

The university student's engagement in recreational sports activities as a means to promote mental well-being in the context of Coronavirus pandemic: An empirical study on a sample of female university students at Mohamed Boudiaf University in M'sila

Samir Merzougui ✉. Faculty of Humanities and Social Sciences. M'sila University. Algeria.

Boudjema Nekbil. Faculty of Humanities and Social Sciences. M'sila University. Algeria.

Ali Houiche. Institute of Science and Technology of Physical Activities and Sports. M'sila University. Algeria.

Nacer Beggar. Institute of Science and Technology of Physical Activities and Sports. University of Biskra. Biskra, Algeria.

ABSTRACT

The study aimed to identify the university student's engagement in recreational sports activities as a means to promote her mental well-being in the context of the Coronavirus pandemic. For this purpose, a descriptive-analytical approach was adopted, and to achieve the study's objectives, a pre-designed questionnaire was utilized to assess the university student's engagement in recreational sports activities as a means to promote her mental well-being in the context of the COVID-19 pandemic. The questionnaire was distributed to a sample of female university students at the University of M'sila using a purposive sampling method, with a total of 31 university students participating. To address the study's questions, the data obtained from the sample individuals were processed using appropriate statistical methods, and the study's results indicated the following: Engagement in recreational sports activities by university students contributes to the promotion of their mental well-being in the context of the COVID-19 pandemic; The university student's engagement in recreational sports activities works to enhance her self-confidence in the context of the COVID-19 pandemic; The university student's engagement in recreational sports activities works to reduce her psychological stress in the context of the COVID-19 pandemic; The university student's engagement in recreational sports activities works to alleviate her anxiety in the context of the COVID-19 pandemic.

Keywords: Sport health, Recreational sports activities, Mental well-being, Coronavirus, COVID-19.

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✉ **Corresponding author.** Faculty of Humanities and Social Sciences. University of M'sila. University Pole, Road Bordj Bou Arreridj, 28000 M'sila. Algeria.

E-mail: samir.merzougui@univ-msila.dz

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INTRODUCTION

The coronavirus pandemic has forced a halt to the normal course of life and disrupted various activities, leading to enforced full lockdowns, closure of schools and universities, and restrictions on individual movement. This has created a genuine crisis in various aspects of life, resulting in substantial alterations in our daily experiences. As a consequence, our psychological responses to usual interactions have shifted under the immense pressure and ongoing sense of threat posed by this pandemic.

The widespread impact of this crisis on individuals' mental health has prompted many in society to turn to recreational sports activities as a means to overcome the significant psychological barrier imposed by this health crisis and to mitigate its physical, social, and psychological effects.

Considering these recreational sports activities as vital for physical, mental, and psychological well-being, sport represents a significant opportunity for enhancing individuals' mental health. The university student is considered one of the groups affected by this health crisis, in addition to the pressures of the pandemic, health, study, and daily life. She has been under these pressures for long hours, resulting in a deterioration of her mental health.

The only way out of this situation for her is to turn to engaging in recreational sports activities in specialized sports facilities. The goal is to alleviate the psychological anxiety resulting from the global health crisis, as well as to improve her physical fitness, leading to enhanced mental well-being, reduced symptoms of anxiety and depression, increased self-confidence, improved mood, and relief from psychological stress through recreational and sports-oriented entertainment. Therefore, this research paper aims to approach women's sports and to understand the role of recreational sports activities as a gateway to achieving the mental health of university students in the midst of the coronavirus pandemic crisis.

Study problem

Human societies have recently witnessed a catastrophic and serious health situation as a result of the terrifying and tremendous invasion of the coronavirus pandemic, which has brought about an unprecedented crisis that has shaken the habits and behaviours of individuals and groups, forcing them to coexist with panic and anxiety due to the worsening health crisis, terrifying and rapid spread of infection, and the increasing number of cases and casualties.

Thus, avoiding and overcoming this critical and exceptional situation has become a top priority in order to comply with the preventive health measures for this pandemic and to risk maintaining the new lifestyle. The COVID-19 pandemic has created a situation with additional harsh repercussions on women due to the grim picture of the epidemic and the health threats it poses. Women are beings who experience numerous psychological frustrations, easily succumb to pressures, obstacles, and risks, and cannot bear high levels of stress, anxiety, panic, maladaptation, and disorders. This unfamiliar reality, characterized by closures, sieges, and lifestyle changes imposed by the health threats posed by the virus and its rapid spread, as well as the significant number of casualties, has had negative effects on the mental health of wide segments of educational communities.

