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The contribution of physical education and sports to improving the mental and physical health of secondary school students (Aged 15–18)

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Abstract---This study aims to identify the extent to which physical education and sports classes contribute to the achievement of certain health dimensions, such as physical fitness and mental health, among secondary school students. The sample comprises 22 teachers, and a descriptive analytical method was adopted. We used a 30-item questionnaire, with 15 items for each dimension, as the study tool. We used SPSS statistical software. The results of the study showed the following: Physical education and sports classes contribute to achieving certain health dimensions among secondary school students, Physical education and sports classes enhance physical fitness among secondary school students, Physical education and sports classes promote mental health among secondary school students.

Keywords---Physical Education and Sports Class, Health Dimensions, Secondary Stage.

Introduction

Sports are part of national security and are an effective means of education and behaviour modification. They are essential for acquiring health and physical fitness, thus reducing treatment costs, preventing diseases and minimising absenteeism from work, thereby increasing productivity. Sports are also the

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best way to prepare young people and all citizens to defend themselves and consequently their country. From this perspective, countries around the world have invested in community sports, as this investment often yields significant returns (Farouk Abdel Wahab, 1995, p. 4).

However, significant cultural changes have occurred worldwide in recent years, impacting not only technology, but also dietary behaviours. The composition and type of food consumed has changed, as has energy intake, and this has been accompanied by a lifestyle characterised by reduced physical activity. The prevalence of car usage and lifts instead of walking has led to an increase in diseases, with statistics indicating a rise in the incidence of modern illnesses.

In the third millennium, there has been a growing interest in physical activity, not for competition or championships, but to improve mental and physical health, enhance performance efficiency, boost productivity and enjoy life. This has led to a modification of human lifestyles for the better. It is crucial for everyone to participate in sports in order to counteract the negative effects and health risks associated with technological advancement. These effects include reduced physical activity, as well as related diseases such as heart disease, respiratory issues, diabetes, high blood pressure, increased blood lipids, obesity and work-related injuries.

Notably, health and psychological fitness development programmes have their own philosophies regarding the components of health and fitness, the goals and benefits of physical and psychological well-being, suitable sports for different individuals, training volume and intensity design, safe exercises for muscle and joint development, healthy nutrition and weight control methods, and measurement and evaluation methods for health efficiency (Osama Rateb & Ibrahim Khalifa, 1998, p. 7).

The more an individual participates in sports, the more positive the impact on their health; conversely, the more they distance themselves from physical activity, the more negative the effects on their physical and mental health. This demonstrates that physical activity has a significant influence on an individual's overall health. According to the World Health Organization, health encompasses various dimensions indicating its soundness, including physical and psychological dimensions.

Despite physical education programmes being a logical part of the school curriculum, physical fitness is often considered the primary goal of physical education, particularly when there is a threat of reduced class durations or cancellations. While physical education encompasses specific objectives related to psychological and physical health, achieving these largely depends on teachers. They play a crucial role in decision-making during the school day. However, the effectiveness with which teachers implement these objectives can vary considerably, depending on the priorities they value in the physical education curriculum. Some allocate minimal time to health-enhancing activities in each lesson, while others focus on psychological health through activities that target psychological dimensions. Some combine activities targeting both psychological and physical aspects for students during lessons, albeit in a somewhat spontaneous and unstructured manner. The final group allocates specific units for physical fitness that include systematic and periodic health-related fitness tests.

The educational process has always been a means for individuals to fulfil their needs and achieve their goals, while ensuring the continuation of the human race. This process encompasses all aspects of an individual's personality, including the physical, mental, psychological and social. Physical education and sports are essential components of a comprehensive education. Therefore, in the modern era, they have become subjects included in educational curricula across various countries, including Algeria. In conjunction with other subjects, they contribute to enhancing students' capabilities in various domains by providing them with numerous skills, movement experiences, knowledge and information covering various aspects.

For this study, we chose to focus on health (both physical and psychological) as one of these aspects. Recognising the importance of physical and mental health among secondary school students, we decided to conduct this study.

1. Research Problem

The secondary education stage is one of the most important phases of education in Algeria. During this period, students are in a transitional phase between childhood and adulthood. In secondary education, students receive a range of knowledge and experiences through various subjects, including physical education and sports. This subject is an integral educational system aimed at improving human performance and developing a fit individual. Like other subjects, physical education and sports contribute to the development and shaping of the individual's personality from all aspects—motor, psychological, and social—relying on physical activity, which serves as a cultural and social foundation. It provides learners with a foundation that ensures a balanced lifestyle and harmonious coexistence with their external environment (Ministry of National Education, 2006, p. 02).

Physical education and sports classes form the core unit for achieving educational goals and serve as the foundation for successful physical education programmes. As Al-Ham berücksichtigt, sie bieten eine umfassende und ausgewogene Entwicklung für Lernende in physischen, kognitiven, psychologischen und sozialen Dimensionen. Furthermore, they positively influence how students utilise their leisure time, enabling them to develop various physical skills and activities that align with their interests, desires, readiness and abilities (Al-Ham berücksichtige, 1996, S. 56).
Algeria's educational guidelines for physical education include specific objectives aimed at enhancing students' health and psychological fitness across all educational stages through various educational units.

Changes in lifestyle, coupled with a decline in physical activity levels, have led to increased psychological stress, as well as a rise in cardiovascular diseases and obesity. These conditions are often associated with modern illnesses such as diabetes, hypertension, heart attacks and anxiety.
Regarding individual mental health, studies and specialised scientific bodies indicate that physical activity has a significant impact on mental health and social aspects, and that engaging in physical activity enhances individual mental health. Those who regularly engage in physical activity enjoy better health and improved resilience to psychological stress (Al-Naqeeb, 1998, p. 41).
From the above, it is evident that there is a close relationship between physical education and sports classes, and certain health dimensions, specifically mental and physical health levels. This highlights the importance of physical activity in enhancing both.

