

The role of health-related fitness elements on some health manifestations among adolescent female pupils -field study for the municipality of Laghouat-

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Abstract

This study aims to find out the role of some physical fitness elements related to health upon healthy manifestations in the city of Laghouat. The researchers conducted a descriptive study using the questionnaire via internet on sample individuals through social media. This is due to special health condition we are living with concerning covid-19. The participants were 100 (female students) in high school, in which they were randomly chosen. To process the results statistically, we used the percentage, Arithmetic mean and Standard deviation. These researchers pointed out that cardiorespiratory fitness, musculoskeletal fitness, muscular endurance and physical structure have an effective role in maintaining the physical and psychological health of the students. The main result that was deduced is: There is a positive effect of health-related fitness elements on the health aspects of teenage girls. The researchers also recommended to follow the healthy life pattern, which is a significant means to prevent several chronic diseases, in which there is a correlation between the fitness elements associated with psychological health and physical health.

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I. Introduction

There has been a major development in recent decades about the concept of sports, exercise and the need to exercise by different ages for both genders. Sports has become a need and even a necessity for its various benefits to health (Saleh, 2014). Health, medical and international sports institutions and organizations have recently emphasized the importance of fitness elements related to health. Knowing that there are many scientific evidences to confirm the association of these elements to the health of the individual (Attari, 2018). The regular practice of sports activities during the adolescence phase increases the short- and long-term efficiency of the teenager as the man of the future (Bakshout, 2019). This was stressed by Abdul Haq et al (2010) in which they confirm that improving the level of fitness is one of the most important objectives of physical education, because it is positively related to several areas such as educational attainment, physical development and mental, psychological, physical and social health. We find that major countries such as The United States of America, The European countries and even the gulf countries give great importance to the physical fitness tests related to health in the school environment. For example, the Kingdom of Jordan has allocated the King's Prize for Physical Fitness to School Students (al-Rubadi, 2012).

Physical fitness helps to improve the self-concept, positively influence the overall personality pattern and increase the orientation towards internal attribution in attributing the causes of success and failure. It also increases social interactions within the school environment. Sports activity plays a role in reducing anxiety, stress and frustration (Al-Arjan, 2015). It is through practicing sports that the individual can feel pleasure, fun, psychological comfort and mood, and he can also control oneself in different playing situations. Since sport is one of the main channels in satisfying and discharging the energy inside the human body, research has proven the extent of the impact of sport on the behavior of individuals. Practitioners have a balance of emotions, the ability to control and tolerate pain, self-confidence and self-esteem (Hassan, 2020). Recent studies and scientific research indicate that all these health, mental and psychological problems are the result of lack of movement and lack of sports activities (Bel Abbas, 2020). The female is able to practice all kinds of sports due to its physiological and mechanical nature by virtue of the physical composition of women. She masters a range of sports such as gymnastics,

swimming, aerobics, diving and any other activity that requires muscle flexibility, agility, balance and muscle compatibility (Moanorzi, 2015). In the pedagogical program of physical education and sports, sports activities take a lot of attention among adolescent girls due to the positive repercussions of it and its contribution to satisfying their needs and desires. That explains their extreme interest in it, which indicates that it responds to a lot of their individual needs. The existence of healthy manifestations of these activities affects students, and in turn it earns them many high educational and ethical qualities.

This was confirmed by Hassan Allawi (2018), stating that research and studies that have tried to study the personal aspects of a girl's athleticism or physical activity appear to be very few compared to research and studies that have tried to study the personal aspects of male athletes or practitioners. Based on the above, monitoring the levels of physical activity and evaluating health-enhancing programs in the Algerian school environment for children and adolescents is an indispensable necessity and basic pillar. It cannot be dispensed with within the public health and preventive medicine services system (Oumri, 2018).

The following is a presentation of the most important studies and previous related research.

Al Arabi Mohammed and Herry Stud (2018) concluded the relationship between health awareness and health-related fitness. One of the most significant findings of the study is: the relationship between health awareness and fitness related to health.

Moreover, Saad Mohamed et al (2019) discussed a study aimed to identify health-related fitness tests for middle school male students in the west of Algeria. The researchers recommended the necessity to rely on a test battery for health-related fitness elements.

There are also the study of Qwasmiya (2020) that aimed to identify the role of physical and sports activity among teenagers in reducing social shyness. The results were that physical and sports activity has a vital role in reducing social shyness. Furthermore.