Among these segments are university female students who face many challenges in their local environments due to the strict health measures resulting from the pandemic, in addition to the emerging psychological, health, and social challenges in the face of the COVID-19 pandemic.

The COVID-19 pandemic has significantly led to a decline in mental health and exacerbated psychological suffering for a wide range of female university students. These students have been characterized by fear, anxiety, depression, and continuous psychological pressure as a result of the prolonged presence and rapid spread of the virus, which has threatened the lives of individuals and communities.

To address this situation and raise awareness among university students about the need to overcome the various effects of this health crisis, as well as to make them aware of the contribution of leisure sports and physical activities in improving their physical and mental health, a wide range of female university students have once again turned to engaging in leisure sports activities in specialized sports facilities. This is in order to cope and adapt to this critical health condition, as well as to enhance their mental health and reduce the various psychological disorders imposed by the situation of closure and quarantine. Therefore, this topic requires further research to reach appropriate solutions to the issue of studying while promoting the mental health of individuals in educational communities amidst the COVID-19 pandemic. This study aims to shed light on the practice of female university students engaging in leisure sports activities as an approach to achieving their mental health during the COVID-19 pandemic. It aims to answer the following research question:

Main research question

Does the participation of female university students in leisure sports activities contribute to enhancing their mental health amidst the COVID-19 pandemic?

Subsidiary research questions

- Does the participation of female university students in leisure sports activities enhance their self-confidence amidst the COVID-19 pandemic?
- Does the participation of female university students in leisure sports activities alleviate their psychological stress during the COVID-19 pandemic?
- Does the participation of female university students in leisure sports activities reduce the severity of their anxiety amidst the COVID-19 pandemic?

Study objectives

The study objectives are as follows:

1. To identify the practice of female university students engaging in leisure sports activities as a means to achieve their mental health amidst the COVID-19 pandemic.
2. To determine if the participation of female university students in leisure sports activities enhances their self-confidence during the COVID-19 pandemic.
3. To investigate if the participation of female university students in leisure sports activities alleviates their psychological stress amidst the COVID-19 pandemic.
4. To examine if the participation of female university students in leisure sports activities reduces the severity of their anxiety during the COVID-19 pandemic.
5. To identify the psychological challenges faced by female university students amidst the COVID-19 pandemic.
6. To contribute to the theoretical literature on the subject by incorporating the current study's findings.

The significance of the study

This study aims to elucidate the importance of female university students engaging in leisure sports activities as a means to achieve their mental health amidst the critical phase characterized by the rapid spread of the COVID-19 pandemic.

It also highlights the importance of leisure sports activities and the necessity for female university students to practice them, given the numerous positive health and psychological effects derived from such engagement. These effects include enhancing physical fitness, providing entertainment and relaxation, improving mood, boosting self-confidence, alleviating various psychological pressures, reducing symptoms of stress and anxiety, and effectively overcoming and transcending psychological disorders to reach a state of mental and physical well-being.

The importance of the current study can be summarized as follows:

- It lies in the nature of the subject it addressed (leisure sports activities and mental health) for female university students in the context of the COVID-19 pandemic.
- It reveals the negative effects of the COVID-19 pandemic on educational communities.
- This study assists in obtaining information about enhancing the mental health of female university students amidst the COVID-19 pandemic.

Study limitations

The study was delimited by the following aspects:

Objective limitations

The objective limitations of the study focused on identifying the role of female university students' engagement in leisure sports activities as a means to achieve mental health amidst the COVID-19 pandemic.

Human limitations

The human limitations of the study were confined to a sample of 31 female university students engaging in leisure sports activities.

Spatial limitations

The spatial limitations of the study were defined by the University of Mohamed Boudiaf in M'sila.

Temporal limitations

The study was delimited by the period extending from April 16th to April 31st, 2021.

Procedural definition of study concepts and terms

Leisure sports activities: These are the various games and sports practiced by female university students in specialized sports facilities.

Mental health

It is measured through the responses of the study sample to questions related to quarantine, and then the sample's responses to the dimensions of the mental health questionnaire (the role of leisure sports activities in enhancing self-confidence, the role of leisure sports activities in reducing psychological pressure, the role of leisure sports activities in reducing anxiety) estimated to be 21 items.

COVID-19 Pandemic

The COVID-19 pandemic, which has spread since the end of 2019 and throughout 2020, continues to spread into the new year 2021. It has spread throughout the world, leading to quarantine, full and partial closures of countries and cities, cancellation of mobility and travel, and the closure of schools and universities. In 2021, partial resumptions of studies and social and economic activities have occurred under strict health measures.

