

**The Impact of Physical Activity on the Quality of Life of the Elderly****- A Case Study of Hodna Gym in M'sila-****تأثير النشاط الرياضي على جودة الحياة لدى كبار السن- حضنة GYM بالمسيلة أنموذجا****Zitouni Sabira\*****Morsli Abdullah University Center, Tipaza****zitouni.sabira@cu-tipaza.dz****Receipt date :10/09/2024      Acceptance Date :05/11/2024      Published date :08/12/2024**

**Abstract:** This study aims to explore the impact of sports on the quality of life among older adults and to understand the extent to which regular participation in sports activities affects various aspects of their lives, including mental health, physical health, social relationships, and environmental awareness. The study employed a descriptive methodology and was conducted on a survey sample of 17 elderly individuals who engage in physical and sports activities at the Hodna GYM sports facility in M'sila, using a quality-of-life scale.

The findings confirm that physical activity has a significant positive impact on the quality of life of older adults in the arms of Msila GY M. Physical activity can effectively contribute to improving the lives of older people by improving physical and mental health, strengthening social relationships and raising environmental awareness.

The study concluded by providing recommendations that emphasize the necessity of encouraging the elderly to engage in regular exercise through tailored programs that consider their health needs. Additionally, it is important to raise awareness about the benefits of physical activity on mental and physical health, such as reducing stress and improving mood. Creating a supportive environment and providing safe spaces for exercise also contribute to sustaining physical activity.

**-Keywords:** physical activity, quality of life, elderly, influence, sports facilities.

**الملخص:** تهدف هذه الدراسة إلى استعراض تأثير الرياضة على جودة الحياة لدى فئة الكبار من السن، وفهم مدى تأثير المشاركة المنتظمة في الأنشطة الرياضية على الجوانب المختلفة لحياة كبار السن، بما في ذلك الصحة النفسية، الصحة البدنية، العلاقات الاجتماعية، والوعي البيئي. حيث اعتمدت الدراسة على المنهج الوصفي وطبقت على عينة مسحية من كبار السن الممارسين للنشاط البدني والرياضي في المنشأة الرياضية حضنة GYM بالمسيلة بلغت 17 فرداً باستعمال مقياس جودة الحياة.

حيث تؤكد نتائج الدراسة أن النشاط الرياضي له تأثير إيجابي كبير على جودة الحياة لدى كبار السن في حضنة GYM بالمسيلة؛ من خلال تحسين الصحة النفسية والبدنية، وتعزيز العلاقات الاجتماعية، وزيادة الوعي البيئي، يمكن للنشاط الرياضي أن يسهم بشكل فعال في تحسين حياة كبار السن.

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وخلصت الدراسة إلى تقديم توصيات بضرورة تشجيع كبار السن على ممارسة الرياضة بانتظام من خلال برامج مخصصة تراعي احتياجاتهم الصحية، كما ينبغي توعيهم بفوائد النشاط البدني على الصحة العقلية والجسدية، مثل تقليل التوتر وتحسين المزاج. وتوفير بيئة داعمة ومساحات آمنة لمارسة الرياضة يسهم في تعزيز استمرارية النشاط البدني.

الكلمات المفتاحية: النشاط الرياضي، جودة الحياة، كبار السن، التأثير، المنشأة الرياضية.

#### - Introduction:

Physical activity has a profound and positive impact on the quality of life of the elderly, playing a crucial role in enhancing both physical and mental health, and improving overall life quality. As people age, maintaining physical fitness becomes essential to addressing the health challenges associated with aging.

Physically, exercise helps improve muscle strength, flexibility, and balance, which reduces the risk of falls and injuries that can significantly affect the lives of older adults. Regular exercise also promotes cardiovascular health and helps manage chronic diseases such as diabetes and high blood pressure. Additionally, it aids in maintaining an ideal weight and strengthens bones, reducing the risk of osteoporosis.

From a psychological perspective, physical activity plays a significant role in improving mood and reducing levels of stress, anxiety, and depression. Exercise stimulates the release of happiness hormones like endorphins, which enhance feelings of comfort and joy. Participating in group sports activities also provides an opportunity for social interaction, reducing feelings of isolation and loneliness that some elderly individuals may experience.

Beyond physical and psychological benefits, physical activity helps to enhance independence and the ability to perform daily activities more easily. This boosts self-confidence and a sense of accomplishment, which positively reflects on overall quality of life. Amid the challenges posed by aging, physical activity becomes an effective means of achieving a healthier and happier life. Therefore, it is essential to encourage the elderly to adopt an active lifestyle through tailored sports programs that suit their needs and capabilities, ensuring a life full of vitality and energy.

## 2. Study Problem:

Quality of life is an important concept that reflects the level of well-being and happiness individuals experience, especially among the elderly, who may face various health and psychological challenges. Physical activity is considered one of the main factors that can contribute to improving the quality of life for this group. Therefore, this study aims to explore the impact of physical activity on the quality of life of the elderly by analyzing a sample of participants from the M'sila gym. What strategies can be adopted to increase the elderly's participation in sports activities and enhance their quality of life? This aspect of the study examines how to develop suitable sports programs that meet the needs of the elderly and contribute to improving their quality of life.

