

PREVALENCE OF AND FACTORS ASSOCIATED WITH THE ADOLESCENTS' NEGATIVE SELF- PERCEPTION IN HEALTH: A SYSTEMATIC REVIEW

Prevalência e fatores associados à autopercepção negativa em saúde dos adolescentes: uma revisão sistemática

Prevalencia y factores asociados a la autopercepción negativa de salud de adolescentes: una revisión sistemática

Review Article

ABSTRACT

Objective: To review in the literature the prevalence of and the factors associated with the adolescents' negative self- perception in health. **Methods:** A systematic review that used, as sources for search, the following databases: LILACS, MEDLINE/PubMed and ADOLEC, using descriptors indexed to DeCS/MeSH. In the selection process, the articles were analyzed in three stages: reading of the titles, abstracts and full texts of the articles according to the eligibility criteria. **Results:** Of the 886 articles found, after using the filters, 25 articles were selected for full-text reading but, after that, only 10 articles were included in the results of this research. The studies showed a prevalence of negative self-perception in adolescents ranging from 1.2% to 38%, and other associated factors, such as the socioeconomic factors, interpersonal relationships, and health risk behaviors were also verified. **Conclusion:** The scientific evidence indicates that socioeconomic factors, relationship with family and friends, stress, psychological aspects and health risk behaviors are linked to the adolescents' negative self-perception in health. Furthermore, being female, having low income, and being older were also factors for an increase in the adolescent's negative evaluation of their health status.

Descriptors: Perception; Adolescent; Adolescent Health; Risk factors; Self Concept.

RESUMO

Objetivo: Revisar na literatura a prevalência e os fatores associados à autopercepção negativa em saúde dos adolescentes. **Métodos:** Trata-se de uma revisão sistemática que utilizou, como fonte de busca, as seguintes bases de dados: Lilacs, Medline/Pubmed e Adolec, utilizando descritores indexados ao DeCS/MeSH. No processo de seleção, os artigos foram analisados em três etapas: leitura dos títulos, dos resumos e do artigo na íntegra de acordo com os critérios de elegibilidade. **Resultados:** Dos 886 artigos encontrados, após a utilização dos filtros, foram selecionados 25 artigos para leitura na íntegra, mas, após a leitura, somente 10 artigos foram inclusos nos resultados desta pesquisa. Os estudos apresentaram uma prevalência de autopercepção negativa em adolescentes que variou de 1,2% a 38%, sendo verificados também outros fatores associados, como fatores socioeconômicos, relações interpessoais e comportamentos de riscos à saúde. **Conclusão:** As evidências científicas apontam que fatores socioeconômicos, relação com a família e amigos, estresse, aspectos psicológicos e comportamentos de risco a saúde estão interligados à autopercepção negativa em saúde dos adolescentes. Além disso, ser do sexo feminino, ter baixa renda e apresentar uma idade maior também foram fatores para um aumento na avaliação negativa do estado de saúde do adolescente.

Descritores: Percepção; Adolescente; Saúde do Adolescente; Fatores de Risco; Autopercepção.

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RESUMEN

Objetivo: Revisar la prevalencia y los factores asociados a la autopercepción negativa de salud de adolescentes en la literatura. **Métodos:** Se trata de una revisión sistemática que se utilizó como fuente de búsqueda las siguientes bases de datos: LILACS, MEDLINE/PubMed y Adolec utilizando los descriptores indexados al DeCS/MeSH. En el proceso de selección los artículos fueron analizados en tres etapas: la lectura de los títulos, de los resúmenes y del artículo completo según los criterios de elegibilidad. **Resultados:** Después de la utilización de los filtros fueron elegidos 25 artículos para la lectura del texto completo de los 886 artículos encontrados, pero tras la lectura, solamente 10 artículos fueron incluidos en los resultados de esa investigación. Los estudios presentaron una prevalencia de autopercepción negativa de adolescentes que varió entre 1,2% y 38% y fueron verificados también otros factores asociados como los factores socioeconómicos, las relaciones interpersonales y las conductas de riesgo para la salud. **Conclusión:** Las evidencias científicas señalan que los factores socioeconómicos, la relación con la familia y los amigos, el estrés, los aspectos psicológicos y las conductas de riesgo para la salud están asociados a la autopercepción negativa de salud de los adolescentes. Además de eso, pertenecer al sexo femenino, tener baja renta y más edad también fueron factores para un aumento de la evaluación negativa del estado de salud del adolescente.

Descriptores: Percepción; Adolescente; Salud del Adolescente; Factores de Riesgo; Autoimagen.

INTRODUCTION

Self-perception of health is strongly associated with the actual or objective health status and can be seen as a representation of subjective health assessments⁽¹⁾, which encompass physical, cognitive and emotional aspects⁽²⁾. It is obtained by questioning the individual about how they rate their health in the last days, presenting as answers five classifications ranging from very good to very bad⁽¹⁾.

