

Adolescent lifestyles and their relationship with the perception of their developmental contexts

Estilos de vida de adolescentes y su relación con la percepción de sus contextos de desarrollo

Estilos de vida de adolescentes e sua relação com a percepção de seus contextos de desenvolvimento

Noemí Campos-Valenzuela ¹

 <https://orcid.org/0000-0001-7082-7116>

Maritza Espinoza-Venegas ^{2*}

 <https://orcid.org/0000-0002-2361-211X>

Magdalena Celis-Bassignana ³

 <https://orcid.org/0000-0002-8156-0215>

Luis Luengo-Machuca ⁴

 <https://orcid.org/0000-0002-9643-4334>

Natalia Castro-Aravena ⁵

 <https://orcid.org/0000-0001-9426-2287>

Sergio Cabrera-Melita ⁶

 <https://orcid.org/0000-0001-5241-2937>

1. Master's Degree in Nursing. Nursing School. Universidad de Concepción. Chile.
2. PhD in Nursing. Nursing School. Universidad de Concepción. Chile.
3. Pediatrician. Nursing School. Universidad de Concepción. Chile.
4. Master's Degree in Statistics. Nursing School. Universidad de Concepción. Chile.
5. Master's Degree in Human Nutrition. School of Chemistry and Pharmacy. Universidad de Concepción. Chile.
6. Child and Adolescent Psychiatrist. School of Medicine. Universidad de Concepción.

* Corresponding author: mespinoz@udec.cl

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Abstract

Introduction: Although lifestyles are generated and consolidated in adolescence, when these lifestyles are unhealthy, adolescents expose themselves to health risks. **Objective:** Identify the lifestyles of adolescents and its relationship with the perception of their development contexts. **Methodology:** A descriptive study was used, with bivariate analysis of comparison of means and correlation, carried out on a sample of 489 adolescents aged 10 to 19 years old from public schools of Biobío, Chile, excluding adolescents with cognitive deficits and/or sense organ disorders. Ethical aspects considered parental consent and the agreement from every adolescent. The "FANTÁSTICO" instrument, adapted Chilean version was used, which measures 8 dimensions related to health, mental wellbeing and perception, family affective relationships, and school environment. The analyses were descriptive and correlational. **Results:** Almost half of the sample reported lifestyles that require changes and/or interventions. The youngest ones showed healthier lifestyles with differences by sex. Healthy behaviors had a statistically positive relationship to mental well-being and to the perception of their developmental contexts such as family affective relationships and their school environment. **Conclusions:** The findings support the design of future intervention studies that consider early adolescent ages and differences by sex, especially aimed at improving the closest developmental contexts such as family, schools, and their neighborhoods.

Key words: Lifestyle; adolescent; health promotion; risk factors (DeCS).

Abstrato

Introdução: Embora os estilos de vida sejam gerados e consolidados na adolescência, quando esses estilos de vida não são saudáveis, os adolescentes se expõem a riscos à saúde. **Objetivo:** Identificar os estilos de vida dos adolescentes e a sua relação com a percepção dos seus contextos de desenvolvimento. **Metodologia:** Foi utilizado um estudo descritivo, com análise bivariada de comparação de médias e correlação, realizado em uma amostra de 489 adolescentes de 10 a 19 anos de escolas públicas de Biobío, Chile, excluindo adolescentes com déficits cognitivos e/ou distúrbios dos órgãos dos sentidos. Os aspectos éticos consideraram o consentimento dos pais e assentimento de cada adolescente. Foi utilizado o instrumento FANTÁSTICO, versão chilena adaptada, que mede 8 dimensões relacionadas à saúde, bem-estar mental e percepção das relações afetivas familiares e do ambiente escolar. As análises foram descritivas e correlacionais. **Resultados:** Quase metade da amostra estudada apresentou estilos de vida que requerem modificações e/ou intervenções. Os mais jovens apresentaram estilos mais saudáveis com diferenças por sexo. Os comportamentos saudáveis relacionaram-se positivamente com o bem-estar mental e com a percepção dos seus contextos de desenvolvimento, como as relações afetivas familiares e o ambiente escolar. **Conclusões:** As descobertas apóiam o desenho de futuros estudos de intervenção que considerem as idades iniciais da adolescência e as diferenças por sexo, especialmente destinadas a melhorar os contextos de desenvolvimento mais próximos, como família, escolas e seus bairros.