Based on the above, this study aims to provide a deep understanding of how physical activity can enhance the quality of life among the elderly, thereby improving their overall health and well-being. Consequently, the study problem revolves around the following questions:

### 2.1. Research Questions:

- What is the impact of physical activity on the psychological state and mood of the elderly?
- How does physical activity affect the physical fitness and general health of the elderly?
- How does physical activity enhance social interaction and involvement in community activities among the elderly?
- How does sports contribute to improving and enhancing the quality of the environment for the elderly?

### 2.2. Research Hypotheses:

- Physical activity has an impact on the psychological state and mood of the elderly.
- Physical activity affects the physical fitness and general health of the elderly.

○ Physical activity enhances social interaction and involvement in community activities among the elderly.

○ Sports contribute to improving and enhancing the quality of the environment for the elderly.

### **3. Significance and Objectives of the Study:**

**3.1. Significance of the Study:** The importance of studying the impact of physical activity on the quality of life of the elderly is growing in light of the demographic changes the world is witnessing, where the number of elderly people is increasing. Sports activities play a vital role in improving the quality of life and enhancing the overall health of this age group. The following points highlight the importance of this topic:

○ Physical activity contributes to improving physical fitness, increasing muscle strength, and enhancing endurance, helping the elderly maintain their independence and perform daily activities.

○ Physical activity is an effective means of preventing many chronic diseases such as diabetes, heart disease, and osteoporosis. This can reduce the healthcare burden on the health system.

○ Physical activity improves the mental state of the elderly by reducing levels of depression and anxiety, and it promotes a sense of happiness and well-being.

○ Studies help raise awareness of the importance of physical activity and its positive impact on the lives of the elderly, which may encourage more of them to engage in sports activities.

**3.2. Objectives of the Study:** The study aims to understand the extent of the impact of regular participation in sports activities on various aspects of the lives of the elderly, including mental health, physical health, social relationships, and environmental awareness through:

○ Analyzing the impact of physical activity on the mental health of the elderly.

○ Assessing the impact of sports activities on physical health.

- Studying the impact of physical activity on social relationships.
- Examining the impact of physical activity on environmental awareness.

#### 4. Study Concepts:

**4.1. Concept of Physical Activity:** Physical activity refers to a set of physical activities undertaken by individuals with the aim of improving their physical and mental health, recreation, competition, or fostering team spirit. Physical activity encompasses a wide range of activities, from simple exercises like walking and running to organized sports such as football and basketball, and even recreational activities like yoga and dancing. (Qasem, 1999, p. 64)

##### 4.1.1. Main Types of Physical Activity:

- **Aerobic Sports:** These include activities that increase heart rate and use oxygen efficiently, such as jogging, swimming, cycling, and aerobic exercises.
- **Anaerobic Sports:** These involve activities that rely on short, intense efforts, such as weightlifting, strength training, and sprinting.
- **Competitive Sports:** These include sports where individuals or teams compete to win, such as football, basketball, tennis, and hockey.
- **Recreational Sports:** These encompass activities performed for enjoyment and leisure, such as mountain biking, skiing, and dancing.
- **Mental Sports:** These include activities that require high mental focus in addition to physical fitness, such as chess and billiards.

##### 4.1.2. Health Benefits of Physical Activity:

###### Firstly- Physical Health:

- **Strengthening Muscles and Bones:** Regular exercise helps in building muscles and increasing bone density.
- **Improving Heart Health:** Aerobic activities enhance the efficiency of the heart and lungs and reduce the risk of heart diseases.
- **Weight Management:** Physical activity helps in burning calories and maintaining a healthy weight.

### **Secondly-Mental Health:**

- **Reducing Stress and Anxiety:** Physical activity releases happiness hormones like endorphins, which reduce stress levels.
- **Improving Mood:** Exercise helps in enhancing mood and achieving psychological satisfaction.
- **Boosting Self-Confidence:** Achieving sports goals contributes to increased self-confidence. (Abdulhamid, 2017, p. 46)

### **Thirdly, Social Interaction:**

- **Building Relationships:** Team sports help in building social relationships and enhancing teamwork.
- **Sense of Belonging:** Joining sports teams or clubs can create a sense of belonging and community.

#### **4.1.3. Essential Elements for Practicing Physical Activity Effectively:**

- **Variety:** Diversifying sports activities helps avoid boredom and injuries, and improves overall fitness.
- **Consistency:** Maintaining regular exercise ensures the attainment of health benefits.
- **Balance:** Achieving a balance between physical activity and rest to prevent fatigue and injuries. (Faraj, 1996, p. 57)
- **Proper Nutrition:** Consuming a balanced diet supports athletic performance and aids in recovery after exercise.
- **Injury Prevention:** Following correct exercise techniques and using appropriate equipment to avoid injuries.

#### **4.1.4. The Role of Society in Promoting Physical Activity:**

- **Infrastructure:** Providing sports facilities such as fields, gyms, and swimming pools.
- **Education and Awareness:** Raising awareness of the importance of sports and offering educational programs to the community. (Fareed, 2003, p. 62)

Physical activity is not just a means to improve physical health; it is also a powerful tool for enhancing mental and social well-being. Through regular exercise, individuals can improve their quality of life and enjoy an active and healthy lifestyle.

