

The role of outdoor walking in alleviating some psychological stresses caused by Covid 19 among High school students

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Abstract:

The study in our hands aims to try to know the role of outdoor walking in alleviating some psychological stresses caused by Covid-19 among High school students, for that, we followed the descriptive approach using the survey method where the study sample consisted of 20 High school students were they were chosen randomly from the original community that represents all High school students at the level of the city of Relizane (Algeria). For data collection, we used the questionnaire, in the same time, for the treatment of the results, we used Pearson correlation coefficient in addition to the chi-square test, the most important results of the study came that the outdoor walking has a role in reducing the psychological stress caused by Covid-19 among High school students. We suggested placing a psychologist in the High school students units, to help them overcome their psychological problems, and to make sure to include outdoor walking in their educational programs because it has a significant impact on their mental health

Keywords:walking ,The open air , psychological stresses ,Covid 19 ,High school students.

1- Introduction :

Walking is one of the least expensive, simple and easiest physical activities and does not require any equipment or special skills. It is also a way to improve physical fitness, maintain health and reduce stress. Unfortunately, it did not receive the appreciation it deserves, whether in terms of health or its value as a mean of transportation and entertainment. In the present era, we see that the more people develop, the less they practice it, In this field, the study of **EL Haj Sayaad** named The Effectiveness Of Walking On A Physiological Variable (hypertension) In A Class Of Elderly (60-65) Years, which aimed to highlight the importance of walking and its impact on some physiological variables, such as controlling complications resulting from high blood pressure in the elderly, in order to find a solution to this problem, the researcher followed the experimental approach by designing two groups, one experimental and the other a control group, on a sample of 47 elderly people over 60 years old who suffer from high blood pressure, the study shows that the use of the proposed walking program positively affects some physiological variables in the elderly, which are high blood pressure, heart rate and weight¹¹In the same context, the study of **Ruqayya, Muhammad Mahdi**, tagged with recreational walking and its impact on the state of psychological flow of the elderly in the shadow of the Corona pandemic, confirmed -After finding that there are statistically significant differences between the means of the pre and post tests in the level of psychological flow- that the proposed program for recreational walking had a positive effect with regard to the state of psychological flow of the study sample, pointing out at the same time that the practice of recreation in general and collectively with peers generates a spirit of cooperation, joy and happiness among individuals, and reduces the feeling of loneliness. especially that recreational walking is one of the important and positive factors for changing mood and psychological state¹⁰. On the other hand, and without neglecting the health aspect of recreational walking, a study under the name of walking and its effect on lowering cholesterol levels in the blood proved that the walking sports program has a significant effect on reducing the total cholesterol ratio (TC) and reducing the Triglycerides ratio (TG), as well as reducing the bad cholesterol ratio (LDL), in addition to

the Increasing of the good clestrol ratio (HDL)⁷ however ,With regard to diabetic patients, the study of **Walid Abdel-Amir Al-Mani**, which tagged with the effect of using walking and jogging exercises on some functional variables of diabetic patients treated with tablets, confirmed that the walking, jogging and running exercises of the aerobic nature have lessened all study variables, and that treating diabetics with the therapeutic triangle (medicine, nutrition exercise) is better than treating with only nutrition and medicine, moreover,some safe distances have been concluded. These distances can be used as safety distances for diabetics aged from 02to 02years without need to use device. having in mind that the patient may have to stop in case of feeling tired³. Furthermore, a study named The effect of a walking training program at the LIPOXmax point on the body mass index in male type II diabetes in the 40-60 age group, by **Bait Aissa, Hadjaissarafik, Bouslah Nadir**, showed that walking to the point LIPOXmax positively affects the reduction in the body mass index in men with type II diabetes in age group 40-60 years old after applying a 12 weeks walking program, and doing the pre and post test of the body mass index (BMI), witch showed that there are Statistically significant differences between the pre-test and the post-test in favor of the post-test in body mass index⁴