As can be seen from the above, there is a close relationship between physical education and sports classes and certain health dimensions, particularly mental and physical health levels. This highlights the importance of physical activity in enhancing both. This raises the following questions:
To what extent do physical education and sports contribute to physical fitness among secondary school students (aged 15–18)?
To what extent do physical education and sports contribute to mental health among secondary school students (aged 15–18)?

2. Research hypotheses:

Physical education and sports classes significantly contribute to achieving physical fitness and mental health among secondary school students (aged 15–18).
Physical education and sports classes significantly contribute to mental health among secondary school students (ages 15–18).

3. Research Objectives:

To assess the extent to which physical fitness is achieved during physical education and sports classes among secondary school students.
To assess the extent to which physical education and sports classes contribute to mental health among secondary school students.

4. Importance of the research
The importance and necessity of this research can be summarised in two main areas:

4.1 Scientific importance Scientific importance
It is notable that research of this type is scarce in our country, possibly due to practical constraints, despite its significant importance in the field of education. In contrast, it has received considerable attention in all developed countries. In light of the above, the scientific importance of this research is evident in the following aspects:
- Addressing the notable absence of literature on health-related issues in education in our libraries.
- Generalising the benefits of scientific research and paving the way for future studies based on this work.

4.2. Practical field importance
The practical importance of this research in the field can be summarised as follows:
- Providing guidance to physical education teachers on how to prepare and deliver physical education classes that incorporate health-related objectives.
- Encouraging students to engage in physical activities that enhance their health and fitness levels.

5. Key concepts and terminology of the study

5.1. Mental health
First: Linguistic definition: Mental health is a state of psychological well-being that enables an individual to cope with life's pressures, fulfil their potential, work effectively and contribute to their local community.

Secondly, the Constitution of the World Health Organization (1946) defines mental health as follows:
'Mental health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity.' The World Health Conference on Mental Health indicates that the concept of optimal mental health does not refer to an absolute or ideal state, but rather to achieving the best possible condition given the circumstances (Nasser Al-Din Zubidi & Yamina Faleh, 2016, pp. 213–227).
Thirdly, the operational definition is as follows: The researcher defines mental health as the score attained by the student on the mental health scale.

5.1.2 Physical fitness
First: Linguistic definition: Physical fitness refers to the level of physical condition that an athlete relies on for the fitness components specific to their sport. This is measured using assessment tools and scientific tests, with the results compared to optimal levels. Essentially, it represents an individual's ability to perform daily activities without fatigue or strain.

5.1.3. Physical Education and Sports Class
First: Technical definition:
According to Muhammad Al-Hamistani, a physical education lesson consists of three main parts.

1) Preliminary stage: This part includes an introduction and exercises. The introduction is intended to prepare students both psychologically and physiologically. The exercises aim to improve posture, develop physical fitness and have a positive impact on vital systems.
The main stage includes both educational and practical activities. The educational activity focuses on teaching the topic included in the lesson, which may consist of one or more topics. During the lesson, the teacher explains the motor skill. The practical activity involves applying and teaching the previously learnt skill.
The final stage is the last part of the lesson and is aimed at physiologically calming the students and returning various body systems to their normal state.

Second: Operational definition:
The researcher defines this class as a significant component of the physical education curriculum. It is conducted by secondary school students once a week for two hours. During this time, the teacher aims to promote various health dimensions, including psychological aspects such as self-esteem and adaptability.

5.3 Secondary stage
First: Technical definition:
The term 'secondary education' is used in most Arab countries and is based on a foreign concept.

6. Previous studies:
When researching our study topic, we came across related studies and focused on those that were most relevant to our subject. We arranged these studies chronologically, from the oldest to the newest. The most significant studies are listed below:

6.1. Arab Studies
Study by Mohammad Lutfi Abu Saleh (2011): 'Building Standard Levels of Health-Related Physical Fitness Among Secondary School Students in Tulkarm Governorate'.
The study aimed to assess health-related physical fitness levels among secondary school students in Tulkarm Governorate, establish standard levels and determine the impact of residence and grade variables, as well as their interaction, on these levels. To this end, the researcher employed a descriptive method and conducted the study on a sample of 1,200 students in years ten, eleven and twelve. The American Physical Fitness Battery related to health was used, comprising four tests: measuring skinfold thickness of the arm and below the scapula, trunk flexion from a sitting position, sit-ups from a lying position, and a 1609-metre walking/running test. After data collection, the data were coded and statistically analysed using the Statistical Package for the Social Sciences (SPSS), employing means, standard deviations, two-way analysis of variance and percentages. The results indicated that students had a lower level of health-related physical fitness than global standards.

Study by Ali Muhammad Al-Saghir (2002):
'A proposed framework for a programme in health-related physical fitness within the context of the curriculum'. Published in Studies in Curriculum and Teaching Methods, Faculty of Education, Ain Shams University, Egypt.
The study aimed to analyse the health-related physical fitness model as a modern approach to physical education curricula. The need to adopt such a model emerged from social influences and modern civilisational data that have led to a sedentary lifestyle. Adopting this model would also help to prevent diseases such as respiratory and circulatory system disorders, muscle weakness, reduced flexibility and high body fat percentage. The study reviewed the 'SPARK' (Sports, Play and Active Recreation for Kids) model, which was developed by the National Heart, Lung and Blood Institute and emphasises the health aspects of physical education. It integrates theory with practice, resulting in a practical programme that can be implemented in physical education classes. The SPARK programme consists of two approaches: the physical education programme and the self-management programme. The study

concluded with several guiding principles for applying the health-related fitness model. These emphasise a focus on physical activities rather than on the development of optimal physical fitness alone, the importance of diversity in physical activities and the use of the FITT (Frequency, Intensity, Time, Type) principles to improve and maintain fitness. Finally, the study presented two models for planning health-related physical fitness lessons.

