



THE EFFECT OF EXERCISE ON MENTAL HEALTH AND SOME ELEMENTS OF
PHYSICAL FITNESS AMONG FEMALE TRAINEES IN FITNESS CENTERS AGED 30-
40 YEARS

Marwah Ali Hamzah

College of Physical Education and Sports
Sciences / University of Kerbala
IRAQ

Corresponding Author: marwaa.ali@uokerbala.edu

Recieved: October 20 , 2025 **Accepted:** December 22, 2025

ABSTRACT

Background. Sports have become more diverse and specialized to meet different individual needs. Some sports aim to improve physical fitness, others focus on muscle strengthening, and still others improve flexibility and balance. Exercise is of great importance in improving general health and physical fitness, enhancing muscle strength, flexibility, and endurance, burning calories, aiding weight loss, and reducing the risk of cardiovascular diseases. It also improves bone density and reduces the risk of osteoporosis. **Objectives.** The purpose of this paper is to identify the impact of exercise on the mental health and certain fitness components of female trainees aged 30-40 years at fitness centers. **Method.** The experimental method, with a single-group design, was used, as it was suitable for the research problem and sample. The research sample consisted of 13 female trainees at the (Go Fit) gym in Karbala Governorate. After completing all field research procedures and statistically analyzing the data. **Results.** The results of the study showed a significance value ($p < 0.05$), women in this age group received significant benefits from exercise in improving their mental health and physical fitness. **Conclusion.** Exercise played an important role in improving the physical and psychological performance of women. Exercise contributes to promoting public health and preventing chronic diseases. The most important recommendation is that the researcher provides support and encouragement to women who exercise to promote their continued participation.

Keywords; exercise, mental health, physical fitness.



A. INTRODUCTION

The field of exercise has witnessed remarkable progress in many aspects. Exercise has become more diverse and specialized to meet the different needs of individuals. There are exercises aimed at improving physical fitness, others that focus on strengthening muscles, and still others that enhance flexibility and balance. Modern technology has also significantly entered this field, with applications and programs offering specific exercises that can be practiced at home or in the gym. In addition, advanced sports equipment helps improve athletic performance and reduce the risk of injuries. All these developments make exercise a more effective and enjoyable part of people's lives (Wasfi, 2009). Believes that "practicing carefully selected exercises based on sound scientific principles to achieve specific goals, whether educational or professional, contributes to building and shaping a body capable of performing required tasks efficiently and effectively (Abdul Hussein & Mutab , 2014).

Consider exercise to be an essential part of a healthy and balanced lifestyle, as it contributes to improving general health and physical fitness, and works to enhance muscular strength, flexibility, and endurance. It also helps in. Burning calories and losing weight, reducing the risk of cardiovascular disease, improving bone density and reducing the risk of osteoporosis, in addition to its positive impact on mental health, as it improves mood, reduces stress and anxiety, and helps boost self-confidence and a sense of accomplishment. Exercise has many benefits, summarized by (Al-Hadithi ,2013) improved physical fitness, enhanced muscle strength, flexibility, and endurance; calorie burning and weight loss; reduced risk of cardiovascular disease; improved bone density; reduced risk of osteoporosis; improved mental health; reduced stress and anxiety; boosted self-confidence; improved sleep; increased energy and vitality; improved mental performance and concentration; and reduced risk of depression and anxiety disorders.

Mental health is a state of psychological well-being that enables individuals to achieve their full potential, cope with the challenges of daily life, work productively, and participate in society. Addad, (2019) defines mental health as a state of psychological well-being that is represented by an individual's ability to adapt to daily life, cope with challenges and pressures, achieve their full potential, and feel Mental health encompasses happiness and satisfaction with life, and includes many aspects such as emotional stability, psychological

balance, the ability to make sound decisions, and positive interaction with social relationships. Al-Rukaibi, (2019) also views it as a state of psychological stability and balance, where the individual is able to effectively face life's challenges, achieve their personal goals, and enjoy a healthy and balanced life. This state includes several essential elements, such as the ability to control emotions, make sound decisions, and build positive and sustainable social relationships. The concept of physical fitness is a comprehensive one, representing the ability to perform daily activities efficiently and effectively and to withstand various physical challenges. Physical fitness includes many elements, such as muscular strength, flexibility, speed, endurance, balance, and motor coordination. Physical fitness can be enhanced through exercise, proper nutrition, good sleep, relaxation, and attention to overall health. Physical fitness plays a vital role in maintaining general health, increasing the ability to perform daily activities, and improving quality of life.