**4.2. Concept of Quality of Life:** Quality of life is a multidimensional concept that reflects the well-being of individuals and communities. This concept goes beyond physical and economic aspects to include psychological, social, and cultural dimensions. (Al-Bakr, 2012, p. 76) Evaluating the quality of life is a complex matter that requires consideration of various factors that affect the lives of individuals and communities as a whole. (Abdulrahman, 2018, p. 37)

#### **4.2.1. Main Aspects of Quality of Life:**

##### **Firstly- Physical and Mental Health:**

- **Physical Health:** This includes the general health condition of individuals, nutrition, level of physical activity, medical care, and access to healthcare services. (Aloo, 2023, p. 846)

- **Mental Health:** This encompasses psychological and emotional well-being, the absence of mental disorders, and levels of stress, anxiety, and personal happiness. (Fahmi, 1995, p. 16)

##### **Secondly- Social Relationships:**

This includes the quality of family relationships, friendships, social support, and community engagement.

- **Economic Status:** This includes income level, financial stability, employment opportunities, and access to basic economic resources.

- **Education and Knowledge:** This includes the level of education, the quality of educational institutions, and access to learning and personal development opportunities.

- **Living Environment:** This includes the quality of the surrounding environment, including housing, security, and basic infrastructure such as clean water and sanitation.

- **Culture and Recreation:** This includes access to cultural and recreational activities, such as arts, sports, and entertainment.

### **Thirdly-The Importance of Measuring Quality of Life:**

- **Improving Public Policies:** Quality of life indicators help guide government policies toward improving citizens' well-being.
- **Planning and Development:** They contribute to the planning and implementation of developmental programs aimed at improving living standards. (Al-Qahtani, 2017, p. 103)
- **Personal Evaluation:** They provide a framework for individuals to assess their personal lives and strive to improve certain aspects of them.

### **Fourthly- Quality of Life Indicators:**

There are many indicators used to measure quality of life, such as:

- **Human Development Index:** Measures development based on income, education, and life expectancy.
- **Self-Well-Being Index:** Relies on individuals' assessment of their life satisfaction and level of happiness.
- **Environmental Indicators:** Measures air quality, water quality, and green spaces. (Al-Nuaimi, 2015, p. 112)

Thus, quality of life is a comprehensive standard that reflects various life dimensions that contribute to the well-being of individuals and communities. Achieving a high quality of life requires concerted efforts in various fields to improve health, social, economic, and environmental conditions.

### **4.3. Concept of the Elderly:**

The elderly are individuals who have reached an advanced age, typically over 60 or 65 years, where they begin to enter a new phase of life characterized by biological, psychological, and social changes. (Khouja and Al-Qahtani, 2000, p. 02) The elderly are also known as "seniors" or "aged individuals." This stage of life is marked by several unique characteristics and requirements. (p401, 1985, cha0000)

## Firstly- Biological Characteristics of the Elderly:

- **Health Changes:**

- Decreased physical capacity: A decline in muscle strength and endurance.
- Chronic diseases: Increased likelihood of chronic diseases such as diabetes, hypertension, and heart disease.
- Sensory changes: A decline in vision and hearing, as well as a weakening of taste and smell. Additionally, there are psychological and emotional changes, including a decrease in the ability to concentrate and remember, as well as increased rates of anxiety and depression due to feelings of isolation or the loss of loved ones.

## Secondly- Social Changes:

- **Retirement:** Retirement from formal work can lead to significant changes in daily routine and a sense of identity.
- **Social Relationships:** Social relationships may decrease due to the death of friends and relatives or difficulty in mobility and participating in social activities. (Al-Kubaisi, 2015, p. 92)
- **Social Support:** A greater reliance on family and caregivers for daily life support.

## Thirdly- Challenges and Needs:

- **Healthcare:** The need for specialized healthcare that addresses chronic diseases and general health issues, along with rehabilitation programs to improve mobility and physical abilities.
- **Social and Economic Support:** The importance of providing a social support system that ensures the elderly have access to financial resources and social assistance, as well as the need to create supportive environments that allow them to live with dignity and independence. (Al-Ghamdi, 2018, p. 115)

- **Suitable Housing:** Providing appropriate housing that meets the needs of the elderly in terms of accessibility and safety.

## Fourthly- The Role of Society in Supporting the Elderly:

- **Awareness and Education:** Raising awareness about the importance of supporting the elderly and understanding their needs.
- **Community Services:** Providing community programs and services that support social participation and physical activity for the elderly.
- **Government Policies:** Developing government policies that ensure the rights of the elderly and provide essential health and social services.

Thus, the elderly form an important part of society and require special attention to ensure their well-being and quality of life. This requires providing appropriate healthcare, social support, and economic and political measures that enhance their rights and ensure a dignified and independent life.

## 5. The Impact of Physical Activity on the Mental and Physical Health of the Elderly:

Physical activity has a significant and positive impact on the mental and physical health of the elderly:

### 5.1. Physical Effects of Physical Activity on the Elderly:

- **Improving Physical Fitness:** Strengthening muscles and bones through regular exercise helps maintain muscle mass and strength as well as bone density, reducing the risk of osteoporosis and fractures.
- **Improving Balance and Coordination:** Physical activities such as balance exercises and walking help improve balance and reduce the risk of falls, which is especially important for the elderly. (Al-Rifai, 2016, p. 142)
- **Cardiovascular Health:** Improving heart and vascular health: Aerobic exercises such as walking, swimming, and cycling help promote heart and arterial health, reducing the risk of heart disease. (Al-Zahrani, 2014, p. 68)
- **Improving Circulation:** Physical activity helps improve blood flow and oxygen delivery to tissues and organs. Additionally, it aids in burning calories, helping to manage weight and maintain a healthy weight, thereby reducing the risk of obesity and related diseases such as type 2 diabetes. Furthermore, it improves digestion;

regular exercise helps enhance digestive processes and reduce gastrointestinal issues like constipation.

