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Psychological Support and its Relationship with Female Students' Performance in Some Health-Related Physical Fitness Elements at the Faculty of Physical Education and Sport Sciences

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ABSTRACT

This research aims to study the relationship between psychological support and some elements of health-related physical fitness among female students of the Faculty of Physical Education and Sport Sciences, using the descriptive approach in the method of relational relationships, on a sample of (70) female students. Physical fitness elements (flexibility, muscle strength, muscular endurance, cardiorespiratory endurance, and body mass index) were measured along with the psychological support scale.The results showed a significant correlation between psychological support and flexibility, muscle strength, and cardiorespiratory endurance, while no significant relationship was shown with muscular endurance and body mass index, suggesting that some elements of fitness are more affected by psychological support than others.The researcher recommends integrating psychological support into the training programs for female students, and qualifying the teaching staff to deal psychologically with female students, because psychological support plays an effective role in improving physical performance and promoting public health.

1- Introduction and Importance of Research

Physical fitness is considered one of the essential aspects of public health formation, especially for female students in physical and sports disciplines, as it helps to improve the quality of life and physical and mental performance. Paying attention to psychological factors, especially psychological support, has become essential in the educational and training process, as it plays an effective role in motivating female students, enhancing their self-confidence, and achieving better physical performance.

Due to the importance of sports psychology in the process of building and directing the behavior and emotions of the individual and preparing students mentally, psychologically, physically and skillfully, "psychological support is one of the basic concepts in sports psychology that leads to restoring the psychological balance of the student during performance, enjoying mental health, and increasing his ability to continue to achieve success (Mona Samir Dergham , 2016)"

The relationship between the psychological aspect and physical performance has become the focus of attention of researchers in the academic and educational field, especially in light of the psychological challenges that female students may face during training or study, and that health-related fitness is one of the foundations on which general physical competence is based, especially among female students in the faculties of physical education and sports sciences, because of its direct impact on sports performance and physical and mental health alike. In light of the increasing interest in the psychological aspect as an influential factor in the process The important role of psychological support has emerged as an effective element in enhancing physical abilities and motivating learners to improve their performance in various physical activities. Hence, the importance of this research came in the relationship between the level of psychological support received by female students, and their performance of some elements of health-related fitness (flexibility, muscle strength, muscular endurance, and body composition), with the aim of understanding the impact of psychological factors on performance, and providing recommendations that help develop academic and physical support programs.

2- 1-2 Research Problem ::

Despite the remarkable progress in physical training programs for female students in the faculties of physical education and sport sciences, the disparity in levels of physical performance, especially in the elements of health-related fitness, is still remarkably visible. This disparity is often due to factors that go beyond physical and physiological aspects, to include psychological aspects, especially psychological support, which is one of the important determinants of motivation and athletic achievement

Hence, the research problem emerged to study the relationship between psychological support and performance in the elements of physical fitness from an applied academic perspective within the university environment, highlighting the need to investigate the impact of psychological support on the performance of female students within the university environment, especially in the Faculty of Physical Education and Sport Sciences, which highlights the need to systematically investigate this relationship to identify the extent of the impact of psychological support as a psychological variable in enhancing physical outcomes, and enriching the applied aspects of training and educational programs directed to female students.

3- Search Scorer

This research aims to

1. Identifying the level of the relationship between psychological support and students' performance in health-related physical fitness elements

1-4 - Research Areas:

1. Human Field: Female Students of the Faculty of Physical Education and Sport Sciences, Second Stage – Diyala University
2. Time Domain: 20/1/2025 – 15/6/2025
3. Spatial Field: Halls and Courtyards of the Faculty of Physical Education and Sport Sciences – University of Diyala

1-5- Study Terms :

1- Psychological support: It is the various methods of help that the individual receives from his family and friends, which are represented in providing care, attention, guidance, advice and encouragement in all situations of life, which satisfy his material and spiritual needs for acceptance, love, and a sense of security, making him confident in himself as the individual perceives them, which increases his efficiency (Huwaida Hanafi, 2007, p. 318).

2. Elements of health-related fitness: Howley, E. T., & Thompson, D. L. (2017) pp. 1-3)
These are physical components that help an individual maintain their overall health and perform daily activities efficiently, and are essential for the prevention of chronic diseases and enhancing the quality of life. These elements are:
1. Cardiorespiratory endurance: The ability of the cardiorespiratory systems to supply oxygen to the muscles during continuous physical activity.
2- Muscular strength: The ability to exercise maximum muscle strength once possible.
3- Muscular endurance: The ability of the muscles to perform repetitive activity without fatigue.
4- Flexibility: The ability of the joints to move in a full range of motion.