Palavras-chave: Estilo de vida; adolescente; promoção da saúde; fatores de risco (DeCS).

Introduction

Lifestyles are patterns of individual behavior based on the interaction of living conditions and sociocultural factors. Depending on the lifestyles that are adopted during adolescence and maintain certain consistency over time, they can become either risk factors or protective factors, and consequently have significant effects



on health ^(1,2). Adolescence is the period of human growth and development that occurs between the ages of 10 and 19. It is one of the most important stages in the life of a person, and according to the social ecological model ⁽³⁾, its development, as well as the adoption of healthy or risky behaviors, it is conditioned by the influence and perception of the different developmental contexts in which the adolescent is involved, such as family, friends, and school community, in addition to biological and psychological factors. As regards biological factors, these are universal, although there may be some variability depending on the culture and the socioeconomic context ⁽²⁾.

Several reports reveal that unhealthy lifestyles are initiated during adolescence, and despite the health promotion efforts of different institutions, these lifestyles are maintained ⁽⁴⁻⁶⁾, leading to different health risks, such as high prevalence of cardiovascular disease, high blood pressure, diabetes, cancer, mental disorders and sexually transmitted diseases ⁽²⁾. Although there are studies regarding the lifestyle of adolescents in Chile, which show, for example, that 22% of adolescents smoke cigarettes, 12% are at risk due to alcohol consumption, 73% show sedentary behaviors, among others, these figures are very general ^(5,6) and centralized; therefore, they may not reflect the immediate and local reality ⁽⁷⁾. Thus, there is necessary to perform more specific diagnoses by schools with the help of simple, easy-to-apply, and self-managed instruments. This would make it possible to obtain updated and individualized information on adolescents that would subsequently lead to actions focused on local needs, also considering the perception of the contexts in which adolescents develop, and that will determine their lifestyles. From the aforementioned foundations, this research aims to identify the lifestyles of adolescents and their relationship with the perception of their development environments.

Methodology

This is a cross-sectional observational study, with descriptive-correlational scope. The population consisted of students from 5th grade of elementary school to 4th grade of secondary education, belonging to seven (7) municipal and subsidized schools in the region of Biobío, Chile, during the year 2019. A non-probabilistic



convenience sample of 489 adolescents was obtained from this population. The inclusion criterion considered adolescents aged 10 to 19 years from educational institutions in Biobío, Chile, and the exclusion criterion was adolescents with cognitive deficits and/or sense organ disorders that prevented the completion of the instrument, who were informed by the coordinating teacher of the institution.

To measure lifestyles, the FANTÁSICO instrument ⁽⁸⁾ was used, translated and validated in Chile ⁽⁹⁾ and subsequently adapted to the adolescent population. The instrument is composed of 34 items divided into 8 dimensions. The first 5 dimensions address lifestyle behaviors such as physical activity (items 5, 6, 7), nutrition (items 8, 9, 10, 11, 12), sexuality (items 29, 30, 31, 32), alcohol and drug consumption (items 13, 14, 15, 16), safety actions (items 33, 34), and the last 3 dimensions refer to the perceptions they have about their relationships in the closest developmental environments, such as affective relationships with family and friends (items 1, 2, 3, 4, 17, 18, 19), mental well-being (items 20, 22, 23, 24, 26, 27, 28), and school satisfaction (items 24, 25). The response options are Likert-type, where zero (0) is the least healthy, 1 is moderately healthy, and two (2) is the most healthy. The score for each dimension is obtained by adding the responses divided by the number of items. The total score is 68 and is obtained by adding all the items. The categorization of the scale proposed by the authors is: Excellent=68, Very Good= 60-67, Good= 52-59, Fair= 44-51, and Needs Improvement < 44 points. The psychometric tests in this study resulted in a Cronbach's Alpha reliability of 0.86 and Spearman's Rho criterion validity of 0.65 with the Health Promotion scale ⁽¹⁰⁾ and 0.73 with the Kidscreen scale ⁽¹¹⁾.

Data were collected in accordance with the regulatory framework of Chilean Law 20120. Approval was requested from the *Comité Ético Científico del Servicio de Salud Concepción* (Concepción Scientific Ethical Committee of Health Service) (Code 18-11-99). Subsequently, authorization was requested from the respective school. Later, in a meeting with the parents and legal guardians, the purpose of the study was explained to them so that they could decide, by means of a written consent, whether their child would participate in the research. The adolescents were invited to participate by being informed before a lesson,



and subsequently they freely and voluntarily decided to participate, confirming their participation by means of a written consent. The instrument was self-administered and supervised by the researchers, with privacy and confidentiality protected at all times.

