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Level of physical activity (LPA) , physical and psychological health of school adolescents

مستوى النشاط البدني والصحة البدنية والنفسية للمراهقين في المدارس

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Abstract: The objective of this research is to analyze the nature of the link between the level of physical activity (LPA) of schooled adolescents and their physical and psychological health, while knowing that despite the multiple benefits that result from a lifestyle active, several studies indicate a gradual decrease in practice during this age. To do this, we opted for the evaluation of the LPA through the 24h recall method, as well as the assessment of physical and psychological health by means of a questionnaire designed for this purpose. The study involved a sample of 120 students aged 15 to 18 years old who practice PSE.

After the statistical analysis of the data collected, it was concluded that the level of physical activity (LPA) presented by the students is positively related to their physical and psychological well-being.

Keywords: Level of physical activity . Health . adolescents.

المخلص : الهدف من هذا البحث هو تحليل طبيعة العلاقة بين مستوى النشاط البدني للمراهقين المتعلمين وصحتهم البدنية والنفسية ، مع العلم أنه على الرغم من الفوائد المتعددة التي تنتج عن نمط الحياة النشط ، تشير العديد من الدراسات إلى انخفاض تدريجي في الممارسة خلال هذا العمر. للقيام بذلك ، اخترنا تقييم من خلال طريقة الاستدعاء 24 ساعة ، وكذلك تقييم الصحة البدنية والنفسية عن طريق استبيان مصمم لهذا الغرض. اشتملت الدراسة على عينة من 120 طالبًا تتراوح أعمارهم بين 15 و 18 عامًا يمارسون النشاط البدني
الكلمات المفتاحية : مستوى النشاط البدني ، المراهقين . ، الصحة

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1-Problem:

"Physical or sports activity is considered to be an a priori factor favorable to health" (INSERM, 2008). Indeed it is an essential component of a balanced lifestyle, its many benefits for physical and psychological health have the effect that this habit of **life should be encouraged and valued in society. However, many people, although aware of the benefits of PA, do not** practice PA, or at least not enough, which can be detrimental to health and well-being. particularly adolescents where this age group represents an important transition stage, during which young people develop their identity and values and make choices in terms of the lifestyle habits they adopt. These choices can affect their current health, but can also affect their long-term health. Some studies indicate that the level of physical activity present in adolescence tends to be maintained during adulthood. The relationship between physical activity level (LPA), and the physical and psychological health of adolescents is at the heart of our research work. It implies a good knowledge of the concepts explored, studies of association between these concepts are discussed. This is important, especially in adolescents where physical activity is present in the school environments (PSE). Knowing that an active lifestyle can constitute a barrier to health problems, it is essential to study the relationship between LPA and the physical and psychological health of young people. Which led us to ask the following question:

Is the physical and psychological health of adolescents related to Their level of physical activity (LPA)?

2- Assumptions:

To answer this question we made the following assumptions:

- LPA is a determinant of the physical health of students.
- The LPA is a determinant of the psychological well-being of students.

- The LPA is linked to physical health and at the same time to the psychological health of students.

3- Research objectives and interests

- Check the nature of the relationship between the level of physical activity (LPA) and the physical well-being of these adolescents.

- Emphasize the link between adolescent psychological well-being and their level of physical activity ((LPA).

- Know if the physical and psychological health of students is related to their level of physical activity

4- Research tasks

In order to achieve the above objectives, we have set ourselves the following tasks:

Bibliographic and documentary analysis on the theme of our research which is the level of physical activity ((LPA) and physical and psychological health, Evaluate the level of physical activity ((LPA) of the students by a method of daily reminder (24h).

Design a questionnaire for students on two essential aspects of our research (APS and physical health / APS and psychological health).

5- Sample:

Our study involved a sample of 120 secondary school students. The survey was carried out at two secondary establishments in Ras El Oued (cherif larguet school and Bouadi Boussoualem school). We made this choice based on our travel possibilities. The access to these two schools was facilitated by the directors of the establishments, the objective of the research was to explain to the students who agreed to participate in this study by answering the receptive questionnaire. The members of our sample are between 15 and 18 years old, we before chose this age group because it represents an important transition stage,

during which young people develop their identity and values and make choices in terms of lifestyle habits they adopt

6- Means and method of research

To solve the aforementioned problem, we applied the following means and methods:

6.1. Bibliographic and documentary analysis:

This process allows us to collect the maximum amount of data relating to our topic. We therefore consulted and analyzed around forty works between books, documents, memoirs, reviews and others, which allowed us to better clarify and identify our problem, and to determine our hypotheses as well as the concrete tasks of our work.