Even though the mensuration of the individuals' general health status is quite complex, self-perception of health has proven to be a reliable and more widely used method than direct observation for global health analysis^(3,4). Moreover, it is a powerful indicator of mortality. People who report their health as poor have a higher risk of mortality from all causes of death compared to those who report having very good health⁽⁵⁾.

Because of the important association between health self-perception and mortality, the analysis of the determinants of health becomes important, since modulating these factors means altering the perception of health and may represent a change in mortality⁽⁶⁾. Data about this health indicator for the Brazilian population has shown a variation in the

prevalence of negative health in Brazilian cities, with 2.4% in Palmas (Tocantins), 7.5% in Macapá (Amapá) and 5.4% in Salvador (Bahia)⁽⁷⁾.

In a survey conducted by the surveillance system for risk factors and national protection presented data from the 27 capitals of Brazil and the Federal District on the self-perception of health in the adult and elderly population⁽⁸⁾. For Brazilian adolescents, however, this information is still scarce⁽⁸⁾, with some studies in the national⁽⁹⁻¹¹⁾ and international⁽¹²⁻¹³⁾ scenarios.

Adolescence is considered a sociocultural category, of historical origin, involving biopsychological and social dimensions^(14,15). It is a period of rapid physical and psychosocial changes, in which the adolescent goes through a process of discovering how to live life, the ways of being and being with others, until the construction of the future through the professional choices⁽¹⁵⁾.

It is important to emphasize that adolescence is a crucial period for adoption of new lifestyles and health perceptions⁽¹⁶⁾, and studies on the determinants of the adolescents' self-perception of health are limited^(9,11,17). Considering the above, this study aims to review in the literature the prevalence of and the factors associated with the adolescents' negative self-perception in health.

METHODS

This is a systematic review, conducted in the period from October 2015 to March 2016, aiming at synthesizing the articles that analyzed the prevalence of and the factors associated with negative self-perception of health in adolescents.

The research was conducted in the following electronic databases: LILACS (Latin American and Caribbean Health Sciences Literature), ADOLEC and MEDLINE/PubMed (National Library of Medicine - National Institutes of Health).

As a starting point, the descriptors were selected by consulting the DeCS (Health Sciences Descriptors) and the MeSH (Medical Subject Headings), considering the following descriptors in English and Portuguese, respectively: "Health Perception", "Adolescent Health," "Risk Factors," "Negative Self Perception" ("Percepção de Saúde", "Adolescente", "Saúde do adolescente", "Fatores de Risco" e "Percepção negativa em Saúde"), in addition to the Boolean operator "and" for combination of the terms. The descriptors were combined in pairs and then by set in order to reach a better retrieval of the articles.

The entire process of searching, selecting, and evaluating the articles was carried out by two researchers in an independent manner, in which the publications that met

the eligibility criteria were integrally and independently analyzed by the two researchers. Then, the disagreements were confronted in order to obtain a consensus among the peers.

The eligibility criteria of the study were: articles published in English, Portuguese or Spanish; published between the years 2010 to 2016, with adolescents as population, and studies addressing the negative self-perception of health in adolescents. Review articles, theses, dissertations and monographs, duplicate studies in more than one database, and articles that did not assess negative self-perception of health in adolescents were excluded.

The selection process of the articles occurred through the reading of the title, followed by the abstract and full text, respectively. The selected articles were evaluated in relation to the sample size, because this methodological step was considered fundamental to obtaining a valid answer to the question of this review.

RESULTS

Among the main results found, negative self-perception of health was associated with socioeconomic^(9,11,17) and environmental factors⁽¹¹⁾, as well as behavioral conducts⁽¹⁸⁻²⁰⁾.

The studies also showed an association with the smoking habit^(9,19,20), a low rate of physical activity^(11,17,21,22), stress^(9,23), dissatisfaction with weight and life⁽²⁴⁾, and behaviors associated with suicide⁽¹⁷⁾ (Chart I).

Of the studies included, all presented in their sample adolescents, with age varying between 11 to 19 years. The sample size of the studies ranged from 414⁽¹⁹⁾ to 21,811⁽²²⁾ adolescents. All studies chose to use validated questionnaires, as well as using the cross-sectional method for the study design.

In relation to the total prevalence of negative self-perception in health, the percentages ranged from 1.2%⁽¹¹⁾,

Chart I - Characteristics of articles related to self-perception of health in adolescents between the years 2010 and 2016.

