

## Health Risk Behaviors of Adolescents Living in a Small Municipality

Comportamentos de Risco a Saúde em Adolescentes Residentes em Município de Pequeno Porte

Comportamientos de Riesgo en Adolescente Residente de Salud en Pequeña Ciudad Porte

Thainara Araujo Franklin<sup>1\*</sup>, Luisa Kecyane Batista Cardoso<sup>2</sup>, Luciene Dias Bispo Veiga<sup>3</sup>, Adriana Alves Nery<sup>4</sup>, Cezar Augusto Casotti<sup>5</sup>

### How to quote this article:

Franklin TAF, Cardoso LKB, Veiga LDB, *et al.* Health Risk Behaviors of Adolescents Living in a Small Municipality. Rev Fund Care Online. 2018 Jul./Sep.; 10(3):704-710. DOI: <http://dx.doi.org/10.9789/2175-5361.2018.v10i3.704-710>

### ABSTRACT

**Objective:** This study aims to identify the prevalence of health risk behaviors in schooling age adolescents that live in a small population municipality of Bahia State over 2012. **Methods:** It is a cohort epidemiological study, censitary, school-based, and having a sampling comprised by 96 adolescent students enrolled in high school. **Results:** In high school were enrolled 134 adolescents within the age group from 12 to 19 years old, where 72.4% participated in the study. It was found that among adolescent, the average age was about 16.63 years old (SD ± 1.63), where 57.5% were female, 78.5% were not employed, 71.1% were aged between 15 to 18 years old, 58.2% had self-declared brown as their skin color and 49.5% lived with their parents. It was also found that 60.8% experienced no tobacco consumption, 90.4% consumed some type of alcoholic beverage and 77.7% were classified as physically active. **Conclusion:** The results have shown the need for further research on risk behaviors among school adolescents.

**Descriptors:** Adolescents, Schooling age, Tobacco, Alcohol, Feeding.

<sup>1</sup> Nursing Graduate, Master's Degree in Nursing and Health by the Nursing and Health Post-Graduate Program from the Universidade Estadual do Sudoeste da Bahia/UESB. Jequié (BA), Brazil. E-mail address: thainarafranklin@hotmail.com

<sup>2</sup> Nursing Graduate, Master's student enrolled in the Nursing and Health Post-Graduate Program at the Universidade Estadual do Sudoeste da Bahia/UESB. Jequié (BA), Brazil. E-mail address: keicyluisa@hotmail.com

<sup>3</sup> Nursing Graduate, Master's Degree in Nursing and Health by the Nursing and Health Post-Graduate Program from the Universidade Estadual do Sudoeste da Bahia/UESB. Jequié (BA), Brazil. E-mail address: lutebispo@gmail.com

<sup>4</sup> Nursing Graduate, Ph.D. Professor of both Graduation Program and Post-Graduate Program of Nursing and Health in the Health Department at the Universidade Estadual do Sudoeste da Bahia/UESB. Jequié (BA), Brazil. E-mail address: aanery@gmail.com

<sup>5</sup> Dental Surgeon, Adjunct Professor of the Nursing and Health Post-Graduate Program at the Universidade Estadual do Sudoeste da Bahia/UESB. Jequié (BA), Brazil. E-mail address: cacasotti@uesb.edu.br

## RESUMO

**Objetivo:** Esse estudo tem o objetivo de identificar a prevalência de comportamentos de risco à saúde em adolescentes escolares residentes em município de pequeno porte populacional do estado da Bahia no ano de 2012.

