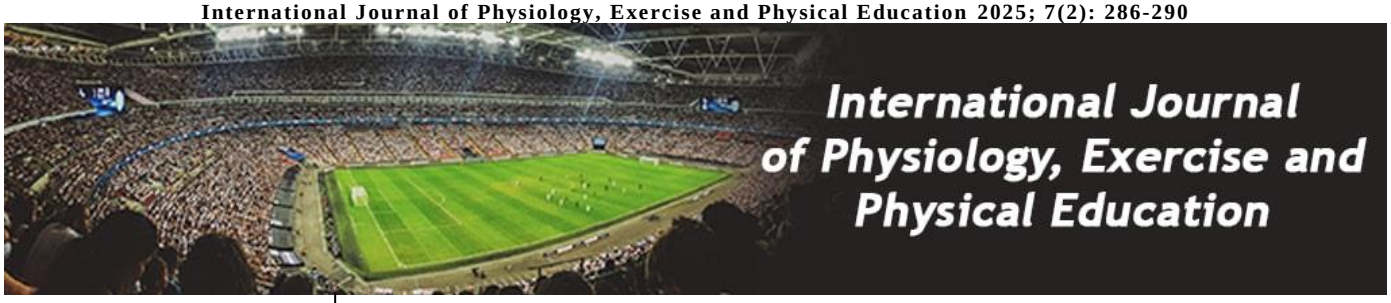

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A comparative study of the level of mindfulness between students who practice sports activities and those who do not at the University of Duhok

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Abstract
This study was aimed at assessing the level of mindfulness between students of the university involved in sports activities versus those not involved in sports activities, in the University of Duhok. Another aim of the study was to determine gender based disparities in both practitioner and non-practitioner cohort levels of mindfulness and to study the disparities in mindfulness between students participating in sporting activities and those who do not. Descriptive-comparative approach was used as it was appropriate to the research objectives. The population used was the 140 undergraduate students (male and female) of the College of Physical Education and Sport Sciences and the College of Basic Education. The data was obtained using the Mindfulness Scale invented by Ahlam Abdullah (2012) by the researcher. The results showed that there were no statistically significant differences between male and female students in the level of mindfulness irrespective of their status of sports participation. Nevertheless, the number of mindfulness was significantly higher among the students practicing sports activities than those who did not.

Keywords: Mindfulness, university students, sports participation, gender differences

Introduction
The university is also regarded as one of the main pillars to developing societies since it is one of the main tools used to educate individuals by increasing their abilities and mental capacities. It is also considered to be one of the centers of scientific enlightenment that supplies the society with qualified educational cadres tasked with preparing new generations and providing support to service institutions in order to enhance the scientific and cognitive reality necessary in the development of society. The university also is a rich place to cultivate the tendencies and the attitudes of the students toward the learning and academic progress.
The main task of the university is to educate and equip them to work in professional posts in various spheres of life. As the level of research regarding the brain is rising, the topic of mindfulness has become more and more appealing to researchers and scholars, as it involves several competencies and skills that can be trained and acquired. Therefore, many scientists have dedicated their time to developing and honing the idea of mindfulness, and at the same time, heredity has been recognized to have influenced the degree of attention and awareness in an individual. Mindfulness opens the mind, creates possibilities, as well as being flexible and capable of dealing with new environmental conditions. It assists in the unraveling of the potential information that might be limited by limited views, adherence to routines, and established behavioral patterns, which limit innovative and creative ways of thinking (Abdullah, 2012, p. 5) [5]. Mindfulness hence minimizes practices that are based on repetition and mechanical habits which restrict flexibility and responsiveness to the dynamism of the world (Al-Bayati, 2015, p. 23) [1].
Besides, mindfulness bolsters will power, promotes self-awareness, and lowers inflexible clung to the preconceived notions and beliefs. Attention and awareness is based on cognitive and emotional aspects which define whether a person is in a state of mindfulness or mindlessness. The conscious position allows the person to form adaptative mental activities especially when creating new creative categories and notions (Al-Zubaidi, 2012, p. 6) [3].

Therefore, the importance of the study is to determine the extent of mindfulness among students engaging in sports activity and its absence in students who do not engage in the same activity at the University of Duhok. Besides that, this study, to the best of the knowledge of the researcher, is a scientific addition to the library of the College of Physical Education and Sport Sciences at the University of Duhok since there is none in the past research that covers the concept of mindfulness as among the students. It is important to learn about mindfulness as it enhances a wide perspective, compassion to new experiences, heightens awareness, and cognitive adaptability, which are all important attributes a student should possess at university both academically and in personal growth.