Author (Year)	Place of study	Number of participants	Age group	Main associations with risk factors
Sousa et al. (2010) ⁽⁹⁾	Brazil	5028	15 to 19 years	Female gender, low economic status, tobacco use and high level of stress.
Meireles et al. (2015) ⁽¹¹⁾	Brazil	1042	11 to 17 years	Sex, social and environmental factors, issues with family, peers and neighborhood.
Spein et al. (2013) ⁽¹⁷⁾	Norway	728	15 and 16 years	Socioeconomic factors, suicide and low level of physical activity.
Mendonça et al. (2012) ⁽¹⁸⁾	Brazil	2859	14 to 19 years	Socioeconomic factors, low level of physical activity and excess body weight.
Afridi et al. (2013) ⁽¹⁹⁾	Pakistan	414	14 to 17 years	Male gender, qualification of parents, family problems, lifestyle, tobacco use and unhealthy diet.
Richter et al. (2012) ⁽²⁰⁾	Germany	6997	11 to 15 years	Female gender, low economic condition, poor family structure, poor diet, tobacco use, and low level of physical activity.
Farias Júnior et al. (2012) ⁽²¹⁾	Brazil	2874	14 to 19 years	Female gender, low level of physical activity.
Galán et al. (2016) ⁽²²⁾	Spain	21811	11 to 18 years	Low level of physical activity, less satisfaction with life.
Wiklund et al. (2012) ⁽²³⁾	Sueden	1027	16 to 18 years	Female gender and stress.
Meireles et al. (2015) ⁽²⁴⁾	Brazil	1035	11 to 17 years	Family structure, low consumption of fruits and vegetables, overweight, low weight and dissatisfaction with life.

the minimum indicated, to 38%⁽¹⁷⁾, for the maximum percentage found in the studies.

Of the selected studies, three^(9,18,21) are available in Portuguese and the others in the English language. The prevalence of negative self-perception, when analyzed by sex, ranged from 6.7%⁽¹⁹⁾ to 32.2%⁽²²⁾ for males, and from 11%⁽²⁴⁾ to 53.6%⁽¹¹⁾ for females (Chart II).

DISCUSSION

Through the data found in this review, it was possible to find information about self-perception in health, such as: i) The methodology used for the studies in relation to the design are associated with cross-sectional studies; ii) The use of validated questionnaires was the most common way to assess self-perceived health in adolescents; iii) The results found with regard to the prevalence of negative self-perception are representative for the associations made in the studies; iv) Higher prevalence of negative self-perception in women; v) When assessing the associated factors, socioeconomic data, low level of physical activity, relationships between family and school, and behavioral attitudes of health risk are related to the negative self-perception in adolescents.

Initially, the question used to evaluate self-perception in health was elaborated with egalitarian essence by all the studies, having a direct question with personal answer, which is evaluated in the studies through four^(19,20,22,23) or five^(9,11,17,18,21,24) alternatives ranging from very good to very bad.

All the studies used a questionnaire to evaluate negative self-perception in health and its associated factors, presenting a variance of instruments. Questionnaires such as PeNSE⁽¹¹⁾, COMPAQ⁽⁹⁾ and WBYG⁽¹⁷⁾ were used, which may justify the variation in the prevalence of associations, as the questionnaires are chosen to better meet the study objectives.

The negative self-perception in health is a widely used variable for epidemiological studies and deserves special attention for the period of adolescence, in which there are several physical, psychological and behavioral changes, with a prevalence ranging from 1.2%⁽¹¹⁾ to 38%⁽¹⁷⁾ in this age group.

An important aspect to be observed is that, in the authors' findings regarding the socioeconomic aspects, it was evidenced that adolescents with lower family income present a greater chance of demonstrating a negative self-perception in health^(9,11,18,20,24). Income is known to represent a determinant component in the greater access to leisure activities, education, housing and health services⁽⁹⁾.

Negative health perception was also associated when compared to family problems^(19,20,24), such as family distancing⁽¹⁹⁾, support to decisions and family structure^(20,24). Generally, adolescents living in families where greater social support is present, have a better self-perception of health⁽²⁷⁾.

Regarding sex, there was a higher prevalence for female adolescents in a vast majority of studies^(9,11,17,18,20-22,24). Only two studies showed a greater negative perception for male adolescents^(19,23). It is believed that, culturally, girls do more routine exams and visit a doctor more often, which increases the possibility of early diagnosis of a disease. Furthermore, they are more sensitive to detect physiological changes⁽²⁸⁾ and to consider habits that are unsuitable for health⁽²⁹⁾.

One study⁽¹¹⁾ states that the negative self-perception in health was associated with an increase in the adolescents' age, suggesting that adolescents may become increasingly concerned about their health over the years, as well as may adopt other risk behaviors with the passing of time. These results corroborate the findings of another study⁽¹⁸⁾, which showed that older adolescents had a worse perception of health, especially the female adolescents.

Another variable that presented important results was the relationship with family and friends, and it was verified that adolescents who have a poor relationship with parents and/or friends present superior results in negative self-perception in health^(11,19,20), which demonstrates the importance of the coexistence circle of adolescents with their peers and how much this influences their perception of health.