Moreover, the study of **Fabien D. Legrand, Philippe Jeande,Fabien Beaumont and Guillaume Polidori**, emphasizes the psychological role that outdoor walking plays from a psychological point of view and its positive and negative affects, importantly the study aimed at comparing the effects of walking in a natural or urban field setting on positive and negative affect. For this purpose, 150 students (46 female, 104 male; mean age: 20.2 years) were randomized into one of three groups: Green Walking, Urban Walking, no-exercise. Positive and negative affect ratings were collected for each participant before and after walking (or before and after attending a class in the CTRL group), Participants in the GW and UW groups reported significant reductions in negative affect pre- to post walking. However, positive affect was increased only for participants in the GW group. This finding may have meaningful implications for mental health professionals who treat patients with significant emotional distress or mood instability⁶

However, the study of **BellilaSeyf_Eddine** showed that There is no statistically significant relationship between the quality of life for working women and their exercise of outdoor walking⁵, apart from this, the study of **Shaima Mohammed Ashour Al-Khawaja** named The effectiveness of using rehabilitative exercises versus walking on the deflection of excessive extension of the knees in children with spastic cerebral palsy, also showed that Rehabilitation exercises are superior to walking in reducing the degree of overextension of the knees²

High school students are exposed to great psychological pressure that requires adaptation, especially during crises, similar to what we are going through in light of the Corona pandemic, which requires a great deal from them. of courage and endurance so that they do not have to threaten their mental health. Categories that need to represent psychological resilience, which is “a dynamic process that refers to a person’s ability to deal effectively with adversity. There is no doubt that Covid-19 was one of the most stressful situations in the lives of high school students, and the only way these stresses were relieved was through walking in outdoors, which prompted us to ask the following questions:

Does outdoor walking have a role in reducing the phenomenon of anxiety caused by Covid 19 among High school students ?

- Does outdoor walking have a role in reducing the frustration caused by Covid 19 among High school students ?
- Does outdoor walking have a role in reducing the phenomenon of stress caused by Covid 19 among High school students ?

02 - Material & methods:

2-1 The method followed in the study: The researcher used the descriptive approach in a survey method due to its suitability for the nature of the current study, the descriptive approach depends on the study of the reality or the phenomenon as it is actually as a precise description and It is interested in describing it accurately and expressing it qualitatively and quantitatively, and since the content of the research revolves around a social phenomenon, namely ‘The role of outdoor walking in alleviating some psychological stresses caused by Covid 19 among High school students’, , by collecting various informations on it, revealing its various aspects, determining the relationships between its elements, analyzing and interpreting it, we considered it necessary to use the descriptive approach to match the

specifications, objectives, and requirements of the study with this approach. If the researcher wants to study a phenomenon, the first step he takes is describing and presenting the phenomenon he wants to study and collecting accurate descriptions and informations about it and its form.

2-2 Research Community: The research community is all High school students at the level of the state of Relizane.

2-3 Research sample: The sample in survey research is considered the basis of the research work, and it is defined as a group of individuals on which the researcher builds his work. It is taken from the original community and is honestly representative of it¹⁴, accordingly, the sample was represented by 20 High school students at the level of the OuedRhiou unit.

2-4 Data collection tools: The data collection tool was a questionnaire prepared by the researcher, which was divided into 03 axes with a total of 19 phrases, Where the first axis, which contained 07 phrases, aimed to know the role of outdoor walking in reducing the phenomenon of anxiety caused by Covid 19 among High school students, While the second axis of the questionnaire, which consisted of 06 phrases, aimed to know the role of outdoor walking in reducing frustration, as for the third axis, which consists of 06 phrases as well, it aimed to know the role of walking in reducing the phenomenon of stress caused by work in the thick of the Covid 19 virus.

2-4-1 psychometric properties of the data collection tools: for the purpose of determining the psychometric properties of the data collection tool, the researcher used:

- **Reliability :** to determine the reliability of the questionnaire, the researcher calculated the correlation after applying the questionnaire to the exploratory sample twice with a time gap of two weeks , and the table below shows the results.