## 5.2. Psychological Effects of Physical Activity on the Elderly:

- **Improving Mood:** Stimulating hormone release: Physical activity contributes to the release of happiness hormones such as endorphins, which improve mood and psychological well-being. (Abdulhamid, 2017, p. 34)

- **Reducing Stress and Anxiety:** Exercise acts as an effective means to relieve stress and anxiety, helping the elderly feel more relaxed.

- **Boosting Self-Confidence:** Participation in physical activities and the ability to achieve fitness goals contribute to increased self-confidence and a sense of control over life.

- **Improving Cognitive Functions:** Physical activity stimulates the brain and helps improve cognitive functions such as memory and concentration, while reducing the risk of dementia. Some studies indicate that physical activity can reduce the risk of neurodegenerative diseases such as dementia and Alzheimer's disease.

- **Enhancing Social Relationships:** Engaging in group sports activities or joining sports clubs provides the elderly with opportunities to form new social relationships and strengthen social bonds. Reducing feelings of isolation; participation in sports activities helps reduce feelings of isolation and loneliness, which is crucial for the mental health of the elderly. (Al-Zahrani, 2014, p. 70)

In general, physical activity is considered an effective way to improve the quality of life for the elderly, as it enhances both physical and mental health and helps them remain active and independent for as long as possible.

## 6. Challenges and Obstacles Faced by the Elderly in Engaging in Physical Activity:

Engaging in physical activity presents numerous challenges and obstacles for the elderly, which can affect their regular participation in physical exercises. These

obstacles can be physical, psychological, social, or environmental. Here is a detailed look at these challenges:

### **6.1. Physical Challenges:**

- **Chronic Health Issues:** Chronic diseases such as arthritis, diabetes, hypertension, and heart disease can hinder the ability to exercise regularly and safely.
- **Decreased Physical Fitness:** A decline in physical fitness and muscle strength with age can make starting an exercise routine difficult and painful.
- **Fear of Injury:** The fear of falling or sustaining injuries during physical activity can be a significant barrier for the elderly.
- **Limited Mobility:** Mobility issues such as joint pain, muscle weakness, and loss of balance can reduce the elderly's ability to engage in exercise. (Abdulhamid, 2017, p. 36)

### **6.2. Psychological Challenges:**

- **Low Motivation:** A lack of psychological motivation to exercise may result from feelings of fatigue, depression, or anxiety.
- **Fear of Failure:** The fear of not being able to perform exercises correctly or the embarrassment of exercising in front of others can be a psychological barrier.
- **Negative Perceptions:** Negative perceptions about sports, such as the belief that it is not suitable for the elderly or that it may cause harm, can prevent them from participating. (Al-Zahrani, 2014, p. 71)

### **6.3. Social Challenges:**

- **Social Isolation:** A lack of social support or feelings of isolation can limit the elderly's participation in sports activities.
- **Lack of Suitable Programs:** A shortage of sports programs specifically designed for the elderly can make it difficult for them to find activities that match their physical level.

- **Lack of Exercise Partners:** Exercising alone may be boring and unmotivating; the elderly may prefer group exercises or activities they can do with friends or family. (Abdulhamid, 2017, p. 39)

#### 6.4. Environmental Challenges:

- **Inadequate Infrastructure:** A lack of places dedicated to physical activity, such as public parks, walking trails, and sports facilities equipped for the elderly.
- **Weather and Climate:** Adverse weather conditions, such as extreme heat or severe cold, can prevent the elderly from exercising outdoors.
- **Limited Access to Facilities:** Access to sports facilities may be limited due to the unavailability of transportation or their distance from home.

#### 6.5. Strategies to Overcome Challenges:

- **Medical Consultation:** Consult a doctor before starting any exercise program to ensure it is suitable for the elderly's health condition and to avoid injuries.
- **Starting Slowly:** Begin with light exercises and gradually increase the intensity to avoid strain and achieve health benefits.
- **Joining Groups:** Engaging in group exercise programs or senior-specific clubs can provide social support and motivation.
- **Preparing the Environment:** Ensure that the exercise environment is safe and comfortable, such as using appropriate equipment, ensuring good lighting, and having obstacle-free spaces.
- **Variety in Exercises:** Engage in a variety of physical activities to avoid boredom and stimulate all parts of the body.
- **Family and Community Support:** Receiving support from friends and family and encouraging participation in sports activities can boost motivation and regular participation. (Abdulhamid, 2017, p. 41)

By adopting appropriate strategies and providing the necessary support, many of these challenges and obstacles can be overcome, helping the elderly to fully benefit

from physical activity and achieve significant improvements in their physical, mental, and social health.