As to the association with health risk behaviors, one study⁽⁹⁾ showed that adolescents who claimed to smoke had a higher negative health prevalence, and this same result was present in other studies^(25,26). The association related to tobacco use was also present in other studies^(19,20).

Other research⁽³¹⁾ also aimed to analyze the influence of some factors in association with health perception, and it was identified that, of the three investigated drugs (alcohol, tobacco and marijuana), only tobacco appeared as a predictor of negative health perception.

This review did not present important findings regarding alcohol consumption and negative perception in health; however, the literature indicates that adolescents who chose not to answer the question had a higher probability of negative health when compared to those who answered to it⁽⁹⁾.

The low level of physical activity was also presented as an indicator of negative self-perception in health^(9,17,18,20-22). Similar data was obtained in a population-based study on health including 2,741 adolescents aged 13 to 19 years, in

Chart II - Negative health evaluation of adolescents, stratified by gender and periodical of publication.

Author (Year)	% Negative health	Periodical	Prevalence by sex (%)	
			(Male)	(Female)
Sousa et al. (2010) ⁽⁹⁾	14.4%	Rev. Paulista de Pediatria	9.6%	17.6%
Meiros et al. (2015) ⁽¹¹⁾	1.2%	Rev. Brasileira de Epidemiologia	46.6%	53.6%
Spein et al. (2013) ⁽¹⁷⁾	38%* 11%**	Int. Journal of Circumpolar Health	9%* 28%**	11%* 41%**
Mendonça et al. (2012) ⁽¹⁸⁾	15.8%	Rev. Bras. Atividade Física e Saúde	10.3%	19.9%
Afridi et al. (2013) ⁽¹⁹⁾	29%	Global Journal of Health Science	32.2%	23.6%
Richter et al. (2012) ⁽²⁰⁾	13.9%	J. Epidemiol Community Health	12%	16%
Farias Júnior et al. (2012) ⁽²¹⁾	15.8%	Rev. de Saúde Pública	10.3%	19.9%
Galán et al. (2016) ⁽²²⁾	8.9%	BMJ Open	6.7%	10.7%
Wiklund et al. (2012) ⁽²³⁾	16.4%	BMC Public Health	20.5%	12.2%
Meiros et al. (2015) ⁽²⁴⁾	11.2%	PLoS One	8.3% ^a 10.9% ^b	6.9% ^a 16.9% ^b

*Refers to Inuit population sample; **Refers to Sami population sample.

^aRefers to the sample from 11 to 13 years. ^bRefers to the sample from 14 to 17 years.

which the absence of physical exercise was observed as a predisposing factor for the negative perception in health⁽²⁷⁾. Physically active adolescents were more likely to perceive their health status positively⁽³²⁾.

Unhealthy diet was also associated with negative health perception in adolescents^(10,18,19,24). A study by the American Centers for Disease Control and Prevention (CDC) found that less than a quarter of adolescents eat plentiful amounts of fruits and vegetables⁽³³⁾. Overweight was also present in some studies^(18,24), and was directly associated with the adolescents' perception of health. The concern with adolescent eating habits is pointed out, evidencing the need for a balanced diet in order to maintain a regularity in body weight, obtaining an increase in the positive indexes related to health perception.

Stress was also associated with negative perception in adolescents⁽²³⁾. A study held in 2012⁽²³⁾ showed that female adolescents have a higher rate of stress compared to male adolescents. Similar results were also found in a previous study in 2010⁽⁹⁾. This is a phase of development and insertion of the individual in differentiated situations, such as the job market and studies, in addition to the increase of personal responsibilities, which can cause a high level of stress.

Another variable that also called attention was the dissatisfaction with life^(22,25). The importance of psychological well-being with regard to adolescents'

perception of health has been observed in studies addressing subjective health assessed through a single-item mensuration^(34,35), which aims to perceive the adolescents' level of satisfaction with life.

The differences between the studies that analyze health perception in adolescents may be due to the absence of an international standard for response options or the way in which the variable is categorized. Such difference in results may also be related to the location of the adolescent, the place where the questionnaire is filled out, the type of questionnaire and the form of selection of the individuals who will participate in the study. It is evidenced the importance of studies in which this data assists the scope of public health interventions, through strategies elaborated for the promotion of healthy habits, in order to reach the adolescent public, putting emphasis on behavior change for a modification of the risk factors, so that the adolescent can respond positively to the perception of health.

CONCLUSION

The scientific evidence indicates that socioeconomic factors, relationships with families and friends, stress, psychological aspects and health risk behaviors are related to the adolescents' negative self-perception in health. Moreover, being female, having low income, and

presenting a higher age were also factors for an increase in the adolescent's negative evaluation of their health status.

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