

THE EFFECTIVENESS OF A SUGGESTED MENTORING PROGRAM USING CASCADING RELAXATION AND RECREATIONAL SPORTING ACTIVITY TO REDUCE THE LEVEL OF AGGRESSIVE BEHAVIOR AMONG SECONDARY SCHOOL STUDENTS AGES 16 TO 18 YEARS

AN EXPERIMENTAL STUDY ON MALE STUDENTS OF SIDI SAADA SECONDARY SCHOOL, RELIZANE, ALGERIA

GORINE AHMED¹, DJAMEL MOKRANI², AHMED BENKLAOUAZ TOUATI²

¹University Khmis Maliana, Algeria

²University Mostaganem, Algeria

Correspondence:

Gorine Ahmed, University Khmis Maliana, Algeria
a_gorine@univ-dbkm.dz

Abstract: This study aims to find out the effectiveness of a psychological counseling program using sequential relaxation and recreational sports activity on reducing the level of aggressive behavior as a feature of both physical and verbal types among secondary school students. The study contained two homogeneous and equal groups, one experimental and one controlled, and the researchers applied the proposed program to the experimental sample of (35) students (males) first year secondary level while the control group underwent the regular program, the researchers used the experimental approach because it was appropriate for the nature of the study and its objectives. The duration of the program was limited to (08) weeks and 01 educational units per week, the duration of each unit (75 minutes) and included the units of the proposed program on (cascading relaxation exercises - recreational sports activities). The results of this study showed statistically significant differences in the post measurement between the members of the experimental sample and the control sample in the post measurement, where the level of aggressive behavior decreased in both physical and verbal types for the members of the experimental sample.

Based on the results, it can be concluded that the increase in cholesterol triglycerides and some parameters of body structure affected the level of health status as well as body composition in students.

Keywords: mentoring program, aggressive behavior, cascading relaxation, recreational sports activities.

INTRODUCTION AND RESEARCH PROBLEM

The phenomenon of aggressive behavior is considered one of the most important phenomena that occupied the attention of workers in the educational field, and this is due to its wide spread in various educational stages, especially among secondary school students, and this requires great attention by researchers to study this phenomenon to provide scientific explanations for it, in order to find appropriate solutions to it. Samira Al-Badri defines “aggressive behavior as an attack directed at a person or thing, or it is a behavior that the aggressor intends to harm the other person, either verbally or physically, such as destroying property or physical beatings, or verbally such as defamation, belittling, stinging jokes, or vitriolic satire.” (Samira Al-Badri, 2005, p. 117)

Adolescence is one of the most difficult and dangerous stages that an individual goes through during his life, due to the physical, physiological, mental, emotional and social changes that occur at this stage. Muhammad Iqbal Mahmud defines it as “the period after childhood, between sexual maturity and the age of majority.” And in it changes occur in all aspects of physical, mental, social and emotional development, and these changes result in many and varied disorders and problems that need guidance and guidance by specialists, and this is so that the adolescent can overcome these problems. (Mohammed Iqbal Mahmud, 2006, p. 9)

The researchers believe that the adolescent’s aggressive behavior in the school environment has many negative consequences and damages, including disruption of the educational process, sabotage of the institution’s property, high repetition rate and school dropout...etc.

The absence of psychological accompaniment for the adolescent and the failure to allocate enough time for him to vent and express his energies, talents and abilities, especially the physical ones, will make him vulnerable to psychological pressures and repeated frustrations that make him act aggressively towards everyone who stands in front of him and this is what made those who watched education intensify studies to investigate and analyze the psychological, social and behavioral phenomena that he is going through during this critical period.

Psychological counseling is one of the necessary services that should be available in educational institutions, in order to activate the learning process and reach the adolescent learner to an integrated growth in all aspects. Many countries of the world have been interested in preparing physical and psychological rehabilitation programs and stressed the importance of practicing them in various forms because of their positive impact on health and psychological well-being.

Relaxation exercises are one of the important rehabilitation programs concerned with mental health, as well as their ability to improve performance, which requires eliminating tension and stress, controlling emotions and not making excessive mental responses.

