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.

Descriptores: Life style; Mental health; Adolescent; Loneliness.

Este es un estudio descritivo, cuantitativo e transversal, realizado en escuelas de una ciudad del norte de Minas Gerais, Brasil, en 2017, con el objetivo de evaluar la percepción de salud mental y la adopción de conductas preventivas en jóvenes escolares. Para la recogida de datos se utilizó el cuestionario titulado "Estilo de Vida del Adolescente Manauara". Se utilizó el análisis descriptivo con frecuencias absolutas y relativas y comparación por medio del test Qui-cuadrado. Participaron 583 alumnos de la red pública de ensino, con edades entre 15 y 18 años, siendo 41,3 % del sexo femenino y 58,7 % del sexo masculino. En cuanto a la salud mental de los escolares, 67% de las adolescentes y 48,1% de los adolescentes mostraron nivel de estrés alto. 40,2% de las jovens e 30,1% dos jovens mostraram percepção de saúde satisfatória. En contrapartida, los escolares presentaron resultados negativos con respecto al uso de preservativos, destacando a cantidad de escolares que a veces o nunca usaron: 31,5% de los adolescentes y 25,4% de las adolescentes. Sugiere acciones de educación en salud en la escuela y por su propio sector de salud con vistas a mejorar el estilo de vida en adolescentes.

Descritores: Estilo de vida; Saúde mental; Adolescente; Solidão.
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 lifestyle1.

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 life2. 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 choices2. 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 control3, 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 risk4,5.

Currently, lifestyle has been affected by several social transformations, from the multiculturality of communicational contents to consumerism stimulated by globalization and new technologies6,7.

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 lifestyle8. Thinking about adolescent health implies reflecting on the different ways of living adolescence and life9. 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)3. 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 9th grade of elementary school and the 3rd 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 1st and 2nd 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.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Rarely stressed, living very well</th>
<th>Sometimes stressed, living reasonably well</th>
<th>Often stressed, facing problems frequently</th>
<th>Overly stressed, struggling to cope with daily life</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>125</td>
<td>77</td>
<td>23</td>
<td>16</td>
<td>241</td>
</tr>
<tr>
<td>Female</td>
<td>113</td>
<td>121</td>
<td>64</td>
<td>44</td>
<td>342</td>
</tr>
</tbody>
</table>

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.

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

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

<table>
<thead>
<tr>
<th>Feeling Lonely</th>
<th>Male Absolute</th>
<th>Male Relative</th>
<th>Female Absolute</th>
<th>Female Relative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>116</td>
<td>48.1</td>
<td>89</td>
<td>26.0</td>
</tr>
<tr>
<td>Always</td>
<td>18</td>
<td>7.5</td>
<td>26</td>
<td>7.7</td>
</tr>
<tr>
<td>Usually</td>
<td>16</td>
<td>6.6</td>
<td>60</td>
<td>17.5</td>
</tr>
<tr>
<td>Sometimes</td>
<td>63</td>
<td>26.1</td>
<td>110</td>
<td>32.1</td>
</tr>
<tr>
<td>Rarely</td>
<td>28</td>
<td>11.7</td>
<td>57</td>
<td>16.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>241</strong></td>
<td><strong>100.0</strong></td>
<td><strong>342</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Feeling Sad</th>
<th>Male Absolute</th>
<th>Male Relative</th>
<th>Female Absolute</th>
<th>Female Relative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>91</td>
<td>37.8</td>
<td>162</td>
<td>47.4</td>
</tr>
<tr>
<td>No</td>
<td>150</td>
<td>62.2</td>
<td>180</td>
<td>52.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>241</strong></td>
<td><strong>100.0</strong></td>
<td><strong>342</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Condom Use</th>
<th>Male Absolute</th>
<th>Male Relative</th>
<th>Female Absolute</th>
<th>Female Relative</th>
</tr>
</thead>
<tbody>
<tr>
<td>I never had sexual relations</td>
<td>88</td>
<td>36.5</td>
<td>198</td>
<td>58.0</td>
</tr>
<tr>
<td>Always</td>
<td>78</td>
<td>32.5</td>
<td>57</td>
<td>16.6</td>
</tr>
<tr>
<td>Sometimes</td>
<td>59</td>
<td>24.4</td>
<td>54</td>
<td>15.7</td>
</tr>
<tr>
<td>Never</td>
<td>16</td>
<td>6.6</td>
<td>33</td>
<td>9.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>241</strong></td>
<td><strong>100.0</strong></td>
<td><strong>342</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

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.
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. 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.

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.

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).

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.

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 Midwesten 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. 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 teh state of Bahia with 811 adolescents, 21.3% did not use condoms in the last sexual intercourse. More expressive behavior was found in a study carried out in four countries in East Africa, 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).

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. 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.

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. Loneliness is associated with decreased sleep quality and psychiatric illnesses such as depression and anxiety. 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.

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. A study carried out in France observed the prevalence of sadness of 29.8%. Research 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. 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.

REFERENCES


**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.