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The Role of Physical Education and Sport in Alleviating Anxiety rate among students preparing to pass the baccalaureate exam (18 ~ 21 years)

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Abstract:

This study aims to know the role that the physical education and sports class plays in alleviating the general anxiety rate among students preparing to pass the baccalaureate exam (18 ~ 21 years), as anxiety became the prominent feature in the teenager student's personality. Such stage is considered one of the most important and difficult stages in the individual life. Therefore, we adopted the descriptive approach in our study, whereat the number of students reached 55 students among practicing and non-practicing of the physical education and sports class, who belong to two secondary schools in the Province of Boumerdes. Thus, the sample was intentionally chosen. Subsequently, to collect the study data and achievement of the goals thereof, Cattell Anxiety Scale was used. Hence, the results showed what follows:- There exist differences in the rate of anxiety relief among practicing and non-practicing of the physical education and sports class, in favour of the practitioners; which confirms that the physical education and sports class has an effective role in alleviating the general anxiety rate among students preparing to pass the baccalaureate exam.

Keywords: Physical education and sports class; General anxiety; Secondary stage; Baccalaureate student; Adolescence.

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1. INTRODUCTION

The physical education and sports class is one of the most important materials in the educational stages that contribute to the formation of learners from various health, physical, psychological, social and kinetic aspects all the way through the development and upgrading of the physical and cognitive level, along with the improvement of intellectual, psychological and affective capabilities; more to the point, it alleviates the tensions and emotions caused by some psychological or physical disorders in the individual, namely the phenomenon of anxiety that students may be exposed to in the secondary stage; in other words, in the adolescence period. (Rami Azeddine, Bilal Hussain 2015) Besides, anxiety becomes the prominent feature in the personality of adolescent as he is a compound emotion of fear and anticipation of threat and danger; the fact of which provokes a state of continuous comprehensive tension. Thus, it causes psychological problems for adolescent under form of annoyance, depression and bad mood, and makes him always pessimistic, anxious and restless, and becomes more severe when this coincides with the stage of adolescence, which is alone considered as a problem should it meet a medium having no sufficient knowledge of the secrets of this stage, as it corresponds to a group of physical and psychological transformations that occur between childhood and adulthood, and it symbolizes one of the development stages that would negatively affect the adolescent behaviour as it results, as a stage, in a lot of pressure, the fact of which makes it difficult for the adolescent to deal with the same (Nahal Hamid, Boughalia Faiza, Saidia Hawari 2019). Above and beyond, the severity of anxiety may increase, in particular for students who are going to pass the baccalaureate exam. In virtue of which, there is no doubt that thinking and worrying about the future is one of the things that has become a preoccupation for teenagers, in particular the baccalaureate students, who find themselves in an emotional state that may be accompanied by unusual psychological and physical reactions as a result of their expectation of failure in the exam, poor performance therein, or fear of failing or the reaction of their relatives (Ibrahim Rasheed – Laban Karim 2019). In the light of which, the Algerian State has given a lot of attention to sports and physical activities, as it integrated the physical education and sports class in the educational stages (intermediate – secondary) as a basic subject, as it stands for a very important step for students who

pass the baccalaureate exam because it aims to crystallizing and refining the student's personality and making it more judicious and equilibrated in terms of physical, kinetic and especially psychological aspect (Mazari Fatah, Bouhadj Meziane, Qasmi Bashir 2016). Moreover, physical education and sports went beyond the limits of the body and went out of the scope of the bones and muscles to incorporate thought, perception, feelings, senses, emotions, motives, tendencies and desires. In general, all aspects of personality have been considered as one of the best ways to reduce anxiety (Salim Bazio, Lyes Djebaili 2018). Further, Osama Kamel Rateb believes that practicing organized physical and sports activity leads to improving vitality and reducing stress, depression, anger, disorder and fatigue. Likewise, sports exercises contribute as well in improving the way the body deals with anxiety and psychological pressure, as this fact is due to the changes that occur at the level of Hormones, whereat exercises affect neurotransmitters in the brain that affect mood and behaviour (Kassouri Osama, Talhi Imen 2021); thus, this calls for guiding and directing students to exercise physical and sports activity throughout the physical education and sports class so as to empty their energies and make themselves relaxed. In the light of the facts we set out above, we will discuss the role of the physical education and sports class as a means of alleviating the general anxiety of students who are preparing to pass the baccalaureate exam; subsequent to which, we ask the following question:

Does the physical education and sports class have a role in alleviating the general anxiety of students who are preparing to pass the baccalaureate exam? In other words, are there any statistically significant differences in the anxiety rate among the practicing and non-practicing students of the physical education and sports class who are preparing to pass the baccalaureate exam?