Data processing was done using the Statistical Package for the Social Sciences 15.0 (SPSS). The analysis used descriptive and inferential statistics of correlational type (Spearman's r), to establish the relationship between the sub-dimensions of the variable "lifestyle". Adequate correlations above 0.3 (12) between the dimensions were considered. For the analysis of the sociodemographic variables, Student's T was applied. For the contrasts and confidence intervals, a significance of 5% was used.

Results

The sample was composed of adolescents aged between 10 and 19 years, with an average of 14 years (SD= 2.1), and 52.4% was comprised by female students. The mean and global average lifestyle score was 51.0 points (SD=7.6). The 50.3% had lifestyles between "regular" and "needs improvement", and 13.3% had a "very good" lifestyle (Table 1).

Table 1 - Categories, adolescent lifestyle scale scores, 2019 (n=489).

Lifestyle category	n	%
Needs improvement	75	15.3
Regular	171	35.0
Good	178	36.4
Very good	64	13.1
Excellent	1	0.2
Total	489	100.0

Source: Own development.



According to Table 2, sociodemographic differences were seen according to sex; men presented an average that resulted in a significant statistical difference of 3.6 points, with a Confidence Interval (CI) (2.3 to 4.9) higher in global lifestyle than women ($t=5.34$; $gl=487$ $p<0.0001$). Scores were better in physical activity, diet, affective relationships, and mental well-being.

Likewise, adolescents belonging to the rural area presented better lifestyle scores than those living in the urban area ($t=2.007$; $gl 70.91$ $p < 0.04$). Adolescents between 10 and 14 years of age obtained better average scores regarding physical activity, diet, sexuality, and alcohol and drug consumption, as well as in the overall lifestyle score. However, the differences were not statistically significant. In addition, the average lifestyle scores were higher in adolescents from subsidized schools.

Table 2 - Lifestyle dimensions, overall score and differences by sociodemographic variables in adolescents, 2019 (n=489)

Sociodemographic variables	Lifestyle (LS) dimension averages									Student's T	
	FA	D	SX	OH Dg	AR	S	MW	SS	Total (LS)		
Sex	Men (233)	1.5	1.3	1.6	1.9	1.7	1.6	1.5	1.4	52.9	$p<0.00$
	Women (256)	1.3	1.2	1.5	1.9	1.6	1.6	1.2	1.4	49.3	
Age	10 to 14 (278)	1.4	1.3	1.5	1.9	1.7	1.7	1.4	1.5	51.7	-
	15 to 19 (211)	1.3	1.2	1.6	1.8	1.7	1.6	1.3	1.4	50.2	
Area	Urban (416)	1.3	1.2	1.5	1.9	1.7	1.6	1.3	1.4	50.8	$P<0.04$
	Rural (50)	1.5	1.3	1.7	1.9	1.7	1.7	1.4	1.5	52.6	
School	Municipal (389)	1.4	1.2	1.5	1.9	1.6	1.6	1.3	1.4	50.8	-
	Subsidized (77)	1.4	1.2	1.6	1.9	1.7	1.7	1.4	1.4	52.0	
Total Average		1.4	1.2	1.6	1.9	1.7	1.6	1.3	1.4	51.0	

Institution, FA: Physical activity; D: Diet; SX: Sexuality; OH Dg: Alcohol and drugs; AF: Affective relationships; S: Safety; MW: Mental wellbeing; SS: School satisfaction.

Source: Own development.



Table 3 shows the relevance of the associations of the dimensions of lifestyle behaviors with perceptions related to their developmental contexts.

The results show the positive and significant statistical association with Spearman > 0.3 of eating behaviors, physical activity, with perceptions of mental well-being. The latter, in turn, correlated significantly with the adolescent's perception of affective relationships with family and friends. The dimensions of school satisfaction were also found to be significantly associated with affective relationships and mental well-being.

Table 3 - Spearman correlation of lifestyle scale dimensions in adolescents, 2019 (n=489)

Lifestyle Dimensions	Diet	Sexuality	Alcohol and drug use	Affective relationships	Safety actions	Mental well-being	School satisfaction
Physical activity	.450**	0.071	0.051	.236**	.167**	.437**	.175**
Diet		.187**	0.074	.287**	.202**	.465**	.251**
Sexuality			-0.028	.344**	.094*	.214**	.213**
Alcohol and drug use				.099*	.238**	.107*	.156**
Affective relationships					.172**	.526**	.378**
Safety actions						.220**	.189**
Mental well-being							.447**

*The correlation is significant at the 0.05 level (bilateral).