Hassanein, (2015) defines physical fitness as the body's ability to perform daily tasks effectively. Physical fitness is characterized by efficiency, maintaining a good level of health, and the ability to cope with unexpected situations. It consists of several interconnected elements that work together to ensure the body functions optimally. Al-Dossari, (2020) defines physical fitness as "the process of building the body, that is, developing the body's overall ability to perform daily tasks with high efficiency. Through this process, the individual increases their health and overall efficiency, enabling them to perform their tasks in the best possible way. A variety of exercises are used to raise the athlete's efficiency in general physical fitness, without focusing on only one aspect, thus contributing to enhancing their overall performance. In conclusion, we see that physical fitness represents a fundamental aspect of an individual's life, as it contributes to promoting general health and increasing the ability to perform daily activities efficiently.

By practicing sports regularly and following a healthy lifestyle, individuals can improve their physical fitness and, consequently, improve their quality of life. Physical fitness is not just a sporting goal, but rather the foundation for a healthy and active life. The importance of this research lies in studying the impact of exercise on the mental health and physical fitness of women in this age group. We can gain a deeper understanding of how to promote health and well-being at this stage of life. To determine the impact of exercise on mental health and fitness components in women aged 30-40 who train in fitness centers, the

research problem includes several main axes such as assessing mental health levels and some fitness components before and after a specific period of exercising. The research seeks to answer questions such as: "Does exercise positively affect mental health levels in women in this age group? And what changes occur in fitness components as a result of exercising?" By answering these questions, the research can contribute to providing recommendations and evidence that support exercises specifically designed to improve mental health and some fitness components in women in this age group.

Research objective: (1) To develop exercise programs to improve mental health and certain aspects of physical fitness. (2) To identify the impact of exercise on mental health and certain aspects of physical fitness among female trainees aged 30-40 years at fitness centers.

B. METHOD

Participant

The research sample consisted of female trainees at the Go Fit gym in Karbala Governorate. There were (13) trainees, (3) of whom were statistically excluded due to non-compliance and frequent absences, leaving a research sample of (10) trainees. A exploratory study was conducted with (3) athletes to ensure the validity of the procedures followed.

Research Design

The researcher used the experimental method with a single-group design, as it was suitable for the problem and the research sample. Data Collection Methods: Arabic and foreign sources, Internet, and Data Entry Form. Equipment and Tools Used: One laptop computer, One manual calculator, One camera, and Stationery.

Preparing Exercises

After reviewing several previous studies and based on the researcher's practical experience as a professor of physical fitness at the College of Physical Education and Sports Sciences, University of Karbala, a training program was designed comprising 12 exercises aimed at improving specific elements of physical fitness. These exercises were characterized by their progressive difficulty, starting with simple exercises and gradually developing into more challenging ones, making them suitable for the research sample and for achieving the study's objectives. These exercises were carefully prepared to ensure they meet the needs of

the participants and contribute to improving their physical fitness effectively and safely. 2- *Developing the Mental Health Scale*

The researcher used the mental health scale developed and adapted by Karim (2018) as a suitable research tool to measure the mental health levels of the study sample. The scale consists of 33 statements, each answered with three options (always, sometimes, never). Responses are scored on a scale of 1 to 3 points, taking into account the tone of the statement (positive or negative). The total score for the scale ranges from 33 to 99 points, allowing for a comprehensive assessment of mental health levels. This scale is a reliable and suitable tool for the Iraqi context, as it has been used in previous studies, thus enhancing its validity and effectiveness in this study. By using this scale, the researcher can collect accurate and reliable data on the mental health of the studied sample, which contributes to enhancing the accuracy of the results and conclusions that will be drawn from the study.

