

The impact of regular practice of physical and sport activities on the level of body image among adolescents

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Abstract:

This study aims to investigate the body image levels of second-year students at Ferhati Hamida High School in the willaya of Oum el Bouaghi. Furthermore, it seeks to determine whether there are statistically significant differences in body image, specifically related to regular physical activity. To achieve this goal, a field study was conducted with a randomized sample of 40 students aged between 15 and 16 years. The study employed a descriptive research methodology and used a scale distribution as the data collection tool. Statistical analysis revealed that adolescents who engage in regular physical activities have a heightened level of body image, with no discernible differences based on gender.

KEY WORDS : Body Image; Adolescence ; Regular Physical And Sports Activities.

المخلص:

تهدف هذه الدراسة إلى إستكشاف مستويات صورة الجسم لتلاميذ السنة الثانية بثانوية فرحاتي أحميذة، بولاية أم البواقي. وتسعى الدراسة للتحقق من وجود إختلافات إحصائية في صورة الجسم، ناتجة عن ممارسة النشاط البدني بانتظام. تمت الدراسة ميدانيا على عينة عشوائية من 40 تلميذ (15-16 عامًا)، باستخدام منهج وصفي وتوزيع مقياس لجمع البيانات. بعد التحليل الإحصائي، أظهرت النتائج ارتفاعاً في مستوى صورة الجسم للمراهقين المشاركين في النشاطات البدنية بانتظام، دون وجود فروق واضحة بسبب الجنس. الكلمات المفتاحية: صورة الجسم؛ المراهقة؛ الأنشطة البدنية المنتظمة.

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-Introduction:

"I am happy with my body!" is considered one of the most challenging statements to achieve, as it embodies both the physical and psychological aspects, creating a flexible link between the tangible (observable) body and the soul (its noticeable impact). There are several dimensions extending from humans, with self at the top, and their importance in connecting the other dimensions, thus extending to touch on personality, psyche, behavior, and body image. This categorization is founded on the pursuit of a comprehensive behavioral model. It posits that by embodying this trait, one attains liberation (confidence) and independence, breaking away from judgments or notions that may stem from misunderstandings or specific psychological beliefs. Once rectified or disproven, these beliefs contribute to adaptation and harmony between abstract and material elements, resolving conflicting aspects in life and aligning with perceived reality.

BI here appeals to readiness and assimilation, as well as accommodating the adjustments and changes that occur on both personality and the physical body during adolescence, as it is a stage of destabilization. Neurologist and psychoanalyst (Schilder, 1968: 35) defines the body image as "a representation of our self-creation, a collection of perceptions and sensations coming from various parts of our body to form a bodily unit." Psychologist "Seymour Fisher" links it to the social aspect, stating that "body image is a subjective or non-subjective matter, reflecting the combined impact of society on the realistic, functional, experiential, and early and ongoing body-related structure, as well as reflecting the ongoing social response to the body's form and social, cultural, and ideal values related to the body". (Rierdan, 1997: 32)

Some, like "Rozin", describe BI as "a positive or negative mental picture that the individual has about his own body and declares itself through a set of behavioral tendencies accompanying that image". (Dessouki, 2006: 16)

According to them, "If the body holds a pivotal role throughout an individual's lifespan, maintaining the person's physiological equilibrium and acting as a reflection of their psychological well-

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being, portraying the external manifestation of the individual, this significance becomes notably amplified during adolescence."This is because adolescence involves comprehensive and rapid changes that affect all aspects of the adolescent's personality". (Nafea, 2001: 68).

Thus, adolescence can be viewed as a fertile environment conducive to the development of psychological and physical compatibility, commonly referred to as centers of interest. These elements forecast the reality of body image for each teenager, shaped by their qualitative interaction with the transitional stage from childhood to adolescence. This actively demonstrate that this period is a "dynamic state, and most physiological and psychological processes that occur during it for the adolescent are not fixed" (Hassan, 2004: 215).