## **7. Methodological Procedures of the Field Study:**

### **7.1. Study Methodology:**

To study the impact of physical activity on the quality of life of the elderly, we adopted the descriptive-analytical method. This method helps in accurately describing and analyzing the phenomenon by collecting and analyzing data to reach evidence-based conclusions. The descriptive method is also a valuable tool for studying such topics, allowing for systematic and precise data collection and analysis in order to:

- Understand the relationship between physical activity and the improvement of physical health in the elderly.
- Study the impact of physical activity on mental and emotional health.
- Evaluate the social impact of physical activity on the interaction of the elderly within the community.

### **7.2. Study Boundaries:**

#### **7.2.1. Temporal Boundaries:**

The current study was limited to a specific time period (from mid-February 2024 to late July 2024) to observe long-term changes during this period in the quality of life resulting from physical activity in this group.

#### **7.2.2. Spatial Boundaries of the Study:**

This study is limited to elderly individuals who engage in physical activity at GYM in M'sila. The sports environment and the available resources (such as sports facilities, qualified trainers, and various sports equipment) may differ among participants, potentially affecting the results. Additionally, external support, such as from family, the local community, and health policies, plays a role. On the other hand, cultural factors—such as variations in cultural values and traditions—may influence the elderly's participation in and response to sports activities. Furthermore, social diversity, including social and economic differences among the elderly, could impact

their access to sports activities and their effects. Alongside all this is individual motivation, as the motivation of elderly individuals to participate in physical activity may vary and influence the results. The general health condition of participants at the start of the study may also affect the outcomes of physical activity on their quality of life.

## **7.3. Study Population and Sample:**

### **7.3.1. Study Population:**

In this study, the population includes all elderly individuals who engage in physical activity at GY M in the M'sila province. This population encompasses all age groups over 60 years old.

### **7.3.2. Study Sample:**

The sample is selected using various statistical methods to ensure fair representation of all segments of the population. Among the possible methods, a comprehensive survey of all elderly individuals at GY M was adopted. The initial sample included 23 individuals, but after excluding 6 individuals who discontinued physical activity at the facility for unknown reasons, the final study sample consisted of 17 individuals.

## **7.4. Data Collection Tools:**

### **7.4.1. Scale:**

This study relied on the Quality-of-Life scale issued by the World Health Organization. In 2018, Professor Fatima Hamza adapted and translated the scale to suit the Algerian environment.

### **7.4.2. Scale Description:**

The Quality-of-Life scale consists of 26 items, 24 of which are distributed across four domains as follows:

- Mental health
- Physical health
- Social relationships

- Environment

The remaining two items assess overall quality of life and general health.

#### 7.4.3. Reliability and Validity of the Scale:

○ **Reliability of the Scale:** To measure the reliability of the scale, this study utilized Cronbach's Alpha coefficient.

**Table (01): Reliability of the Study Scale**

| Constancy of honesty<br>Scale | Number of Domains | Cronbach's Alpha |
|-------------------------------|-------------------|------------------|
|                               | 4                 | 0.88             |

The data from the table above indicates that the Cronbach's Alpha value is 0.88, which demonstrates a high level of internal consistency for the tool used. A Cronbach's Alpha value exceeding 0.70 is considered good and suggests that the scale is reliable and can be trusted to measure the targeted variables in the study.

Therefore, it appears that the study scale used to assess the impact of physical activity on the quality of life of the elderly has high reliability, which enhances the credibility of the results that will emerge from this study. This reliability means that the tool is capable of providing consistent and dependable measurements when applied to the study sample, which is essential for ensuring the accuracy of the conclusions and recommendations based on these measurements.

○ **Validity of the Scale:**

**Table (02): Correlation Coefficients Between Study Domains**

| Domains              | Number of Items | Correlation Coefficient | Significance |
|----------------------|-----------------|-------------------------|--------------|
| Mental Health        | 6               | 0.79                    | 0.05         |
| Physical Health      | 7               | 0.73                    | 0.05         |
| Social Relationships | 3               | 0.91                    | 0.05         |
| Environment          | 8               | 0.61                    | 0.05         |

The results indicate a strong positive correlation between physical activity and mental health among the elderly (correlation coefficient = 0.79). Sociologically, this can be explained by the fact that regular physical activity contributes to improving mood and reducing depression and stress, which enhances the mental health of

elderly individuals. These findings highlight the importance of sports programs as part of comprehensive healthcare for the elderly.

Additionally, the strong positive correlation between physical activity and physical health (correlation coefficient = 0.73) reflects the direct impact of physical activity on improving physical fitness, muscle strength, and cardiovascular efficiency. From a sociological perspective, these results support the idea that physical activity contributes to improving the quality of life by enhancing overall health and reducing the risk of chronic diseases.

The high correlation coefficient (0.91) between physical activity and social relationships indicates that sports play a significant role in strengthening social bonds. From a sociological standpoint, sports activities provide opportunities for social interaction, building new friendships, and enhancing a sense of belonging. These results confirm the importance of sports as a means to promote social integration and emotional well-being among the elderly.

Meanwhile, the moderate correlation coefficient (0.61) between physical activity and the environment suggests that a supportive environment and available resources can significantly impact the quality of life. From a sociological perspective, this can be interpreted as the surrounding environment, such as the availability of sports facilities and green spaces, playing an important role in motivating the elderly to participate in physical activities. These findings highlight the importance of providing a supportive environment to encourage physical activity among the elderly.

