

**Lifestyle: mental health and preventive behavior in adolescents****Estilo de vida: saúde mental e comportamento preventivo em adolescentes****Estilo de vida: salud mental y comportamiento preventivo en adolescentes****Received: 04/12/2020****Approved: 15/06/2021****Published: 01/01/2022****Laís Castilho Xavier<sup>1</sup>****Larissa Ferreira dos Santos<sup>2</sup>****Maria Clara Álvaro Santos<sup>3</sup>****Nívea Maria de Oliveira Jacques<sup>4</sup>****Frederico Sander Mansur Machado<sup>5</sup>****Adelson Fernandes da Silva<sup>6</sup>**

This is a descriptive, quantitative and cross-sectional study, carried out in schools in a city in the Northern region of the state of Minas Gerais, Brazil, in 2017. It aimed to evaluate the perception of mental health and the adoption of preventive behavior in young students. For data collection, the questionnaire named "*Estilo de Vida do Adolescente Manauara*" (Lifestyle of the Manauara Adolescent) was used. Descriptive analysis with absolute and relative frequencies and comparison using the chi-square test was used. A total of 583 students from the public school system, aged between 15 and 18 years, participated, of which 41.3% were female and 58.7% were male. In the mental health of students, 67% of female adolescents and 48.1% of male adolescents had a high level of stress. 40.2% of female adolescents and 30.1% of male adolescents showed satisfactory health perception. On the other hand, students showed negative results regarding the use of condoms, highlighting the number of students who sometimes or never use it: 31.5% of male adolescents and 25.4% of female adolescents. Health education actions are suggested at school and by the health sector itself, with a view to improving the lifestyle of adolescents.

**Descriptors:** Life style; Mental health; Adolescent; Loneliness.

Este é um estudo descritivo, quantitativo e transversal, realizado em escolas de uma cidade do norte de Minas Gerais, Brasil, em 2017, com objetivo de avaliar a percepção de saúde mental e da adoção de comportamento preventivo em jovens escolares. Para a coleta de dados foi utilizado o questionário intitulado "*Estilo de Vida do Adolescente Manauara*". Utilizou-se análise descritiva com frequências absolutas e relativas e comparação por meio do teste Qui-quadrado. Participaram 583 alunos da rede pública de ensino, com idades entre 15 e 18 anos, sendo 41,3 % do sexo feminino e 58,7 % do sexo masculino. Quanto à saúde mental dos escolares, 67% das adolescentes e 48,1% dos adolescentes apresentaram nível de estresse alto. 40,2% das jovens e 30,1% dos jovens demonstraram percepção de saúde satisfatória. Em contrapartida, os escolares apresentaram resultados negativos quanto ao uso de preservativos, destacando a quantidade de escolares que às vezes ou nunca usaram: 31,5% dos adolescentes e 25,4% das adolescentes. Sugere-se ações de educação em saúde na escola e pelo próprio setor saúde com vistas a melhor estilo de vida em adolescentes.

**Descritores:** Estilo de vida; Saúde mental; Adolescente; Solidão.

Este es un estudio descriptivo, cuantitativo y transversal, realizado en escuelas de una ciudad del norte de Minas Gerais, Brasil, en 2017, con el objetivo de evaluar la percepción de la salud mental y la adopción de conductas preventivas en jóvenes estudiantes. Para la recogida de datos se utilizó el cuestionario titulado "*Estilo de Vida do Adolescente Manauara*". Se utilizó el análisis descriptivo con frecuencias absolutas y relativas y la comparación mediante la prueba de Chi-cuadrado. Participaron un total de 583 alumnos de escuelas públicas, con edades comprendidas entre los 15 y los 18 años, el 41,3% de sexo femenino y el 58,7% de sexo masculino. En cuanto a la salud mental de los estudiantes, el 67% de las adolescentes y el 48,1% de los adolescentes mostraron un alto nivel de estrés. El 40,2% de las chicas y el 30,1% de los chicos mostraron una percepción satisfactoria de la salud. Por otro lado, los estudiantes mostraron resultados negativos en cuanto al uso de preservativos, destacando la cantidad de estudiantes que a veces o nunca los utilizaron: 31,5% de los adolescentes y 25,4% de las adolescentes. Se proponen acciones de educación en salud en la escuela y por parte del propio sector de salud, con el objetivo de mejorar el estilo de vida de los adolescentes.