Shamoun (2001) stresses that relaxation is a mental skill that has an important role in helping the individual or player to control his emotions, not provoke negative responses, reduce anxiety, tension and negative behaviors, develop self-confidence, self-esteem, and a sense of calm and safety (Muhammad al-Arabi Shamoun, 2001, pp. 162-164).

In this regard, Jabali Radwan adds, "In order to deal positively with psychological stress and reduce the phenomenon of aggressive behavior in different circles, counseling psychologists have used a number of relaxation methods, including cascading relaxation where this method is considered one of the most effective strategies that work to alleviate psychological pressures, anxiety and tension, and control the level of emotional arousal. (Radwan Jabali, 2013, p. 3)

Recreational sports activity is a successful and purposeful treatment method rather than a waste of time and leisure. It gives the individual in general and the adolescent in particular experiences that help to enjoy life and get rid of the complex of feelings of inferiority and frustration.

In this regard, Kamal Darwish points out that practicing recreational skills works to link friendships that take the individual or adolescent out of his isolation and integrate him well into society, thus keeping him away from all violent and immoral behavior. (Darwish and Al-Hamami, 1997, p. 56)

Based on the foregoing, this study came in which we address the positive role that a counseling program can play using sequential relaxation exercises and a group of recreational sports activities as one of the solutions that will reduce or modify the phenomenon of aggressive behavior among secondary school students.

This is what leads us through this research to ask the following general question: How effective is the proposed counseling program (cascading relaxation and recreational sports activity) in reducing the level of aggressive behavior (physical verbal) among secondary school students?

METHODOLOGICAL PROCEDURES FOLLOWED IN THE STUDY

Research Methodology: The researchers used the experimental method due to its relevance to the nature and objectives of the study.

Appropriate experimental design: The researcher chose the experimental design with two equal groups (control and experimental).

Research community: The research community represents secondary school students aged between 16 and 19 years at the state of Relizane, Algeria for the 2019-2020 school season. The following table shows the size of the study population:

Table 1. The population of the original research community

Directorate of Education of Relizane State, Algeria	
1st year Secondary level (female, male)	9751
2nd year Secondary level (female, male)	8241
3rd year Secondary level (female, male)	9252
Total	27245

The main study sample: Because it was difficult to test all the students of the original community due to the effort, time and money that this requires, the researchers chose a limited sample of the original community, this sample consisted of 70 male students from the departments of the first-year secondary scientific stream of Sidi Saada High School, Relizane State. They were chosen in a deliberate way after they obtained a high level in the aggressive behavior scale (as a trait) by Hassan Allawi, where they were randomly divided into two equal and homogeneous groups with a rate of (35) students for each group (control, experimental), and the following table shows the sample size on which this study was established:

Table 2. The size of the search sample

Secondary school name	Year	Size	Gender	Sample type
Sidi Saada (Relizane)	1st year	35	Male	Control
		35	Male	Experimental
Total		70		

DATA AND INFORMATION COLLECTION TOOLS

Morphological measurements: (homogeneity and reward of the two research samples) in order to achieve this, the researcher performed parity between the two research groups, to adjust the following variables: (age, length, mass) and the following table show the specific results of the differences between these variables.

Table 3. The specifications of the two search samples and the value (t) of age, length and mass variables

Variables	Sample	arithmetic mean X	Standard deviation ± p	Value of "t"	Twisting factors
Age (year)	Control	16.51	1.06	0.66	0.53
	Experimental	16.62	1.05		0.43
Height (cm)	Control	170.65	6.50	0.93	0.45
	Experimental	170.50	6.80		0.35-
Mass (Kg)	Control	69.21	6.60	0.59	0.01-
	Experimental	68.30	6.30		0.71

Through the results shown in Table 3, we note that the two search samples are equal and homogeneous in age, height and mass variables.