Therefore, this study demonstrates that physical activity has significant positive effects on the quality of life of the elderly across various domains: mental health, physical health, social relationships, and environment. These findings support the importance of adopting comprehensive and integrated sports programs as part of elderly healthcare and social strategies. By enhancing mental and physical health, providing opportunities for social interaction, and ensuring a supportive environment, the quality of life can be significantly improved. Hence, social and health policies

should focus on facilitating and expanding the scope of sports activities for the elderly to ensure their overall well-being.

## 8. Presentation and Interpretation of Study Results:

### 8.1. Presentation of the First Hypothesis Results:

- Physical activity has an impact on the mental state and mood of the elderly.

**Table (03): Distribution of the Study Sample Related to the Mental Health Domain.**

| Alternatives | N  | %      | Calculated Chi-square | Tabulated Chi-square | Significance Level | Degrees of Freedom | Statistical Significance |
|--------------|----|--------|-----------------------|----------------------|--------------------|--------------------|--------------------------|
| High         | 09 | 52.94% |                       |                      |                    |                    |                          |
| Medium       | 06 | 35.29% |                       |                      |                    |                    |                          |
| Low          | 02 | 11.77% |                       |                      |                    |                    |                          |
| Total        | 17 | 100%   | 7.242                 | 3.841                | 0.000              | 1                  | Significant              |

It is evident from Table (03) that the distribution of elderly individuals who engage in sports activities, specifically in the mental health domain, shows that the calculated Chi-square value is 7.242, which is higher than the tabulated Chi-square value of 3.841. The p-value is 0.000, which is much lower than the conventional significance level (0.05), indicating that the results are statistically significant.

Regarding mental health and the impact of sports, we observe that a large proportion of elderly individuals who regularly participate in physical activities exhibit high levels of mental health. From a sociological perspective, this can be explained by the fact that sports contribute to improving mood, reducing stress, and enhancing overall well-being.

The social support available through sports activities, such as peer interaction and forming new friendships, enhances the sense of belonging and reduces feelings of isolation. As for medium mental health, a portion of the sample showed moderate levels of mental health, which may suggest that these individuals partially benefit from the psychological benefits of sports but may face other challenges that affect their mental health. These individuals may require additional support programs or

psychological guidance to maximize the benefits of physical activity. On the other hand, the small percentage of elderly individuals with low levels of mental health indicates that there may be other factors affecting their mental well-being, limiting their ability to benefit from sports activities. These factors could be related to chronic health issues, lack of social support, or other life stresses.

**Statistical significance:** The results indicate that the differences in mental health levels among individuals are not random but are significantly influenced by participation in physical activity. This suggests a strong relationship between physical activity and improved mental health among the elderly.

Therefore, enhancing sports programs aimed at the elderly should be promoted as an effective means of improving their mental health. These programs should include a variety of engaging activities that meet their needs and physical abilities. Additionally, providing psychological support and counseling should be offered to those elderly individuals who show moderate or low levels of mental health. Encouraging social interaction through sports activities can also enhance the sense of belonging and social interaction. Therefore, sports programs should be designed to encourage interaction and cooperation among participants.

Thus, the data from the table above shows that physical activity has a significant positive impact on the mental health of the elderly. By analyzing the results, it can be concluded that promoting and supporting physical activity through comprehensive programs can have a long-term positive effect on the psychological quality of life for this population.

### **8.2. Presentation of the Second Hypothesis Results:**

- Physical activity affects the physical fitness and general health of the elderly.

**Table (04): Distribution of the Study Sample Related to the Physical Health Domain.**

| Alternatives | N  | %      | Calculated Chi-square | Tabulated Chi-square | Significance Level | Degrees of Freedom | Statistical Significance |
|--------------|----|--------|-----------------------|----------------------|--------------------|--------------------|--------------------------|
| High         | 08 | 47.06% |                       |                      |                    |                    |                          |

|        |    |        |       |       |       |   |             |
|--------|----|--------|-------|-------|-------|---|-------------|
| Medium | 05 | 29.41% |       |       |       |   |             |
| Low    | 04 | 23.53% | 5.683 | 3.841 | 0.000 | 1 | Significant |
| Total  | 17 | 100%   |       |       |       |   |             |

From Table (04), it is evident that the distribution of elderly individuals who engage in sports activities, specifically in the physical health domain, shows that the calculated Chi-square value is 5.683, which is higher than the tabulated Chi-square value of 3.841. The p-value is 0.000, which is much lower than the conventional significance level (0.05), indicating that the results are statistically significant. Regarding physical health and the impact of sports, we observe that:

○ **High Physical Health:**

- A large percentage of elderly individuals who regularly engage in physical activity demonstrated high levels of physical health (47.06%). From a sociological perspective, this indicates that physical activity significantly contributes to enhancing physical health among the elderly, leading to improved physical fitness and greater ability to perform daily activities efficiently.
- This can have a positive impact on the independence of the elderly, enhancing their sense of capability and self-efficacy.

○ **Medium Physical Health:**

- A portion of the sample (29.41%) showed medium levels of physical health, which may suggest that these individuals partially benefit from the physical advantages of sports but may not engage in it regularly enough or face other health challenges that limit their full benefit.
- This group could benefit from tailored sports programs that consider their physical abilities and health challenges.

○ **Low Physical Health:**

- A notable percentage (23.53%) of elderly individuals have low levels of physical health, indicating the presence of hindering factors that affect their ability to engage in and benefit from physical activity.