**Descritores:** Estilo de vida; Salud mental; Adolescente; Soledad

1. Physical Education Professional. Januária, MG, Brazil. ORCID: 0000-0002-2599-0149 E-mail: castilhoxavierlais@gmail.com

2. Physical Education Professional. Januária, MG, Brazil. ORCID: 0000-0002-8583-3559 E-mail: larisasantosferreira@gmail.com

3. Physical Education Professional. Januária, MG, Brazil. ORCID: 0000-0002-0891-2384 E-mail: mariaclara3466@gmail.com

4. Physical Education Professional. Specialist in Motor Activities in Academy. Master in Gerontology, Physical Activity and Health. Professor at the Universidade Estadual de Montes Claros (UNIMONTES), Januária, MG, Brazil. ORCID: 0000-0002-4003-3582 E-mail: niveajques@yahoo.com.br

5. Physical Education Professional. Master in Sports Science. PhD in Physiology and Pharmacology. Professor at UNIMONTES, Januária, MG, Brazil. ORCID: 0000-0003-2295-0894 E-mail: frederico.machado@unimontes.br

6. Educator. Physical Education Professional. Specialist in Sports Training. Specialist in Biological Sciences. Master in Assessment of Physical and Sports Activities. Professor at UNIMONTES, Januária, MG, Brazil. ORCID: 0000-0001-5450-6937 E-mail: adelson\_fsilva@hotmail.com

## INTRODUCTION

Adolescence is a stage of human development that is influenced by internal (physiological) and external (variable, changeable and innovative) factors, usually studied and detected after the establishment of their consequences or by increasing situations of high morbidity and directly related to lifestyle<sup>1</sup>.

Lifestyle is a modern expression that refers to the stratification of behavioral aspects of a society. They are usually expressed in the form of consumption patterns, routines, habits or a way of life adapted to everyday life<sup>2</sup>. Its determination, however, does not escape the rules of formation and differentiation of cultures: adaptation to the environment and to other humans.

Lifestyle represents the ways in which a person or a group of people could experience the world and, as a result, determines how they behave and make choices<sup>2</sup>. At the confluence of cultural patterns, habits and lifestyles, it is necessary to consider the integrality of the adolescents' life context in processes inherent to the social contexts (historical, political and economic) in which they are immersed.

Lifestyle consists of five components: nutrition, physical activity, preventive behavior, social relationships and stress control<sup>3</sup>, which can be modified through positive interference, being controlled by people in their daily lives. On the other hand, social inequalities, insecurity, sedentary behavior, physical inactivity, unhealthy diet and stress have a negative disposition in the composition of a lifestyle, putting health at risk<sup>4,5</sup>.

Currently, lifestyle has been affected by several social transformations, from the multiculturalism of communicational contents to consumerism stimulated by globalization and new technologies<sup>6,7</sup>.

Globalization has a great influence on lifestyle and values of adolescents. In early adolescence, there is greater exposure to behavioral risk factors such as: smoking, consumption of alcohol and other drugs, inadequate diet and sedentary lifestyle<sup>8</sup>. Thinking about adolescent health implies reflecting on the different ways of living adolescence and life<sup>9</sup>. Health and well-being depend on the balance between lifestyle components: regular physical activity, adequate nutrition, stress control, good relationships and preventive behaviors (avoiding smoking, drug use and unprotected sex)<sup>3</sup>. Thus, this study aims to assess the perception of mental health and the adoption of preventive behavior in school age youth.

## METHODS

This is a descriptive, quantitative and cross-sectional study, carried out in schools in a city in the north of the state of Minas Gerais, Brazil, from July to September 2017. The state's public education system in the city had 2,104 students. Sampling was carried out through conglomerates, by schools. Initially, the total number of schools linked to the public network was identified, as well as the number of classes between the 9<sup>th</sup> grade of elementary school and the 3<sup>rd</sup> year of high school. Considering the number of students per shift, 64 classes were randomly selected.

To calculate the sample size, unknown prevalence for the outcome (50%), tolerable error of five percentage points, 95% confidence level, 2.0 design effect, adding 10% for possible losses were taken into account. and refusals.