This dynamic situation leads to specific perceptions with networked relationships with the psychological aspect of the adolescent, especially how he sees himself within the limits of his body and how this can affect his effective position in society. This is what led "Schilder" to say, "Our eyes, as well as the eyes of others, serve as the primary mechanism for the interplay of body images, facilitating the potential to establish social connections with others." This passage discusses the importance of the visual space in building body and face images, centralizing them, and the tool he uses to bring other body images closer to him" (Bedoua, 2009: 97) .

The value of physical and sports activities lies in being a means and support for adolescents to perceive and develop their BI based on individual differences. Additionally, "the significance of consistent engagement in physical and sports activities resides in fostering physical, psychological, and mental development in a wholesome manner. Physical activities aim to enhance mood, alleviate stress and anxiety both during and post-exercise, resulting in a substantial boost in self-confidence, enhanced coping mechanisms, improved physical fitness, and appearance, directly influencing all facets of personal life.". (Ahmeda, 2019: 398).

1-2 Problematic:

Adolescence is a highly sensitive period, marking the transition between childhood and adulthood. During this stage, adolescents experience a disturbance in the relative balance of psychological,

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physical, and social concepts they encountered in childhood. Numerous studies, focusing on both observable and subtle changes and extending beyond mere observation to encompass thorough study and analysis of behaviors, reveal the impact of the growth process on the student's experience during this critical stage.

"If the body plays a fundamental role throughout a person's life, overseeing the individual's physiological balance and serving as a mirror for psychological life, representing the external appearance of him, this importance increases significantly during adolescence. This is because it involves comprehensive and rapid changes that affect all aspects of the adolescent's personality" (Nafea, 2001: 68).

The significant difficulties affecting adolescents involve their attempts to match their personal conception of their body (whether illusory or real) with the actual existing body. The imbalance lies in the constant preoccupation with the data of the body or total aversion, affecting the levels of body image. The study aims to highlight the interaction between regular physical and sports activities and the level of body image among our target group (adolescents). This is achieved by studying the differences between adolescents based on the two variables (practitioner/non-practitioner) and (gender: male/female), which may be attributed to the results regarding the level of body image (individual perception of the body/individual perception of the body based on the opinions of others).

The main question of the research can be formulated as follows:

What is the impact of engaging in regular physical and sports activities on the body image among adolescents?

1.3 Sub-questions:

- 1- Are there statistically significant differences in body image among adolescents engaged in regular physical and sports activities compared to those who are not, attributed to the variable of gender (males/females)?
- 2- Are there statistically significant differences in the level of body image attributed to the variable of regular engagement in physical and sports activities (regular practitioners/non-practitioners)?

1.4 Research Hypotheses:

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1.4.1 General Hypothesis:

- Regular engagement in physical sports activities plays a role in categorizing the levels of body image for adolescents.

1.4.2 Specific Hypotheses:

- 1- There are no statistically significant differences in body image levels attributed to the gender (male/ female) variable for both practicing and non-practicing adolescents.(exerciser/ non-exerciser).
- 2- There are statistically significant differences in body image levels attributed to the variable of regular engagement in physical and sports activities (regular practitioners/non-practitioners) among adolescents. (exerciser/ non-exerciser).

1.5 Previous studies:

First Study:

In a study conducted by (Hamzaoui, 2016), the relationship between body image and self-esteem in adolescents was investigated, and gender differences in body image satisfaction and self-esteem levels among schooled adolescents were explored. The study found no gender differences in both body image and self-esteem. Additionally, a positive correlation was found between body image and self-esteem among schooled adolescents of both genders.

Second Study:

A study conducted by (Ghazali, 2017) aimed to determine whether there is a difference in self-esteem between university students who engage in physical sports activities and those who do not, and to explore the relationship between self-esteem and body image among these students. The findings revealed a positive correlation between self-esteem and physical activity engagement. Differences in self-esteem and body image levels were observed between male and female students who participated in physical sports activities.

6.3 Third Study:

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In (Ahmeda, 2019) study, the satisfaction level of secondary school students with their body image was assessed through physical education classes, and their athletic orientation level was determined. The study found that secondary school students experienced high levels of satisfaction with their body image and athletic orientation through physical education classes. A statistically significant positive correlation was found between satisfaction with body image and athletic orientation.