Khojaet et al (2019) conducted a study aimed to improve the level of some respiratory physiological indicators and fitness elements concerning the health of asthma patients. The results concluded that physical activities have a positive effect on some respiratory physiological indicators and some health-related fitness elements in asthma patients. In addition to the study of Marrah et al (2019) in which it aimed to determine standard levels of health-

related fitness elements in middle school students within some western Algerian middle schools. The researchers achieved the construction of standard levels for females and recommended that standard levels should be adopted in the process of evaluating students in an objective manner.

Through all of the above the general question can be formulated as follows: Is there a positive effect on the health-related fitness elements on female adolescents' health aspects? Through this, we ask the following partial questions:

- ✓ Does health-related fitness elements have positive impact on female adolescents' physical appearances?
- ✓ Does health-related fitness elements have positive impact on female adolescents' psychological manifestations?

II. Method and tool

2.1. Study approach: in our research, we have adopted a descriptive approach because it is appropriate to the nature of the study under taken.

2.2. The study community and participants: The study community is represented by all secondary school students in the province of Laghouat. The participants were 100 female students, in which they were selected in a random manner.

Search fields:

Spatial field: The study was carried in Laghouat.

Temporal field: The study was conducted in the period from 08 to 30 November 2020.

2.3. Research variables

2.3.1. Independent Variable: Health-Related Fitness Elements.

2.3.2. Dependent Variable: Healthy Manifestations.

2.4. Data collection tools: In order to achieve the objectives of the study, the two researchers used the electronic questionnaire form technique distributed via social media platforms (internet) with high click level such as Facebook, and Instagram The study tool was the questionnaire in which the form included a set of closed questions distributed to:

The first axis: physical health manifestations in seven questions.

The second axis: psychological health manifestations in seven questions.

2.5. The honesty of the questionnaire (apparent honesty):

Honesty: It means the extent to which the tool achieves the purpose for which it was prepared. It measures what it was prepared to measure only, so do not

measure a mistake or something else that we did not want to measure (Agha, 1997). preparing the questionnaire in its initial form, the researchers should have made sure of its content with the prior opinion of the specialists over its suitability for what it was established to measure. In order to establish the tool's honesty, an arbitrators' opinion survey method was used and the tool was presented to a group of university professors among educational, and sports specialists who gave their remarks on the relevance of the questionnaire's paragraphs, its degree of relationship and the clarity of its language. In the light of this, some paragraphs were adjusted and some were deleted, the initial image of the scale was displayed on (04) specialized arbitrators.

Table (01): shows the list of arbitrators

| Name | Rank | University |
|-----------------|------------------------|------------------------|
| Hizoum Mohammed | Lecturer professor "A" | University of Laghouat |
| Sghir nourdin | Lecturer professor "A" | University of oran |
| Kattaf Mohammed | Lecturer professor "A" | University of Laghouat |
| Bait Aissa | Lecturer professor "A" | University of Laghouat |

2.6. The stability of the questionnaire: we calculated the stability coefficient by Alpha Cronbach method and the following table shows the Cronbach's Coefficient Alpha relative to the questionnaire stability measurement.

Table (02): Calculation of stability coefficient by Alpha Cronbach method

| Participants | Total questions | Alpha Cronbach |
|--------------|-----------------|----------------|
| 10 | 14 | 0.797 |

Source : Based on SPSS outputs

We note from Table 02 that the Cronbach's Coefficient Alpha of all the questionnaire axis ranges reached (.0797), which prove the high stability value and shows that the stability value is high and indicates that the search tool is highly stable, making us fully confident that our questionnaire is correct and appropriate for the study and the hypotheses testing

2.7. The Objectivity: The rise of the coefficient of both honesty and stability confirms the validity of the questionnaire in measuring what it was designed for (Saidi et al, 2020).

2.8. The statistical methods used in the study

- The SPSS program has been used.

- Repetitions and percentage.
- The arithmetic mean.
- Standard deviation.
- The Cronbach's Coefficient Alpha: We used it to calculate the stability of the study tool.

III. Results:

3.1. Presentation and analysis of the first hypothesis results: There is a positive effect of health-related fitness elements on the physical health of female students.