All students had to be enrolled in the state school system. Among these, those who had parental consent (Consent Form) and expressed voluntary acceptance to participate in the study (Consent Form) and who were in the classroom on the day of collection were part of the analysis.

Students under the age of 15 or over 18 were excluded from the analysis.

The field work was carried out by academics from the Physical Education course at the Universidade Estadual de Montes Claros, Campus Januária-MG. The instrument used was a questionnaire from a project called "Estilo de Vida do Adolescente Manauara 2011" (Lifestyle

of the Manauara Adolescent 2011), adapted for the city of Januária-MG. The questionnaire consists of 17 multiple-choice questions, with five alternatives, subdivided into 3 sections: *Personal information* (gender, age, marital status, grade, which shift you study, where you live); *Health perception* (anxiety, stress, depression, loneliness); and *Preventive behavior in relation to sexual habits*. The instrument was applied in the classroom, without the presence of a teacher.

Data were analyzed for normality using the Kolmogorov-Smirnov test, with a non-parametric distribution being observed. A descriptive analysis with absolute and relative frequencies for the responses obtained in each section was also performed. To compare these frequencies of responses to variables of interest, the Chi-square test was used. The significance index adopted was  $p < 0.05$ . Analyzes were performed using the Statistical Package for Social Science (SPSS) statistical package, version 22.0.

The instruments and procedures described in this study were approved by the Research Ethics Committee of the Universidade de Montes Claros under Opinion No. 2,163,521 of July 8, 2017.

## RESULTS

A total of 583 students aged between 15 and 18 years old participated, of which 241 (41.3%) were female and 342 (58.7%) were male.

The highlighted grades were 1<sup>st</sup> and 2<sup>nd</sup> year of high school, as they had a higher number of students enrolled and had a higher prevalence of responses to the morning shift (51.3%), most were single and lived with their parents in urban areas (93.8%).

As for their own health, boys and girls are similar ( $p=0.17$ ). Specifically, 30.1% of female students consider their own health excellent, 50% consider it good, 15.7% consider it average, and 4.2% consider it poor or very poor. In turn, 40.2% of male students consider their health excellent, 43.6% consider it good, 11.2% consider it average and 5% consider it poor or very poor.

In the perception of their own health, boys and girls differ in terms of stress level (Table 1), sources of stress (Table 2), feelings of loneliness (Table 3) and sadness (Table 4).

In terms of reported level of stress, girls had higher frequencies (31.7%) of confrontations and difficulties associated with stress than boys (16.6%),  $p=0.001$ .

**Table 1.** Absolute and relative values (%) of the cross table between gender (dependent variable) and stress level (independent variables). Januária, Brasil, 2017.

	Male		Female	
	Absolute	Relative	Absolute	Relative
Rarely stressed, living very well	125	51.9	113	33.0
Sometimes stressed, living reasonably well	77	32.0	121	35.3
Often stressed, facing problems frequently	23	9.5	64	18.7
Overly stressed, struggling to cope with daily life	16	6.6	44	13.0
<b>Total</b>	<b>241</b>	<b>100.0</b>	<b>342</b>	<b>100.0</b>

Additionally, girls are more often in situations of rejection/prejudice, excessive commitments and responsibilities, aggression, health problems, financial difficulties and others ( $p=0.001$ ). These situations seem to be accompanied by greater feelings of loneliness and also sadness when compared to boys of the same age group ( $p=0.001$  and  $p=0.02$ , respectively).

**Table 2.** Absolute and relative values (%) of the cross table between gender (dependent variable) and the main source of stress in students' lives (independent variables). Januária, Brasil, 2017.

	Male		Female	
	Absolute	Relative	Absolute	Relative
I do not experience stress	104	43.2	89	26.0
Relationship problems (family, school, work)	80	33.2	152	44.5
Situation of rejection and/or prejudice (difficulty of accepting oneself or be accepted by others)	12	5.0	14	4.1
Excess of commitments and responsibilities	27	11.2	52	15.2
Aggressions (physical and/or sexual violence)	5	2.0	2	0.5
Financial difficulties (not having money, losing or not getting a job, supporting the family)	8	3.3	18	5.3
Others	5	2.1	15	4.4
<b>Total</b>	<b>241</b>	<b>100.0</b>	<b>342</b>	<b>100.0</b>

**Table 3.** Absolute and relative values (%) of the cross table between gender (dependent variable) and frequency of feeling lonely (independent variables). Januária, Brasil, 2017.