Through this question, the hypothesis hereinafter crystallizes:

There exist statistically significant differences in the anxiety rate among the practicing and non-practicing students of the physical education and sports class who are preparing to pass the baccalaureate exam.

2. The res earch goals:

- ✓ Reveal the effective role that the physical education and sports class plays in alleviating the general anxiety of students who are preparing to pass the baccalaureate exam.
- ✓ Know the difference between the practicing and non-practicing of the physical education and sports class with regards to the general anxiety of the students who are preparing to pass the baccalaureate exam.



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3. Definition of the concepts and procedural terms:

- ❖ **Physical and Sports Education:** It represents the educational process that aims at forming the individuals in an integrated form in terms of sensual, kinetic, social, emotional and cognitive aspects.
- ❖ **Physical and Sports Education Class:** It stands for an educational class whose duration is two hours (intermediate – secondary phase), and consists of a group of competitive and cognitive physical and sports activities framed by the professor of physical and sports education; likewise, it is one of the educational materials prescribed in the schedules of the educational materials.
- ❖ **General Anxiety:** It signifies a phenomenon, in which there is no sense of security and psychological reassurance, as the student has less self-confidence and confidence in the future, and has many threatening expectations that provoke exhaustion for him, narrow his chest, and causes disturbance of his behaviour from the usual. Likewise, the general anxiety appears from several symptoms, including psychological, physical or hidden and apparent.
- ❖ **Secondary Stage:** It corresponds to the educational stage that follows the intermediate stage, whereat the student moves from middle school to secondary school after successfully passing the intermediate education certificate exam.
- ❖ **Baccalaureate Student:** This refers to the student who studies in the third year of secondary school and is qualified to pass the baccalaureate certificate exam.
- ❖ **Adolescence:** It stands for a transitional stage from childhood to adulthood, as it represents a gradual progression towards physical, sexual, mental and emotional maturity. Besides, Adolescence in this study means the student whose age ranges between 18 and 21 years; in other words, the secondary school stage.

4. The methodological methods used in this research:

4.1. The exploratory study: We conducted a field visit to two secondary schools in the Province of Boumerdes, particularly the Secondary School of the Martyr Mohamed Ziou and the Secondary School of Mohamed Laïd Al-Khalifa, starting

from 13th April 2019 to 17th April 2019, during which an interview was carried out with some teachers of the physical education and sports class, whereat a number of points, directly related to the content and objective of the research, have been discussed, as they kindly gave us a clear picture of the reality of the practice of sports physical activity within their educational institutions. However, the interview results have led in the absence of a large number of students who do not practice physical education and sports; the fact of which underlines a sign of the students' love for this class and their satisfaction with the recreational activities offered to them. More to the point, the high demand of males to females in the practice of physical education and sports have been highlighted, in addition to recording some cases of anxiety and agitation among the non-practicing students through some turbulent and inappropriate behaviours.

In the light of such results, the appropriate scale for our study has been chosen, which is the Cattell scale of general anxiety (Farouk Sayed Othman 2001). Besides, the scale was distributed to students in three stages, so as to know the difficulty of the expressions and the stability of the scale.

In the first stage, the scale was distributed on 13th April 2019, whilst the second scale was distributed on 15th April 2019. Further, the third stage was completed on 16th April 2019, as it was conducted in the two secondary schools of the Martyr Mohamed Ziou and Mohamed Laïd Al-Khalifa in the Province of Boumerdes, whereat the sample consisted of 10 students of both genders, as well as the practicing and non-practicing of sports physical activity throughout the physical education and sports class.