6.2. Algerian Studies

Study by Ben Chaib Ahmed (2022): 'The Level of Achieving Health Dimensions Through Physical Education Classes in Secondary Education', conducted for a doctoral degree at the University of Algiers 3. The study aimed to assess the extent to which health dimensions (mental health, cardiorespiratory fitness, musculoskeletal fitness and body composition) are achieved through physical education classes in secondary school. The researcher adopted a descriptive method with a sample of 800 students over three academic years (2016/17 to 2018/19) using a longitudinal approach. The researcher used the mental health scale developed by Al-Qrayti and Al-Shakhis (1992) to measure mental health; the 800-metre running/walking test to measure cardiorespiratory fitness; and the 2 kg medicine ball throw test to measure arm strength. The sit-up test with knee flexion and hands on the chest was used to assess abdominal muscle strength, and the flexibility box test was used to evaluate the hamstrings and lower back muscles. Height, weight and body fat percentage were estimated using the body mass index (BMI). The study concluded with the following results:

Physical education and sports classes achieve a good level of mental health for secondary school students.

Physical education and sports classes contribute to moderate cardiorespiratory fitness among secondary school students.

- Physical education and sports classes contribute to achieving optimal body composition among secondary school students, albeit weakly.

Study by Dahoun Oumari (2017), University of Algiers: 'Determining Standard Levels of Health-Related Physical Fitness Elements Among Secondary School Students Using a Computer Program'. This descriptive study employed a survey method with secondary school students (aged 16–18) from various schools in Algeria. The study aimed to design a computer programme to evaluate health-related physical fitness elements among secondary school students (both male and female) and determine their levels based on the programme. The researcher used a descriptive survey method with a randomly selected sample of 9,763 students from different secondary schools across the country. A series of tests were employed, including the 20-metre multistage shuttle run, the inclined push-up test, the sit-up test from a lying position with knee flexion, trunk flexion from a sitting position and the body mass index (BMI). The main findings included:

- The effectiveness of the proposed computer programme in evaluating health-related physical fitness elements among a large number of students in a shorter amount of time, with greater accuracy and less effort.
- Identification of physical tests for health-related fitness elements among secondary school students.
- The establishment of standard levels for health-related fitness elements among secondary school students, particularly females and males.
- A decrease in the level of health-related physical fitness elements among the research sample.

Study by Souli Iman (2014): 'School Climate and Its Relationship with Mental Health Among a Sample of Intermediate and Secondary School Students', a Master's thesis from the University of Ouargla, Algeria. The study aimed to explore the relationship between school climate and mental health among intermediate and secondary school students, assessing the current state of both at various schools in Ouargla. The study also sought to identify differences in mental health levels based on gender, geographical area (urban vs. rural) and age group (fourth intermediate vs. third secondary). A total of 978 students from Ouargla were surveyed during the 2012/13 academic year using two

questionnaires: one developed by the researcher to assess school climate, and another developed by Marwan Abdullah Diab (2006) to assess mental health. The study results included:
- The prevailing school climate in intermediate and secondary schools was found to be open.
- The level of mental health in these schools was high.
- A positive correlation was found between school climate and mental health.
- No statistically significant differences were found in mental health levels between genders.
- Statistically significant differences in mental health levels were found based on geographical area, favouring rural students.
- Statistically significant differences in mental health levels were also found based on educational stage, favouring third-year secondary school students.

8. Research Methodology:

The methodology is defined as the process of uncovering truth in science. The nature of this study, its problem and its questions determine the methodology. As our study aims to determine the extent to which physical education and sports classes contribute to achieving certain health dimensions among secondary school students in Tipaza, and having reviewed the scientific methodologies employed in research, we opted for a descriptive methodology due to its suitability for the characteristics of our study. Descriptive statistics were used to answer the study questions, including calculating means and standard deviations to determine the extent to which physical education and sports classes contribute to achieving certain health dimensions among secondary school students, based on the responses collected through the study tool.
The descriptive methodology is defined as follows: 'One of the forms of organised scientific analysis and interpretation used to describe and quantify a specific phenomenon or problem by collecting relevant data and information, classifying and analysing it in detail' (Ali Moamer Abd Al-Mu'min, 2008, p. 286).

9. Study population
The study population is the social group on which the study will be conducted, according to the chosen methodology. The researcher aims for the results of the study to be applicable to this population. Our study population consists of all physical education and sports teachers at secondary level in Tipaza, estimated to be 132 teachers distributed across 45 secondary schools.

10. Study sample:
The sample was selected at random to obtain information that is representative of the original study population. The sample consists of individuals selected for a specific study, ensuring the results are representative of the population under study. A well-chosen sample allows the results to be generalised to the population under study. For this study, we selected a sample of over 10% (22 teachers), which accounts for 16.66% of the total population and is distributed across ten secondary schools in three districts: Hajjout, Cherchell and Tipaza. Therefore, the results obtained from the individuals included in the sample can be generalised to the original study population.

11. Scope of the study
11.1. Spatial scope:
The study was conducted in the Tipaza province and included three districts: Hajjout, Cherchell and Tipaza.

11.2 Temporal scope: Temporal scope:
The research was conducted over a period of four months, from early February to late May 2024. It was divided into two phases:
Phase One:

From early February to the end of April. This phase involved theoretical research, during which we gathered information about the theoretical framework of our study.
Phase Two, in May, focused on the practical aspect, involving data collection and discussion of results.

11.3. Human scope:
The human scope of our study comprises secondary school physical education and sports teachers.

12. Data and information collection tools
In order to confirm or refute the proposed hypotheses and achieve the outlined objectives of our research, we employed appropriate methods and tools for this type of research. The tools and means employed are summarised below:

12.1. Theoretical study:
This involves the use of sources, references, books, theses and published texts related to the subject, in Arabic and foreign languages. This enabled us to define the problem and design the questionnaire effectively.