	Male		Female	
	Absolute	Relative	Absolute	Relative
Never	116	48.1	89	26.0
Always	18	7.5	26	7.7
Usually	16	6.6	60	17.5
Sometimes	63	26.1	110	32.1
Rarely	28	11.7	57	16.7
<b>Total</b>	<b>241</b>	<b>100.0</b>	<b>342</b>	<b>100.0</b>

**Table 4** Absolute and relative values (%) of the cross table between gender (dependent variable) you felt "very sad" or "hopeless" almost every day for two weeks in a row or more, to the point that you had to stop doing your normal activities? (independent variables). Januária, Brazil, 2017.

	Male		Female	
	Absolute	Relative	Absolute	Relative
Yes	91	37.8	162	47.4
No	150	62.2	180	52.6
<b>Total</b>	<b>241</b>	<b>100.0</b>	<b>342</b>	<b>100.0</b>

Regarding preventive behavior during sexual intercourse, the frequency of girls who reported not having had sexual intercourse (58%) was higher than that of boys (36.5%). The number of students who *Sometimes* or *Never* used condoms was 31.5% of boys and 25.4% of girls (Table 5).

**Table 5** Absolute and relative values (%) of the cross table between gender (dependent variable) and frequency of condom use (independent variables). Januária, Brazil, 2017.

	Male		Female	
	Absolute	Relative	Absolute	Relative
I never had sexual relations	88	36.5	198	58.0
Always	78	32.5	57	16.6
Sometimes	59	24.4	54	15.7
Never	16	6.6	33	9.7
<b>Total</b>	<b>241</b>	<b>100.0</b>	<b>342</b>	<b>100.0</b>

## DISCUSSION

Adolescence is a unique moment that shapes people into adulthood. While most adolescents have good mental health, multiple physical, emotional and social changes, including exposure to poverty, abuse or violence, can make adolescents vulnerable to mental health conditions<sup>10</sup>.

Stress has an interface with the individual's situational context. It is a characteristic of a psychological nature. Although it cannot be avoided by parents and teachers, it is important to prevent this stress from causing serious damage to the adolescent's life<sup>11</sup>. This study identified a stress level of 67.0% for girls and 48.1% for boys. An exorbitant behavior was verified among adolescents in a survey carried out in a city in the Minas Gerais state, where 90.3% of adolescents considered themselves stressed<sup>12</sup>.

Several factors are presented as stressors, in the present study, with prevalence in relationship problems (in the family, at school, at work), respectively 44.5% of girls and 33.2% of boys. These data are impactful, as the level of stress negatively influences the health of adolescents. All regions of the body are influenced by events in the individual's mind, and stress has an effect on the mind, which consequently results in a significant effect on health and well-being<sup>13</sup>.

Regarding the sources of stress, 39.8% of respondents showed higher proportions in the source of relationships, in the family, at school, at work, similar to work carried out with students from two municipalities in the state of Amazonas, where it was pointed out that the sources stress among students from both municipalities were relationship problems and excess commitment and responsibilities (43.00% Silves, 52.92% Rio Preto da Eva)<sup>14</sup>.

Stress symptoms can manifest in children and adolescents when they are subjected to new social relationships with parents, teachers and peers; all of these changes can create an overload of responsibilities that lead to social pressure. Symptoms tend to worsen if the young person is exposed to stressful life events: family crisis, parents' separation, economic difficulties or physical illness. Stress can become harmful, depleting energy reserves and keeping the body in an alert state capable of generating or aggravating various pathologies, such as depression<sup>15</sup>.

A worrying fact is the number of students who sometimes or never used a condom, 31.5% of boys and 25.4% of girls. Study conducted in the Midwest region of the state of Mato Grosso, with male adolescents, 39% admitted not using a condom in the first sexual intercourse and 44% had already had casual sex without a condom<sup>16</sup>. Attitudes like these can trigger Sexually Transmitted Infections (STIs) or an early and unwanted pregnancy.