Table 1. Represents the distribution of the exploratory study sample by the practicing and non-practicing of the physical education and sports class.

Students	Number	Percentage
Practicing the physical education and sports class	07	70%
Non-practicing the physical education and sports class	03	30%
Total	10	100%

4.2. The adopted approach in this study:

The nature of the problem we presented above requires the descriptive approach to be used in studying the variables of our study, and trying to make known the role of the physical education and sports class in alleviating the general anxiety among



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the secondary school students who are preparing to pass the baccalaureate exam. Thus, the first developments in this research have taken place in the field of description and questions that have been asked as they had descriptive implications, seeing that they are all looking at determining the rate of general anxiety among the practicing and non-practicing of the physical education and sports class; in virtue of which, the descriptive approach has shown to be the most appropriate for such studies since it is based on the study and interpretation of the phenomenon by defining the characteristics and dimensions thereof, and describing the relationships between them, for the purpose of reaching an integrated scientific description. (Amar Bouhouche, Muhammad Mahoud Al-Thneibat 2001, p. 137)

4.3. Sample and characteristics of the study:

- ❖ **Sample of the study:** The study sample has deliberately been chosen; in other words, it represents an intentional sample from the original community, which is corresponding to the practicing and non-practicing students of the physical education and sports class who are preparing to pass the baccalaureate exam, whose ages range between 18 ~ 21 years, whereat we distributed the Cattell Anxiety Scale on 55 students between a practicing and non-practicing of the physical education and sports class.

- ❖ **Characteristics of the study sample:**

In terms of age: the ages of the sample range from (18 ~ 21 years), as tabulated hereinafter in Table No.02:

Table 02. Shows the distribution of the sample members according to the age variable

Age Secondary School	Less than 20 years	More than 20 years	Total
Mohamed Ziou Secondary School	20	10	30
Mohamed Laïd Al-Khalifa Secondary School of	17	08	25
Total	37	18	55

In terms of activity: The study sample consists of (30) practicing students of the physical education and sports class and (25) non-practising ones, distributed as follows:

Table 03. Shows the distribution of the sample members according to the activity variable

Age Secondary School	Students practicing the physical education and sports class	Students non-practicing the physical education and sports class	Total
Mohamed Ziou Secondary School	15	15	30
Mohamed Laïd Al-Khalifa Secondary School of	15	10	25
Total	30	25	55

5. Fields of the study:

- ❖ **Spatial domain:** This study was conducted in the Province of Boumerdes at the secondary schools of the Martyr Mohamed Ziou in the Commune of Tidjelabine and Mohamed Laïd Al-Khalifa in the Commune of Boumerdes.
- ❖ **Temporal domain:** The temporal domain of our study extended from 13th April 2019 to 17th April 2019.
- ❖ **Human domain:** The human domain in our study represents the category of adolescent students who are preparing to pass the baccalaureate exam, in particular the late adolescence with determination of the age (18 ~ 21 years).

6. Psychometric conditions (validity and stability of the scale):

- ❖ **Stability:** For calculation purpose of the stability of the anxiety scale or the correlation coefficient of Cattell, we resorted to the test application and reapplication method (the stability coefficient over time), two weeks after the first application of the SPEARMAN correlation coefficient, we obtained the



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result $R = 0.88$, whereat it has shown that the scale is fixed by 88 %, which is very acceptable at the significance level $P < 0.01$.

- ❖ **Validity:** Cattell and Scheier calculated the scale validity using several methods, whereat they found the scale validity 0.92, right through calculating the correlation of each of the scale items with the total score on this scale; moreover, we have alike found the same result through the square root of the stability coefficient. Besides, upon calculating the saturations of the five components of the anxiety factor, the scale validity was estimated to 0.85.
- ❖ As for the Egyptian environment, Sawsan Ismail calculated the scale validity by finding the correlation coefficient between the scores of the Cattell Anxiety Scale and the scores of the Taylor test for measurement purpose of the anxiety level, whereat she found that the correlation coefficient is equal to 0.38.
- ❖ Likewise, Muhammad Hassan Allawi calculated the scale validity on sports samples, whereat a correlation coefficient of 0.61 was reached between the scale and the Taylor scale of apparent anxiety.