6.4 Fourth Study:

Study by (Zerrouki,2019-2021), the study intended to identify and reveal the relationship between body image and self-esteem in adolescents engaged in physical activities in secondary school.

Its outcomes there were significant differences between adolescents engaged in classroom and extracurricular activities in both body image and self-esteem, for those engaged in extracurricular activities. Significant differences were also found based on specific variables: gender (favouring males), age (no significant differences), environment (favouring urban residents), and activity type (individual vs. group).

6.5 Fifth Study:

A study by (Zerrouki and Omrawi, 2023), the study oriented to identify the impact of the reflection of in-class and extracurricular physical and sports activities on body image by revealing the differences between adolescents engaged in in-class and extracurricular activities on body image. Also to uncover the nature of the relationship between body image and self-esteem among adolescents engaged in in-class and extracurricular physical activities in secondary school, it concluded a positive correlation between body image and its dimensions and self-esteem. Differences were identified between adolescents engaged in in-class and extracurricular activities, favoring those engaged in extracurricular activities.

2- Research Objectives:

- Identify differences in body image levels between regular practitioners and non-practitioners of physical and sports activities based on gender.

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- Explore differences in body image levels between regular practitioners and non-practitioners of physical and sports activities during adolescence.
- Determine whether the body image levels of adolescents in high school vary (high, medium, or low).

- Research Significance:

Scientific Importance: Proposing the dialectical relationship between study variables and clarifying the intersecting trajectories emerging from the intended impact to be revealed.

Applied Importance: The significance of studies focusing on adolescents lies in understanding and addressing the issues they face, aiming to find appropriate solutions. This involves integrating psychological and physical aspects to develop adolescents' ability to comprehend the rapid changes they undergo. Additionally, it emphasizes the importance of each adolescent's perception of themselves as a reference for their engagement in regular physical activity and its connection to their body image.

3-Procedural definition of the concepts mentioned in the research:

- The first concept: Body Image (Saber, 2009: 6)

"The image that a person forms in their mind about their body, whether positive or negative, real or unreal, influenced by psych, cultural, and social factors."

According to "Shilder" (Turkey, 1990: 242) definition, "the human body image is "an image of our own bodies as we conceive them in our minds, meaning the pattern on which our body is built.".

The researcher concludes that it is how an individual perceives themselves through their bodily boundaries, forming an image of their body. It can be positive or negative, and it may have levels (high, medium, low) as it is influenced by various variables such as personal opinion, society, gender... and may not be realistic because it is more subjective than regulated.

- The second concept: Regular Physical and Sports Activities (Malina, 2004: 6)

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"Physical activity can take several forms such as free play, PE (sports classes in schools) and organized sports."

The researcher concludes that regular PA is consistent and non-intermittent engagement in PA, whether inside or outside of school, structured with weekly sessions of two or more.

- **The third concept: Adolescence**(Daron et port, 1991:13)

"It is regarded as a phase involving emotional and cognitive reconstruction of one's personality, signifying a period of significant psychological transformations that serves as a bridge between the stages of childhood and adolescence. "

The researcher concludes in this research, the target age group is adolescents in the second year of high school, aged between 15 and 16 years.

4-The methodological procedures used in the study:

The exploratory study was made in order to determinate the following:

4-1 Method and tools:

- Our aim is to identify characteristics, frequencies, trends, correlations, and categories; in order, the most convenient method is "Descriptive research".

4-2 Research Population and Sample:

The study's **research population** consists of second-year high school students at Farhati Ahmed Secondary School in the willaya of OEB, with an average of 120 students.

Research Sample: consists of 40 students divided into 20 male students (10 Exerciser, 10 Non-exerciser) and 20 female students (10 Exerciser, 10 Non-exerciser).

Sampling Method: The research sample was randomly selected using the random tables (lists of students) provided by the administration. The selection ensured the nature of engaging in physical and sports activities or being non- exercisers based on the questions attached to the scale.