**Métodos:** Estudo epidemiológico transversal, censitário, de base escolar, amostra constituída por 96 adolescentes escolares matriculados no ensino médio. **Resultados:** No ensino médio estavam matriculados 134 adolescentes com idade entre 12 e 19 anos, 72,4% participaram do estudo, verificou-se que entre os adolescentes a média da idade foi de 16,63 anos (DP±1,63), 57,5% do sexo feminino, 78,5% não exerciam atividade remunerada, 71,1% apresentavam idade de 15 a 18 anos, 58,2% se auto-declararam de cor Parda e 49,5% reside com os pais, 60,8% não experimentaram tabaco, 90,4% consumiram algum tipo de bebida alcoólica e 77,7% foram classificados como ativos fisicamente. **Conclusão:** Os resultados trazem a necessidade de novas pesquisas referentes aos comportamentos de risco em adolescentes escolares..

**Descritores:** Adolescentes, Escolares, Tabaco, Álcool, Alimentação.

## RESUMEN

**Objetivo:** Este estudio tiene como objetivo identificar la prevalencia de conductas de riesgo para la salud de los adolescentes en el municipio de pequeño tamaño de la población del estado de Bahía, en 2012. **Métodos:** estudio transversal, censo, muestra que consta en la escuela por 96 estudiantes adolescentes inscritas en la escuela secundaria. **Resultados:** En la escuela secundaria se matricularon 134 adolescentes de edades comprendidas entre los 12 y los 19 años, el 72,4% participó en el estudio, se encontró que entre los adolescentes, la edad media fue de 16,63 años (DE ± 1,63), 57,5% mujeres, no se emplearon 78,5%, el 71,1% tenían entre 15-18 años de edad, el 58,2% Parda auto-declarado de color y el 49,5% vive con sus padres, 60,8% no experimentó el tabaco, el 90,4% consume algún tipo de bebida alcohólica y el 77,7% fueron clasificados como activos físicamente. **Conclusión:** Los resultados muestran la necesidad de una mayor investigación sobre los comportamientos de riesgo entre los estudiantes adolescentes.

**Descritores:** Adolescentes, La escuela, Tabaco, Alcohol, Alimentos.

## INTRODUCTION

The World Health Organization classifies as adolescents a person aged between 12 and 18 years old. This phase is characterized by biological, cognitive, emotional and social changes, in which there is autonomy gain and the advent of new behavioral practices. During this period, the adolescent is exposed to several behavioral risk factors, among them, the consumption of alcohol, tobacco, drugs, as well as sedentarism and inadequate feeding.<sup>1,2</sup>

Adolescents tend to form groups among themselves, because they find themselves under the same situation of changes and search for identity. Adolescents adopt group habits and custom, and this way they are able to assume risk behaviors that may be interrelated, even if they are not found in their family nucleus.<sup>3</sup>

Some habits formed at this life stage may persist during adulthood, influencing the quality of their future health. The main habits that persist are related to the use

of alcohol, tobacco and other drugs, which are most often stimulated by close friends.<sup>4</sup>

Currently, the adoption of unhealthy habits by adolescents is considered a major public health problem in Brazil and in the world, because alcohol and tobacco consumption are associated with physical inactivity and inadequate nutrition.<sup>5</sup> In addition to directly affecting the adolescent, causing problems for the family, school and society in general, these behaviors can cause adults of a potentially productive age to have health problems, such as chronic noncommunicable diseases.<sup>6,7</sup>

Given this background, it can be highlighted the school important role regarding the promotion of knowledge about behaviors that induce healthy life habits, and concerning the prevention of the consumption of licit and illicit drugs, since it is a place where information is exchanged, and also impact in the personal formation and social inclusion.<sup>6</sup>

Considering that studies related to this topic have been restricted to large urban centers, this study aimed to identify the prevalence of health risk behaviors in schooling age adolescents, which are residing in a small population municipality of *Bahia* State.

## METHODS

It is a cohort epidemiological study, censitary, school-based, and having a sampling comprised by 96 adolescent students enrolled in high school, evening and night shifts, at the *Colégio Estadual Luiz Eduardo Magalhães*, which is the only educational institution in the urban area of *Aiquara, BA, Brazil*. The municipality has a population of 4,602 people and HDI 0.583.<sup>8</sup>

All students that were regularly enrolled in high school and that were present in the classroom on at least one of the two visits of the collection team, were invited to participate in the study. It was considered adolescent losses those who had less than 18 years old, and that did not present the informed consent form signed by either their parent or responsible, and those over 18 years old who did not want to participate, and also those who were not present in the classroom at the day of data collection.