Previous studies

The nature of this study required the researcher to review previous studies related to the subject of the current study and to utilize them in discussing the study's results. These studies have been classified according to their indicators and their chronological order as follows:

Masouda (2019) conducted a study that aimed to uncover the role of physical and aerobic exercise and its impact on the psychological health of practicing women. The study concluded that physical aerobic activity plays a significant role in achieving psychological health in women, as it reduces psychological pressure, enhances self-confidence, and alleviates anxiety.

Similarly, Abdessalam and Lamine (2018) conducted a study aimed at revealing the role played by physical education and sports in reducing the level of anxiety among secondary school students. The study found that physical education and sports significantly contribute to alleviating anxiety among secondary school students.

Naima (2018) conducted a study aimed at uncovering the relationship between sports culture and women's attitudes towards practicing aerobic exercise. Among the most important results obtained: The women's attitude was positive towards sports and practicing aerobic exercise.

Bofrida 2016 conducted a study aimed at clarifying the role of recreational physical and sports activity and its impact on reducing psychological pressures among adolescent schoolgirls in the secondary stage (17-18 years old). The study concluded the following results: Physical aerobic activity plays an effective role in reducing psychological pressures among third-year secondary school female students.

The benefits of previous studies

Through reviewing previous studies, it is evident that they focus on the topic of sports activities and individuals' mental health. The current study follows the same path, but it has chosen an important category of educational communities in universities to shed light on the role of engaging in recreational sports activities as an approach to achieving the psychological well-being of female university students during the COVID-19 pandemic. This study aims to clarify the reality of female university students' engagement in sports activities and to understand the awareness of this group regarding the importance of these activities during this critical stage, which imposed a state of closure, quarantine, and the implementation of health measures due to this new reality and the necessity of living with it.

The current study has benefited from previous research in terms of both the adopted methodologies and the tools used, as well as the results obtained. This methodological harmony of previous studies has enriched the current study in form, content, and methodology.

The theoretical aspect of the study

Firstly, recreational sports activities

Sports are considered one of the important human activities. Almost every society, regardless of its level of advancement or backwardness, includes some form of sports activity.

Throughout different ages and civilizations, humans have recognized the significance of sports. While various civilizations have had different approaches to sports, some emphasized sports for military purposes, whether defensive or expansionist.

Others engaged in sports as a way to pass the time and for recreation, while in other civilizations, sports were utilized as an educational method. Ancient educational thinkers recognized the values embodied in sports as well as their powerful potential in shaping and nurturing balanced social personalities, not to mention the health benefits associated with physical activity and sports training since ancient times. It is a concept supported by the results of scientific research related to the functional and health effects at the biological level of humans (Anwar El Khawly, 1996, p. 5).

The growing interest in sports has become issues and problems with a fundamentally social nature, as the real requirements of people derive from the intricacies of social and economic circumstances, especially in the wake of the changes brought about by social change trends, cultural transfer factors, and tremendous technological advances and the development of information transfer methods (Anwar El Khawly, 1996, p.7).

Recreational physical activity

It refers to those games or sports that are practiced in leisure time and free from intense competition, serving as a means of occupying leisure time (Bouabdellah & Boutalbi, 2014, p. 14).

The psychological approach to recreational sports activities

Recreational sports activities have important psychological aspects, including:

- Providing opportunities for experiencing new experiences and feeling of comfort and self-worth.
- Offering opportunities for building self-confidence, eliminating shyness, promoting happiness and achieving success.
- Developing qualities such as integrity, compassion, emotional control, and authenticity.
- Providing the greatest opportunities to eliminate aggressive tendencies in socially acceptable conditions.
- Enhancing mental health and emotional maturity.
- Fulfilling inclinations and motivations related to play and hobbies, contributing to the individual's psychological satisfaction from participating in recreational physical activity.

The individual's emotional health development and psychological balance are enhanced through engaging in recreational physical activity, which contributes to relieving or reducing psychological stress, anxiety, and levels of depression (Bouabdellah & Boutalbi, 2014, pp. 15-16).

Sports and women

Women need sports just as much as men do, as their bodies are composed of muscles, joints, ligaments, heart, and organs that are all designed to work and move. With women's participation in the workforce and education, it is imperative for them to maintain their weight, figure, and health.