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Table N°1: Represents the distribution of the research sample between exerciser and non-exerciser (males - females).

Regular APS		Frequency	Ratio
Exerciser	Females	10	50%
	Males	10	
Non-exerciser	Females	10	50%
	Males	10	

4-3 Data Collection Tool:

Body Image Scale: Developed by the researcher, Samia Mohamed Saber Mohamed Abdul Nabi, Professor of Mental Health at the Faculty of Education, Benha University, 2008. (Abdul Nabi, 2008: 187-235)

- First Dimension: The individual's perception of their body, which can be positive or negative, and includes the following expressions:

1	2	4	5	6	7	9	10	12	13	16	17	19	21	23	24	25	26
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- Second Dimension: Individual's perception of their body through the opinions of others, containing the following expressions:

3	8	11	14	15	18	22	27
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- Correction Method:

1 "Never" for positive statements, 2 "Sometimes", 3 "Always"

1	2	7	10	11	16	22	24	25	27
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1 "Never" for negative statements. , 2 "Sometimes, 3 "Always"

3	4	5	6	8	9	12	13	14	15	17	18	19	20	21	26
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We calculated the median value for the body image scale, which was $\mu = 72$. Thus, scores above 72 indicate a positive body image with the individual's accurate and clear perception of their body, as well as satisfaction with it. Scores below 72, on the other hand, indicate a negative body image with the individual having a distorted perception of their body and dissatisfaction with it. Therefore, the scores on the scale range from 27 as the minimum to 81 as the maximum, representing the degree of body image.

Table N°2: Represents the median value for the body image scale.

The sample	The median
40	72

We determined the levels of the body image scale, which relies on a Likert-type scale labeled with three degrees (Always, Sometimes, Never). After calculating both the lowest and highest scores, we found them as follows:

$(27 \times 1) = 27$ Lowest Score. $(27 \times 3) = 81$ Highest Score.

Then, we calculated the ranges of each dimension, which in turn reflects the level of body image (Low, Moderate, High) as follows:

$81 - 27 = 54$, $54 \div 3 = 18$

Table N°3: Represents the levels of body image.

The range	$27 + 18 = 45$	$46 + 18 = 64$	$65 + 18 = 83$
	$(83 - 65)$	$(64 - 46)$	$(27 - 45)$
The level	Low	Medium	High

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4.3.1 Reliability and Stability of the Tool:

- Tool Stability:

The Cronbach's alpha coefficient was used to calculate the reliability of the scale:

Table N°4: Represents the reliability of the body image scale (>0.70).

The number of paragraphs	Cronbach's alpha
27	0.775

Internal Consistency Validity:

The calculation relied on the correlation coefficients of the scale items with its total score:

Table N°5: Represents the correlation coefficients of the scale items with the total score.

The number of the sentence (Individual statement)	Correlation coefficient	The number of the sentence (Individual statement)	Correlation coefficient
1	*0.378	15	**0.655
2	**0.438	16	*0.391
3	*0.346	17	**0.632
4	*0.312	18	**0.661
5	*0.379	19	**0.657
6	**0.346	20	**0.531
7	**0.451	21	**0.657
8	**0.415	22	**0.438
9	**0.435	23	**0.753
10	**0.495	24	**0.530
11	**0.423	25	*0.311
12	*0.392	26	**0.512
13	**0.477	27	*0.341
14	**0.579	*Significant at 0.005	*Significant at 0.001

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From Table N°5, we observe statistically significant correlation coefficients of the BI Scale with its total score, as most scale items are significant at 0.001. Consequently, the scale exhibits a high degree of internal consistency.

4.4 Research Domains:

- Spatial Domain: Secondary School of Ferhati Hmida, Willaya of Oum El Bouaghi.
- Temporal Domain: The study was conducted over a two-week period (survey and field study).

4.5 Methods and Statistical Procedures Used:

- Mean calculation.
- Student's t-test.
- Standard deviation
- Pearson correlation coefficient.
- Statistical package programs: SPSS 22.