RESEARCH TOOLS

Aggressive behavior scale: designed by Muhammad Hassan Allawi to measure general aggression as a property. The scale consists of 04 dimensions of aggression (attack, verbal aggression, speed of arousal, indirect aggression) and 40 statements where each dimension is represented by 10 statements (06 positive, i.e. in the direction of the dimension, and 04 of them negative, i.e. opposite to the direction of the dimension). The students answer the scale statements based on a five-graded scale:(agree to a very large extent, agree to a large extent, agree to a moderate degree, agree to a small degree, agree to a very little degree)

Determining the levels of aggressive behavior among students:

The researchers identified three levels of aggressive behavior (low, medium, high), after which the results are addressed and discussed.

Table 4. The levels of aggressive behavior of students

levels of aggressive behavior	low	medium	high
Function values	From 36 to 84	From 85 to 132	From 133 to 180

Suggested indicative program

The content of the educational units of the proposed program

Introductory part: 20 minutes

It aims to prepare students psychologically, pedagogically and physically for the main part of the session and its duration is divided as follows:

- Administrative and educational procedures (calling - monitoring the suit - explaining the goal of the class and motivating students to achieve it - sports salute) and the duration of 05 minutes
- The physical and physiological preparation, public and private, of 15 minutes

Main part: 45 minutes

- Competitive and recreational 30-minute set of sports activities in different formations
- 15-minute cascade relaxation session

The concluding part: 10 minutes

- A group discussion on the content of the class and open the way for the students to express their opinions freely, and it lasts for 10 minutes

Cascade relaxation sessions: Researchers used cascade relaxation exercises from the series of psychiatrist Edmund Jacobson (1931) who first used this type of relaxation. It was called by this name due to the succession of contraction from one muscle group to another until it covers all the muscle groups in the body, and it included sequential relaxation exercises on the muscle groups (legs, abdomen, chest, back, arms, shoulders, neck, face), where the successive relaxation exercises were recorded on a CD with the researcher's voice for the experimental group members to listen to, apply and implement the instructions through collective counseling sessions. CDs that include cascading relaxation exercises were distributed to the experimental group members to be able to practice cascading relaxation on their own as homework. Where the students are asked to make contractions of a specific muscle group, followed by a complete relaxation of this muscle group. These exercises help students to identify the difference between the processes of tension and muscle contraction and relaxation and muscle relaxation. Where the state of muscle tension lasts for a period of (5-7) seconds, then followed by the process of muscle relaxation of the same muscle group for a period of (5) seconds. Each exercise is repeated for a muscle group (3) times before moving to another muscle group, with a good focus on the exhalation process during breathing, the duration of the program took (08) weeks, with one session per week, the duration of each session (15) minutes.

Recreational sports activities: represented in a group of games known by the nature of competition and give enthusiasm and pleasure and help the vital body systems to work efficiently and regularly and accustom the individual to obedience and a sense of responsibility and cooperation in addition to its recreational benefits for the body and mind

Presentation and analysis of results

Presentation and analysis of the results of the first hypothesis:

Hypothesis text: There are statistically significant differences between the pre and post measurements of the experimental group members in the level of aggressive behavior (physical, verbal) and in favor of the post-measurement.

Table 5. The calculation of the *t*-test for the significance of the differences between the means of pre and post measurements for the experimental group in the level of aggressive behavior

Scale	Experimental sample	Sample size	Average	Standard deviation	Value of "t"	Degree of freedom	Level of significance	Statistical significance
Aggressive behavior	pre-measurement	30	161.87	8.66	46.88	29	0.01	Statistically significant
	post-measurement	30	75.60	10.49				

Through the results obtained and shown in Table No. 5, which represent the results of the comparison between the pre and post measurements of the experimental group at the level of aggressive behavior, the value of "t" is 46.88 at the degree of freedom of 28, which is statistically significant at the level of significance 0,01. This means that there are statistically significant differences between the pre and post measurements of the experimental group in the level of aggressive behavior (physical, verbal) and in favor of the post-measurement.

Presentation and analysis of the results of the second hypothesis:

Hypothesis text: There are statistically significant differences in the post measurements between the experimental and control sample members in the level of aggressive behavior in favor of the experimental group.

Table 6. the calculation of the *t*-test for the significance of the differences between the means of the post-measurement of the two experimental and control groups in the level of aggressive behavior.