In order to obtain the data a questionnaire was used, which after being answered without the student identification, was then placed in a box that was located outside the room where they were applied. The research was performed in March 2012, which was conducted by two students of the Nursing and Health Post-Graduate Program, who were previously trained and standardized.

The questionnaire included questions about the following topics: gender, age, skin color, work, residence, alcohol consumption, smoking, and eating habits.

Skin color was self-determined, according to the categories proposed by the *Instituto Brasileiro de Geografia e*

*Estatística (IBGE)* [Brazilian Institute of Geography and Statistics] (brown, black, white, yellow, indigenous).

A structured questionnaire was adopted for the data collection. It was decided to divide the questionnaire into five blocks, as follows: sociodemographic profile of the adolescent; eating habits (consumption of fried foods, sweets, fruits, vegetables and vegetables); level of physical activity; tobacco consumption and alcohol consumption.

After the data collection, the data were tabulated with the assistance of the Statistical Package for Social Science (SPSS) version 21.0 for Windows. A descriptive analysis of the sociodemographic information of the studied population was carried out, describing the variables, calculating the absolute and relative frequencies, as well as the average and the standard deviation.

The study was approved by the Human Research Ethics Committee of the Universidade Estadual do Sudoeste da Bahia (Protocol No. 212/2011).

The variables dependent on the study were the following: the level of physical activity, where there have being considered physically inactive those students whose energy expenditure was less than or equal to 36.9 Kcal/kg day; tobacco use (not smoking and smoking cigarettes in the past 30 days); alcohol consumption (not drinking and drinking in the last 30 days) and eating habits (weekly frequency of consumption of fried foods, sweets and soft drinks, fruits and natural juices, vegetables and vegetables), where there have being considered as inappropriate habits the consumption of fried foods, sweet and soda when consumption was greater than or equal to three days a week, and inadequate consumption of fruits and vegetables, when consumption of these items was less than five days a week.

## RESULTS

In the municipality of *Aiquara-BA*, in the only public secondary school, 134 adolescents between 12 and 19 years old were enrolled, and from which 72.4% have participated in the study.

When analyzing the data, it was found that among adolescents the average age was about 16.63 years old (SD ± 1.63), where 57.5% were female, 78.5% were not employed, 71.1% were aged between 15 to 18 years old, 58.2% had self-declared brown as their skin color and 49.5% lived with their parents.

Table 1 exhibits data on tobacco consumption.

**Table 1:** Profile of tobacco consumption among school adolescents in the municipality of Aiquara-BA, Jequié-BA, 2016.

variable	(n)	%
<b>Have you used tobacco? (n = 83)</b>		
Yes	24	28.9
No	59	71.1
<b>Age at the first time (n = 96)</b>		
I never smoked cigarettes	55	57.3
7 years or less	10	10.4
8 or 9 years	11	11.5
10 or 11 years	1	1.0
12 or 13 years	3	3.1
14 or 15 years	7	7.3
16 years or more	9	9.3
<b>Tobacco use in the last 30 days (n = 96)</b>		
None	73	75.3
1 or 2 days	23	23.7
<b>Parents or responsible smoke (n = 96)</b>		
None of them smoke	77	80.2
Both of them smoke	10	10.4
Just one of them smoke	8	8.3
I do not have either parent or responsible	1	1.0
<b>Parents or responsible know you smoke (n = 96)</b>		
I do not smoke cigarettes	90	93.8
They do not know	6	6.3
<b>Closer friends smoke (n = 97)</b>		
None	62	64.6
Some of them	27	28.1
Most of them	6	6.3
All of them	1	1.0
<b>Is smoking cigarettes harmful to health? (n = 96)</b>		
Certainly not	6	6.3
Maybe yes	1	1.0
Certainly yes	89	92.7

Source: Research data.