Table 01: Show the results of the K-S normality test, And pearson correlation results

	pearson correlation	validity coefficient	K-S statistical value	Kolmogorov-Smirnov Normality Test
1st axis	0.86	0.93	K-S statistical value	0.119
2 nd axis	0.84	0.92	Statistical significance level	0.200
3rd axis	0.87	0.93	significance level	0.05
questionnaire	0.85	0.92		

since the statistical significance of 0.2 is higher than the significance level of 0.05 we can say that the null hypothesis (H0) is validated and that the normality of the data distribution condition is also validated.

We can see from the table that all the values of the Pearson correlation coefficient were high, which indicates that the correlation between the first and second tests is evidence of the questionnaire having a high degree of reliability,

Returning to the validity coefficient, we also see that it has high degrees for all the axes of the questionnaire, which indicates that the questionnaire has a high degree of self-validity.

Through the aforementioned measures, the previous studies that we touched upon, the pilot study that we carried out on the sample and the arbitration carried out by a committee of the Institute's doctors, our tool has become codified and contains three axes and each axis consists of Six expressions. Except for the first axis, as it contains 7 expressions, so that the answer to the axes is (Sometimes, mostly, never)

Table 02: Show the axes of the questionnaire and number of the questions

Number	Axes	Number of questions
1	The first axis: outdoor walking has a role in reducing the phenomenon of anxiety by Covid-19 among High school students	07
	The second axis: outdoor walking has a role in reducing the frustration caused by Covid-19 among High school students	06

The third axis: outdoor walking has a role in reducing the phenomenon of s caused by work in the thick of the Covid 19 virusamong High school students.

2-5 Statistical Tools: The researcher used statistical methods like the SPSS Program to calculate: Frequencies, Percentage, and Chi-square goodness of fit test.

Goodness of fit chi-square test:

$$k^2 = \sum_{i=1}^k \frac{(x_i - m_i)^2}{m_i} \quad x_i: \text{observed frequencies} / m_i: \text{expected frequencies}^1$$

Pearson correlation coefficient $(r = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \sum(y_i - \bar{y})^2}} \quad x_i: \text{values of the x-variable in a sample})^{13}$

3-Results:

3-1 Presentation and discussion of the results of the first hypothesis: This stipulates the role of outdoor walking in reducing the phenomenon of anxiety caused by Covid-19 among High school students.

Table 03: shows the differences in the respondents' responses to the first axis

The question	Frequencies (The ratio)			K ²	K ² Scheduled
	sometimes	mostly	never		
I feel comfortable inside the center during practice	02 10%	18 90%	00 00%	29.2*	5.99
I control my nerves when I walk	00 00%	20 100%	00 00%	40*	
I feel peace of mind when I finish my outdoor walk	05 25%	15 75%	00 00%	17.5*	
I feel confident when I walk	09 45%	11 55%	00 00%	10.3*	
I control my behavior when I walk	00 00%	20 100%	00 00%	40*	
I feel reassured when I go for an outdoor walk	09 45%	11 55%	00 00%	10.3*	
I Feel the fun when it's time to take a walk	08 40%	09 45%	03 15%	3.1	
Total			20		

*: significant at the 0.05 level- degree of freedom 2 - significance level 0.05

From the table, we see that 90% of the sample members feel comfortable inside the center while practicing the walking activity, while all the sample members confirm that they control their feelings when practicing the walking activity. At the same time, the results of the table confirmed that the highest percentage of the responses of the sample members, which amounted to 55%, confirmed that they feel self-confidence and reassurance when going for a walking activity.

chi square goodness of fit test results confirm that, Where it is noted that the test results for 06 phrases out of 07 were statistically significant, as the test values ranged between 10.3 and 40, where these values are greater than the scheduled value of 5.99, except for the last phrase, which states that the practitioner feels pleasure while doing outdoor walking, in which the test value was not statistically significant, as the calculated value was 3.1, which is less than the scheduled value of 5.99, which means that the phrase is not statistically significant, and this is due to the high response rate "sometimes" which reached 40% of the number of respondents. This may be attributed to some internal and external factors that reduce the degree of pleasure during the exercise of walking activity, the most important of which is thinking a lot about work, and the pressure resulting from working under the Corona pandemic.