5- Presentation and Analysis of Results:

Presentation and Analysis of the Results for the First Hypothesis:

Which states that there are no statistically significant differences in body image levels attributed to the gender variable.

Table N°6: Results of the student's t-test regarding differences between males and females in the scores of the body image scale in its dimensions and the total score

Body image scale		Arithmetic mean	Standard deviation	Calculated t-value	Tabulated t-value	Significance level	Degree of freedom	SIG
Gender								
Dim 1	Female	51.05	3.76	0.848				0.402
	Male	49.75	5.73					
Dim 2	F	21.05	2.91	0.653	1.686	0.05	38	0.518
	M	20.50	2.40					

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Total	F	72.10	5.51	0.878					0.386
	M	70.25	7.64						

Analyzing the results presented in Table 6:

It becomes apparent that there are differences in the Body Image scale based on its dimensions (Dim1 = Individual's perception of their body, Dim2 = Individual's perception of their body through others) and gender (male, female). Additionally, differences in the overall scale score and gender (male, female) are observed. The average for Dim1 (Female) is 51.05 with a standard deviation of 3.76, and for Dim1 (Male), the average is 49.75 with a standard deviation of 5.73. The calculated t-value is 0.848, which is smaller than the tabulated t-value. Comparing this with the significance (sig) value of 0.402 (greater than 0.05), there are no statistically significant differences in Dimension 1 between males and females.

For Dim2 (Female), the average is 21.05 with a standard deviation of 2.91, and for Dim2 (Male), the average is 20.50 with a standard deviation of 2.40. The calculated t-value is 0.653, smaller than the tabulated t-value, and the significance (sig) value is 0.518 (greater than 0.05), indicating no statistically significant differences in Dimension 2 between males and females.

Regarding the overall score, females have an average of 72.10 with a standard deviation of 5.51, while males have an average of 70.25 with a standard deviation of 7.64. The calculated t-value is 0.878, smaller than the tabulated t-value of 1.686 at a significance level of 0.05. The significance (sig) value of 0.386 is greater than 0.05, supporting the conclusion that there are no statistically significant differences in Body Image scores between males and females.

Presentation and Analysis of the Results of the Second Hypothesis: Which states that there are statistically significant differences in body image levels attributed to the variable of regular engagement in physical and sports activities (regular exercisers and non-exercisers).

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Table N°7: Results of the t-Test for differences between regular exercisers and non-exercisers in body image scale scores in its dimensions and total score.

Body image scale APS		Arithmetic mean	Standard deviation	Calculated t-value	Tabulated t-value	Significance level	Degree of freedom	SIG
Dim 1	Exerciser	52.30	3.73	2.678	1.686	0.05	38	0.011
	Non-exerciser	48.50	5.14					
Dim 2	Ex	21.75	1.71	2.480				0.018
	Non-ex	19.80	3.07					
Total	Ex	74.05	4.71	3.005				0.005
	Non-ex	68.30	7.15					

Analysis of the Results of the Second Hypothesis:

Analyzing the results presented in Table 7:

Reveals the differences in the body image scale based on its dimensions (Dimension 1 = individual's perception of their body), (Dimension 2 = individual's perception of their body through others), and regular engagement in physical activity (exerciser, not exerciser). Additionally, differences in the total score of the scale based on the variable of regular engagement in physical activity (ex, not ex) are observed. The average for Dimension 1 (exerciser) is 52.30 with a standard deviation of 3.73, while for Dimension 1 (Not exerciser), the average is 48.50 with a standard deviation of 5.14. The calculated t-

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value is 2.678, which is greater than the tabulated t-value. This comparison is supported by the significance level (sig) estimated at 0.011, which is less than 0.05, indicating statistically significant differences in Dimension 1, favouring the engaged individuals in regular physical activities.

As for Dimension 2 (exerciser), the average is 21.75 with a standard deviation of 1.71, while for Dimension 2 (Not exerciser), the average is 19.80 with a standard deviation of 3.07. The calculated t-value is 2.480, exceeding the tabulated t-value, and the significance level (sig) is estimated at 0.018, less than 0.05, indicating statistically significant differences in Dimension 2, favouring the engaged individuals in regular PA.