As described in Table 1, the prevalence of smoking was 23.7%. Among the adolescents, 60.8% did not experience tobacco and 24.7% had already tried tobacco. Among those who tried tobacco, our attention has been drawn to the age group of initiation, since 11.5% reported that it was between 8 to 9 years old. It was also verified that 23.7% of the interviewees consumed tobacco in the last 30 days, 80.2% reported that the parents or responsible are not smokers, 64.6% do not have close friends who use tobacco and 92.7% recognized that smoking causes health damage. Out of the 24 school adolescents that reported consuming tobacco, 25% reported that their parents or responsible did not know they smoked.

Table 2 shows the results referring to the consumption of alcoholic beverages.

**Table 2:** Profile of alcohol consumption among school adolescents in the municipality of Aiquara-BA, Jequié-BA, 2016.

Variable	(n)	%
<b>Have you drunk alcoholic beverage? (n = 94)</b>		
Yes	85	90.4
No	9	9.6
<b>Age at the first time (n = 74)</b>		
I never drank alcoholic beverage	10	13.5
8 or 9 years	2	2.7
10 or 11 years	4	5.4
12 or 13 years	12	16.2
14 or 15 years	25	33.8
16 or 17 years	15	20.3
18 years or more	6	8.1
<b>Alcoholic beverage consumption in the last 30 days (n = 95)</b>		
I do not drink	32	33.7
1 to 2 times	39	41.1
3 to 4 times	12	12.6
5 to 6 times	8	8.4
More than 6 times	4	4.2

Source: Research data.

Based on the data obtained, it can be observed that in Table 2 90.4% of the adolescents that participated in the research already consumed some type of alcoholic beverage and 33.8% of these experimented for the first time while were in the age group between 14 to 15 years old. Additionally, it was found that 41.1% of these adolescents consumed some type of alcoholic beverage 1 to 2 times in the last 30 days.

Table 3 displays the values referring to the profile of food consumption by the adolescents.

**Table 3:** Profile of the school adolescents regarding their eating habits in the municipality of Aiquara-BA, Jequié-BA, 2016.

Variable	(n)	%
<b>Frying, fatty foods (n = 90)</b>		
Never	2	2.2
1 to 2 times	54	60.0
3 to 4 times	25	27.8
5 to 6 times	4	4.4
Everyday/1 to 2 times	4	4.4
Everyday/3 to 5 times	1	1.1
<b>Sweet foods (n = 93)</b>		
1 to 2 times	36	38.7
3 to 4 times	24	25.8
5 to 6 times	13	14.0
Everyday/1 to 2 times	8	8.6
Everyday/3 to 5 times	12	12.9
<b>Fruits and natural juices (n = 94)</b>		
Never	1	1.1
1 to 2 times	17	18.1
3 to 4 times	18	19.1
5 to 6 times	20	21.3
Everyday/1 to 2 times	21	22.3
Everyday/3 to 5 times	17	18.1
<b>Vegetables (n = 94)</b>		
Never	3	3.2
1 to 2 times	25	26.6
3 to 4 times	15	16.0
5 to 6 times	12	12.8
Everyday/1 to 2 times	14	14.9
Everyday/3 to 5 times	25	26.6

Source: Research data.

Regarding the eating habits, 62.2% of the adolescents reported adequate consumption of fried foods and fatty foods, 38.7% of sweet foods, 61.7% of adequate fruits, 54.3% of vegetables.

Regarding the level of physical activity, it was found that 77.7% of adolescents were classified as physically active and 22.3% were inactive. Among boys, 85% (n = 34) were active and 15% (n = 6) were physically inactive, while 72.2% (n = 39) were active and 27.8% (n = 15) were inactive.