12.2 Practical study
Questionnaire Form:
Description of the questionnaire:
The researchers designed a 30-question questionnaire divided into two dimensions:
- **First Dimension:** The contribution of physical education classes to achieving cardiorespiratory fitness.
- **Second Dimension:** The contribution of physical education classes to mental health.

The questionnaire is aimed at secondary school physical education and sports teachers. When scoring the questionnaire, points are assigned as follows: 3 (Yes), 2 (Somewhat) and 1 (No).
Instructions for designing the questionnaire:
The questionnaire consists of 30 statements with three response options ('Yes', 'Somewhat', 'No'), represented by the numbers (1, 2, 3). Scoring involves summing the ratings to obtain the highest and lowest possible scores.
The highest possible score is: $30 \times 3 = 90$.
The lowest score is: $30 \times 1 = 30$.

13. Psychometric Properties
Validity of the questionnaire:
The questionnaire was presented to a group of specialists who assessed its relevance to the study topic. They provided specific guidance on determining the direct relationship between the selected items and the study topic. The researcher will define this relationship during the discussion of the final results.

Reliability of the questionnaire:
After preparing the study tool (the questionnaire), we examined its reliability to ensure the stability of its constituent items. We calculated the internal consistency reliability coefficient, Cronbach's Alpha, which ranges from 0 to 1 and indicates the percentage of sample members who would give the same answers if re-interviewed under the same conditions.

Table 2: Reliability of the questionnaire dimensions

Dimension	Field	Cronbach's Alpha
- Physical Fitness	06	0.870
- Psychological Health	06	0.751

Source: Prepared by the students based on SPSS outputs.

Items with a reliability coefficient exceeding 60% are accepted, as represented in the table above. The internal consistency for the fitness dimension in this study is estimated at 0.870 (87%). For the mental health dimension, this value is 0.751 (75.1%), which is close to 1. Thus, the measurement tool used in this study exhibits a high degree of reliability for all items in the questionnaire, indicating its credibility. This suggests that respondents would provide the same answers if re-interviewed under the same conditions.

14. Statistical tools used in the study

Regardless of the type of study being conducted, no researcher can forgo statistical methods and techniques, whether social or economic. These tools are particularly useful when the goal is comparison, as they enable the researcher to determine if there are differences among study groups. They also provide precise, objective descriptions. Rather than relying solely on personal observations, statistical methods lead to correct approaches and valid results (Mohamed El-Sayed, 1970, p. 85).

1. Percentages, frequencies, mean, standard deviation and relative mean: These are primarily used to determine the frequency of categories of a variable and assist the researcher in describing the study sample.
2. Cronbach's alpha: This is used to assess the reliability of the measurement items.
3. Chi-Square Test:

This involves calculating the theoretical and computed chi-square values.

15. Presentation, analysis and interpretation of results

15.1 Presentation, analysis and interpretation of results: Presentation and analysis of the first hypothesis results:

Physical education and sports classes significantly contribute to physical fitness among secondary school students.

Statement 1: Physical education classes enhance cardiac performance through the activities practised.

Table 3 presents the statistical analysis of the first statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-Square Test
					Calculated	Tabular			
Yes	16	72.7	0.912	1.55	7.951	3.55	0.05	01	Significant
No	-	-							
Somewhat	06	27.3							
Total	22	100							

Figure 07: Percentages of responses to Question 1 from the first dimension.

Table 03 shows that the largest percentage of teachers (72.7%) believe that physical education classes enhance cardiac performance through the activities practised. Meanwhile, 27.3% view it as contributing somewhat. The standard deviation is 0.912 and the mean is 1.55. The calculated chi-squared value of 7.951 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to enhancing cardiac performance through the activities practised.

Statement 02: Physical education classes contribute to developing respiratory performance.

Table 4 presents the statistical analysis of the second statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-Square Test
					Calculated	Tabular			
Yes	**15**	**68.2**	**0.953**	**1.64**	8.549	3.55	0.05	01	Significant
No	-	-							
Somewhat	**07**	**31.8**							
Total	**22**	**100**							

Figure 08: Percentages of responses to Question 2 from the first dimension.

As can be seen from Table 04, the largest percentage of teachers (68.2%) believe that physical education classes contribute to respiratory performance development. Meanwhile, 32.8% view it as contributing to some extent. The standard deviation is 0.953 and the mean is 1.64. The calculated chi-squared value of 8.549 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to respiratory performance development.

Statement 03: Physical education classes contribute to improving performance by measuring heartbeats.

Table 5 presents the statistical analysis of the third statement from the first dimension

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	**13**	59.1	**0.973**	**.177**	8.050	3.55	0.05	01	Significant
No	**1**	4.5							
Somewhat	**8**	36.4							
Total	**22**	100							

Figure 09: Percentages of responses to Question 3 from the first dimension.

Table 05 shows that the largest percentage of teachers (59.1%) believe that physical education classes improve performance by measuring heartbeats. Meanwhile, 36.4% view it as contributing somewhat, while 4.5% disagree. The standard deviation is 0.953 and the mean is 1.64. The calculated chi-squared value of 8.549 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to improving performance through heartbeat measurement.

Statement 04: Physical education classes contribute to treating certain respiratory diseases.

Table 06: Presents the statistical analysis of the fourth statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-Square Test
					Calculated	Tabular			
Yes	**13**	59.1	0.897	1.68	8.827	3.55	0.05	01	Significant
No	**3**	13.6							
Somewhat	**6**	27.3							
Total	**22**	100							

Figure 10: Percentages of responses to Question 4 from the first dimension.

Table 6 shows that the largest percentage of teachers (59.1%) believe that physical education classes contribute to treating certain respiratory diseases. Meanwhile, 27.3% view it as contributing somewhat, while 13.6% disagree. The standard deviation is 0.897 and the mean is 1.68. The calculated chi-squared value of 8.827 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to the treatment of certain respiratory diseases.