3-2 Presentation and discussion of the results of the first hypothesis: This stipulates the role of outdoor walking have in reducing the frustration caused by Covid 19 among High school students

Table 04: shows the differences in the respondents' responses to the second axis

The question	Frequencies (The ratio)	K ²	K ²
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	ometimes	mostly	never	Schedule d
I break free when I do outdoor walking	02%	18%	00%	29.2*
I insist on winning and completing the activity	%	0%	%	*
I feel happy when I participate with colleagues in the activity	%	0%	%	*
I feel happy when I do the outdoor walk	%	%	%	33*
I overcome my problems when practicing the activity of outdoor walking	%	%	%	40
I feel more motivated when doing the outdoor walking activity	%	%	%	40
total				5.99

*: significant at the 0.05 level - degree of freedom 2 - significance level 0.05

We notice from the table that all respondents answered “mostly” to each of the second statement, which states that they insist on winning when they practice walking, and that they feel happy when running with their colleagues and friends at work, while 90% of them confirmed that they feel liberated when doing this activity, not only, but also 55% of them said that they feel generally happy when practicing the activity of outdoor.walking.

Apart from this and by returning to the chi square goodness of fit test results, we find that all the results of the test were statistically significant, where the test results ranged between 10.3 and 40, which are statistically significant values at the level of significance of 0.05, except for the phases 5 and 6, where their statistical values came 2.8 and 5.2, which are values less than the scheduled value 5.99, we can see that phase 5 states “the ability of outdoor walking to overcome the problems that afflict the agents during work”, it can be said that the results of the statement were not statistically significant because work problems may not be solved through outdoor walking alone, but require several other things.

3-3 Presentation and discussion of the results of the first hypothesis: This stipulates the role of outdoor walking have in reducing the phenomenon of stress caused by Covid 19 among High school students

Table 05: shows the differences in the respondents' responses to the third axis

The question	requencies (The ratio)			heduled
	netimes	ostly	ver	
I get rid of aggression with others	%	0%	%	5.
I forgive my colleagues when they tease me while I'm outdoor walking	%	%	%	40
I focus on my walking activity	%	%	%	40*
I get rid of pent-ups when I outdoor walk	%	%	%	33*
I resort to walking when I feel unhappy with myself	%	%	%	22*
Continuing my walking activity increases the stability of my psychological state	%	0%	%	*

Total

0

***: significant at the 0.05 level – degree of freedom 2 - significance level 0.05**

Through the table, we can see that all the sample members confirm that outdoor walking helps them get rid of aggression with others, and that continuing to practice this activity has a great role in maintaining the stability of their psychological state, 90% of them also resort to Practicing this activity when they feel unhappy or stressed, while 55% of them state that after practicing the activity of outdoor walking, most of these feelings disappear to be replaced by positive feelings.

We can see that 5 out of 6 phrases in the test results have a statistical significance, particularly, we note that the statistical values of the test ranged between 6.70 and 29.2, all of which are greater than the scheduled value which was 5.99, and from it can be said that the majority of the phrases have statistically significant differences at the 0.05 level of significance.

Discussions:

Through research, hypotheses, objectives, and what resulted in the results of the analysis of tables and, in the light of discussing the results we reached:

Through the results of the table for the results of the first hypothesis, we note that most of the respondents' responses to the statements of the first axis, emphasized the positive role that cellular walking activity plays in reducing the phenomenon of anxiety caused by working under pressure from the pandemic, and it should be noted that this result differed with the findings of the study of GüçlüÖzen under the name of THE EFFECT OF RECREATIONAL ACTIVITIES ON TRAIT AND STATE ANXIETY LEVELS, As a result of the analysis; it was determined that the activities such as trekking, camping and rock climbing do not have a significant effect on trait anxiety scores of the participants, however; camping and rock climbing cause a significant increase on state anxiety scores. In terms of the gender variable, it has been found out that camping and rock climbing lead a statistically significant increase on state anxiety scores of female participants.