Scale	Experimental sample	Sample size	Average	Standard deviation	Value of "t"	Degree of freedom	Level of significance	Statistical significance
Aggressive behavior	control sample	30	150.71	5.71	39.90	58	0,01	Statistically significant
	experimental sample	30	66.40	9.81				

It is evident from the results obtained and shown in Table No. (6), which represent the results of the comparison between the experimental group and the control group in the pre measurement of the level of aggressive behavior, where we note that the value of "t" is 39.90 at the degree of freedom of 58, which is statistically significant at the level of Significance 0.01. This means that there are statistically significant differences between the experimental and control groups in the level of aggressive behavior for the post-measurement in favor of the experimental group.

DISCUSSING THE RESULTS

Discussing the results of the first hypothesis

The researchers believe that these differences and the results obtained are due to the proposed indicative program. Its learning units included a set of sequential relaxation exercises for the different areas of the body in which tension is concentrated and which were referred to by some previous references and studies, such as the areas of (neck, face, shoulders, arms, abdomen, back, legs). Which had a significant effect in reducing the tension and the level of emotional arousal for the teenager.

This was indicated by Mustafa Kamel Rateb (1995) that the individual is prepared for psychological stress that comes as a result of internal and external factors, and through training in relaxation skills, he can fill his physical and mental energy and reduce the level of tension, anxiety and excessive excitement to the appropriate level. (Rateb, 1995, p. 271).

The results of this study agree with some previous studies, such as the study (Beni Youssef, 2005), whose results indicated that muscle relaxation training programs are one of the important therapeutic methods that work to alleviate some behavioral disorders. It also helps to control and manage psychological stress and reduce the level of stress and anxiety, which in turn contributes to maintaining the mental health of individuals.

The researchers also attributed a decrease in the level of aggressive behavior among the members of the experi-

mental group to the effect of recreational sports, which were also included in the learning units of the proposed counseling program, which contributed to alleviating the aggressive behavior of the teenager student. This was pointed out by Mouna Abdel Halim 2009, who believes that recreation with sports is one of the methods of psychological and physical therapy, which includes the safety of bodies and minds from fatal diseases, especially in the modern era, which is characterized by lack of movement in view of the technological development taking place in all areas of life. Sports are among the heart-loving activities that develop the quality of sportsmanship, love of the group, lack of introversion and social isolation, which result in a number of psychological and social problems that lead the individual to engage in abnormal and immoral behaviors. (Mouna Abdel Halim, 2009, p. 115).

This is consistent with the results of the study of Si Al-Arabi Al-Sharif 2016, whose results were yellow, indicating that the experimental group to which the recreational sports program was applied decreased its aggression to a significant degree. This means that it is possible through recreational sports to modify aggressive behavior to socially acceptable behavior in this critical age stage (adolescence). (Si Al-Arabi, 2016, p. 223).

Accordingly, it can be said that the first hypothesis, which states that there are statistically significant differences between the pre and post measurements of the experimental sample in the level of aggressive behavior, has been achieved.

Discussing the results of the second hypothesis

The researchers attribute these differences to the proposed counseling program, where its educational units include successive relaxation exercises. It is considered one of the best relaxation techniques that are used in most counseling programs, by trying the individual or the player to contract his muscles and then relax them in a sequential manner. As the muscle contraction for a few seconds and then the muscle relaxation for a double seconds makes the muscles in a state of relaxation, thus feeling a high degree of psychological comfort and reassurance. This was confirmed by Allawi (2002) that relaxation helps reduce the effect of the stress response and help reach the optimal level of stress. And that relaxation exercises help to increase focus, get rid of stress, develop and activate the powers of mental perception, as well as increase the ability to work for long periods in addition to many physical and psychological benefits. (Allawi 2002, p. 217)

Clayton (1974) added in this regard that the various relaxation methods help the individual to get rid of tension, eliminate fatigue and stress, preserve his energies, and improve the efficiency of the respiratory circulatory system while developing the individual's ability to use the necessary muscle groups and relax the unnecessary groups. (S & other, 1974, p. 93)

These results agree with the study (Sulaiman, Thamer, 2010), whose results indicated that the use of mental skills training programs, including sequential relaxation, is highly effective in modifying some psychological disorders such as exam anxiety and raising the level of academic qualifications for gymnastics. (Akla 2010, pp. 186-208)

The researchers also attributed a decrease in the level of aggressive behavior (physical, verbal) among the members of the experimental group to the effect of recreational sports, which were also included in the proposed counseling program in alleviating the phenomenon of aggressive behavior in its four dimensions.