4- Body composition: the ratio of fat to lean mass in the body (e.g., muscle, bone, water).

2- Research Methodology and Field Procedures

2-1 Research Methodology

The researcher used the descriptive method, to suit the nature of the research problem.

2.2 Research population and sample

The selection of the sample from the important lines in all its elements, as it obliges the researcher to identify the community of her research based on the problem chosen by the sample is a part of the society whose selection is according to special rules in order to represent the society correctly and accurately (Muhammad Hassan Allawi and Osama Kamel Rateb, 1999).

The research population included the students of the Faculty of Physical Education and Sport Sciences (Phase II) at Diyala University for the academic year (2024-2025), which numbered 80 students in the deliberate method, 8 students for the exploratory experiment, 70 students for the main experiment, who are organized in the academic and practical study in physical fitness courses. This category represents an appropriate environment to achieve the research objectives, given the nature of the study that deals with psychological aspects and physical performance within an academic and sports context

2.3 Devices, Instruments and Means Used in Research

2.3.1 Means of collecting information

- ✓ Internet.
- ✓ Personal interview.

- ✓ Note.
- ✓ Questionnaire.
- ✓ Hussein Ali Hamid Scale for Psychological Support.
- ✓ Scientific references.
- ✓ Sources.
- ✓ Similar Studies.

2.3.2 Tools and devices used

- ✓ Ballpoint pens.
- ✓ Pencils.
- ✓ Data collection and offloading form.
- ✓ Electronic Manual Calculator Type (ANCO).
- ✓ Statistical Methods.
- ✓ Laptop type (DELL).

2.4 Field research procedures

2.4.1 Scale used in the research

The psychological support scale (Hussain Ali Hamid, 2022) consisting of (38) items was used, and the degree of psychological support for each member of the sample was calculated by finding the set of scores obtained by each student through her answer to the paragraphs of the scale, as the scale was corrected on the basis of 38 items so that the answer of the scale is based on five alternatives (always applies to it, applies to me often, applies to me sometimes, applies to me rarely, does not apply to me) and the key of the scale starts if it is positive (1, 2, 3, 4, 5) If negative is the opposite of the above key (1,2,3,4,5), as in Appendix (1), and since the psychological support scale consists of (38) phrases, the highest score that can be obtained is (190) and the lowest score is (38).

2.4.2 Physical fitness elements related to health shall be determined:

The researcher conducted several interviews with some experts in the field of physical education, especially in the field of (sports tests) for the purpose of identifying the elements of physical fitness related to health and their tests that are commensurate with the physical abilities of female students in order to use them in measuring the elements of physical fitness related to their health, where the researcher agreed with the opinion of the experts in testing the following elements:

- ✓ Cardiorespiratory endurance
- ✓ 2. Muscular strength
- ✓ 3. Muscular endurance
- ✓ 4. Flexibility
- ✓ 5. Physical Composition

Through which health-related fitness elements can be measured

Specifications of Health-Related Fitness Items:

In order to get accurate and safe results and avoid injuries and fatigue, it is preferable to follow the following steps:

- Warm-up (5-10 minutes)
- Brisk walking or dynamic bathing exercises

There should be a rest of (3-5 minutes) between each test so that the breathing rate and heart rate return to its normal state.

It is preferable that the exams should be in the following order to avoid injuries and stress on female students:

- Physical Composition
- Flexibility
- Muscular strength
- Muscular endurance .

1- Body Composition Test

Body Mass Index (BMI) Test (WHO 2020)

• Objective: Assess body composition based on height and weight.

• Description: BMI is calculated through the following equation:

BM

•

•

•

•

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2- Flexibility test:

Sit and Reach Test

ACSM (2022)

• Objective: Measure the flexibility of the lower back and the back muscles of the thighs.

• Description: The student sits with her feet outstretched in front of her.

It tries to lean forward as far as possible.

• Application: The distance the fingertips reach is recorded in centimeters.

3- Muscular strength test

Arm Curl Test

Rikli, R. E., & Jones, C. J., 2013)..).

• Objective: Measure the muscular strength of the muscles of the forearm (biceps).

• Description: The student lifts a dumbbell weighing 2.5–3 kg (depending on capacity) using one hand, for as many repetitions as possible within 30 seconds.

• Application: Seat in a chair without a backrest, with the arm fixed on the side

4- Muscular Endurance Test:

Sit-up Test

• Objective: Measurement of muscular endurance of abdominal muscles.

