developing the sports landscape through positive interpersonal relationships between teachers and students, and between administration and students. This leads to self-respect, a positive self-concept, and balanced behavior, ultimately resulting in psychosocial well-being and enabling the athlete to contribute more effectively to their chosen sport.
- Attention should be paid to both material and moral incentives and rewards, as these have a positive impact on student-athletes, stimulating their motivation and enthusiasm during athletic competitions.

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