Recent research has shown an increased susceptibility of women to heart and artery diseases (especially during menopause) due to the modern lifestyle they lead, where modern conveniences at home allow them to work without exerting any physical effort as they did in the past. Therefore, women without exercise become vulnerable to illness, flabbiness, and excessive obesity (Farouk Abdel Wahab, 1995, p.71). "*In our Arab society, women undergo changes after marriage, often attributed to weight gain. However, these are all superficial excuses. The main reason is excessive eating, especially during pregnancy, combined with lack of physical activity or exercise*". This leads to various health issues, the most significant being obesity, which often leads to psychological problems. This, in turn, may result in social problems, the most serious of which is marital breakdown or dissolution.

"The solution is simple women should take care to engage in physical exercise before, during, and after pregnancy, strengthening their bodies and maintaining family cohesion, the love of their husband, and the respect of all" (Farouk Abdel Wahab, 1995, p.71). "There are certainly physiological differences between men and women. The blood volume in women is lower than that in men of the same size and age, as is their respiratory capacity and oxygen consumption". This is due to the fact that women have less muscle mass. Additionally, women are typically shorter than men of the same age. Therefore, although their blood volume and oxygen capacity are lower, they are proportionate to their body size and muscle mass. Consequently, their ability to engage in sports is not affected by these physiological differences, and training can reduce or minimize these discrepancies (Farouk Abdel Wahab, 1995,p.74).

Home-based physical activities

There are plenty of diverse physical activities and exercises that can be done at home without the need for equipment or large spaces. For instance, walking from one room to another for a few minutes every half an hour, as well as using the stairs for ascending and descending, and performing bodyweight exercises such as arm exercises for ten consecutive repetitions within three varied sets with one to two minutes of rest between each set. Additionally, aerobic dancing can also be practiced, and one can utilize the television to follow fitness programs and perform the exercises simultaneously. Furthermore, one can search online for physical activities and apply them, or even contact friends or fitness trainers through smartphones. To open video calls for shared sports activities is a way to cultivate and strengthen social relationships while engaging in physical activity (Source: <http://www.awraqthaqafya.com/920/>).

Sports and health

Sports serve as a form of physical therapy that is currently encouraged by medical professionals. Moreover, sports play a crucial role in preventing various diseases before they require treatment. The most important diseases that sports help to prevent or treat include:

Psychological disorders

Such as depression, anxiety, and stress are prevalent among modern individuals due to the lifestyle they lead, which often results in constant psychological turmoil. This is attributed to sedentary behaviour, social isolation, and the fear or concern about success or failure in the future. Consequently, individuals often experience anxiety and stress, which may have started from early childhood.

Stress and anxiety are accompanied by excessive hormone secretion, leading to increased tension, rapid heart rate, and a lack of relaxation. Such symptoms can be alleviated by engaging in physical activity for a few minutes each day, which can help individuals to alleviate the effects of hormones, feel confident and at ease, and overcome feelings of depression, stress, anxiety, and mental fatigue.

Cardiovascular diseases

Exercise is an important method for both preventing and treating heart diseases, including high blood pressure, atherosclerosis, and coronary artery disease, which are increasingly prevalent among young people. Psychological stress, anxiety, and other pressures can contribute to elevated blood pressure and heart rate. This can lead to an increase in cholesterol and triglycerides in the blood, making individuals more susceptible to cardiovascular diseases and at risk of experiencing a stroke, heart attack, or coronary thrombosis. Engaging in physical activity helps to improve the elasticity, flexibility, and dilation of blood vessels, thereby regulating blood pressure, enhancing circulation, and significantly reducing the risk of cardiovascular diseases. (Farouk Abdul Wahab, 1995, pp. 99-100).

Back pain

Prolonged sitting at a desk, in a car, and at home puts significant pressure on the muscles of the back and pelvis, leading to continuous pressure on the intervertebral discs. This can result in back pain and disc herniation, affecting posture and movement, especially when standing and walking. Therefore, regular and proper physical activity and exercise protect against these symptoms.

Postural deformities

Exercise is one of the most important methods for preventing and treating postural deformities, especially in young ages. Therefore, there is a strong focus on posture correction exercises for children and adolescents to prevent spinal curvature, foot deformities, knee friction, and back curvature, among other postural deformities.

Diabetes

Exercise is used as an effective method in treating non-hereditary diabetes primarily. Furthermore, exercise is used as a preventive measure for both hereditary and non-hereditary diabetes, along with the appropriate dietary program, of course.