6.2. The question sheet

Since our research work focuses on the relationship between two essential aspects; the level of physical activity of young people and their physical and psychological health, we considered it necessary to use the questionnaire as a tool for collecting information, this technique which is much more quantitative

6..2.1. Structure of our questionnaire

Our questionnaire contains twenty statements on PSA and the two essential aspects of health (physical and psychological health) and five possible response responses where we assigned for each point: Always (5 pts), Often (4 pts), Sometimes (3 pts), Rarely (2 pts), Never (1pts). Statements one through ten focus on the physical aspect and statements eleven through twenty focus on the psychological aspect. The calculation of the results is done by adding the score of a proposed answer for each statement for a subject, although the maximum possible score, by questionnaire relating to physical appearance, is 50 points,

6.3. Level of physical activity ((LPA):

It is the estimate of the number of hours spent, per day, each type of activity, by realizing an average from the duration of these activities counted over one day the more the estimate is precise the closer the calculated (LPA will be reality.

First note the duration of all the activities practiced during the day:

☐ Classify the activities according to their intensity ((LPA), to simplify the evaluation, the activities are divided into six main categories (to which corresponds an (LPA) according to the table below.

☐ Calculate the average (LPA as follows:

$$((\text{LPA coefficient} \times \text{duration (hours)}) / 24$$

For example: ((LPA x hours of sleep) + (LPA x hours sitting on TV, PC, games videos) + ((LPA x hours of cleaning)... etc. The whole divided by 24 hours.

Each category corresponds to a specific activity level which must be multiplied by the number of hours First note the duration of all the activities practiced during the day:

☐ Classify the activities according to their intensity(LPA), to simplify the evaluation, the activities are divided into six main categories (to which corresponds an (LPA) according to the table below.

☐ Calculate the average (LPA as follows:

$$((\text{LPA coefficient} \times \text{duration (hours)}) / 24$$

For example: ((LPA x hours of sleep) + (LPA x hours sitting on TV, PC, games videos) + (LPA x hours of cleaning)... etc. The whole divided by 24 hours.

Each category corresponds to a specific activity level which must be multiplied by the number of hours

Category	(LPA	Activity
A	1	Sleep and nap, extended rest
B	1.75	Sitting position. (TV, computer, homework, meal, transportation)
C	2.1	Standing position (toilet, shopping, cooking, short trips)
D	2.6	Light activities of low intensity (games can be active)
E	3.5	Moderate activities (brisk walking, manual work.)
F	5.2	Sports activities (club training, physical education and sports ...)
G	10	Sports competition

Classification of the activities of children and adolescents aged 10 to 18 years in 7 categories according to the level of physical activity, (Martin 2000).

Low physical activity 1.50 to 1.80

Moderate physical activity 1.80 to 2.20

High physical activity greater than 2.20

7- Statistical study:

To carry out all the calculations of our work, we used statistical methods for a mathematical analysis of the data.

The percentage:

After retrieving the questionnaires distributed, take into account the scores of the responses to each statement, then calculate the percentage of each response according to the total workforce.

The average:

The mean of a statistical series is equal to the quotient of the sum of all the values of this series by the total workforce.

The median (Med):

It is the value that divides the sample into two parts of the same size.

The standard deviation:

It is the variance of the deviation from the mean, it means the distance which separates the individual values of the group.

Pearson's correlation coefficient:

Used to measure the intensity of the link between two characters. It is therefore an important parameter in the analysis of linear regressions (single or multiple)

8 - Presentation of the results of the questionnaires:

8.1. Presentation of the results obtained after the calculation of (LPA

Table N ° 2: Average NAP of our sample

Workforce	120
(LPA average	1.89

The results in the table above show that, overall, the students have a sufficient NAP, with an average of 1.89 in accordance with the international recommendations in force.