7. Study tool and the application method thereof: One single tool has been used in this study, which is the Cattell Anxiety Scale. Hence, we adapted the same according to the Algerian environment in which the study is being conducted, and we considered it appropriate to measure the anxiety among the practicing and non-practicing of the physical education and sports class.

The scale included 35 phrases distributed between the apparent anxiety and the latent anxiety..Whereat the student is given an anxiety scale and then asked to answer all the phrases on the scale and to put the (x) mark in one of the two boxes “Yes” or “No”. Further, this choice is called Multiple Choice (MQC) (Abdul Hafeez Moghadam 2003 p. 131), the method of which is considered as the most widely used and the most flexible.

8. Statistical methods used:

The percentage is calculated as follows:

$$\frac{100 \times S}{N}$$

Use the K squared law X^2

$$X^2 \frac{Mg (Mt - Ft)}{Mt}$$

9. Presentation and analysis of the results:

9.1. Presentation of the hypothesis results: Are there any statistically significant differences in the anxiety rate among the practicing and non-practicing students of the physical education and sports class who are preparing to pass the baccalaureate exam?

Table 04. Shows the general anxiety percentages among the practicing and non-practicing students of the physical education and sports class according to the “Yes” and “No” frequencies.

Activity \ Frequency	Yes %	No %	Total
Practicing the physical education and sports class	46.66 %	53.34 %	100 %
Non-practicing the physical education and sports class	53.49 %	46.51 %	100 %

For calculation purpose of the percentage of alleviating the general anxiety, we find the difference between the percentage of general anxiety for practicing and non-practicing of the physical education and sports class, as follows: **53.49 – 46.66 = 6.83 %**

Table 05. Shows the X^2 values of the general anxiety among the practicing and non-practicing of the physical education and sports class according to the “Yes” and “No” frequencies.

General anxiety Activity	Yes	No	Total	Freedom degree	X^2	P
Practicing the physical education and sports class	490	560	1050	1	8.877	0.05
Non-practicing the physical education and sports class	522.5	527.5	857			



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	435.5	439.5				
Total	958	967	1925	/	/	/

Calculation of X^2 :

In order to find the differences between the practicing and non-practicing of the physical education and sports class with regards to the general anxiety rate, the X^2 has been calculated according to the data of the Cattell scale dual table, which we summarized in Table No. 05 above, as follows: $X^2 = 8.877$.

9.2. Analysis and discussion of the hypothesis results:

In the light of the obtained results, which has showed that there exists an inconsistency or a difference in the general anxiety variable among the practicing and non-practicing of the physical education and sports class, we found the value of $X^2 = 8.877$, which is a statistical significance of the existence of differences, the fact of which is further explained through Table No. 01, whereat we find that the frequency rate of “Yes” is 46.66% among the practicing of the physical education and sports class; as for the frequency rate of “No”, we find 53.34%; however, with regards to the non-practicing of the physical education and sports class, we obtained 53.49% for the frequency rate of “Yes”, and 46.51 for the frequency rate of “No”. in virtue of which, this indicates that such differences are in favour of the practicing students of the physical education and sports class, since the general anxiety variable and the rate thereof are high among the non-practicing students with the rate of 53.49% less than 46.66% among the practicing ones, considering that “Yes” is the expression of the general anxiety rate. Subsequent to which, it became clear for us that the practicing the exercise physical and sports activity through the physical education and sports class has in fact alleviated the intensity of the general anxiety among students by 6.83%. From this point of view, it has become clear to us the important and basic role that the physical education and sports class plays in alleviating the general anxiety. Indeed, the physical and sports activities that are provided through the physical education and sports class stand for a source and origin of joy and enjoyable competition that push the student to show up his abilities and get rid of loneliness, as per confirmed by the study of (Gourari Benali 2018), whereat the results of the study have confirmed that the physical sports activity alleviates the anxiety rate among the retired elderly category, and provides them