Research Problem

Increasing the will power and awareness of students to perceive their external environment, mindfulness is one of the important aspects of the life of the individuals in general, and students in particular. Using the work of the researcher in the Directorate of the University Sports at the University of Duhok, previous research and research, and informal interviews with students, it was seen that there are students who do not have the capacity to pay attention or concentrate on their academic work. Additionally, many students struggle to engage in more than one task at a time, perform activities without conscious awareness, exhibit mental distraction during lectures, and show limited use of prior experiences when confronted with new challenges.

Therefore, the current research problem can be summarized through the following main questions:

- What is the level of mindfulness among students at the University of Duhok?
- Does the level of mindfulness differ according to gender and field of study?
- Do students who engage in sports activities exhibit a higher level of mindfulness compared to those who do not?

Research Objectives

1. To assess the level of mindfulness among students who practice sports activities at the University of Duhok.
2. To assess the level of mindfulness among students who do not practice sports activities at the University of Duhok.
3. To identify the differences in mindfulness levels according to gender (male and female) among students who practice and do not practice sports activities at the University of Duhok.
4. To identify the differences in mindfulness levels between students who practice sports activities and those who do not at the University of Duhok.

Research Hypotheses

1. There are no statistically significant differences in the level of mindfulness according to the gender variable (male and female) among students who practice and do not practice sports activities at the University of Duhok.
2. There are no statistically significant differences in the level of mindfulness between students who practice sports activities and those who do not at the University of Duhok.

Research Scope

1. **Human Scope:** Fourth-year students in the College of Physical Education and Sport Sciences and the College of Basic Education at the University of Duhok.
2. **Time Scope:** The period from 21 September 2025 to 11 October 2025.
3. **Place Scope:** Classrooms of the College of Physical Education and Sport Sciences and the College of Basic Education at the University of Duhok.

Definition of Terms

Gazzaniga and colleagues (2018) [11] define *mindfulness* as "a state of heightened awareness and attention to the surrounding environment, characterized by a high level of focus on present thoughts, emotions, and experiences. It is considered one of the important psychological traits that contributes to improving cognitive, emotional, and behavioral performance" (Gazzaniga & Others, 2018, p. 55) [11].

2. The Theoretical Framework and Previous Studies

2.1 The Theoretical Framework

2.1.1 The Concept of Mindfulness

Mindfulness is deemed as one of the powerful predictors of the cognitive processes; i.e. the better the mental processes (attention, thinking, memory, and perception), the higher the extent of mindfulness in a person. Mindfulness is a state or an action that takes place at the current time. To develop mindfulness successfully, a person should have cognitive flexibility that is the possibility to perceive information and situations in different ways, listen to the views of other people, and not make strict, unambiguous judgments. This openness makes people open to new ideas and be able to innovate, which, in its turn, can help them gain as many different experiences and information as possible and facilitate the achievement of greater levels of personal and cognitive development (Yassin, 2021, p. 29) [9].

The benefits of mindfulness are among the most crucial since they include the improvement of attention and concentration, the capacity to memorize and learn, reduction of psychological stress and mental burnout. Mindfulness also helps to make superior decisions and regulate emotions. Also, it has been found that mindfulness can be a powerful driver of performance in both everyday life and professional life because more mindful people are more likely to respond to the emerging circumstances and demanding situations. Also, mindfulness is capable of improving social relationships, facilitating good communication, active listening, and healthier and stronger interactions between a person and another person (Marcora, 2018, p. 107) [12].

Mindfulness helps to raise the level of self-awareness because this practice helps the person to monitor and become aware of personal thoughts, automatic responses, and habitual actions in everyday life. Mindfulness is the ability to concentrate on the current state of being and to be living in reality without becoming emotionally and impulsively judgmental (Al-Saqqa, 2016, p. 631) [4].

Mindfulness also possesses a number of advantages, among which there is the decrease of mental distraction that can be viewed as a useful tool in the management of cognitive dispersion and the enhancement of focus on the needed task. It also leads to more decision-making capacity, which is important in refining the capacity of making sound and well thought out decisions. People who possess a higher mental mindfulness tend to be better able to perceive and analyze facts and weigh the options available to them and ease tension and anxiety as well as become more emotionally

stable in the face of a challenge, hence lessening tension and anxiety (Tang & Others, 2015, p. 215) [13].
Besides, mindfulness may be considered as a safeguard against psychological strains and a trigger of positive mental health, a robust predictor of enhancing the psychological well-being of an individual.(Ismail, 2017, p. 209).