Gout

Exercise helps in reducing the elevation of uric acid that causes this disease, whether due to the consumption of red meat or legumes. Therefore, those suffering from this disease resort to exercising to alleviate its excruciating pain.

Rheumatism

Engaging in physical activity helps to increase body temperature, which often aids in alleviating rheumatism pain, especially in its early stages.

Other diseases

Many diseases can be prevented and treated through exercise, which also helps in alleviating conditions such as headaches, general weakness, and other illnesses. (Farouk Abdul Wahab, 1995, p.102).

Secondly, Mental Health

The Concept of Mental Health

There have been numerous attempts to define mental health. The differences in these attempts are attributed to the diversity of perspectives and schools of thought. Among these definitions, researcher Hameed Abdul Salam Zahran (1977, p.9) defines it as the scientific study of mental health, the process of psychological adjustment, its achievements, hindrances, psychological problems, disorders, and diseases.

Mental health has two essential dimensions: theoretical scientific dimension that deals with the patient's personality in terms of causes, symptoms, adjustment, dissemination of knowledge, motivations, needs, study of causes, treatment, and prevention. The second dimension is the applied scientific dimension, which requires the use of various methods and techniques for examination, diagnosis, treatment, and preventive programs.

Abdulkhaliq (1991) defines it as a relatively permanent complex emotional-mental state in which everything is going well, feeling happy with oneself and others, feeling content and secure, mental safety, embracing life with a sense of activity and strength. This state is characterized by a high degree of psychological and social harmony, with satisfactory and fulfilling social relationships.

On the other hand, Alaa Al-Din Kafafi (1997, p.81) defines mental health as a state of balance and integration of the individual's psychological functions that lead them to adopt a way that enables them to accept themselves and be accepted by society, resulting in a sense of satisfaction and sufficiency.

As for Adeeb Al-Khaldi (2002, p.23), he defines it as a relatively permanent state in which the individual is psychologically, emotionally, and socially harmonious (with oneself and with the environment), experiencing happiness within oneself and with others, capable of self-realization, utilizing their potential to the fullest, able to cope with life's demands. Their personality is well-integrated, their behaviour is normal, and they possess good manners, enabling them to live in safety and peace. From the definitions of mental health provided by psychologists, it can be inferred that it is a psychological state involving feelings of satisfaction, happiness, and contentment. It also entails psychological, emotional, and social harmony, as well as adaptation of the individual to oneself, others, their community, and environment. It can be defined as the level of psychological well-being and the psychological state of a person who possesses a good emotional and behavioural level.

Women's mental health

In light of the current global changes, particularly the COVID-19 pandemic, women require special healthcare attention due to the differences in their physical and psychological makeup, in addition to the constant pressures they face at home, in public, in their studies, and in the workplace.

Women undergo numerous biological changes that require special care and attention due to factors such as age, lifestyle, dietary habits, physical activity, and hormonal fluctuations. Additionally, psychological factors are among the most important factors linked to a woman's life, safety, and mental resilience. Society plays a significant role in promoting women's mental health, transitioning from creating healthy conditions that support mental well-being to emphasizing the importance of women's self-care through communication with others and allocating time for engaging in activities and hobbies. This role extends to promoting health education, including training women to control and manage sources of psychological stress, as well as addressing and mitigating them, in addition to attending to all of women's psychological needs.

METHODOLOGY

The descriptive-analytical method was adopted as a method that describes and interprets reality. This was achieved through a review of theoretical literature on recreational sports activities and the mental health of female college students. The field study was then conducted, and results were obtained to contribute to enriching the topic of mental health and recreational sports activities for female college students.

Study population and sample

The study population included female college students at Mohamed Boudiaf University in El M'Sila who engage in recreational sports activities in sports halls and leisure centres. The study sample consisted of 31 female college students who engage in recreational and physical sports activities. Participants were purposefully selected.

Data collection tool

By referring to studies related to both mental health and sports activities, and through relevant previous research, a pre-prepared questionnaire developed by the researcher Masouda Ben Othman (2019) was adopted for its suitability in achieving the objectives of the current study and for collecting data from the study sample.

Tool description

The study questionnaire consists of two main sections:

- The first section: It includes questions related to mental health.
- The second section: This section of the questionnaire consists of 21 items focusing on the mental health of female college students, distributed across three dimensions as follows:
 - Dimension 1: The role of recreational sports activities in boosting self-confidence (07 items).
 - Dimension 2: The role of recreational sports activities in reducing psychological pressure (07 items).
 - Dimension 3: The role of recreational sports activities in reducing anxiety (07 items).