What Taha Abdel Rahim (2006) indicated is that the practice of recreational activities provides its practitioners with opportunities to raise the level of mental health and balance between independence and dependence and helps to develop emotional maturity and develop social qualities such as cooperation and the desire to help others. (Taha Abdel Rahim Taha, 2006, p. 26).

This is also consistent with the study of Hafsawi bin Youssef (2007), whose results indicated that the proposed program for kinetic games effectively contributed to reducing the degree of aggression among the members of the experimental group.

Accordingly, it can be said that the second hypothesis which states that there are statistically significant differences in the post measurements between members of the experimental and control group in the level of aggressive behavior and in favor of the experimental group has been achieved.

Overall conclusions

- The experimental group outperformed the control group in decreasing the level of aggressive behavior, after completing the application of the proposed indicative program.

- The efficacy of successive relaxation exercises in reducing the level of aggressive behavior of the experimental sample members.
- The efficacy of recreational sports activities in reducing the level of aggressive behavior of the experimental sample members

Future suggestions and hypotheses:

In light of the findings and conclusions reached by the researchers, we suggest the following:

- Inclusion of cascading relaxation exercises in the final part of the physical and sports education class for secondary students for the purpose of alleviating psychological stress and the phenomenon of aggression within the school environment.
- Inclusion of recreational activities in physical and sports education curricula to reduce aggressive behaviors and promote mental health in secondary school adolescents.
- Conduct training courses for physical and sports teachers to understand various relaxation techniques and recreational sports activity.

REFERENCES

- Jabali Radwan. (2013). The effect of relaxation techniques in managing psychological stress among elite Algerian football referees and competition anxiety among the experimental group. *Unpublished PhD thesis, ed. University of Algiers, Algeria*
- Kamal Darwish and Muhammad Al-Hamami. (1997). A modern vision of recreation and leisure (Version 1). *Al-Rafidain Journal of Sports Science. Volume 16(53)*.
- Mouna Abdel Halim. (2009). *An introduction to mental health in the sports field (concepts and applications)* (2nd ed.). Alexandria, Egypt: Dar Al-Wafaa for printing and publishing.
- Mohamed Mahmoud Beni Youssef. (2005). The effect of muscle relaxation techniques in reducing post-traumatic stress disorder symptoms among a sample of Jordanian university students. *Journal of Human and Social Sciences Studies, Volume 32(3)*.
- Muhammad al-Arabi Shamoun. (2001). *Mental training in the sports field* (2nd ed.). Cairo, Egypt: Arab Fikr House.
- Muhammad Al-Dulaimi Abdul Razzaq. (2012). *The media and the child*. Amman, Jordan: Dar Al Masirah.
- Muhammad Hassan Allawi. (2002). *The psychology of sports training and competition*. Cairo, Egypt: Book Center for Publishing.
- Muhammad Iqbal Mahmoud. (2006). *Adolescence*. Amman, Jordan: Arab Society Library for Publishing and Distribution.
- Osama Kamel Rateb. (1995). *Training of psychological skills in the sports field*. Cairo, Egypt: Arab Fikr House.
- Samira Al-Badri. (2005). *Educational and psychological terms*. Amman, Jordan: House of Culture for Publishing and Distribution.
- Taha Abdel Rahim Taha. (2006). *Introduction to Recreation*. Alexandria, Egypt: Dar Al-Wafaa Printing and Publishing.
- Si Al-Arabi Charef. (2016). The importance of recreational sports activity in reducing the aggressive behavior of high school students. *Unpublished PhD thesis, University of Mostaganem, Algeria*.

Primljen: 14. jul 2021. / Received: July 14, 2021
 Prihvaćen: 11. februar 2022. / Accepted: February 11, 2022