## DISCUSSION

The present study is an important tool for the recognition of health conditions and life habits among adolescents residing in a small municipality with low socioeconomic levels. Research with adolescents becomes relevant in the national scenario, because of the habits acquired in this phase of life, and also by influencing individual's health throughout life.

The majority of the students reported that they did not smoke, but it is a worrying result, since among those who smoke the age of tobacco experimentation was very low, raging from 8 to 9 years old.

We can compare the results of this study with a recent study performed by Tondowski and coworkers<sup>9</sup> that aimed to analyze the association between the use of tobacco in adolescents with the styles and behaviors of their parents. It has been noted that children of either negligent or indulgent parents reported using tobacco in the past month or frequently, the study shows that there is an association between the parents' lifestyle and cigarette use by high school students.

Another study that corroborates these findings was done by Nader and coworkers<sup>10</sup>, which found that 12.1% of the sample stated they had tried tobacco and different from the present study the average age of the cigarette experience was 12.37 years old.

In this sense, the importance of the school role in the perspective of health education is perceived. A study that evaluated, in the school context, the impact of preventive actions on the reduction of substance use among students,<sup>11</sup> showed that there is an effectiveness of the interventions made by educators, both in reducing the consumption of substances harmful to health and in decreasing problems. Even though some schools promote preventive and educational actions on drug use, there are few records on their implementation process and results.

Alcohol consumption during adolescence has become a factor of exposure to diseases in adulthood. Cardiovascular problems, traffic accidents and also homicides are the main consequences of this abusive consumption of

alcohol, representing the greatest causes of death among young people.<sup>12,13</sup>

A study carried out by Malta<sup>14</sup> demonstrates the seriousness of the problem involving the consumption of alcohol and other drugs among adolescents, and the ease that these young people have of accessing alcohol at parties, bars and other environments, even within their own homes. This same study revealed the prevalence of alcohol consumption among Brazilian school adolescents. About three-quarters of 13 to 15 year old adolescents have drunk alcohol, about one-quarter have drunk regularly in the past 30 days with drunkenness, and 9% report having had alcohol problems. Corroborating with the present study, 90.4% of adolescents who participated in the study already consumed some type of alcoholic beverage.

In addition to triggering some diseases, alcohol consumption can influence adolescents to try other drugs, and manifest some types of depressive, aggressive behaviors, anxiety disorders, which comes to affect his health.<sup>15</sup>

The use of alcohol is accepted by society and this makes the adolescent more and more exposed to consumption, and consequently end up becoming more easily involved in episodes of risk. Given this, it is important that parents monitor the development of their children, and observe their behavior, always alerting them to the problems that this consumption of alcohol might cause.<sup>16</sup>

A study evaluating a program to prevent alcohol consumption among adolescents in schooling age<sup>17</sup> brings positive results in health education, since it brings about changes in the behaviors of school adolescents that may influence the future development of these individuals, increasing the knowledge about the subject, interfering in the perception of the risk and reinforcing its protection.

From the results of this study, it was observed that the majority of the population studied (62.2%) consumed fried foods and fatty foods in a proper way (up to 2 times a week), as well as the intake of sweets that was 38.7%. It was also noted that these adolescents regularly consume healthy foods such as fruits (61.7%), and vegetables (54.3%).

These results differ from the study performed by Muniz and coworkers<sup>18</sup> showing that only one third of the adolescents in a sample of 600 subjects who study in public schools in *Caruaru-PE* consume daily fruits or vegetables, and less than 7% of the sample reported consuming both foods daily. Likewise other studies<sup>19,20</sup> that reported insufficient consumption of fruits and vegetables among adolescents, this difference may be related to the fact that the adolescents studied reside in a city in the interior of the state, where a large part of the population lives in the rural area, where they do the cultivation of fruits and vegetables.