2.2 Previous Studies
1. Study of Taybah Zaid Hikmat (2016) [2]
A Comparative Study of the Level of Mindfulness Between Students Who Practice and Do Not Practice Sports Activities at the University of Baghdad.
The purpose of the study was to determine the mindfulness rate of the students engaged in sports activities and the students who are not engaged in sports activities in both scientific and humanities colleges at the University of Baghdad and in order to compare the rate of mindfulness based on gender, specialization, and age. The researcher employed the descriptive comparative approach because it was the appropriate approach of the study. The sample size of the research was based on students of the University of Baghdad chosen randomly out of the initial population of the research (1200) male and female students. The mindfulness scale that was embraced by the researcher comprised (36) items administered in four domains, which is valid and reliable. The clarity and appropriateness of the items in the scale was determined through the application of a pilot study where (20) students were administered the scale.
Having analyzed the data with help of relevant statistical approaches, the researcher came to the conclusion that there were no significant differences in mindfulness in students based on gender and age variables which proved the fact that mindfulness relies on the cognitive capabilities of the individual and not the gender or age. Nevertheless, it was also revealed that there is significant variance between the students who practice sports activities and those who do not, in favor of students who practice sports activities.

2.2 Previous Studies
2. Study of Ahlam Mahdi Abdullah (2013) [5]
Mindfulness Among University Students
The purpose of this research was to find the degree of mindfulness in university students and also to determine the difference in mindfulness based on the gender factor (male, female). The researcher created a mindfulness scale, which is based on the theory of Ellen Langer in order to meet the objectives of the research. Calculation of face validity and assessment of reliability were performed on the test by the use of test-retest method that produced a reliability coefficient of (0.79). The scale was finalized with (36) items that were appropriate in determining mindfulness.
The scale was used to test a research sample of (500) male and female students and the data analyzed through Pearson correlation, one sample t-test and two-way analysis of variance (ANOVA). The researchers concluded that the degree of mindfulness of university students was high and statistically significant differences based on gender favoring male students.

3. Research Procedures
3.1 Research Method
The descriptive method with a comparative approach was used, as it is suitable for the nature of this study.

3.2 Research Population and Sample
The research population included fourth-year students in the College of Physical Education and Sport Sciences at the University of Duhok for the academic year (2025-2026), totaling (87) students (63) males and (24) females considered as practitioners of sports activities. It also included fourth-year students from the College of Basic Education, Department of Kurdish Language, at the University of Duhok for the academic year (2025-2026), totaling (93) students (60) males and (33) females considered as non-practitioners of sports activities after excluding any practitioners.

3.2.1 Research Sample
The research sample consisted of (140) students randomly selected from the students of the College of Physical Education and Sport Sciences and the College of Basic Education. Specifically, (50) male students were selected from the College of Physical Education, (50) male students from the College of Basic Education, (20) female students from the College of Physical Education, and (20) female students from the College of Basic Education. Table (1) presents the details of the research sample.

Table 1: Details of the Research Sample

S	Sample	Number of Students	Percentage of the Research Population
1	Pilot Study Sample for the Mindfulness Scale	20	10%
2	Reliability Sample of the Scale	20	10%
3	Application Sample of the Scale	140	80%

3.3 Research Instrument
3.3.1 Mindfulness Scale
The researcher adopted the mindfulness scale developed by Ahlam Mahdi Abdullah (Abdullah, 2013, p. 366) [5]. The scale consists of 36 items distributed across four domains: (10) items for the first domain *Alert Distinction*, (10) items for the second domain *Openness to Life*, (7) items for the third domain *Orientation to the Present*, and (9) items for the fourth domain *Awareness of Multiple Perspectives*. Of these, 26 items are positive and 10 items are negative.
Scoring key is based on the five-point Likert scale whereby the response to every item is characterized by five responding choices: Always applies to me, Often applies to me, Sometimes applies to me, Rarely applies to me, Never applies to me. The scoring of the responses was done (5, 4, 3, 2, 1) on positive items and (1, 2, 3, 4, 5) on negative items. Each respondent has the total score which is shown by adding up all items of the scales and the maximum possible score of all items is 180, minimum is 36 and the hypothetical average is 108.

3.3.2 Scientific Properties of the Scale
3.3.2.1 Face Validity of the Scale
To ensure the validity of the scale, the researcher used face validity to confirm its suitability for this study. The scale was presented to a group of experts and specialists in the

fields of sports psychology and measurement and evaluation (Appendix 1). After analyzing the experts' responses and their feedback on the scale items, no comments or objections were raised regarding the items.