Statement 05: Physical education classes negatively affect students with respiratory issues.

Table 07 presents the statistical analysis of the fifth statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	**10**	45.5	0.921	1.91	9.721	3.55	0.05	01	Significant
No	**4**	18.2							
Somewhat	**8**	36.4							
Total	**22**	100							

Figure 11: Percentages of responses to Question 5 from the first dimension.

Table 7 shows that the largest percentage of teachers (45.5%) believe that physical education classes negatively affect students with respiratory issues. Meanwhile, 36.4% view it as having some effect, while 18.2% disagree. The standard deviation is 0.921 and the mean is 1.91. The calculated chi-squared value of 9.721 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the negative impact of physical education classes on students with respiratory issues.

Statement 06: Physical education classes contribute to correcting certain congenital deformities in students.

Table 8 presents the statistical analysis of the sixth statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	**8**	36.4	0.733	1.82	11.640	3.55	0.05	01	Significant
No	**10**	45.5							
Somewhat	**4**	18.2							
Total	**22**	100							

Figure 12: Percentages of responses to Question 6 from the first dimension.

Table 8 shows that the largest percentage of teachers (45.5%) believe that physical education classes do not contribute to correcting certain congenital deformities in students. Meanwhile, 18.2% view them as somewhat contributing, while 36.4% disagree. The standard deviation is 0.733 and the mean is 1.82. The calculated chi-squared value of 11.640 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses favouring the belief that physical education classes do not contribute to correcting certain congenital deformities in students.

Statement 07: Physical education classes contribute to improving the morphological structure of students' bodies.

Table 9 presents the statistical analysis of the seventh statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	**12**	54.5	0.952	1.82	8.902	3.55	0.05	01	Significant
No	**2**	9.1							
Somewhat	**8**	36.4							
Total	**22**	100							

Figure 13: Percentages of responses to Question 7 from the first dimension.

Table 9 shows that the largest percentage of teachers (54.5%) believe that physical education classes contribute to improving students' body shape. Meanwhile, 36.4% view it as contributing somewhat, and 9.1% disagree. The standard deviation is 0.952 and the mean is 1.82. The calculated chi-squared value of 8.902 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to improving the morphological structure of students' bodies.

Statement 08: Physical education classes contribute to building students' muscular structure and correcting posture.

Table 10 presents the statistical analysis of the eighth statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	**11**	50.0	0.971	1.91	9.218	3.55	0.05	01	Significant
No	**2**	9.1							
Somewhat	**9**	40.9							
Total	**22**	100							

Figure 14: Percentages of responses to Question 8 from the first dimension.

Table 10 shows that the largest percentage of teachers (50%) believe that physical education classes contribute to building students' muscular structure and correcting posture. Meanwhile, 40.9% view it as contributing somewhat, while 9.1% disagree. The standard deviation is 0.971 and the mean is 1.91. The calculated chi-squared value of 9.218 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to building students' muscular structure and correcting posture.

Statement 09: Physical education classes contribute to reducing obesity.

Table 11 presents the statistical analysis of the ninth statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	**9**	40.9	0.971	2.09	10.095	3.55	0.05	01	Significant
No	**2**	9.1							
Somewhat	**11**	50.0							
Total	**22**	100							

Figure 15: Percentages of responses to Question 9 from the first dimension.

Table 11 shows that the largest percentage of teachers (50%) believe that physical education classes contribute somewhat to reducing obesity. Meanwhile, 40.9% view them as contributing to obesity reduction, and 9.1% disagree. The standard deviation is 0.971 and the mean is 2.09. The calculated chi-squared value of 10.095 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to reducing obesity.

Statement 10: Physical education classes contribute to enhancing motor coordination.

Table 12 presents the statistical analysis of the tenth statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	19	86.4	0.703	1.27	8.498	3.55	0.05	01	Significant
No	-	-							
Somewhat	03	13.6							
Total	**22**	100							

Figure 16: Percentages of responses to Question 10 from the First Dimension

As can be seen in Table 12, the largest percentage of teachers (86.4%) believe that physical education classes enhance motor coordination. Meanwhile, 13.6% view it as contributing somewhat. The standard deviation is 0.703 and the mean is 1.27. The calculated chi-squared value of 8.498 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to enhancing motor coordination.

Statement 11: Physical education classes contribute to enhancing the functional performance of the musculoskeletal system.

Table 13 presents the statistical analysis of the eleventh statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	15	**68.2**	0.908	1.59	8.217	3.55	0.05	01	Significant
No	1	**4.5**							
Somewhat	6	**27.3**							
Total	**22**	100							

Figure 17: Percentages of responses to Question 11 from the first dimension.

Table 13 shows that the largest percentage of teachers (68.2%) believe that physical education classes enhance the functional performance of the musculoskeletal system. Meanwhile, 27.3% view it as contributing somewhat, and 4.5% disagree. The standard deviation is 0.908 and the mean is 1.59. The calculated chi-squared value of 8.217 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to enhancing the functional performance of the musculoskeletal system.

Statement 12: Physical education classes contribute to increasing flexibility and agility.

Table 14 presents the statistical analysis of the twelfth statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	16	72.7	0.859	1.50	8.189	3.55	0.05	01	Significant
No	1	4.5							
Somewhat	5	22.7							
Total	**22**	100							

Figure 18: Percentages of responses to Question 12 from the first dimension.

Table 14 shows that the largest percentage of teachers (72.7%) believe that physical education classes increase flexibility and agility. Meanwhile, 22.7% view it as contributing somewhat, and 4.5% disagree. The standard deviation is 0.859 and the mean is 1.50. The calculated chi-squared value of 8.189 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to increasing flexibility and agility.

Statement 13: Physical education classes contribute to increasing strength and endurance.