Table N ° 3: NAP of the members of our sampl

(LPA	Staff n = 120	Percentage %	NAP average
Student	24	20%	2,14
Moderate	66	55%	1,94
Low	30	25%	1,59

The results recorded in the table above show that More than half of the students have a moderate (LPA with an average of 1.94, while 30% have a low(LPA with an average of 1.59, who do not reach the level of physical activity favorable to health in accordance with international recommendations and only 20% of students with an average of 2.14 have a high (LPA The results recorded in the table above show that More than half of the students have a moderate(LPA with an average of 1.94, while 30% have a low (LPA with an average of 1.59, who do not reach the level of physical activity favorable to health in accordance with international recommendations and only 20% of students with an average of 2.14 have a high (LPA

8-2 Results of questions relating to physical appearance:

8-2-1 Results of statement N ° 1: on the relationship between the practice of APS and the feeling of physical well-being

Table N°4 Physical activity and good physical health

	A	O	S	R	N	Total	Average score	Median
points	5	4	3	2	1			
Students	112	05	01	02	00	120	4,43	3
%	93,33	4,16	0,83	1,66	00	100%		

(A)Always, (O) Often, (P) Sometimes, (R) Rarely, (N) Never

The results recorded in the table above show that the members of our sample affirm that the practice of a PSA makes you feel healthy, with an average score of 4.43 higher than the median which is 3.

8-2-2-Results of statement No. 2: Relating to the relationship between practicing APS and maintaining or improving physical fitness.

Table N ° 5: physical activity and maintenance or improvement of physical fitness.

	A	O	S	R	N	Total	Average score	Median
points	5	4	3	2	1			
Students	29	58	21	07	05	120		
%	24,16	48,33	17,50	5,83	4,16	100%	3,78	3

The results in the table above demonstrate that the average score (3.78) for this statement is higher than the median which is 3, which means that practicing PSA allows them to maintain or improve their physical shape, noted that 29 answered by always and 58 by often

8-2-3 Results of statement N ° 3: better listening to the body

Table N ° 6: APS and better listening to the body

	A	O	S	R	N	Total	Average score	Median
points	5	4	3	2	1			
Students	25	49	29	15	02	120		
%	20,83	40,83	24,16	12,5	1,66	100%	3,66	3

The results recorded in the table above demonstrate that the average score (3.66) is higher than the median which is 3, note that 20.83% as well as 40.83% of our sample answered forever and often, which indicates that the practice of PSA allows a better listening of the body.

8-2-4-Results of statement N ° 4: development of physical condition

Table N ° 7: PSA and development of physical condition.

	A	O	S	R	N	Total	Average score	Median
Points	5	4	3	2	1			
Students	07	28	55	25	05	120		
%	5,83	23,33	45,83	20,83	4,16	100%	3,05	3

From the results recorded in the table above, the average student score for this statement is 3.05 which is slightly higher than the median 3, note that 45.83% of our sample attest that the PSA allows that sometimes the development of physical condition

8-2-5-Results of statement N ° 5: better knowledge of physical qualities.

Table N ° 8: APS and better knowledge of physical qualities

	A	O	S	R	N	Total	Average score	Median
Points	5	4	3	2	1			
Students	16	28	46	21	09	120		
%	13,33	23,33	38,33	17,50	7,50	100%	3,17	3

The results in the table above demonstrate that the average score (3.17) for this statement is higher than the median which is 3, Note that only 7.50% answered never, which means that practicing of an APS allows a better knowledge of physical qualities

8-2-6 Results of statement N ° 6: better combated against fatigue.

Table N ° 9: PSA and better exercise tolerance

	A	O	S	R	N	Total	Average score	Median
points	5	4	3	2	1			
Students	19	38	44	12	07	120		
%	15,83	31,66	36,66	10	5,83	100%	3,41	3

The results recorded in the table above demonstrate that the average score (3.41) for this statement is higher than the median which is 3, with 31.66 who answered often and 15.83 always. This means that practicing APS can withstand the effort.

8-2-7 Results of statement N ° 7: maintenance of body appearance.

Table N ° 10: PSA and maintenance of body appearance, weight loss ... etc

	A	O	S	R	N	Total	Average score	Median
Points	5	4	3	2	1			
Students	18	31	28	33	10	120		
%	15	25,83	23,33	27,50	8,33	100%	3,11	3

The results recorded in the table above show that the members of our sample obtained an average score of 3.11 for the statement maintenance of body appearance, which is greater than 3 which is the median.

8-2-8 Results of statement N ° 8: more freedom of movement

Table N ° 11: APS and freedom in movement

	A	O	S	R	N	Total	Average score	Median
Points	5	4	3	2	1			
Students	17	44	25	21	13	120		
%	14,16	36,66	20,83	17,50	10,83	100%	3,25	3

The results recorded in the table above demonstrate that the average score (3.25) is higher than the median which is 3, it should be noted that 36.66 as well as 14.16 of our sample answered always and often, this which indicates that the practice of PSA allows you to be more free in movement.