According to the Health Ministry an adequate consumption of fruits and vegetables can help in the prevention of cardiovascular diseases and in the prevention

of some cancers. But, these foods have low energy value and a diet restricted only to these foods is not a guarantee of energy supply to the body, thus, there is a need of balancing with other types of food.<sup>21</sup>

It is important to remember that the eating habits associated with the practice of physical activity contribute significantly to good life quality of the human being. When considering the phase of adolescence, this care with food needs to be redoubled, because in this phase of changes, the tendency of less healthy behavior is greater, and may extend it into adult life.<sup>22</sup>

In this contemporary world in which we are inserted, it is very common for adolescents to consume foods rich in saturated fats, sugars and calories, and often fail to perform important meals such as breakfast, thus contributing to an unbalanced diet.<sup>23</sup>

Consumption of sugar-based beverages can contribute to weight gain and onset of future diseases such as diabetes, and also tooth decay. This increased consumption of soft drinks and artificial juices by adolescents arouses concern of experts regarding obesity as, for example, there is a decrease in milk consumption.<sup>24,25</sup>

Another author reveals that the last decades have seen many changes in the socioeconomic, demographic and social environment and consequently affected the diets and foods consumed by the population, becoming great responsible for the increase of obese youngsters.<sup>26</sup>

In this perspective, it is important that professionals close to these adolescents, such as the professors, should be attentive to the habits of the student, and may somewhat interfere in a positive way in some inappropriate eating behavior that so realize. Nutrition and food education should be emphasized especially at this stage of life, promoting a healthy lifestyle.<sup>27</sup>

Regarding the level of physical activity, it was found that among school adolescents, most of them (77.7%) were considered active. Among boys, 85% (n = 34) were active and 15% (n = 6) were physically inactive, while 72.2% (n = 39) were active and 27.8% (n = 15) were inactive.

These results corroborate with a study<sup>28</sup>, which has showed that a little more than half of the 2,874 adolescents participating in the research were classified as physically active, twice as likely to be male as to female.

It differs from the results found by a cohort study with a national scope that involved Brazilian adolescents aged 12 to 17 from municipalities with more than 100 thousand inhabitants.<sup>29</sup> This particular study reported that the prevalence of physical inactivity in leisure was 54.3% in its sample being higher in females when compared to males. More than a quarter of adolescents (26.5%) reported not practicing physical activity. There were 74,589 adolescent participants who participated in the *Estudo de Riscos Cardiovasculares em Adolescentes (ERICA)* [Study of Cardiovascular Risks in Adolescents].

The habits related to the physical activities developed and acquired during the adolescence will be reflected during the adult life. Therefore, the adolescence is a critical period in relation to the practice of exercises. Adolescent inactivity is still high, nonetheless, this group of individuals is considered the most physically active in relation to the entire population.<sup>30</sup>

## CONCLUSION

In this study we have identified variables that involved smoking, alcohol, food and physical activity, and the results point to a need for new epidemiological research related to the topic. It was also found a need for intersectoral actions among schools and health establishments to promote educational activities toward the adolescents in schooling age, in order to alert this part of the population to the risks arising from their behavior.

By analyzing the risk behaviors of school adolescents, it was possible to identify some peculiarities in this study. It was noted that there is a significant relationship between healthy eating habits and the location of the municipality under research, where the majority of the studied population consumes fried foods and fatty foods in a proper way. It was also noted that these adolescents regularly consume healthy food, and it may be associated with the city having a larger part of the population in rural areas.

It is hoped that this study will be able to contribute to enhancing the knowledge in the health field, as well as to promote reflections on the prevention measures for the risk behaviors, in order to minimize the incidence of diseases related to the risk behaviors, contributing to a healthy development of these adolescents, and helping them to reach the adult life well.