Table 15 presents the statistical analysis of the thirteenth statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	12	54.6	0.990	1.86	8.828	3.55	0.05	01	Significant
No	1	4.5							
Somewhat	9	40.9							
Total	**22**	100							

Figure 19: Percentages of responses to Question 13 from the first dimension.

Table 15 shows that the largest percentage of teachers (54.6%) believe that physical education classes increase strength and endurance. Meanwhile, 40.9% view it as contributing somewhat, and 4.5% disagree. The standard deviation is 0.990 and the mean is 1.86. The calculated chi-squared value of 8.828 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to increasing strength and endurance.

Statement 14: Physical education classes contribute to increasing speed.

Table 16 presents the statistical analysis of the fourteenth statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	12	54.5	0.990	1.86	8.828	3.55	0.05	01	Significant
No	1	4.5							
Somewhat	9	40.9							
Total	**22**	100							

Figure 20: Percentages of responses to Question 14 from the first dimension.

Table 16 shows that the largest percentage of teachers (54.6%) believe that physical education classes increase speed. Meanwhile, 40.9% view it as contributing somewhat, and 4.5% disagree. The standard

deviation is 0.990 and the mean is 1.86. The calculated chi-squared value of 8.828 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to increasing speed.

Statement 15: Physical education classes contribute to enhancing balance and accuracy.

Table 17 presents the statistical analysis of the fifteenth statement from the first dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	14	63.7	0.945	1.68	8.343	3.55	0.05	01	Significant
No	1	4.5							
Somewhat	7	31.8							
Total	**22**	100							

Figure 21: Percentages of responses to Question 15 from the first dimension.

Table 17 shows that the largest percentage of teachers (63.7%) believe that physical education classes enhance balance and accuracy. Meanwhile, 31.8% view it as contributing somewhat, and 4.5% disagree. The standard deviation is 0.953 and the mean is 1.64. The calculated chi-squared value of 8.549 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to enhancing balance and accuracy.

Hypothesis 2: Physical education classes significantly contribute to achieving mental health among high school students.

Statement 01: Physical education classes contribute to shaping students' personalities.

Table 18 presents the statistical analysis of the first statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	18	81.8	0.790	1.36	8.101	3.55	0.05	01	Significant
No	-	-							
Somewhat	4	18.2							
Total	**22**	100							

Figure 22: Percentages of responses to Question 1 from the second dimension.

As can be seen from Table 18, the largest percentage of teachers (81.8%) believe that physical education classes contribute to shaping students' personalities. Meanwhile, 18.2% view it as contributing to some extent. The standard deviation is 0.790 and the mean is 1.36. The calculated chi-squared value of 8.101 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to shaping students' personalities.

Statement 02: Physical education classes contribute to enabling students to achieve self-actualisation and utilise their abilities.

Table 19 presents the statistical analysis of the second statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	18	81.8	0.790	1.36	8.101	3.55	0.05	01	Significant
No	-	-							
Somewhat	4	18.2							
Total	**22**	100							

Figure 23: Percentages of responses to Question 2 from the second dimension.

As can be seen from Table 19, the largest percentage of teachers (81.8%) believe that physical education classes enable students to achieve self-actualisation and utilise their abilities. Meanwhile, 18.2% view it as contributing somewhat. The standard deviation is 0.790 and the mean is 1.36. The calculated chi-squared value of 8.101 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to enabling students to achieve self-actualisation.

Statement 03: Physical education classes contribute to improving students' morals.

Table 20 presents the statistical analysis of the third statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	19	86.4	0.703	1.27	8.498	3.55	0.05	01	Significant
No	-	-							
Somewhat	3	13.6							
Total	**22**	100							

Figure 24: Percentages of responses to Question 3 from the second dimension.

As can be seen from Table 20, the largest percentage of teachers (59.1%) believe that physical education classes contribute to improving students' morals. Meanwhile, 36.4% view it as contributing to this to some extent. The standard deviation is 0.703 and the mean is 1.27. The calculated chi-squared value of 8.498 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to improving students' morals.

Statement 04: Physical education classes contribute to reducing rapid emotional responses and enhancing balance and maturity.

Table 21 presents the statistical analysis of the fourth statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	18	81.8	0.716	1.32	8.632	3.55	0.05	01	Significant
No	1	4.6							
Somewhat	3	13.6							
Total	**22**	100							

Figure 25: Percentages of responses to Question 4 from the Second Dimension

Table 22 shows that the largest percentage of teachers (81.8%) believe that physical education classes contribute to reducing rapid emotional responses and enhancing balance and maturity. Meanwhile, 13.6% view it as contributing somewhat, while 4.6% disagree. The standard deviation is 0.716 and the mean is 1.32. The calculated chi-squared value of 8.632 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to reducing rapid emotional responses and enhancing balance and maturity.

Statement 05: Physical education classes contribute to reducing anger and enhancing psychological well-being.

Table 22 presents the statistical analysis of the fifth statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	17	77.3	0.727	1.36	8.801	3.55	0.05	01	Significant
No	2	9.1							
Somewhat	3	13.6							
Total	**22**	100							

Figure 26: Percentages of responses to Question 5 from the second dimension

As can be seen in Table 22, the largest percentage of teachers (77.3%) believe that physical education classes contribute to reducing anger and enhancing psychological well-being. Meanwhile, 13.6% view it as contributing somewhat, and 9.1% disagree. The standard deviation is 0.727 and the mean is 1.36. The calculated chi-squared value of 8.801 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to reducing anger and enhancing psychological well-being.

Statement 06: Physical education classes contribute to reducing psychological stress and increasing enjoyment.

Table 23 presents the statistical analysis of the sixth statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	22	100	0.955	1.00	8.884	3.55	0.05	01	Significant
No	-	-							
Somewhat	-	-							
Total	**22**	100							

Figure 27: Percentages of responses to Question 06 from the Second Dimension

Table 23 shows that all teachers (100%) believe that physical education classes contribute to reducing psychological stress and increasing enjoyment. The standard deviation is 0.955 and the mean is 1.00. The calculated chi-squared value of 8.884 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to reducing psychological stress and increasing enjoyment.