- These factors may be related to chronic illnesses, lack of resources or necessary support, or insufficient awareness of the importance of physical activity.

The results suggest that differences in physical health levels among individuals are not random but are significantly influenced by participation in physical activity. This means there is a strong relationship between physical activity and improved physical health among the elderly.

Thus, the data from the table above shows that physical activity has a significant positive impact on the physical health of the elderly. By promoting and supporting physical activity through comprehensive and tailored programs, notable improvements in the physical quality of life for this group can be achieved. These findings support the importance of sports as an integral part of comprehensive healthcare for the elderly.

### 8.3. Presentation of the Third Hypothesis Results:

- Physical activity enhances social interaction and involvement in community activities among the elderly.

**Table (05): Distribution of the Study Sample Related to the Social Relationships Domain.**

| Alternatives | N  | %      | Calculated Chi-square | Tabulated Chi-square | Significance Level | Degrees of Freedom | Statistical Significance |
|--------------|----|--------|-----------------------|----------------------|--------------------|--------------------|--------------------------|
| High         | 10 | 58.82% |                       |                      |                    |                    |                          |
| Medium       | 06 | 35.30% |                       |                      |                    |                    |                          |
| Low          | 01 | 05.88% |                       |                      |                    |                    |                          |
| Total        | 17 | 100%   | 6.325                 | 3.841                | 0.000              | 1                  | Significant              |

From Table (05), it is evident that the distribution of elderly individuals who engage in sports activities, specifically in the social relationship's domain, shows that the calculated Chi-square value is 6.325, which is higher than the tabulated Chi-square value of 3.841. The p-value is 0.000, which is much lower than the conventional significance level (0.05), indicating that the results are statistically significant. Regarding social relationships and the impact of sports, we observe that:

○ **High Social Relationships:**

- The majority of elderly individuals who regularly engage in physical activity demonstrated high levels of social relationships (58.82%). From a sociological perspective, this indicates that physical activity significantly contributes to enhancing social relationships.
- Sports activities provide opportunities for social interaction, forming new friendships, and strengthening social networks, which helps improve the sense of belonging and reduce social isolation.

○ **Medium Social Relationships:**

- A portion of the sample (35.30%) showed medium levels of social relationships, which may suggest that these individuals benefit somewhat from physical activity in enhancing their social interaction but may face certain limitations or barriers preventing them from achieving higher social interaction.
- These limitations might include a lack of opportunities for interaction outside of sports activities or personal challenges such as shyness or social anxiety.

○ **Low Social Relationships:**

- A small percentage (05.88%) of elderly individuals have low levels of social relationships, indicating that there are obstacles preventing them from fully benefiting from the social opportunities provided by sports activities.
- These obstacles may be related to physical or mental health issues or a lack of social support.

The results suggest that differences in social relationship levels among individuals are not random but are significantly influenced by participation in physical activity. This means there is a strong relationship between physical activity and improved social relationships among the elderly.

Thus, the data from the table above shows that physical activity has a significant positive impact on the social relationships of the elderly. By promoting social interaction and providing opportunities for communication and collaboration,

significant improvements in the social quality of life for this group can be achieved. These findings support the importance of sports as an effective tool for enhancing social integration and psychological well-being among the elderly.

## 8.4. Presentation of the Fourth Hypothesis Results:

- Sports contribute to enhancing and improving the environmental quality for the elderly.

**Table (06): Distribution of Middle School Students Related to the Environment Domain.**

| Alternatives | N  | %      | Calculated Chi-square | Tabulated Chi-square | Significance Level | Degrees of Freedom | Statistical Significance |
|--------------|----|--------|-----------------------|----------------------|--------------------|--------------------|--------------------------|
| High         | 07 | 41.18% |                       |                      |                    |                    |                          |
| Medium       | 05 | 29.41% |                       |                      |                    |                    |                          |
| Low          | 05 | 29.41% |                       |                      |                    |                    |                          |
| Total        | 17 | 100%   | 4.943                 | 3.841                | 0.000              | 1                  | Significant              |

From Table (06), it is evident that the distribution of elderly individuals who engage in sports activities, specifically in the environment domain, shows that the calculated Chi-square value is 4.943, which is higher than the tabulated Chi-square value of 3.841. The p-value is 0.000, which is much lower than the conventional significance level (0.05), indicating that the results are statistically significant. Regarding the impact of sports on environmental awareness and quality of life, we observe that:

### ○ High Environmental Awareness:

- A significant percentage of elderly individuals who regularly engage in physical activity demonstrated high levels of environmental awareness (41.18%). From a sociological perspective, this can be explained by the fact that sports activities, especially those conducted in open and natural spaces, enhance awareness and interaction with the surrounding environment.
- This connection may lead to an improved quality of life by fostering a sense of connection to nature and increasing appreciation for environmental factors.

○ **Medium Environmental Awareness:**

- A portion of the sample (29.41%) showed moderate levels of environmental awareness, which may indicate a moderate engagement with environmental activities. These individuals may be aware of the importance of the environment but do not participate deeply in environmental activities.
- This group could be further engaged through educational and awareness programs that increase their interest and participation in environmental issues.