Regarding the differences in the total score of the body image scale based on the variable of regular engagement in physical activity (ex, not ex), the average for the engaged individuals is 74.05 with a standard deviation of 4.71, while for the non-engaged individuals, the average is 68.30 with a standard deviation of 7.15. The calculated t-value is 3.005, surpassing the tabulated t-value of 1.686 at a significance level of 0.05. This supports the statistically significant differences in the total score, favouring the engaged individuals.

6- Discussion and interpretation of the results:

6.1 The First Hypothesis:

The results in Table 6 indicate no statistically significant differences in the level of body image attributed to the gender variable at a significance level of 0.05. The study sample of adolescents (males-females) does not differ in terms of body image.

This aligns with the study by (Hamzaoui,2016), which found no differences in body image between males and females, attributing it to their simultaneous participation in the transitional phase of puberty and the associated physical, psychological, and cognitive changes. This period serves as a common ground for both genders to build or discover the intertwined dimensions of body image (cognitive-perceptual, self, socio-behavioral), making body image gender-neutral.

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Similarly, a study by (Ghazali, 2017) found no differences between genders in body image levels related to engaging in sports activities.

The obtained results, along with previous studies, suggest that adolescence compels individuals to grapple with questions, particularly regarding satisfaction and self-esteem of their body image. Adolescents perceive this through behaviors rather than content, leading to the absence of variations between males and females as body image reflects personal or external opinions.

This is supported by Shilder's (1923) definition of body image in his book "L'image du corps" as "The notion we maintain regarding our physical unity is governed by a temporal sequence and takes the form of a sense of distinctiveness in our physical existence in relation to the surrounding environment."

The social aspect, represented by Dimension 2 of the scale, indicates that body image is influenced by the opinions of others and society, shaping a normative framework for positive and negative comments received by adolescents in their direct experience and lived reality, whether male or female.

6.2 The second Hypothesis:

The analysis of Table 7 and its results indicates statistically significant differences in favor of individuals engaged in regular physical and sports activities at a significance level of 0.05. This aligns with a study by (Zerrouki. Omrawi, 2023) and (Zerrouki, 2019-2021), both concluding that there are significant differences in body image among adolescents engaged in extracurricular activities, attributing it to the positive impact of organized sports programs. Similarly, other studies support the positive influence of regular physical activity on body image satisfaction among secondary school students.

6.3 The general hypothesis of the research:

Derived from the analysis of Tables 2 and 3, suggests that the average score of the total scale falls within the high range (65-83) with an average of 74.05 for engaged individuals, surpassing the median value of 72. Therefore, it can be concluded that the general hypothesis, stating that regular engagement in physical activity plays a role in classifying the body image levels of adolescents, is achieved.

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7- Conclusion:

The study demonstrates that regular engagement in physical and sports activities has a tangible positive impact on the body image of adolescents. This is supported by statistically significant differences favoring engaged individuals, both in terms of individual perception and perception through others. The findings emphasize the integrative relationship between physical and psychological aspects, highlighting the importance of regular physical activity as a means to enhance adolescents' overall well-being.

In conclusion, considering all the points discussed, the significance of regular engagement in physical and sports activities on the psychological well-being of adolescents is evident. This involvement enhances their awareness of body image, fosters a positive body image, and contributes to the development of self-confidence, facilitating effective adaptation to the challenges faced during adolescence.

Based on these findings and in light of the current study results, we propose the following:

- Attempting to harness the training aspect to align with the teaching requirements to build a complete educational unit at the educational level to attract students who are enthusiastic about participating in physical education and sports sessions.
- Conducting new studies on the impact of regular physical activity on the social normalization that school-going adolescents lack due to the withdrawal effects of the isolation experienced for three years due to COVID-19.
- Emphasizing the necessity for adolescents to engage in regular physical activities as a means of psychological support, parallel to their physical development.

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