Statement 07: Physical education classes contribute to modifying and addressing students' behaviours.

Table 24 presents the statistical analysis of the seventh statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	15	**68.2**	0.953	1.64	8.050	3.55	0.05	01	Significant
No	-	-							
Somewhat	7	**31.8**							
Total	**22**	100							

Figure 28: Percentages of responses to Question 07 from the Second Dimension

As can be seen from Table 24, the largest percentage of teachers (68.2%) believe that physical education classes contribute to modifying and addressing students' behaviours. Meanwhile, 31.2% view it as contributing somewhat. The standard deviation is 0.953 and the mean is 1.64. The calculated chi-squared value of 8.050 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to modifying and addressing students' behaviours.

Statement 08: Physical education classes contribute to enhancing trust between students and their peers.

Table 25: Presents the statistical analysis of the eighth statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	18	81.8	0.790	1.36	8.101	3.55	0.05	01	Significant
No	-	-							
Somewhat	4	18.2							
Total	**22**	100							

Figure 29: Percentages of responses to Question 08 from the Second Dimension

As can be seen in Table 25, the largest percentage of teachers (81.8%) believe that physical education classes contribute to enhancing trust between students and their peers. Meanwhile, 18.2% view it as contributing somewhat. The standard deviation is 0.790 and the mean is 1.36. The calculated chi-squared value of 8.101 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to enhancing trust between students and their peers.

Statement 09: Physical education classes contribute to enhancing psychological recreation and students' feelings of satisfaction and happiness.

Table 26: Presents the statistical analysis of the ninth statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	20	90.9	0.588	1.18	9.419	3.55	0.05	01	Significant
No	-	-							
Somewhat	2	9.1							
Total	**22**	100							

Figure 30: Percentages of responses to Question 09 from the Second Dimension

As can be seen from Table 26, the largest percentage of teachers (90.9%) believe that physical education classes contribute to psychological well-being and satisfaction. Meanwhile, 9.1% view it as contributing to some extent. The standard deviation is 0.588 and the mean is 1.18. The calculated chi-squared value of 9.419 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to enhancing psychological recreation and students' feelings of satisfaction and happiness.

Statement 10: Physical education classes contribute to enhancing mutual trust among students and encouraging collaboration.

Table 27: Presents the statistical analysis of the tenth statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	21	95.5	0.426	1.09	12.000	3.55	0.05	01	Significant
No	-	-							
Somewhat	1	4.5							
Total	**22**	100							

Figure 31: Percentages of responses to Question 10 from the Second Dimension

As can be seen in Table 27, the largest percentage of teachers (95.5%) believe that physical education classes contribute to enhancing mutual trust and encouraging collaboration among students. Meanwhile, 4.5% view it as contributing somewhat. The standard deviation is 0.426 and the mean is 1.09. The calculated chi-squared value of 12.000 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to enhancing mutual trust and encouraging collaboration among students.

Statement 11: Physical education classes contribute to improving mood and reducing stress and psychological tension.

Table 28: Presents the statistical analysis of the eleventh statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	17	77.3	0.858	1.45	7.953	3.55	0.05	01	Significant
No	-	-							
Somewhat	5	22.7							
Total	**22**	100							

Figure 32: Percentages of responses to Question 11 from the Second Dimension

As can be seen in Table 28, the largest percentage of teachers (77.3%) believe that physical education classes contribute to improving mood and reducing stress and psychological tension. Meanwhile, 22.7% view it as contributing somewhat. The standard deviation is 0.858 and the mean is 1.45. The calculated chi-squared value of 7.953 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to improving mood and reducing stress and psychological tension.

Statement 12: Physical education classes contribute to the ability to face challenges and the demands of life.

Table 29 presents the statistical analysis of the twelfth statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	9	40.9	0.926	2.00	10.132	3.55	0.05	01	Significant
No	4	18.2							
Somewhat	9	40.9							
Total	**22**	100							

Figure 33: Percentages of responses to Question 12 from the Second Dimension

As can be seen in Table 29, the largest percentage of teachers (40.9%) believe that physical education classes contribute to the ability to face challenges and the demands of life. A further 40.9% view it as contributing somewhat, while 18.2% disagree. The standard deviation is 0.926 and the mean is 2.00. The calculated chi-squared value of 10.132 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to the ability to face challenges and the demands of life.

Statement 13: Physical education classes contribute to forming successful social relationships among students.

Table 30 presents the statistical analysis of the thirteenth statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	17	77.3	0.646	1.32	9.566	3.55	0.05	01	Significant
No	3	13.6							
Somewhat	2	9.1							
Total	**22**	100							

Figure 34: Percentages of responses to Question 13 from the Second Dimension

As can be seen from Table 30, the largest percentage of teachers (77.3%) believe that physical education classes contribute to the formation of successful social relationships among students. Meanwhile, 9.1% view it as contributing somewhat, while 13.6% disagree. The standard deviation is 0.646 and the mean is 1.32. The calculated chi-squared value of 9.566 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to forming successful social relationships among students.

Statement 14: Physical education classes contribute to instilling desired values and a spirit of tolerance.

Table 31: Presents the statistical analysis of the fourteenth statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	20	90.9	0.588	1.18	9.419	3.55	0.05	01	Significant
No	-	-							
Somewhat	2	9.1							
Total	**22**	100							

Figure 35: Percentages of responses to Question 14 from the Second Dimension

As can be seen in Table 31, the largest percentage of teachers (90.9%) believe that physical education classes contribute to instilling desired values and a spirit of tolerance. Meanwhile, 9.1% view it as contributing somewhat. The standard deviation is 8.664 and the mean is 1.18. The calculated chi-squared value of 9.419 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to instilling desired values and a spirit of tolerance.