## REFERENCES

1. BRASIL. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Ações Programáticas Estratégicas Saúde do adolescente: competências e habilidades/ Ministério da Saúde, Secretaria de Atenção à Saúde, Departamento de Ações Programáticas Estratégicas. – Brasília : Editora do Ministério da Saúde, 2008.
2. Malta DC, Porto DL, Melo FCM, Monteiro RA, Sardinha LMV, Lessa BH. Família e proteção ao uso de tabaco, álcool e drogas em adolescentes, Pesquisa Nacional de Saúde dos Escolares. *Rev Bras Epidemiol.* 2011; 14(1): Supl.: 166-77.
3. Alves MVQM, Costa MCO, Nascimento Sobrinho CL, Santos CAST, Gomes WA, Assis DR. Uso de bebidas alcoólicas entre adolescentes: perfil de experimentação, uso regular e fatores de risco. *Rev Baiana Saúde Pública.* 2005; 29(1): 91-104.
4. Vier BP, Rego-Filho EA, Campos E, Olivi M. Uso de álcool e tabaco em adolescentes. 2007; 11(2): 5-8.
5. Coutinho RX, Santos WM, Folmer V, Puntel RL. Prevalência de comportamentos de risco em adolescentes. *Cad. Saúde Colet.* 2013; 21 (4): 441-9.
6. Farias Júnior JC, Nahas MV, Barros MVG, Loch MR, Oliveira ESA, Bem MFL, Lopes AS. Comportamentos de risco à saúde em adolescentes no Sul do Brasil: prevalência e fatores associados. *Rev Panam Salud Publica* 2009; 25(4): 344–52.
7. Nader L, Aerts D, Alves G, Câmara S, Palazzo L, Pimentel Z. Consumo de álcool e tabaco em escolares da rede pública de Santarém-PA. *Aletheia* 2013 maio/ago; 41: 95-108.
8. IBGE. Instituto Brasileiro de Geografia e Estatística - Cidades. Aiquara. Informações Estatísticas 2010.
9. Tondowski CS, Bedendo A, Zuquette C, Locatelli DP, Opaleye ES, Noto AR. Estilos parentais como fator de proteção ao consumo de tabaco entre adolescentes brasileiros. *Cad. Saúde Pública.* 2015; 31(12): 2514-2522.
10. Nader Luiza, Aerts Denise, Alves Gehysa, Câmara Sheila, Palazzo Lilian, Pimentel Zilma. Consumo de álcool e tabaco em escolares da rede pública de Santarém-PA. *Aletheia* 2013 ; 41:95-108.
11. Nascimento MO, Micheli D. Avaliação de diferentes modalidades de ações preventivas na redução do consumo de substâncias psicotrópicas em estudantes no ambiente escolar: um estudo randomizado. *Ciência & Saúde Coletiva.* 2015; 20(8): 2499-2510.
12. Strauch ES, Pinheiro RT, Silva RA, Horta BL. Uso do álcool por adolescentes: estudo de base populacional. *Rev Saúde Pub.* 2009; 43(4): 647-55.
13. Modelli MES, Pratesi R, Tauil PL. Alcoolemia em vítimas fatais de acidentes de trânsito no Distrito Federal, Brasil. *Rev Saúde Pub.* 2008; 42(2): 350-2.
14. Malta DC, Mascarenhas MDM, Porto DL, Duarte EA, Sardinha LM, Barreto SM, et al. Prevalência do consumo de álcool e drogas entre adolescentes: análise dos dados da Pesquisa Nacional de Saúde Escola. *Rev Bras Epidemiol.* 2011; 14(1) Supl.: 136-46.
15. Vieira PC, Aerts DRGC, Freddo SL, Bittencourt A, Monteiro L. Uso de álcool, tabaco e outras drogas por adolescentes escolares em município do Sul do Brasil. *Cad. Saúde Pública.* 2008; 24(11): 2487-2498.
16. Paiva FS, Rozani TM. Estilos parentais e consumo de drogas entre adolescentes: revisão sistemática. *Psicol Est.* 2009; 14(1): 117-83.
17. Barroso TMMDA, Mendes AMOC, Barbosa AJF. Programa de prevenção do uso/abuso de álcool para adolescentes em contexto escolar: parar para pensar. *Esc Anna Nery.* 2013; 17(3): 466 – 473.
18. Muniz LC, Zanini RV, Schneider BC, Tassitano R M, Feitosa W M N, González-Chica DA. Prevalência e fatores associados ao consumo de frutas, legumes e verduras entre adolescentes de escolas públicas de Caruaru, PE. *Ciência & Saúde Coletiva,* 2013; 18(2): 393-404.
19. Romanzini M, Reichert FF, Lopes AS, Petroski EL, Júnior JCF. Prevalência de fatores de risco cardiovascular em adolescentes. *Cad. Saúde Pública.* 2008; 24(11): 2573-2581.
20. BRASIL. Ministério da Saúde. Secretaria de Atenção à Saúde. Coordenação-Geral da Política de Alimentação e Nutrição. Guia alimentar para a população brasileira: promovendo a alimentação saudável. Brasília: Ministério da Saúde, 2006.210p. (Série A. Normas e Manuais Técnicos).
21. Gonçalves VM. Fatores de risco cardiovascular em adolescentes estudantes da rede pública de ensino de Brodowski-SP. [dissertação]. Ribeirão Preto (SP): Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo; 2012.
22. Almeida AR. Adesão ao padrão alimentar mediterrânico e associação ao estado nutricional em crianças das escolas de 1º ciclo da Póvoa de Lanhoso.[Investigação]. Porto (Portugal): Universidade do Porto, Porto; 2012.
23. Moreno LA, Rodriguez G, Fleta J, Bueno-Lozano M, Lazaro A, Bueno G. Trends of dietary habits in adolescents. *Crit Rev Food Sci Nutr.* 2010; 50(2): 106-12.
24. Ludwig DS, Peterson KE, Gortmaker SL. Relation between consumption of sugar sweetened drinks and childhood obesity: a prospective, observational analysis. *Lancet.* 2001; 357(9255): 505–508.
25. Sales-Peres SHC, Goya S, Sant’Anna RMF, Silva HM, Sales-Peres AC, Silva RPR, et al. Prevalência de sobrepeso e obesidade e fatores associados em adolescentes na região centro-oeste do estado de São Paulo. *Cien Saude Colet.* 2010; 15 (Supl. 2): 3175-3184.
26. Popkin BM. The nutrition transition and obesity in the developing world. *J Nutr.* 2001 ; 131(3):871S-873S.