8-2-9 Results of statement N ° 9: more confidence in the students' physical abilities.

Table N ° 12: PSA and confidence in physical capacities

	A	O	S	R	N	Total	Average score	Median
Points	5	4	3	2	1			
Students	35	23	24	21	17	120		
%	29,16	19,16	20	17,50	14,16	100%	3,31	3

The results recorded in the table above demonstrate that the average score (3.25) is higher than the median which is 3, it should be noted that 36.66 as well as 14.16 of our sample answered always and often, this which indicates that the practice of PSA allows you to be more free in movement.

8-2-9 Results of statement N ° 9: more confidence in the students' physical abilities.

Table N ° 12: PSA and confidence in physical capacities.

	A	O	S	R	N		Average score	Median
Points	5	4	3	2	1	Total		
Students	35	23	24	21	17	120		
%	29,16	19,16	20	17,50	14,16	100%	3,31	3

The results recorded in the table above demonstrate that the members of our sample obtained an average score of 3.31 for this statement, which is higher than the median (3), which means that the practice of PSA allows to feel confident in his physical ability.

8-2-10 -Results of statement N ° 10: better physical expression

Table N ° 13: PSA and best physical expression

	A	O	S	R	N		Average score	Median
Points	5	4	3	2	1	Total		
Students	26	30	23	26	15	120		
%	21,66	25	19,16	21,66	12,50	100%	3,21	3

The results recorded in the table above demonstrate that the members of our sample obtained an average score of 3.21 for this statement, which is higher than the median (3), note that 21.66% and 25% of the sample responded always and often. Table N ° 13: PSA and best physical expression.

8-2-11-Results of all questions relating to physical appearance.

In your opinion, does the practice of a physical and sports activity allow you:

Table N ° 14: average of questions relating to physical appearance

N°	States	Average score	Overall score ± E.type	Médian
1	To be in good health	4,43	32,52 ± 5,05	
2	Maintaining or improving your physical condition	3,78		30
3	Better listening to your body	3,66		
4	Development of your physical condition	3,05		
5	Better knowledge of your qualities physical (speed. Flexibility. Fore...)	3,41		
6	Better fight against fatigue (exercise tolerance)	3,17		
7	Maintain your body appearance (eg weight loss, muscles ... etc.)	3,11		
8	To be more free in your movements	3,25		
9	To have more confidence in your physical abilities To have more confidence in your physical abilities	3,31		
10	Better express yourself physically	3,21		

The results recorded in the table above demonstrate that the average score for each statement relating to the physical aspect of our questionnaire is higher than the median, the highest score recorded is 4.43 points, while the lowest score is 3.05 points. Note that the overall score obtained by all students is expressed with the mean (32.52 ± 5.05). This testifies to the homogeneity of our sample, as well as the superiority of this score to the median which is 30.

8-3 Results of questions relating to the psychological aspect:

Results of statement No. 11: on the relationship between the practice of PSA and the feeling of psychological well-being.

Table N ° 15: PSA and psychological well-being.

	A	O	S	R	N	Total	Average score	Median
Points	5	4	3	2	1			
Students	112	06	01	01	00	120	4,90	3
%	93,33	5	0,83	0,83	00	100%		

The results recorded in the table above show that the majority of the members of our sample (93.33%) affirm that the practice of PSA provides a feeling of psychological well-being with an average score of 4.90 higher than the median. is 3.

8-3 -1 Results of statement N ° 12: physical activity and pleasant sensations and positive.

Table N ° 16: PSA and pleasant and positive sensations

	A	O	S	R	N		Average score	Median
Points	5	4	3	2	1	Total		
Students	28	60	26	03	03	120		
%	23,33	50	21,66	2,50	2,50	100%	3,89	3

The results recorded in the table above demonstrate that half of our sample is 50% affirm that often the practice of PSA allows to have pleasant and positive sensations, as well as 23.33% of responses are expressed by always, which represents an average score of 3.89 higher than the median which is 3.

8-3 -2 -Results of statement N ° 13: fun and pleasure

Table N ° 17: APS, fun and pleasure

	A	O	S	R	N		Average score	Median
Points	5	4	3	2	1	Total		
Students	26	57	23	12	02	120		
%	21,66	47,50	19,16	10	1,66	100%	3,77	3

The results recorded in the table above demonstrate that the average score (3.77) for this statement is higher than the median which is 3, with 47.50% of responses expressed by often and 21.66% by always. This indicates that the practice of APS allows you to have fun and have fun.