Statement 15: Physical education classes contribute to reducing irritability and building psychological integration.

Table 32: Presents the statistical analysis of the fifteenth statement from the second dimension.

Fields	Frequency	Percentage	Standard Deviation	Mean	Calculated Chi-square (χ^2)		Error Rate	Degrees of Freedom	Significance of Chi-square Test
					Calculated	Tabular			
Yes	13	59.1	0.935	1.73	8.664	3.55	0.05	01	Significant
No	2	9.1							
Somewhat	7	31.8							
Total	**22**	100							

Figure 36: Percentages of responses to Question 15 from the Second Dimension

As can be seen in Table 32, the largest percentage of teachers (59.1%) believe that physical education classes contribute to reducing irritability and building psychological integration. Meanwhile, 31.8% view it as contributing somewhat, and 9.1% disagree. The standard deviation is 0.935 and the mean is 1.37. The calculated chi-squared value of 8.664 is greater than the theoretical chi-squared value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates that there are statistically significant differences in teachers' responses regarding the contribution of physical education classes to reducing irritability and building psychological integration.

16. Discussion of Hypotheses

16.1 Discussion of the First Hypothesis

After presenting the results and analysing the obtained data statistically, the following is found:

The first partial hypothesis is accepted, stating that physical education classes significantly contribute to achieving physical fitness among secondary school students. This is based on the calculated chi-square values, which ranged from 7.95 to 11.64 for the fitness dimension statements. These values are statistically significant, exceeding the tabulated chi-square value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates significant differences in teachers' responses favouring the contribution of physical education classes to achieving physical fitness among secondary school students. This is supported by the majority of teachers' responses to the following questions:

Question 1: 'Do physical education classes contribute to enhancing cardiac performance through practised activities?'

Question 2: 'Do physical education classes contribute to improving respiratory performance?'

Question 5: 'Do physical education classes negatively affect students with respiratory issues?'

Question 10: 'Physical education classes contribute to enhancing motor coordination.'

Question 11: 'Do physical education classes contribute to enhancing the functional performance of the musculoskeletal system?'

Question 12: 'Physical education classes contribute to increasing flexibility and agility.'

Question 14: 'Physical education classes contribute to increasing speed.'

An exception is question 6, where 46% of teachers responded negatively, indicating that physical education classes do not correct certain congenital deformities in students. This is compared to 36% who responded affirmatively.

The results of our current study are consistent with the findings of Ahmed Ben Chouaib's doctoral research, which concluded that:
Physical education classes contribute to achieving cardiovascular fitness among secondary school students at a moderate level.
Physical education classes contribute to achieving muscular strength among secondary school students at a moderate level.
Physical education classes achieve muscular endurance among secondary school students at a moderate level.
Additionally, our findings are consistent with those of Slaim Ben Abid's study, which indicated:
- Physical education classes play a role in enhancing health-related fitness.
Physical education classes contribute to improving both cardiovascular and muscular fitness, as well as body composition.

Discussion of the second hypothesis: 16–2

Regarding the second partial hypothesis, which asserts that physical education classes significantly contribute to psychological well-being among secondary school students, the calculated chi-square values for the psychological well-being dimension ranged from 7.95 to 12.00. These values are statistically significant, exceeding the tabulated value of 3.55 at one degree of freedom and a significance level of 0.05. This indicates significant differences in teachers' responses favouring the contribution of physical education classes to achieving psychological health for secondary school students.
This is supported by the majority of teachers' responses to the following questions:
Question 3: 'Physical education classes contribute to improving students' morals.'
Question 4: 'Physical education classes help reduce impulsive reactions and promote stability and maturity.'
Question 6: 'Physical education classes contribute to reducing psychological stress and increasing enjoyment.'
Question 9: 'Physical education classes contribute to enhancing psychological recreation and students' feelings of satisfaction and happiness.'
Question 10: 'Physical education classes contribute to enhancing mutual trust among students and encouraging collaboration.'
An exception is Question 12, where the percentages of teachers who responded affirmatively and somewhat were equal at 41%.
The results of our current study align with the findings of Ahmed Ben Chouaib's doctoral research, which concluded that physical education classes promote good psychological health among secondary school students. Additionally, Iman Souli's 2014 master's thesis study, titled 'The School Climate and Its Relationship to Psychological Health Among Middle and Secondary School Students', found that the level of psychological health in middle and secondary schools is high.

17. General conclusion:

The results of the study indicate a statistically significant correlation between physical education classes and various health dimensions among secondary school students. The study emphasises the significant role that physical education plays in achieving health-related goals, particularly with regard to psychological well-being and physical fitness.

Through our theoretical study of the health dimensions associated with physical education for 15-18 year old students, in conjunction with the field study, we concluded that physical education should be given a more prominent place in the curriculum. This can be achieved by increasing the number of classes and elevating their importance, as this is the best way to ensure students' psychological health and improve their physical fitness.

Physical education classes provide students with the opportunity to express their opinions and behaviours freely, fostering healthy human relationships through activities based on respect, participation and mutual trust.

Furthermore, efforts should be made to promote sports activities at primary school level to address and prevent psychological issues at an early age. This will encourage students to enjoy optimal psychological health, and promote both in-class and extracurricular sports activities that enhance feelings of competence and self-confidence, facilitating social interaction.

Furthermore, these activities foster emotional maturity and self-control in a competitive atmosphere, helping to harness students' energies and potential. Additionally, both in-class and extracurricular activities can strengthen the relationship between students and teachers. It is also essential to revise the secondary education physical education curriculum by increasing the focus on health dimensions through the formulation of educational objectives that ensure students are optimally fit and healthy. This approach will give students a sense of value and the ability to achieve, as well as preparing them to face various life demands. The goal should be to encourage secondary school students to engage in extracurricular physical activities and participate in class activities to develop and enhance health dimensions.