○ **Low Environmental Awareness:**

- A notable percentage (29.41%) of elderly individuals have low levels of environmental awareness, indicating the presence of barriers or a lack of opportunities that stimulate environmental engagement.
- These barriers may be related to health or spatial limitations, or a lack of programs aimed at enhancing environmental awareness among the elderly.

The results suggest that differences in environmental awareness levels among individuals are not random but are significantly influenced by participation in physical activity. This indicates a strong relationship between physical activity and improved environmental awareness among the elderly. Thus, the data from the table above shows that physical activity has a positive impact on environmental awareness among the elderly. By promoting interaction with the environment and providing opportunities for learning and participation, tangible improvements in the quality of life for this group can be achieved, contributing to a more sustainable and environmentally conscious society. These findings support the importance of integrating sports with environmental education to enhance overall health and well-being.

## **9. Study Findings and Recommendations:**

### **9.1. Study Findings:**

This study examines the impact of physical activity on the quality of life of the elderly at GY M in M'sila. The study aims to understand the extent to which regular

participation in sports activities affects various aspects of the lives of the elderly, including mental health, physical health, social relationships, and environmental awareness. The study reached the following conclusions:

- **Mental Health:** High results: 52.94% of participants showed high levels of mental health. This is supported by statistical significance, with a calculated Chi-square value of 7.242 (significant at the 0.05 level), indicating a significant impact of physical activity on mental health.
- **Physical Health:** High results: 47.06% of participants showed high levels of physical health. This is supported by statistical significance, with a calculated Chi-square value of 5.683 (significant at the 0.05 level), demonstrating a positive impact of physical activity on physical health.
- **Social Relationships:** High results: 58.82% of participants showed high levels of social relationships. This is supported by statistical significance, with a calculated Chi-square value of 6.325 (significant at the 0.05 level), confirming the impact of physical activity on enhancing social relationships.
- **Environmental Awareness:** High results: 41.18% of participants showed high levels of environmental awareness. This is supported by statistical significance, with a calculated Chi-square value of 4.943 (significant at the 0.05 level), highlighting the impact of physical activity on enhancing environmental awareness.

## 9.2. Study Recommendations and Suggestions:

- **Develop Tailored Sports Programs:** GYM should design sports programs that meet the needs and abilities of the elderly, considering individual differences. These programs can include activities such as strength training, flexibility exercises, aerobics, and yoga.
- **Organize Awareness Workshops:** It is important to organize workshops and seminars to raise awareness about the benefits of physical activity and its positive impact on quality of life. These workshops can cover topics like practicing sports safely and effectively.

- **Encourage Social Participation:** Activities that promote social interaction among the elderly should be encouraged, such as organizing group sports events or friendly competitions. These activities help reduce feelings of loneliness and strengthen social bonds.
- **Provide Psychological Support:** Psychological support should be provided to the elderly through counseling programs or support groups. These initiatives can help address the psychological challenges they may face.
- **Regular Program Evaluation:** It is important to conduct regular evaluations of the effectiveness of sports programs offered to the elderly, using surveys or interviews, to ensure that the desired goals are achieved and necessary improvements are made.
- **Collaborate with Other Institutions:** GYM can collaborate with local health and community institutions to provide additional resources and raise awareness about the importance of physical activity. Such partnerships can contribute to improving the quality of services provided.
- **Encourage Future Research:** Future research that explores the effects of physical activity on various aspects of life for the elderly, including mental and social health, should be supported and encouraged.
- **Involve Family and Community:** The role of family and community in supporting the elderly to engage in physical activity should be enhanced by creating an environment that encourages movement and activity.
- **Offer Participation Incentives:** Incentives can be provided to the elderly for participating in sports programs, such as discounts on memberships or rewards for regular participants.
- **Ensure Suitable Facilities:** GYM should ensure that its facilities are suitable and safe for the elderly, with appropriate equipment that facilitates their participation in sports.

By implementing these suggestions and recommendations, GYM can contribute to improving the quality of life for the elderly, leading to a healthier and more prosperous community.

### **10. Conclusion:**

We can conclude that physical activity plays a vital role in improving the quality of life for the elderly, as demonstrated through the case study of GYM in M'sila. By analyzing the data and evaluating the personal experiences of the participants, it became clear that regular exercise contributes to enhancing both physical and mental health, reducing feelings of loneliness and depression, and ultimately improving overall well-being.

The findings show that sports activities are not limited to physical benefits but also extend to social and psychological dimensions. Physical activity encourages social interaction and communication among individuals, contributing to building a cohesive community. Additionally, the involvement of the elderly in sports programs at GYM boosts their self-confidence and their ability to face daily life challenges.

These results are not only academically significant but also carry important practical implications for decision-makers and local communities. Relevant authorities should provide more sports programs tailored to the elderly and raise awareness of the importance of physical activity at this stage of life. Encouraging partnerships between health and sports institutions is also recommended to ensure the sustainability and increased accessibility of these programs.

Therefore, we must recognize that improving the quality of life for the elderly is not just a health goal but a social commitment that requires collective efforts and cooperation from the entire community. Promoting physical activity and strengthening social bonds among individuals of all ages can create long-lasting positive effects, ensuring a better life for the elderly and contributing to the development of a healthy and prosperous society. With this, we lay the foundation for

a deeper understanding of the role of physical activity in the lives of the elderly, and we hope this study serves as a catalyst for further research in this vital field.

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