When considering the entire researched group (boys and girls), 8.4% of adolescents did not use condoms. In a study carried out in the state of Bahia with 811 adolescents, 21.3% did not use condoms in the last sexual intercourse<sup>17</sup>. More expressive behavior was found in a study carried out in four countries in East Africa<sup>18</sup>, where 62% of young people did not use condoms. Not using a condom increases the possibility of a sexually transmitted infection. This scenario justifies the need for the implementation of educational activities by social sectors, such as schools, since adolescents increasingly start their sexual lives early, being vulnerable to (STI's)<sup>19</sup>.

In the perception of health, 40.2% of boys and 30.1% of girls considered themselves healthy. Research carried out in the city of Olinda, in the state of Pernambuco, with 202 adolescents showed more expressive results, 87.3% of boys and 63.9% of girls say they have a positive perception of health<sup>20</sup>. Studies with teenagers show mostly that females present, in general, less positive results when compared to males. Research shows that girls are more sensitive to detect physiological changes and consider habits inappropriate to health<sup>21</sup>.

Of the students who felt alone, 50.2% showed a feeling of loneliness. Findings in a study showed that 64.1% never felt alone, in contrast to the results obtained in the research<sup>22</sup>. Loneliness is associated with decreased sleep quality and psychiatric illnesses such as depression and anxiety<sup>23-25</sup>. There are also associations between loneliness and unhealthy lifestyles, such as smoking, alcohol consumption, sedentary lifestyle and unhealthy diet, as well as hypertension, metabolic syndrome and cardiovascular disease<sup>23,26</sup>.

Regarding feelings of sadness, 43.4% of interviewed students reported feeling sad for two weeks or more. Another study showed that 30.0% of students reported sadness for two or more

weeks<sup>27</sup>. A study carried out in France observed the prevalence of sadness of 29.8%<sup>28</sup>. Research<sup>29</sup> found a high proportion of adolescents who did not report feeling sad (80.0%), diverging with the findings of the study presented here.

It is important to encourage adolescents to become active subjects of their care, through health education actions aimed at preventing health problems<sup>30</sup>. The school should promote reflections on the different dimensions of the students' intellectual and social development process.

Thinking about the health dimension, the school should provide actions to encourage and consolidate healthy lifestyle habits, something to be considered by managers for the development and implementation of effective health education policies in schools in the Northern region of Minas Gerais.

## CONCLUSION

Students perceive their own health as good or excellent, regardless of gender. On the other hand, feelings of loneliness are present for most girls, which may indicate a greater probability of developing serious mental illnesses, such as depression. In addition, sexually active school-age boys and girls exhibit risky behavior by not using condoms, constituting a fundamental aspect to be addressed in the school and family environment.

As limitations, the following are pointed out: the cross-sectional design, which makes it impossible to establish causality and temporality of the tested associations; and information obtained through a self-administered questionnaire. Despite this, this research brings data for adolescent health, with emphasis on the expansion of health education actions.

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**Associated Publisher:** Vania Del Arco Paschoal

#### CONTRIBUTIONS

**Laís Castilho Xavier, Larissa Ferreira dos Santos, Maria Clara Álvaro Santos** participated in data collection and writing. **Nivea Maria de Oliveira Jacques, Frederico Sander Mansur Machado** and **Adelson Fernandes da Silva** contributed to the design, data analysis, writing and reviewing.

#### How to cite this article (Vancouver)

Xavier LC, Santos LF, Santos MCÁ, Jacques NMO, Machado FSM, Silva AF. Lifestyle: mental health and preventive behavior in adolescents. *REFACS* [Internet]. 2022 [cited in *insert day, month and year of access*]; 10(1):77-84. Available from: *insert access link*. DOI: *insert DOI link*

#### How to cite this article (ABNT)

XAVIER, L. C.; SANTOS, L. F.; JACQUES, N. M. O.; MACHADO, F. S. M.; SILVA, A. F. Lifestyle: mental health and preventive behavior in adolescents. **REFACS**, Uberaba, MG, v. 10, n. 1, p. 77-84, 2022. DOI: *insert DOI link*. Available from: *insert access link*. Access in: *insert day, month and year of access*.

#### How to cite this article (APA)

Xavier, L.C., Santos, L.F., Santos, M.C.Á., Jacques, N.M.O., Machado, F.S.M., & Silva, A.F. (2022). Lifestyle: mental health and preventive behavior in adolescents. *REFACS*, 10(1), 77-84. Retrieved in *insert day, month and year of access* from *insert access link*. DOI: *insert DOI link*.