• Description: The student performs the "sit and get up" exercise from a lying position on her back within one minute, with as many repetitions as possible.

• Application: Feet should be fixed to the ground, hands touching knees each time

5- Cardiorespiratory Endurance Test

Running or walking test

Cooper 12-minute Run/Walk Test)

) Cooper, K,1982.).

• Objective: Measure the efficiency of the circulatory respiratory system.

• Description: Ask the student to run or walk as much as she can for 12 minutes continuously, and the distance traveled is measured.

• Application: Uses a sports track or open space, recording time and distance

3.4.3 Exploratory experiment of the scale

The researcher conducted the exploratory experiment on Tuesday, 16-4-2025 at 10:00 a.m., and the number of them was (8) female students who were not from the study sample, and the aim of this experiment was:

✓ Identify the clarity of the paragraphs of the scale used.
✓ Ensure that the instructions of the scale used are clear.
✓ Knowing the time it takes to answer the scale.

2.4.4 Main Experience:

The researcher conducted the main experiment on (70) female students from the second stage at the Faculty of Physical Education and Sport Sciences - Diyala University on 21-4-2025 on Monday, and included the application of the questionnaire in the classrooms, then the implementation of physical tests inside the sports halls or designated stadiums, taking into account the availability of safety and psychological comfort conditions for the participants.

2.4.5 Statistical methods

Statistical data were extracted using the Statistical Package (SPSS)

5- Presentation, analysis and discussion of the results:

3.1 Presentation of the homogenization results of the sample

Table 1: Homogeneity for Age, Weight and Height

Significance	Upper limit	The bare minimum	Standard deviation	Torsion coefficient	Broker	Arithmetic Average	N	Variable
Insignificant	1.75	1.50	0.08	-0.10	1.63	1.63	70	Length (m)
Insignificant	74.79	45.34	9.62	0.12	59.50	59.86	70	Weight (kg)
Insignificant	22.00	20.00	0.84	0.25	21.00	20.80	70	lifetime

Table 1 shows that all values for height, weight, and age were statistically homogeneous, as the standard deviation is less than 30% of the arithmetic mean, which shows that the sample is stable and can be used for statistical analysis with confidence.The torsion coefficient for all values is within the acceptable normal range (+1,-1).

3-2 Presentation of the results of the relationship between arithmetic media, standard deviations and Pearson correlation coefficient between psychological support and physical fitness elements:

Table (2): Correlation coefficient between psychological support and physical variables

Significance	Error Percentage (α)	Significance Level (SIG)	Pearson coefficient (r)	Standard deviation	Arithmetic Average	Variable
Moral	0.05	0.0	0.833	3.25	13.23	Elasticity (cm)
Moral	0.05	0.0	0.509	3.44	9.35	Muscular strength (Repeats)
Insignificant	0.05	0.3575	-0.112	5.31	29.79	Muscular endurance (Repeats)
Moral	0.05	0.0	0.94	290.02	1363.92	Cardiorespiratory Endurance (m)
Insignificant	0.05	0.8023	0.03	4.12	22.53	BMI

Table (2) presents the results of the statistical correlation between the psychological support scale and the physical fitness elements of female students. It was found that there was a significant relationship between psychological support and flexibility, muscular strength, and cardiorespiratory endurance, while there was no significant relationship between psychological support, muscular endurance and body mass index.

The results showed that flexibility had the highest significant correlation with psychological support ($r = 0.833$) Pearson's coefficient, this indicates that students with good psychological support show

a greater ability to perform large-range movements, because psychological stress may lead to an increase in muscle tension, which hinders the body's ability to stretch, while psychological stability contributes to reducing muscle resistance to movement, as noted by Weinberg & Gould (2015).

A good psychological state improves the trainees' acceptance of stretching exercises and reduces the feeling of pain and discomfort.

The results also showed that muscle strength had a significant association between psychological support and muscle strength (r = 0.509). This shows that psychological support can be a positive motivator when performing exercises that require repetitive strength or resistance, as Peluso & Andrade (2005) pointed out that "psychological and emotional motivation play a role in physical performance related to strength, as trainees who feel supported and valued have a higher ability to endure muscular exertion and achieve better results.