Table (03): shows the impact of health-related fitness on physical appearances

| Sentences | Always | Sometimes | never | Arithmetic mean | Standard deviation |
|---------------------------------------------------------------------------|--------------|--------------|--------------|-----------------|--------------------|
| | Percentage % | Percentage % | Percentage % | | |
| The teacher helps solving physical problems. | 60% | 25% | 15% | 0.074 | 0.744 |
| Avoid practicing fitness elements in front of others for fear of mockery. | 20% | 40% | 40% | 0.075 | 0.752 |
| I improved my cardiorespiratory fitness by continuing to exercise. | 70% | 15% | 15% | 0.074 | 0.744 |
| Make sure to improve my fitness by exercising muscle power. | 60% | 20% | 20% | 0.080 | 0.804 |
| Avoid practicing exercises related to flexibility. | 30% | 50% | 20% | 0.070 | 0.704 |
| I have a lot of desire to gain muscular endurance through exercise. | 70% | 18% | 12% | 0.070 | 0.699 |
| I care a lot about maintaining my physical health. | 65% | 15% | 20% | 0.081 | 0.809 |

Source: Based on SPSS outputs

From the answers of the first question, table (03) reveals that 60% of the overall sample claims that the teacher helps female pupils to overcome their physical problems, which is the highest value. It was followed by 25% who state that the teacher sometimes helps them to do so. The lowest ratio was 15% (never) who claimed the opposite. The arithmetic mean was 0.074 and the standard deviation was 0.744. This shows us that teachers care about the physical problems of the students.

Concerning the second question, it was found that 40% of the pupils are not afraid to exercise health-related fitness in front of others so that they answered never. 40% answered sometimes so that the lowest percentage was 20%. The arithmetic mean was 0.075 and the standard deviation was 0.752.

With regard to the third question, 70% considered an improvement in respiratory fitness when maintaining sports, while 15% sometimes see the opposite. In addition, another 15% answered never which show that their respiratory fitness is not improving. The arithmetic mean was 0,074 and the standard deviation was 0.744.

The findings also showed in the fourth question that 60% are keen to improve their fitness by exercising muscle power, which is the highest percentage. While 20% are sometimes willing to improve their fitness and exercise muscle power. Furthermore, the last 20% are never keen to work out. The arithmetic mean was 0.080 and the standard deviation was 0.804.

In the fifth question, it became clear that 30% of female students did not avoid flexibility exercises so that they answered always. 50% answered sometimes which shows that they avoid flexibility exercises from time to time, but the lowest percentage is 20% which answered never. This explains to us that students are interested in exercising flexibility exercises. The arithmetic mean was 0.070 and the standard deviation was 0.704.

In the sixth question, 70% wanted to gain muscular endurance through exercise. 18% answered that sometimes they wanted to gain muscular endurance, but 12% answered never. The arithmetic mean was 0.070 and the standard deviation was 0,699. In the seventh question, the highest ratio was 65% who care about maintaining their health, followed by 20% who answered never, followed by 15% who answered sometimes which was the lowest ratio. Further, the arithmetic mean was 0.081 and the standard deviation was 0.809. Through these findings, the researchers concluded that the role of health-related fitness affects physical health.

3.2. Presentation and Analysis the second hypothesis results: There is a positive effect of health-related fitness elements on the psychological health of female students.

Table (04): shows the impact of health-related fitness on psychological manifestations

| sentences | Always | Sometimes | Never | Arithmetic mean | Standard deviation |
|---------------------------------------------------------------------------------|-------------|-------------|--------------|-----------------|--------------------|
| | Percentage% | Percentage% | Percentage % | | |
| I can control my emotions during exercising physical fitness related to health. | 50% | 48% | 02% | 0.054 | 0.541 |
| I am calm during exercising physical fitness related to health. | 71% | 09% | 20% | 0.081 | 0.810 |
| I am amused during exercising physical fitness related to health. | 90% | 10% | 00% | 0.030 | 0.302 |
| I am nervous during exercising physical fitness related to health. | 04% | 40% | 46% | 0.071 | 0.709 |
| I am eager to exercise physical fitness related to health. | 80% | 15% | 05% | 0.054 | 0.539 |
| I am bored during exercising physical fitness related to muscle power. | 05% | 15% | 80% | 0.054 | 0.539 |
| I am worried about my friends during cardiorespiratory fitness practice. | 10% | 52% | 38% | 0.064 | 0.637 |

Source: Based on SPSS outputs

It is evident from table (04) in the first question that 50% of the overall sample of female pupils can control their emotions, followed sometimes by 48%, while the lowest percentage was never by 02%. The arithmetic mean was 0,054, while the standard deviation was 0.541. This confirms the good psychological state of the female students when exercising health-related fitness.

With regard to the second question, 71% feel stable during the practice, as they remain calm and sober, and 20% of the total sample felt instability and lack of calm, while the lowest percentage was 09% who answered sometimes. The arithmetic mean was 0.081 and the standard deviation was 0.810.