8-3 -3 Results of Statement # 14: Feeling Comfortable and Relaxing

Table N ° 18: PSA and comfortable sensations and relaxation.

	A	O	S	R	N		Average score	Median
Points	5	4	3	2	1	Total		
Students	06	30	54	20	10	120		
%	5	25	45	16,66	8,33	100%	3,01	3

According to the results recorded in the table above, the average score (3.01) for this statement is slightly higher than the median 3, it should be noted that 45% of our sample say that physical activity allows that sometimes feeling comfortable and relaxing, while 25% responded often.

8-3 -4-Results of statement N ° 15: confidence in your abilities and going beyond your limits

Table N ° 19: APS and confidence in its capacities and to exceed its limits

	A	O	S	R	N		Average score	Median
Points	5	4	3	2	1	Total		
Students	17	34	40	19	10	120		
%	14,16	28,33	33,33	15,83	8,33	100%	3,24	3

The results in the table above demonstrate that the average score (3.24) for this statement is greater than the median which is 3, which means that practicing PSA allows the maintenance or improvement of the shape. physical, noted that 14.16% responded always and 28.33% often

8-3 -5 Results of statement N ° 16: psychological decompression (de-stress)

Table N ° 20: PSA and psychological decompression (de-stress).

	A	O	S	R	N	Total	Average score	Median
Points	5	4	3	2	1			
Students	23	29	37	20	11	120		
%	19,16	24,16	30,83	16,16	9,16	100%	3,27	3

According to the results recorded in the table above, 19% and 24.16% of our sample answered by always and often for this statement while and 30.83% expressed themselves by sometimes which indicates that the practice physical activity allows psychological decompression (distress) with an average score of 3.27 which is higher than the median 3.

8-3 -6-Results of statement N ° 17: self-knowledge see (strengths and weaknesses)

Table N ° 21: PSA and self-knowledge (strengths and weaknesses).

	A	O	S	R	N	Total	Average score	Median
Points	5	4	3	2	1			
Students	16	34	25	30	15	120		
%	13,33	28,33	20,83	25	12,50	100%	3,05	3

According to the results recorded in the table above, the average score 3.05 of the sample is slightly higher than the median which is 3, note that 28.33% state that the practice of physical activity often allows to have a better knowledge of their strengths and weaknesses while 12.50% are expressed have responded rarely.

8-3 -7 Results of Statement No. 18: Reduction in feelings of depression and nervousness

Table N ° 22: PSA and reduction of feeling of depression and nervousness.

The results in the table above demonstrate that the average score (3.14) for this statement is higher than the median which is 3, note that only 17.50% of our sample, while 26.66% state that the practice of PSA can reduce their feeling of depression and nervousness a better knowledge of physical qualities.

	A	O	S	R	N	Total	Average score	Median
Points	5	4	3	2	1			
Students	24	32	22	21	21	120		
%	20	26,66	18,33	17,50	17,50	100%	3,14	3

8-3 -8-Results of item 19: better expressing oneself in a group

Table N ° 23: PSA and expression in a group.

	A	O	S	R	N	Total	Average score	Median
Points	5	4	3	2	1			
Students	33	16	23	28	20	120		
%	27,50	13,33	19,16	23,33	16,66	100%	3,11	3

The results recorded in the table above demonstrate that the average score (3.11) for this statement is higher than the median which is 3, with 27.50% of responses expressed by always while 16.66% responded forever.

8-3 -9 Results of Statement No. 20: Develop a Better Relationship with Comrades

Table N ° 24: APS and relation with the comrades

The results recorded in the table above demonstrate that the average score (3.25) is higher than the median which is 3, note that 25% as well as 19.16% of our sample answered always and often, while 7.50% have never spoken, which indicates that the practice of PSA helps develop a better relationship with their comrades.