As for cardiorespiratory endurance, the study showed a significant correlation for this health-related fitness element as Pearson's coefficient appeared in it (r = 0.94), confirming that psychological support can be an important factor in enhancing the ability to perform aerobic activities such as running, and according to Morgan (1997) "Psychological support reduces the body's response to stress and helps regulate breathing and heartbeat, leading to better performance in cardiorespiratory endurance tests

As for muscular endurance, the results showed that there was no significant relationship between psychological support and muscular endurance, as Pearson's coefficient was equal to

This type of performance can be more related to muscle-specific physiological factors (e.g., type of muscle fibers and extent of endurance training), rather than just psychological state, and this is consistent with Kraemer et al. (2002) noting that "muscular endurance is more dependent on specialized training, individual muscular characteristics, and is not directly affected by psychological support.

The results also showed that there was no significant relationship between psychological support and BMI (r = 0.03), which is logical, because BMI is affected by the level of fat and muscle mass, and needs long-term changes in diet and physical activity, and not only psychological factors, as Kraemer et al., 2002 pointed out that the change in BMI occurs relatively slowly, and may not be sensitive to psychological changes in the short term.

The results obtained show the need for integration between psychological and physical aspects in the training process, especially among female students at the university level. The researcher believes that enhancing psychological support within the educational and sports environment contributes not only to improving physical performance, but also to raising the level of motivation and commitment to participate in sports activities, thus achieving sustainable health and educational results.

4 – Conclusions:

1- There is a significant relationship between psychological support and (flexibility, muscular strength, cardiorespiratory endurance)
2- There is no significant relationship between psychological support and both (muscular endurance, body mass index) because they are factors that are affected by training and physiological factors more than psychological factors.

3- Psychological support plays an important role in promoting certain aspects of physical fitness, especially those that require motivation and psychological readiness, such as strength, cardio endurance and flexibility.

5. Recommendations:

1- The necessity of integrating psychological support methods into the physical fitness programs for female students.
2- Qualifying the teaching and training staff on psychological skills to deal with female students in the faculties of physical education and sports sciences

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Appendix (1) Paragraphs of the Psychological Support Scale

It never applies to me.	Applies to Rarely	Applies to sometimes	Applies to most of the	Always apply to me	Phrases	t
					I accept advice from my fellow students.	1
					I am embarrassed to ask for help from others.	2
					I want to spend my free time in social activities with my colleagues.	3
					I prefer to rely on myself to achieve success by performing skills.	4
					I share my fellow students with their joys and sorrows outside of the lesson.	5
					I do not provide any help to teach those who are less competent than me in practical lessons.	6
					I don't have a lot of friends in the sports community.	7
					I am in high spirits before I sign up for the practical fitness class.	8
					I have the ability to perform successfully after a failed performance.	9
					I feel that the drop in my performance level is due to the teacher's neglect of me.	10
					When my colleague makes a mistake, I encourage him.	11
					I like to make fun of my fellow students when they make mistakes.	12

					My performance goes down when I don't get moral motivation.	13
					I feel that my performance in the fitness elements is very poor.	14
					The success of the student in these elements depends on the support of the teacher and not on his or her distinctive performance.	15
					I feel that the support provided by the teacher enhances my performance in the physical fitness elements.	16
					The noise made by the students makes me lose my mental perception of the movement before the performance.	17
					I have previous experience and experience that makes me achieve good performance in the elements of physical fitness.	18
					I encourage students to share information with me during the practical lesson.	19
					The instructor provides information to learn the basic skills in a sequential manner for the elements of physical fitness.	20
					Apply whatever instruction the instructor asks for in the practical lesson without discussion.	21
					I feel confident in myself when I participate in the competition with my colleagues in the practical lesson.	22
					I have high confidence in myself that I will overcome the difficulties I face in my performance of the physical elements .	23
					I perform at my best for fitness items when I'm calm.	24

					I feel grateful to everyone who has given me support and advice in the lesson by my classmates.	25
					I feel comfortable and excelling in doing my homework in the lesson without helping others.	26
					I feel the lack of support received by my fellow students during the lesson.	27
					My colleagues help me when I fail to perform in the practical lesson.	28
					I can challenge strong students when I receive external support.	29
					The course teacher does not correct my mistakes in time which hinders her learning.	30
					I suffer from the teacher's neglect of me during the practical lesson.	31
					I advise and assist students in overcoming difficulties during training.	32
					The teacher gives advice and advice to all students in the practical lesson for good performance.	33
					I feel that the teacher is not cooperating with me with questions and inquiries regarding the practical and theoretical material.	34
					I am psychologically reassured when performing with students who are more experienced than me.	35
					I feel confused by the presence of sports equipment in the arena.	36
					My performance decreases when performing certain sports that cause me injury.	37