** The correlation is significant at the 0.01 level (bilateral).

Source: Own development.

Discussion

This study investigated the lifestyles of adolescents in activities such as physical activity, diet, alcohol and drug consumption, among others, and their perceptions of mental well-being, and their relationships with their closest developmental contexts such as family, school environment and friends. Half of the sample under the study reported lifestyles that require modifications and/or interventions. Although these results



are only a rough approximation, they comprise a great vulnerability for an important group of adolescents who completed the survey. Results of similar studies conducted in public schools of Brazil ⁽¹³⁾ indicated that only 10.6% obtained high scores. Another Colombian study ⁽¹⁴⁾ showed a percentage of 22.5% of better lifestyle behaviors. The results of this study confirm differences in lifestyles according to sociodemographic characteristics, such as type of school, type of rural area, age and sex. These findings are consistent with several studies that consider them as predictors ⁽³⁾, i.e. the contexts in which adolescents develop have a favorable or negative influence on their behavior ⁽³⁾.

Older adolescents showed less healthy behaviors in several dimensions ⁽²⁻³⁾. These results are in agreement with Chilean national reports ⁽¹⁵⁾, which reveal that adolescents' physical performance in different endurance and muscular strength tests worsens with each passing year. The same occurs with alcohol and drug use, which increases in middle adolescence in less than a quarter of the population and peaks in late adolescence in almost half of the population. Similarly, international studies indicated that alcohol consumption increases with age ^(16, 17).

As for the analysis by sex, a significant mean difference in lifestyles between male and female adolescents was seen in this study. Several studies showed better physical activity lifestyles in male adolescents compared to female adolescents ^(14, 18); and at the national level in Chile, standardized physical education tests ⁽²³⁾ agreed that males practice physical activity longer and at a higher intensity than female adolescents. Similarly, Latin American indicators of risk factors in adolescents ⁽¹⁷⁾ also indicate that male adolescents are significantly more physically active than female adolescents. These sex differences can be explained by the ecological differences surrounding adolescents, which are related to the environmental characteristics and family behavior of their parents ⁽¹⁹⁻²⁰⁾.

Male adolescents also obtained better results in the diet dimension. This is consistent with international studies ^(17, 21) and national reports, although not optimal, they indicate that males eat 28.6% of the recommended fruits and vegetables while females eat only 23.7% ⁽¹⁶⁾.



The perception of the contexts in which the adolescents develop that were evaluated by means of the lifestyle scale, was statistically and positively related to diet and physical activity behaviors. The foregoing confirms that the lifestyles adopted by adolescents could be influenced by their favorable or unfavorable life contextual relationships. Studies show ^(22, 23) that external and internal support resources such as friends and personal well-being are positively associated with effective parenting practices. In this regard, studies ^(22, 23, 24) concluded that the close bond provided by the family, in addition to generating better stress management, enhances healthy behaviors of physical activity, mental well-being, self-esteem, and life satisfaction ^(25, 26); moreover, they also act as protectors against alcohol and drug consumption ⁽²⁷⁾. The former suggests that the mental well-being of adolescents depends on their relationships with their families, especially with their parents. This occurs even if there is a normal parental distance inherent to the psychosocial development of the adolescent ⁽²⁷⁾.

The scale used to measure lifestyles in adolescents was quick and simple to use, and allowed a local diagnosis of health behaviors and the perceptions that influence them. Finally, it is considered that the limitations of the study correspond to the type of non-probabilistic convenience sampling, which exposes the study to the non-representativeness of the adolescent population and to the restriction of generalization of the results. The type of instrument used may entail biases related to social desirability.



Conclusions

From the sample under study, it is concluded that a low percentage of adolescents reported healthy lifestyles. The perception of their closest developmental contexts, such as family, educational institutions and their neighborhoods, are related to lifestyles, especially regarding diet and physical activity. The evidence of this type of study cannot establish causal inferences, but it can establish statistical relationships of great importance for public health research, thus, allowing us to support future intervention studies, where the nursing professional plays an important role in carrying out promotion and prevention programs for adolescents that contribute to the improvement of their lifestyles.

Conflict of interest

The authors stated that there was no conflict of interest.

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