27. Fortes LS, Morgado FFR, Ferreira MEC. Fatores associados ao comportamento alimentar inadequado em adolescentes escolares. *Rev Psiq Clín.* 2013; 40(2): 59-64.
28. Júnior JCF, Lopes AS, Mota J, Hallal PC. Prática de atividade física e fatores associados em adolescentes no Nordeste do Brasil. *Rev Saúde Pública.* 2012 ; 46(3): 505-15.
29. Cureau FV, Silva TLN, Bloch KV, Fujimori E, Belfort DR, Carvalho KMB et al. ERICA: inatividade física no lazer em adolescentes brasileiros. *Rev Saude Publica.* 2016 ; 50 (supl 1):4s.
30. Roman B, Majem-Serra L, Ribas-Barba L, PérezRodrigo C, Aranceta J. How many children and adolescents in Spain comply with the recommendations on physical activity? *J Sports Med Phys Fitness.* 2008; 48(3): 380-7.

Received on: 12/08/2016  
Reviews required: None  
Approved on: 02/07/2017  
Published on: 07/05/2018

**\*Corresponding author:**

Thainara Araujo Franklin  
Avenida Adolfo Moitinho, nº 236  
Centro, Irecê/BA, Brazil

E-mail address: thainarafranklin@hotmail.com  
Telephone number: +55 74 99120 3646