Survey study

The researcher conducted a pilot survey study on a preliminary sample of (18) individuals in order to verify the psychometric properties of the study tool, ensure its suitability for the final application, and achieve the study's objectives.

Psychometric properties of the study tool*Content validity*

The researcher verified the content validity of the tool through established procedures. The tool was presented to a group of expert professors from the psychology department at the University of M'Sila for item validation and to ensure its suitability for the current study. This was done to ensure that the tool measures what it was designed for. The final output of the tool achieved consensus among the expert professors, and thus, the study tool was adopted to achieve the study's objectives and to collect data from the study sample.

Reliability

To verify the reliability of the study tool, the split-half method was utilized and applied to a pilot sample of (18) female college students practicing sports in sports facilities. After obtaining the results, the questionnaire items were divided into odd and even items, and the reliability was calculated. The Pearson correlation coefficient between the odd and even items was found to be (0.71), which is an acceptable value in descriptive research and studies. This proves that the tool possesses high reliability, and its measurement can be trusted. The practice of female college students engaging in recreational sports activities as a means to achieve mental health during the COVID-19 pandemic is supported by this.

Statistical methods

Several appropriate statistical methods were used to process the data obtained from the study sample, including the Pearson correlation coefficient, frequencies, and percentages.

RESULTS

Presentation, analysis, and interpretation of results in light of quarantine:

Table 1. Did you stop practicing sports in sports facilities and clubs during the quarantine period?

Yes	No	Total
24	7	31
77.42%	22.58%	100%

It is noted that 77.42% of the study sample continued to practice sports during the lifting of the quarantine, while 22.58% discontinued their activity. This can be attributed to various reasons including getting used to

the quarantine, unawareness of the reopening schedule for sports facilities, fear of getting infected, and the fact that college students are accustomed to practicing sports activities at home during the quarantine period.

Table 2. Have you considered practicing sports at home during the quarantine period?

Yes	No	Total
23	8	31
74.19%	25.81%	100%

It is noted that 74.19% considered practicing sports at home and did not discontinue it, as recreational sports activities are important for their health. Meanwhile, 25.81% did not consider home sports activities, primarily due to being preoccupied with news about the coronavirus pandemic, quarantine, and the increasing number of infections and deaths.

Table 3. What type of sports did you engage in at home during the quarantine?

Number	Type of Sport	Repetition
01	Home – based Zumba exercises	5
02	Home aerobics exercises	3
03	Jumping rope	9
04	Exercise using devices	0
05	Home walking exercise	9
06	Free exercise	5
	Total	31

It is noteworthy that skipping rope and home walking were the most popular activities, as these sports do not require equipment, and most college students do not have sports equipment at home due to their financial inability and the low economic status of their families. Zumba, home aerobics, and free sports activities ranked next, as most college students who engage in these recreational sports activities follow registered sessions on YouTube, and these activities have recently gained great popularity among female groups.

Table 4. Do you have sports equipment at home?

Yes	No	Total
01	30	31
3.23%	96.77%	100%

It is observed that 96.77% of college students who do not have sports equipment at home still engage in sports, while 3.23% own sports equipment and engage in sports. This is because college students are accustomed to exercising in sports halls in university residences.

Table 5. Has a doctor previously advised you to exercise for your health?

Yes	No	Total
5	26	31
16.13%	83.87%	100%

It is noted that 16.13% of them have been previously advised by a doctor to exercise for their health, while the other half exercise based on their own willingness, as a result of their health awareness, and also due to the social tradition of attending the sports halls available in the university residence.

Table 6. Do you exercise for physical health purposes?

Yes	No	Total
18	13	31
58.06%	41.94%	100%

It is observed that 58.06% of female college students exercise for the purpose of maintaining their physical health, attributed to their awareness of the importance of exercise in enhancing their mental and physical health.

Table 7. Do you exercise for the purpose of maintaining your physique and appearance?

Yes	No	Total
16	15	31
51.61%	48.39%	100%

From the figure, it is noticeable that 51.61% of female college students continue to engage in physical activities to maintain their body shapes, fearing obesity, fat accumulation, and lack of agility and agility, and to achieve a suitable appearance both personally and socially.

Presentation, analysis, and interpretation of the results in light of the study's questions

Does the engagement of female college students in recreational physical activities contribute to enhancing their mental health in the context of the COVID-19 pandemic?