Defining the Research Variables

The researcher prepared a special questionnaire to select the most important elements of physical fitness that would be the focus of this research. This questionnaire was presented to a group of five experts specializing in the field of physical fitness and sports, in order to obtain their opinions and evaluation of the most important and relevant elements to the research objectives. The expertise of these experts was relied upon in determining the main elements that would form the basis of the study, which enhances the validity and reliability of the research. Through this procedure, the researcher seeks to ensure that the selected elements of physical fitness are of practical and scientific importance and effectively meet the research needs.

Tests Used in the Research

1. First: Standing Broad Jump Test:

Purpose of the Test: To measure leg muscle strength. Equipment Used: A precision measuring tape, A mat fixed to the ground to ensure stability, A suitable, obstruction-free location to ensure safety during the test.

Preparation: The subject stands in the prepared position with slightly bent knees and arms swinging backwards with a slight forward lean. Jump: The subject performs a broad jump forwards with both feet together, attempting to achieve the longest possible distance. Lifting the feet off the ground and swinging the arms forwards is encouraged to help the body

generate maximum propulsion. Distance Measurement: After landing, the distance is measured from the starting line to the nearest point of landing. If the subject falls backwards and lands on their hands, the measurement is taken from the starting line to the position of the hands.

Test Scoring: The subject performs three consecutive attempts, and the best result of the three attempts is recorded. The attempt with the longest landing distance is considered the subject's final score.

2. Second: Endurance Test:

Test Name: Abdominal Exercise Test (Stomach Twist). Test Description: Lie on your back with your arms behind your head, and have a partner hold your legs. Recording: The number of repetitions achieved by the subject within 60 seconds is recorded.

3. Third: Flexibility Test:

Test Purpose: To measure the flexibility of the spine and upper body, and to assess the ability to move while seated. Unit of Measurement: Centimeters.

Preparation: The trainee stands a certain distance from the table, keeping her back straight and her hands at her sides. Bending: The trainee attempts to bend forward as far as possible, keeping her knees straight. Recording: The distance reached by the fingers on a ruler attached to the edge of the table is recorded.

Scoring Method: The best score from three consecutive attempts is recorded, and the result is recorded in centimeters. The purpose of this test is to assess the level of flexibility in the upper body and spine, and to determine the ability to move and bend.

Exploratory Experience

On Wednesday, April 2, 2025, a exploratory study was conducted with three trainees to evaluate the effectiveness of pre-designed tests and exercises. During this study, tests and exercises were administered to measure mental health and certain physical fitness components such as muscular strength, endurance, and flexibility objectives of the Exploratory Study:

1. To assess the clarity of the instructions and exercises.
2. To determine the suitability of the exercises for the trainees.
3. To evaluate the effectiveness of the measurement tools used.

To collect preliminary observations and data that may contribute to improving the design of the main study.

Pre-tests

On April 8, 2025, pre-tests were conducted on a research sample of 10 trainees. A series of physical and psychological tests were administered to assess the participants' physical fitness and mental health levels before the start of the training program. These tests included:

1. The long jump test to measure leg muscle strength.
2. The 1500-meter run test to measure endurance.
3. The flexibility test to measure spinal and upper body flexibility.
4. A mental health scale to assess anxiety, depression, and overall mental health levels.

Main Experiment

The main experiment was conducted for six weeks, from April 12, 2025, to May 20, 2025. During this period, the research sample underwent a program of exercises designed by the researcher to improve physical fitness components. The program lasted six weeks, with two days of exercise per week, totaling twelve units. The objectives were to improve specific physical fitness components, namely muscular strength, endurance, and flexibility, as well as to enhance mental well-being.