3.3.2.2 Reliability of the Scale
The level of reliability was high though the original scale, the researcher calculated the reliability using the test-retest method. A pilot sample of (10) students were used to administer the scale on them initially and after two weeks again. (The common time between the two applications is between 10- 20 days) (Al-Zahir *et al*., 2002, p. 141). To determine the relationship between the two applications, Pearson correlation coefficient was applied, and the computed value is (r = 0.87) that is statistically significant and therefore the scale is reliable.

3.3.1.4 Application of the Scale
The scale (Appendix 2) was used by the researcher on the application sample of (140) students. The students were informed about the process and the procedure to be used to respond to the scale items in Kurdish language. Students were asked to complete (√) beside the alternative they considered suitable to each item in the scale, it was important to answer all the items correctly and clearly. Responses were recorded directly on the questionnaire form. After completion, the questionnaires were collected, scored, and the total score for each student was calculated by summing the scores of all the scale items.

3.5 Statistical Tools
- Arithmetic Mean
- Standard Deviation
- Pearson Correlation Coefficient
- t-Test
- Hypothetical Mean of the Scale (Alawi, 1998, p. 146) [6]
- Percentage (Omar *et al*, 2001, pp. 88-90) [7]

4. Presentation and Discussion of Results
4.1 Presentation of the Research Sample Results on the Mindfulness Scale
To evaluate the level of mindfulness among the research sample (students who practice and do not practice sports activities) according to the gender variable (male-female), the researcher calculated the arithmetic mean, standard deviation, and the computed t-value for both groups according to gender. Table (2) presents these results.

Table 2: Shows the arithmetic means, standard deviations, and computed t-values for the gender variable among students who practice and do not practice sports activities in mindfulness

Variables	Practitioners of Sports Activities		Non-Practitioners of Sports Activities		Computed t-Value	Difference
	S−	S+	S−	S+		
Male	138.53	8.24	133.72	9.47	3.47	Significant
Female	136.92	12.23	132.69	12.31	4.87	Significant

It is evident from Table (2) that there are significant differences in mindfulness between male students who practice sports activities and those who do not, in favor of the practitioners. Similarly, significant differences were found in mindfulness between female students who practice sports activities and those who do not, in favor of the practitioners.

Table 3: Shows the arithmetic means, standard deviations, and computed t-values between students who practice and do not practice sports activities in mindfulness

Variables	Practitioners of Sports Activities		Non-Practitioners of Sports Activities		Computed t-Value	Difference
	S−	S+	S−	S+		
Mindfulness	137.72	11.72	133.20	12.45	3.49	Significant

Significant at a significance level ≥ 0.05, with a degree of freedom (138), and a tabulated t-value = (1.97)

It is evident from Table (3) that there are significant differences in mindfulness between students who practice sports activities and those who do not, in favor of the practitioners, as the computed t-value was greater than the tabulated t-value.

4.2 Discussion of Results
As it is observed in Table (3 and 4) it is notable that there are great disparities in the mindfulness among students who engage in sports activities over those who do not. It means that students who are involved in sport activities have a higher degree of mindfulness. The researcher explains this finding by the fact that the curricula and subjects in the College of Physical Education and Sport Sciences are quite precise and focused, and this aspect makes the mind more attentive and focused, which is a positive attribute of mindfulness. Such different subjects and the education scenarios they involve make one more aware and responsive in various scenarios. Their other purpose is to condition people to make correct answers and minimize the mistakes with the help of motor practices that they do during lectures and practical classes.

In this sense, according to Asma Nouri, mindfulness improves awareness, flexibility in reactions, the possibility to drop the planned reactions and the possibility to respond correctly to the unplanned events and reduce the error (Nouri, 2012, p. 206) [8]. Also, students who engage in sports activities are psychologically alert to be attentive to the requirements of practical classes and sports exercises so that they require adequate attention and concentration particularly in situations that require prompt decision-making. A consciously aware person, as highlighted by Asmahan Younis, can differentiate the information by its original form, decipher it using conscious interpretation, categorize the cognitive inputs, and deal with it well in the context where it has been assigned (Younis, 2015, p. 8) [10].

5. Conclusions and Recommendations

5.1 Conclusions

1. The research sample is composed of practitioners and non-practitioners of sports activities, which is why the members of the sample group are adequately mindful because the arithmetic mean is greater than the hypothetical one.
2. There are no significant differences in mindfulness between male and female students who practice or do not practice sports activities.
3. Significant differences exist in mindfulness between students who practice and those who do not practice sports activities, in favor of the practitioners.

5.2 Recommendations

1. Enhance the level of mindfulness among students through psychological and social support.
2. Conduct studies on mindfulness and its relationship with certain psychological variables, such as psychological stability and its relation to mindfulness, among other variables.
3. Conduct similar studies focusing on individual or team sports activities in relation to mindfulness.

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