To answer the main question, the percentage dimensions of the study tool were calculated, and the following results were obtained:

Table 8. Percentage dimensions of the study tool according to the responses of female college students.

Number	Axes	Always (%)	Sometimes (%)	Never (%)
01	Dimension 1: The role of recreational physical activities in enhancing self-confidence	75.58	13.82	10.60
02	Dimension 2: The role of recreational physical activities in reducing psychological stress	88.02	06.45	05.53
03	Dimension 3: The role of recreational physical activities in reducing anxiety	88.48	05.53	05.99
	Total percentage for all dimensions	84.02	08.60	07.37

Table 8 shows that 84.02% of female college students believe that recreational physical activities contribute to enhancing their mental health in the context of the COVID-19 pandemic. On the other hand, 8.60% of female college students are hesitant, while 7.37% do not believe that engaging in recreational physical activities plays a role in enhancing their mental health.

The third dimension ranked first at 88.48%, while the second dimension ranked second at 88.02%, and the first dimension ranked last at 75.58%. The results of the current study are consistent with those of Masouda (2019) and Abdel Salam and Lameen (2018) studies. The study by Boufrida (2016) demonstrates the significant role of physical sports activities in enhancing individual mental health, as engaging in such activities reduces psychological pressure, boosts self-confidence, and alleviates anxiety.

Does engaging in recreational physical activities enhance the self-confidence of female university students in the context of the COVID-19 pandemic?

To answer the first sub-question, the frequencies and percentages of the items in the first dimension were calculated. The following results were obtained:

Table 9. Frequencies and percentages of the items in the first dimension (Role of recreational physical activities in enhancing self-confidence).

Number	Item	Always		Sometimes		Never	
		Frequency	%	Frequency	%	Frequency	%
01	I organize and coordinate my tasks while engaging in recreational physical activities	19	61.29	5	16.13	7	22.58
02	I try to benefit from the experiences of others while engaging in recreational physical activities	17	54.84	8	25.81	6	19.35
03	I have the ability to overcome the problems I encounter while engaging in recreational physical activities	23	74.19	4	12.90	4	12.90
04	I seek to develop self-confidence during engaging in recreational physical activities	29	93.55	1	3.23	1	3.23
05	I have the ability to convey my thoughts to others while engaging in recreational physical activities	20	64.52	8	25.81	3	9.68
06	I feel greater mental security while engaging in recreational physical activities	27	87.10	3	9.68	1	3.23
07	When I trust myself during recreational sports activities, I make fewer daily mistakes.	29	93.55	1	3.23	1	3.23
Dimension 1: The Role of Recreational Sports Activities in Boosting Self-Confidence		164	75.58	30	13.82	23	10.60

Based on Table 9, it is evident that an average of (75.58%) of female university students enhance their self-confidence through engaging in recreational physical activities, while (10.60%) of female university students do not enhance their self-confidence through engaging in recreational physical activities. Additionally, (13.82%) of female university students do not show any aspect of self-confidence enhancement. As for the frequency of items, item four and item seven ("*I seek to develop self-confidence during engaging in recreational physical activities*" and "*When I trust myself while engaging in recreational physical activities, my daily mistakes decrease*") obtained the highest frequencies, amounting to (29). This indicates that engaging in recreational physical activities by female university students increases their self-confidence and enables them to resist the negative psychological effects produced by the COVID-19 pandemic, such as panic, depression, anxiety, and psychological pressure. The results of the current study are consistent with the findings of a study by Masouda (2019) that physical sports activity plays a significant role in enhancing self-confidence.

Does the engagement of female university students in recreational physical activities alleviate their psychological pressure in the context of the COVID-19 pandemic?

To answer the second sub-question, the frequencies and percentages of the second dimension were calculated, and the following results were obtained:

Table 10: Frequencies and percentages of items in the second dimension (The role of recreational physical activities in alleviating psychological pressure).

Number	Item	Always		Sometimes		Never	
		Frequency	%	Frequency	%	Frequency	%
08	Practicing recreational physical activities makes me feel calm and at ease	19	61.29	1	3.23	1	3.23
09	Engaging in recreational physical activities reduces my emotional reactions	17	54.84	2	6.45	1	3.23
10	Recreational physical activities help me achieve emotional balance, such as feeling happy	23	74.19	1	3.23	1	3.23
11	Engaging in recreational physical activities helps me to vent my emotions	26	83.87	2	6.45	3	9.68
12	I feel psychological freedom when practicing recreational physical activities	26	83.87	4	12.90	1	3.23
13	Engaging in recreational physical activities allows me to develop social relationships with others	24	77.42	3	9.68	4	12.90
14	Recreational sports activities help me to reduce stress.	29	93.55	1	3.23	1	3.23
Dimension 2: The role of recreational sports activities in alleviating psychological pressure		164	191	14	13.82	12	10.60

According to Table 10, it is evident that 88.02% of female university students agree that recreational physical activities contribute to alleviating their psychological pressure. On the other hand, 6.45% of them are hesitant in their responses, possibly unsure about feeling relief from psychological pressure. Meanwhile, 5.53% of the students did not provide any response regarding the alleviation of psychological pressure.