	A	O	S	R	N	Total	Average score	Median
Points	5	4	3	2	1			
Students	30	23	27	31	09	120		
%	25	19,16	22,50	25,83	7,50	100%	3,28	3

8-3-10-Results of all questions relating to psychological aspects:

In your opinion, does the practice of a physical and sports activity allow you

Table N ° 25: Average of questions relating to psychological health

N°	States	Average score	Overall score ± E.type	Médian
1	Better psychological well-being	4,90	32,48 ± 5,10	30
2	To have pleasant and positive sensations, good humor, joy ... etc	3,89		
3	To have fun and have fun	3,77		
4	To feel comfortable and relax	3,01		
	Better knowledge of your qualities physical (speed.	3,24		

	Flexibility. Fore...)	
6	Psychological decompression (de-stress)	3,27
7	Better knowledge of you (strengths and weaknesses)	3,05
8	Reduce the feeling of depression and nervousness	3,14
9	Better express yourself in a groupe	3,11
10	Develop a better relationship with your comrades	3,28

The results recorded in the table above, demonstrate that the average score for each statement relating to the psychological aspect of our questionnaire is higher than the median, the highest score recorded is 4.90 points while the lowest score is 3.01 points. Note that the overall score obtained by all students is expressed with the average (32.48 ± 5.10). This testifies to the homogeneity of our sample as well as the superiority of this score to the median which is 30

8-4 Results of correlation tests:

8-4 - 1 Level of physical activity ((LPA) and physical health

Table N ° 26: correlation (LPA and physical health.

Variable	Average	E. Type	Matrix of correlation (R)	Meaning
(LPA	1,94	0,24	0,75	< 0,0001
S phy	32,74	5,05		

The correlation results on the table above show us that there is a positive and statistically significant correlation at the threshold $\alpha \leq 0.0001$ between the ((LPA) level of physical activity with an average ($1.94 \pm 0, 24$) and physical health with an average (32.74 ± 5.05).

8-4 –2 Level of physical activity (LPA) and psychological health

Table N ° 27: correlation(LPA and psychological health

Variable	Average	E. Type	Matrix of correlation (R)	Meaning
(LPA	1,94	0,24	0,77	< 0,0001
S phy	32,48	5,10		

The correlation results in the table above show us that there is a positive and statistically significant correlation at the threshold $\alpha \leq 0.0001$ between the (NAP) level of physical activity with an average ($1.94 \pm 0, 24$) and psychological health with an average (32.48 ± 5.10)

8-4 - 3 Physical and psychological health

Table N ° 28: correlation physical and psychological health.

Variable	Average	E. Type	Matrix of correlation (R)	Meaning
NAP	1,94	0,24	0,85	< 0,0001
S phy	32,48	055,		

The correlation results in the table above show us that there is a positive and statistically significant correlation at the threshold $\alpha \leq 0.0001$ between physical health with an average of (32.74 ± 5.05) and health psychological with an average of (32.48 ± 5.10) .

8-4 –4 Level of physical activity ((LPA) and Physical and psychological health

Table N ° 29: correlation NAP and physical health and psychological health

Variable	Average	E. Type	Matrix of correlation (R)	Meaning
NAP	1,94	0,24	0,78	< 0,0001
S phy	65,22	9,79		

The results of the correlations in the table above show us that there is a positive and statistically significant correlation at the threshold $\alpha \leq 0.0001$ between the ((LPA) level of physical activity with an average $(1.94 \pm 0, 24)$ and physical and psychological health with an average (65.22 ± 9.79) .

9- Discussion of the results:

9-1 Discussion of the results relating to the evaluation of the level of physical activity (LPA) of students: The calculation of the(LPA of students; based on an estimate of the number of hours spent, per day, in each type of daily activity. The results show that the members of our sample are active with an average (LPA of 1.89, considered as favorable health in accordance with current international recommendations. We note that 20% of the students recorded a high(LPA with an average of 2.14 which indicates a large daily activity, while more than half or (66%) of the subjects recorded a moderate(LPA (1, 94) which is a very acceptable value according to always the same recommendations. In the end, 30% of the members of our sample showed a weak NAP with an average score of 1.59 In the light of these results we can consider that the young people in our sample are physically active, indeed such an observation, can be associated with a practice of physical and sporting activities (APS) including globally the compulsory practice within the framework of the school curriculum , during physical and sports education (PSE), to which are added the time spent on other activities of daily life hiking, walking, standing... etc., which can also be explained by the availability and accessibility of practice areas (stadium, recreation area, etc.)