with such a kind of happiness and fun compared to the non-practicing category. Besides, the physical and sports activities lead to an alleviation in stress, depression, anger, tiredness and all psychological disorders and they have been considered as one of the best ways to alleviate the intensity of anxiety, as they provide the teenager with such a feeling of satisfaction, reassurance, self-realization and enjoyment all the way through the lessons being presented in the form of games, as per confirmed by the results of the study conducted by the researchers (Salim Bazio, Lyes Djebaili 2018) and (Osama Kamel Rateb), as confirmed by the results of the study (Madjeralou Ahlam). In addition, the results of the study conducted by (Ahlam Madjeralou and Zaoui Ali 2017) have alike confirmed that the physical education and sports class has an effective role in alleviating the level of psychological anxiety because it helps in developing the social relationships, achieving the psychological balance and acquiring good moral qualities. More to the point, the results attained by the study conducted by (Mohammed Mahdi Yahia and Hocini Mohamed Amine 2019) have indicated that the extra-curricular and classroom physical activity has a significant role in alleviating the psychological stress resulting from the academic stresses among students studying at the secondary stage. Furthermore, a study conducted by (Ousmail Makhoulf – Bourzama Rabah 2019) has demonstrated the effectiveness of the application of sports activities programs in treating or modifying some behaviours of children suffering from autism, as well as the efficacy thereof in alleviating the intensity of anxiety in such category of children, in addition to the opinions of psychologists and sports researchers in this issue, as they significantly support the effect of sports on the psychological, emotional and nervous aspect of the human being, similarly to Muhammad Hassan Allawi, Farouk Sayed Othman and Ahmed Kamel Rateb.

In the light of which, it has become clear for us that the psychological stability of adolescent students, in particularly those who are preparing to pass the baccalaureate exam, requires the practice of physical activities and exercises; as physical fitness and breathing exercises or a basketball or handball games will indubitably help to get rid of anxiety and make students more equilibrated and make them eliminating the pressures and emotions they are encountering on daily basis, especially when they are going through the most difficult stage in their lives, which is adolescence (Adel Ali Hassan 1995).



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10. CONCLUSION

Based on our study of this subject, we endeavoured to find out the role of the physical education and sports class in alleviating the general anxiety, from the standpoint of the secondary school students who are preparing to pass the baccalaureate exam, all the way through trying to find the statistically significant differences among the practicing and non-practicing of the physical education and sports class in the anxiety general rate, as one of the most prominent incurable diseases because it falls within the psychological problems that hinder work and provide profitability, namely for learners and students; thus, they found it as portent of the danger that threatens the security of individual and his health safety, more than ever if he is in the period of adolescence, alongside the changes that result therefrom on the physical, psychological, emotional and social aspects. Nonetheless, upon analyzing and discussing the attained results and based on the existing data, we come to the conclusion that the physical education and sports class is of an effective role in alleviating the general anxiety rate among the students who are preparing to pass the baccalaureate exam, the fact of which occurs when we found the statistically significant differences among practicing and non-practicing of the physical education and sports class in alleviating the general anxiety rate. More to the point, and through our conducted study, which agrees with the psychosomatic and psychological researches in terms of finding solutions to alleviate anxiety among the adolescents throughout the physical and sports activities that are practiced in the physical education and sports class in secondary schools, we decided to provide some suggestions that could contribute to the formation of a comprehensive psychological education that could help the adolescent to avoid dire consequences, which are as follows:

- ✓ Paying attention to the category of adolescents all the way through diversifying the activities inside and outside the secondary schools, by means of creation of sports associations;
- ✓ Raising awareness of students, parents and educators about the importance of practicing physical and sports activities;

- ✓ Increasing the hourly volume of the physical education and sports classes because of their psychological, physical, social and health benefits for the adolescent student;
- ✓ Paying more attention to the psychological aspect than to the student's academic achievement, by preventing students from psychological pressures, whether from teachers or parents;
- ✓ Stimulating contact with colleagues through a lot of team sports;
- ✓ Parents should take care of their children and establish friendships with them during the adolescence period, as well as with students and teachers so as to help them solving and overcoming their problems.

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