Post-Tests

On May 24, 2025, post-tests were administered to the research sample after the completion of the six-week exercise program. The same tests used in the pre-tests were administered under the same conditions.

Statistical Methods

The researcher used the SPSS statistical package to analyze the data collected from the pre-tests and post-tests.

C. RESULTS AND DISCUSSION

Results

From Table (1) the results showed significant differences in favor of the post-tests, indicating a marked improvement in performance after applying the exercises used in the

research. Exercise is an essential part of a healthy lifestyle, playing a vital role in promoting physical and mental health.

Table 1. Shows The Results Of The Research Sample In The Pre- And Post-Tests

No	Variables	Measuring unit	Pre-test		Post-test		T value calculate	Level Sig	Type Sig
			Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
1	Mental health	Degree	50.99	7.14	73.6	4.93	8.25	0.000	Sig
2	Strength	cm	1.66	1.10	1.91	0.11	5.34	0.001	Sig
3	Endurance	Degree	25.4	3.20	35.4	3.20	7.00	0.000	Sig
4	Flexibility	cm	3.54	0.32	5.52	0.86	6.37	0.001	Sig

Discussion

Through regular exercise, individuals can improve their fitness levels, increase their muscle strength, and enhance their flexibility and speed. Furthermore, exercise contributes to weight loss, improves cardiovascular health, and increases respiratory efficiency. This was confirmed by (Al-Ubaid ,2018), who stated that exercise "has benefits that are not limited to the physical aspect alone, but extend to the psychological and emotional aspects as well. Exercise helps reduce levels of anxiety and depression, improves mood, increases self-confidence, enhances concentration and attention, and improves sleep quality." This is further emphasized by (Al-Dossari ,2020), who stated that exercise "is not merely a physical activity, but a gateway to improving quality of life and achieving psychological and physical balance." Exercise is not just a physical activity, but also an investment. In terms of public health and psychological and social well-being, this was confirmed by (Hassanein, 2015), who stated that exercise "stimulates the production of happiness hormones such as endorphins, which helps improve mood, reduce stress and anxiety, and enhance blood flow to the brain, thus improving focus, attention, and memory. It also strengthens social relationships, expands the circle of friends, and helps prevent chronic diseases such as diabetes and cardiovascular diseases." The researcher sees great importance in improving the physical performance and mental health of the participants. Based on the results

obtained, it can be said that exercise plays an important role in promoting public health and improving quality of life.

D. CONCLUSION

Exercise played an important role in improving the physical and psychological performance of women. Exercise contributes to promoting public health and preventing chronic diseases. Recommendations, Encourage women to exercise regularly to enhance the health and psychological benefits. Conduct further research to broaden the scope of application and improve our understanding of the impact of exercise on public health.

E. ACKNOWLEDGMENT

The author extends sincere appreciation to all those who contributed to the success of this research.

F. AUTHOR CONTRIBUTION STATEMENT

Mahdi Lafta Rahi Abd is fully responsible for the content of the article.

G. REFERENCE

Abdul Hussein, W. S., & Mutab, S. Y. (2014). *Motor learning and its applications in physical education and sports* (1st ed.). Dar Al-Kutub Al-Ilmiyah.

Addad, W. (2019). *Domestic violence and its relationship to the mental health of abused women* (Master's thesis).

Al-Dossari, M. A. (2020). *Sports exercises and mental health*. Dar Al-Mufradat for Publishing and Distribution.

Al-Hadithi, K. I. S. (2013). *Motor learning*. Dar Al-Arab for Studies, Publishing and Translation.

Al-Rukaibi, M. F. (2019). *The availability of dimensions of mental health among primary school teachers in the State of Kuwait* (Doctoral dissertation).

Al-Ubaid, A. A. M. (2018). *Mental health and physical fitness*. Misbah Al-Ibdaa.

Hassanein, M. S. (2015). *Physical fitness*. Egyptian Book House.

Wasfi, M. S. (2009). *Effective physical education and students of colleges of education* (1st ed.). Arab Community Library.