In terms of item frequencies, all items received high frequencies from the sample respondents, indicating their awareness of the extent to which engaging in recreational physical activities can contribute to reducing emotional reactions, achieving emotional balance, feeling calm and at ease, experiencing happiness, and reducing the severity of psychological tension to avoid the psychological effects of the COVID-19 pandemic.

The results of the current study align with those of a study by Masoud (2019) indicating that physical exercise plays a significant role in achieving mental health and reducing psychological pressure. Similarly, they also correspond with the findings of Bofreda's study (2016) in that recreational physical activities play an effective role in reducing psychological pressures.

Does engaging in recreational physical activities alleviate the level of anxiety for female university students in the midst of the COVID-19 pandemic?

To address the third sub-question, frequencies and percentages for the items of the third dimension were calculated, yielding the following results:

Table 11: Frequencies and percentages for the items of the third dimension (The role of recreational physical activities in reducing the severity of anxiety).

Number	Item	Always		Sometimes		Never	
		Frequency	%	Frequency	%	Frequency	%
15	I stay calm during my engagement in recreational physical activities	25	80.65	4	12.90	2	6.45
16	I feel at ease when engaging in recreational physical activities	27	87.10	2	6.45	2	6.45
17	Recreational physical activities help me control my emotions and get rid of anger	29	93.55	1	3.23	1	3.23
18	I forget all my academic and personal problems when engaging in recreational physical activities	26	83.87	2	6.45	3	9.68
19	I find myself psychologically comfortable after engaging in recreational physical activities	29	93.55	1	3.23	1	3.23
20	Engaging in recreational physical activities helps me prepare and get ready for my other tasks	28	90.32	1	3.23	2	6.45
21	Recreational sports activities contribute to reducing fear.	28	90.32	1	3.23	2	6.45
Dimension 3: The role of Recreational Sports Activities in Reducing Anxiety Severity.		192	192	88.48	12	5.53	5.99

Based on Table 11, it is evident that 88.48% of female university students agree that engaging in recreational physical activities contributes to reducing the severity of psychological anxiety, while 5.99% did not support this feeling.

The majority of items received the highest frequency of acceptance, confirming that the recreational physical activity practiced by female university students helps in controlling nerves, getting rid of anger, and maintaining composure. Recreational physical activities serve as the only outlet for female university students, working to mitigate the effects of the COVID-19 pandemic lockdown.

The results of the current study align with those of Masouda's study (2019) in emphasizing the significant role of physical exercise in achieving mental health and reducing anxiety. Additionally, these findings are consistent with the results of studies by Abdel Salam and Lameen (2018), indicating that physical activity significantly contributes to reducing the severity of anxiety.

CONCLUSIONS

The study results indicated the following:

- Engaging in recreational physical activities by female university students contributes to achieving their psychological well-being amidst the COVID-19 pandemic.
- Engaging in recreational physical activities by female university students works to enhance their self-confidence amidst the COVID-19 pandemic.
- Engaging in recreational physical activities by female university students helps to alleviate their psychological stress amidst the COVID-19 pandemic.
- Engaging in recreational physical activities by female university students contributes to reducing the severity of their anxiety amidst the spread of the COVID-19 crisis.

From the results of the current study, it is evident that female university students engaging in recreational physical activities have a positive understanding of the concept of health culture amidst the various effects of the COVID-19 crisis. They agree that their participation in recreational physical activities works to strengthen their psychological well-being during this pandemic, and that regular practice contributes significantly to overcoming this crisis mentally and physically.

Suggestions

Conduct studies focusing on the physical and mental health of female populations in educational communities. Conduct studies focusing on recreational physical activities for females in educational communities.

AUTHOR CONTRIBUTIONS

This work was collective, starting with the theoretical background, and everyone participated in building the measurement tool through its arbitration, distribution, and analysis, and reaching the final results and recommendations.

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