In the third question, 90% of the pupils enjoy the practice which is the highest value, and 10% of the pupils who sometimes have fun. The percentage of students who answered never was 0%. The arithmetic mean was 0.030 and the standard deviation was 0.302.

We found in the fourth question that the pupils feel nervous by 04% which is a small ratio due to the psychological confidence and high efficiency of

the pupils and their ability to overcome difficulties. 40% answered sometimes, followed by never with 46%. The arithmetic mean was 0.071 and the standard deviation was 0.709.

In the fifth question, it was found that 80% of female students have great desire to exercise health-related fitness which is the highest percentage, followed by 15% of them who believe that sometimes they want to exercise health-related fitness by 05%. This confirms that the students care about their psychological health. Moreover, the arithmetic means was 0.054 and the standard deviation was 0.539.

Regarding the sixth question, it was found that students do not get bored during the exercise of muscle power with 80% which is the higher value, followed by 15% who answered sometimes, while 05% did not feel bored at all during the exercise of muscle power. The arithmetic mean was 0.054 and the standard deviation was 0.539.

About the seventh question, the lower ratio was 10% for pupils who were concerned during a cardiorespiratory fitness exercise, 52% were sometimes anxious and 38% never felt uncomfortable. As for the arithmetic mean, it was 0.064 and the standard deviation was 0.637. Through these results, we researchers have concluded that the role of associated fitness affects the psychological health.

IV. Discussion

Referring to table (03), it was found that the percentage of physical health among female pupils in all sentences shows that the role of health-related fitness elements is very relevant to the health of female pupils. This is what was found in the study of (Al Arabi , 2018). The study concluded the existence of a link between health awareness and health-related fitness tests. Health-related fitness exercises lead to cardiorespiratory fitness, muscle power and flexibility. Thus, a healthy lifestyle has become an important way to prevent many chronic diseases. The good body shape of female pupils improves the respiratory and periodic system. From the latter, there is a correlation between fitness elements related to health and physical health. The Study of (Idris et al, 2019) agreed that physical activities have a positive effect on some respiratory physiological indicators. This has been shown by many studies and research that there is a close correlation between the physical fitness and overall health of the individual (Boussafiet, 2016). Therefore, teachers should take into account the quality of the exercise to achieve the health benefits, especially increasing the hours of physical

education classes in order to raise the level of physical characteristics among female adolescents. (Hany and Ismail , 2014) stated that the practice of physical activity contributes to improving the health of the individual and gaining him good strength and works to raise the physical competence of the individual, as well as the efficiency of the functional organs of the body, and works to affect the psychological, mental and social aspects of the individual, which positively affects the individual's life system Whether at work or at rest. On this basis it can be said that our hypothesis has been realized

By referring to table (04), the findings show the role of health-related fitness elements in maintaining psychological health by giving female pupils calmness, non-anxiety and non-stress. Not only that, it also prevents psychological decline during adulthood phase. This agrees with the Study (Qwasmiya, 2020), which concluded that exercising physical and sports activities by adolescents reduce social shyness, leading to a sense of psychological health among female students. As well as the study of (Saad et al, 2019) aimed to clarify the necessity to rely on a test battery for health-related fitness elements, which explains the impact of health-related fitness on mental health. (Al-Hori, 2016) explains that the practice of sport has many benefits for psychological health, including: satisfying the needs of the individual in order to build self-esteem and build self-confidence and encourage him to practice sports and fulfill the duties required of him that push him to build more confidence, as well as regularity in sports training programs and their diversity is one of the Helpful reasons to get rid of some types of emotional anxiety and improve mood, and the individual acquires positive educational values that are accepted by society aimed to clarify the necessity to rely on a test battery for health-related fitness elements, which explains the impact of health-related fitness on psychological health. On this basis it can be said that our hypothesis has been realized.

V. Conclusion

In light of what the results have shown, we have concluded from the analysis of the hypotheses results that the fitness elements associated with health have a positive impact on psychological and physical health. Therefore, one of the most important strategic objectives that we must work towards is to raise awareness about the importance of developing health-related fitness elements to avoid diseases among children, teenagers and old

people. It is also necessary to measure the level of physical fitness among students, provide them with appropriate awareness about the importance of fitness and attract attention to health-related studies in order to prevent diseases.

-Inviting researchers, those interested and the authorities related to scientific and educational research to conduct a similar study on the other segment of students, such as primary and middle school students, and it is preferable to study using the experimental method.

-Since the study was limited to some health aspects of adolescents represented in physical and psychological health, we require other studies to be done on other aspects.

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