Consequently, it is possible to say that activities taking place in an unfamiliar environment with a high-risk potential increase the state anxiety of participants and these physical activities have a higher level of influence on females in terms of state anxiety level⁹

Through the results of the table for the results of the second hypothesis, It can be seen that the majority of the respondents confirmed, through their responses to the questions of the second axis, the positive role that cellular walking activity plays in reducing the frustration caused by working under the pressure of the pandemic, this came consistent with the study of B. D. Kirkcaldy, R. J. Shephard & R. G. Siefen under the name of The relationship between physical activity and self-image and problem behaviour among adolescents, for its part, it was concluded that regular practice of endurance exercise was related to a more favourable self-image, in addition to the strong association between participation in sports and the type of personality that tends to be resistant to drug and alcohol addiction. On the other hand, physical exercise was further significantly related to scores for physical and psychological well-being, adolescents who engaged regularly in physical activity were characterised by lower anxiety-depression scores, and displayed much less social behavioural inhibition than their less active counterparts.⁸

Through the results of the table for the results of the third hypothesis, we see that the overwhelming majority of the sample members confirm, through their responses to the questions of the third axis, the role that the exercise of outdoor walking activity plays in alleviating the phenomenon of stress caused by work under the pressure of the pandemic, as these results are consistent with the results of the study of Ray James, Hayley Cutt which found that regular physical activity is widely recognised as protective against the overall burden of disease. Evaluations by government departments in Australia and the United States (US) found that people who participate in sports clubs and organised recreational activity enjoy better mental health are more alert, and more resilient against the stresses of modern living. Participation in recreational groups and socially supported physical activity is shown to reduce stress, anxiety and depression, and reduce symptoms of Alzheimer's disease, yet more than one-third of adult Australians report no participation in sports and physical recreation. Evaluations of some programs found that physical activity is increased when the social environment is supportive and that the mental

and physical benefits of participating in organised recreational activity can be experienced by people other than those directly involved with the sport or activity.¹²

Conclusion:

Based on what was reached through theoretical study and field research, it can be said that the High school students agent who is primarily charged with providing protection and security to all members of society and ensuring their safety, may not be able to do so if he is not himself imbued with a sense of security and psychological reassurance, however, the need for psychological security According to Maslow, it is a basic need that must be satisfied in order for an individual to grow healthy, which helps him to perform his job that most requires him to be steadfast in the face of the dangers he is constantly exposed to, accordingly, the relationship between the three variables of “anxiety, frustration and stress ” that the study found carries within it the need to ascertain the psychological state of High school students during covid 19 pandemic, in addition to the need to study the psychological pressures that could be the cause of the inability to perform tasks through the inclusion of outdoor walking in their training programmes, which is confirmed by the results that showed in their entirety that outdoor walking has a major role in alleviating the psychological pressures experienced by High school students during covid 19.

Recommendations and suggestions :

- Placing a psychologist for High school students, to help them overcome on their psychological problems.
- Ensure that outdoor walking is included in the educational programs, as it has a significant impact on their mental health.
- Creating physical, psychological and social conditions for High school students, and developing programs, especially for mental health in the field of first aid, in a way that guarantees them comfort and helps them to overcome their psychological problems that lead them to a more perfect work, few problems, fewer accidents, and almost negligible absences.
- Carrying out continuous studies on the conditions of High school students, and improving the environment of their work, and appreciating their initiatives and efforts.
- Suggesting special programs for self-development at the High school students that are organized individual or collective.
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-Human subjects statement:

Preparation of this paper involves primary research or data collection involving human subjects and, therefore, no institutional review board screening or approval was required.

- **competing interest:** The authors declare that they have no competing interests.

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