9-2 Discussion of the data relating to the physical health and the (LPA of the pupils: hypothesis N ° 1 stipulates that the level of physical activity ((LPA) is a determinant of the physical health of young people. The data from this study shows that 93.33% of the members of our sample affirm that the practice of PSA contributes among other things to physical health. Indeed the practice of PSA is strongly encouraged nowadays, its beneficial effects on health have been demonstrated by the World Health Organization (WHO), which recommends

regular practice throughout life providing "a complete state of physical, mental and social well-being "in active subjects (Taylor 2000). It can also be a means of preventing health risks, so several studies (Riddoch and Boreham 2000; Taylor 2000) have demonstrated close relationships between level of physical activity ((LPA) and diseases such as diabetes, cardiovascular accidents, hypertension, stress, anxiety, osteoporosis, certain cancers or obesity.

The study shows that sports practice allows students to maintain and develop physical condition. Knowing that a person's physiological qualities, like many other attributes, are largely determined by their genetic predispositions. Physical condition can be improved through regular practice of appropriate physical activities (Sallis and Patrick, 1994). Students expressed that they listen to their bodies better (3.66) in fact regular practice of physical activity arouses in young people take an interest in their health and make them responsible for their personal hygiene (Desharnais, R.1991). Active adolescents take better control of their health and have a better lifestyle and better listen to the body's alarm signals . Research has indicated that regular physical activity has many health benefits, so PA is associated with a reduced risk of obesity (Ostman et all 2004), especially if combined with proper nutrition and healthy lifestyles.

Physical activity improves physical qualities and allows better exercise tolerance. Indeed the cardiovascular function depends on the level of physical activity ((LPA), during physical exercise, the muscles need a supply of oxygenated blood higher than that of the state of rest, this increase in blood circulation is achieved by increasing the activity of the myocardium, the AP makes it possible to solicit this muscle and makes it progress. Physical activity is now recommended in the field of cardiovascular diseases, both as prevention and to limit the consequences when they are installed (INSERM 2008). There has been a strong

positive correlation between the level of physical activity and physical health of students with a correlation index $r = 0.75$. This shows that the practice of physical activity and sport, has a positive effect on all aspects of the physical health of students, as explained above. Through these results we can say that the first hypothesis is confirmed.

9-3 Discussion of the data relating to the psychological well-being and the (LPA of the pupils:

hypothesis N ° 2 stipulates that the level of physical activity (NAP) is a determinant of psychological well-being of the pupils. The results obtained show that 93.33% of the members of our sample affirm that the practice of PSA contributes among other things to psychological health, in fact the regular practice of a physical and sporting activity is associated with an improvement in health. mental (Inserm2008), and can be a preventive and therapeutic means against depression, phobias, stress, anxiety phenomena, psychological quite widespread in adolescents. The study shows that the practice of physical activity and sports allows students to have pleasant sensations. PA is indeed associated with a decrease in the prevalence of depressed mood. Physical Activity provides an opportunity to stop thinking about your worries and frustrations. Alfermann and Stoll (2000). Northatetal (1990) observed that to decrease negative moods chronic exercise was found to be more effective than relaxation or other activities. It also provides a feeling of fun and pleasure. The greater the pleasure associated with physical activity, the better will be the benefits on psychological well-being, for (Wankel. L, 1993), it is identified as a major reason for sports practice among young people (Brustad et al (2001). The results of our study show that PSA practice allows students to de-stress. This can be explained, among other things, by the fact that it helps to manage stress, through the

production of endorphins by the body (hormones in the brain which promote feelings of pleasure and enjoyment). PSA is a safe and effective way to reduce the level of tension in adolescents, increasing the secretion of chemicals used as neurotransmitters improves the psychological state (Richard, H.cox. 2013). The practice of PSA also allows students to have confidence in their abilities and exceed their limits, as well as a better knowledge of themselves, indeed the positive repercussions of physical practice on adolescents are located in particular in level of self-esteem and self-image (Kirkcaldy et al, 2002), emphasizing their strengths, offering them opportunities to try new things and to master activities. Monteiro et al. (2011) have shown that APS has a protective effect on body image as well as benefits for self-esteem. Our study shows that physical activity also helps students to express themselves better in a group, by spending time with others, social bonds are formed which can then be applied to other aspects within the group. school installation (Halas, 2001). A sense of belonging can then be experienced, as well as the development of a better relationship with their comrades. By reducing isolation, creating a context of interaction with others and initiating cooperation and teamwork (Kino-Québec, 1998), since the social interaction accompanying physical activity with friends and colleagues is very pleasant and has the effect of improving mental health (North et al, 1990). There was a strong positive correlation between the level of physical activity and the physical health of students with a correlation index $r = 0.77$. This shows that the practice of physical activity and sport, has a positive effect on all aspects of the psychological health of students, as explained above. In light of these results, we can say that the second hypothesis of our study is confirmed.

9-4 Discussion of the data relating to the physical and psychological health and the (LPA of the pupils:

Hypothesis N ° 3 stipulates that the (LPA is related to the physical and psychological health of the pupils. As previously explained, leading an active lifestyle has a physical and psychological impact on the good of individuals, Powell and Dysinger (1987) explained that the improvement in health status is closely linked to the increase in (LPA, in fact the good level of physical activity of students and directly relates to their well-being, and can certainly alleviate the health problems generated by a sedentary lifestyle and by the habits of life which are attached to it. It has been found that the practice of regular physical and sports activities is of capital importance for the improvement of the health factor and to ensure a well-being. There was a strong positive correlation between physical health and psychological health relative to the data back with a correlation index $r = 0.85$. Indeed physical health and mental health are closely linked. There is no health without mental health (WHO). It is a complete state of physical, mental and social well-being, many mental disorders are associated with somatic disorders and many somatic diseases can be accompanied by psychic troubles. There was also a strong positive correlation between the level of physical activity ((LPA) and the physical and psychological health of students with a correlation index $r = 0.78$. These results are in agreement with the scientific literature. Powell and Dysinger (1987) have shown that improvements in health are closely linked to increases in (LPA Through these results we can say that hypothesis N ° 3 is confirmed.

10- Conclusion

The practice of physical activity is very present and important in the life of adolescents, whether by its compulsory nature in school programs, but also thanks to the many means put in place to be able to benefit adolescents after

school. . It is at the heart of current social concerns. Both the various health professionals and government bodies promote the adoption of an active lifestyle. This lifestyle contributes to reducing the risks of presenting various health problems which affect the quality of life of the individual on a daily basis. Physical activity is associated with a reduced risk of suffering from obesity. It also reduces the likelihood of having various medical problems, such as diabetes, cardiovascular disease, hypertension. In addition, it contributes to boosting self-esteem as well as reducing depressive and anxiety symptoms (Hill, & Dishman, 2004). At the social level, it makes it possible to reduce isolation, to create a context of interaction with others and to initiate cooperation and teamwork (Kino-Québec, 1998).

Despite promotional campaigns that encourage and emphasize the importance of adopting a regular physical activity, a significant proportion of the population is not active enough to reap the benefits that result from it, particularly in adolescents, this period of life is associated with a gradual decrease in the practice of physical activity.

This research work allowed us to deal with a specific problem which is the level of physical activity ((LPA and are related to the physical and psychological health of adolescents educated at the secondary school level. The objective of this study is to analyze the scientific literature on our research topic, and establish the link between NAP and the physical and psychological health of adolescents. To meet the objectives of this study, we evaluated the level of physical activity using the 24-hour recall method, as well as the estimation of physical and psychological health, using a constructed questionnaire. based on statements relating to different aspects of well-being.

The results of this study led to the conclusion that:

- The level of physical activity ((LPA) of the students is sufficient, reaching the current global recommendations and considered as favorable for health.
- The level of physical activity presented by the students is strongly linked to physical well-being and this through the maintenance of their appearances, better tolerance of effort, the maintenance or improvement of physical fitness.... etc.
- The level of physical activity presented by the students is related to psychological well-being, promoting pleasant and positive feelings, the feeling of belonging to a group and a better relationship with peers ... etc.
- The good level of physical activity of students is closely linked to physical and mental well-being. In fact, the higher the NAP, the better the repercussions, which can even alleviate the health problems generated by a sedentary lifestyle and by the lifestyle habits associated with it, which means that practicing sports is of paramount importance for the improvement of different aspects of health.

It is important to note that good PSA and lifestyle habits acquired during childhood and adolescence are more likely to be maintained throughout life. Consequently, improving the NAP of young people is imperative for future health. In order to improve the health of young people through APS, the school appears to be an opportunity capable of promoting it, in order to instill a sports culture, especially since it is the compulsory passage of all children regardless of their socio-economic and cultural background.

Physical activity and sport at school should further promote individual confidence and well-being, in addition to physical fitness. Physical education should be equitable and supervisors should encourage all students, regardless of ability. Adolescents should be able to participate in new activities that they enjoy, allowing them to acquire skills, a positive image of their body, and to improve their academic results. This must be achieved through an awareness of the

importance of physical and sporting activities, in order to obtain the expected benefits.

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