Quality of life assessment of adolescent secondary school students from Potosí. Evaluación de calidad de vida de estudiantes potosinos adolescentes de educación secundaria.

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Abstract:

Quality of Life (QoL) and Health-Related Quality of Life are essential concepts for understanding people's well-being, particularly during adolescence, which is a crucial transition stage in the lives of human beings. The QoL assessment helps us obtain a comprehensive understanding of well-being and development at various stages of life. Assessing QoL in adolescents allows researchers and health professionals to understand the specific dynamics of this population. Method. The present work evaluated QoL in adolescents from technical secondary schools in vulnerable areas of San Luis Potosí. The Kidscreen-52 (KS-52) scale was used to probe physical, emotional, and social aspects and risk factors. 797 students participated (50% men, 50% women), aged between 11 and 15 years, from two technical secondary schools in vulnerable San Luis Potosí. 35.94% of the sample was made up of first-year students. year, 38.39% in the second year and 26.47% in the third year. Results. Statistical differences were found for internal factors ($t=5.87$; gl 795; $p < .001$) between men and women, with lower scores in the latter. Likewise, greater vulnerability is observed in the first and third grades ($F= 3.076$; $p = 0.047$). In both subsamples, the relevance of socioeconomic status and the parental and family relationship as external factors predominates, and physical and psychological well-being, self-perception, and autonomy as internal factors. Conclusions. The findings of this work support the importance of addressing adolescents' QoL from a comprehensive perspective, considering both internal and external factors that influence their comprehensive well-being.

Keywords:

Quality of life, adolescents, KS-52, emotional health

Resumen:

La Calidad de Vida (CV) y la Calidad de Vida Relacionada con la Salud, son conceptos esenciales para comprender el bienestar de las personas, particularmente durante la adolescencia, que es una etapa de transición crucial en la vida de liios seres humanos. La evaluación de la CV nos apoya para obtener una comprensión integral del bienestar y desarrollo en las diversas etapas la vida. Evaluar la CV en adolescentes permite a los investigadores y profesionales de la salud comprender las dinámicas específicas de esta población. Método. El presente trabajo evaluó la CV en adolescentes de secundarias técnicas en zonas vulnerables, de San Luis Potosí. Se utilizó la escala Kidscreen-52 (KS-52) para sondear aspectos físicos, emocionales y sociales, así como, factores de riesgo. Participaron 797 estudiantes (50% hombres, 50% mujeres), un rango de edad entre los 11 y los 15 años de dos secundarias técnicas. El 35.94% de la muestra estuvo conformada por estudiantes de primer año, el 38.39% de segundo y el 26.47% de tercero. Resultados. Se encontraron diferencias estadísticas para factores internos ($t=5.87$; gl 795; $p < .001$) entre hombres y mujeres, con puntuaciones menores en estas últimas. Asimismo, se observa mayor vulnerabilidad en el primer y tercer grado ($F= 3.076$; $p = 0.047$). En ambas submuestras, predomina la relevancia del estatus socioeconómico y la relación parental y familiar como factores externos, y el bienestar físico, psicológico, autopercepción y autonomía, como factores internos. Conclusiones. Los hallazgos del presente trabajo apoyan la importancia de abordar la CV de los adolescentes desde una perspectiva integral, considerando tanto factores internos como externos que influyen en su bienestar integral.

Palabras Clave:

Calidad de vida, adolescentes, ks-52, salud emocional

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INTRODUCTION

Quality of life can be defined as global general well-being that comprises objective descriptors and subjective evaluations of physical, material, social, and emotional well-being, together with the degree of personal development and activity directed at life purposes, all weighted by a set of personal values (Felce and Perry, 1995). On the other hand, the World Health Organization considers that quality of life is the individual perception of the life situation, understood in a cultural context, within a system of values , and in relation to a society's objectives, expectations, and standards. given society (WHO, 2024). Therefore, it is important to understand that addressing problems within this field must be done from a multidisciplinary approach.

Health-Related Quality of Life (HRQoL) focuses on the impact of this construct on health status and complements the comprehensive panorama in this area to understand the well-being of people at different stages of life (Verdugo et al., 2010). To enrich this perspective, we seek to assess the opinion of people who went to the doctor to treat some discomfort or alteration in their health, questioning them about the effectiveness of the treatment (Mouelhi et al., 2020), as well as different sectors of the population. such as children, adolescents, adults, and older adults, in conditions of comprehensive health, identifying characteristics that allow knowing the level of quality of life in a comprehensive way (Benítez & Isabel, 2016a).

Adolescence, a transitional phase between childhood and adulthood, is characterized by numerous biological, emotional, and social changes that can significantly influence young people's QoL and HRQoL (Molla et al., 2021). According to WHO estimates (2021), more than 1.5 million adolescents and young adults between 10 and 24 years old lost their lives, which translates into nearly 4,500 deaths daily. The main causes of these deaths were injuries, trauma, self-harming behaviors, interpersonal violence, and complications related to motherhood. The prevalence of communicable diseases, mental disorders, early substance use, and unplanned pregnancies aggravates the situation (PAHO, 2019).

In Mexico, during 2021, 7,084 deaths of adolescents between 12 and 17 years old were recorded, according to INEGI mortality statistics (2023), of which a quarter were recorded in rural environments and three quarters in urban environments. The main causes of death in this section of the population were homicides, transportation accidents, and self-inflicted injuries. In San Luis Potosí, it is reported that the main causes of death in adolescents are transportation accidents 23.3%, assaults 20.9% and self-inflicted injuries 12.6%. This scenario highlights the importance of developing strategies focused on the prevention of suicide, violence, and traffic accidents to improve the quality of life of young people (River-Rivera, et al., 2020).

The QoL assessment supports us to obtain a comprehensive understanding of well-being and development at various stages of life. This process goes beyond numerical measurements, addressing physical, psychological, and social aspects directly influencing decision-making (Moreno et al., 2023). Assessing QoL in adolescents allows researchers and health professionals to understand the specific dynamics of this population. Screening the adolescent population in San Luis Potosí enriches the specific understanding of the risk, protective, and mediating factors for the comprehensive well-being of this area of the community. As it is a unique geographical and cultural environment, it contributes to the understanding of a complex phenomenon (Benítez & Isabel, 2016b) and helps to identify contextual and cultural factors that influence the quality of life and enrich research and design initiatives for transdisciplinary interventions. Assessment results can guide allocating resources and creating specific strategies to address particular challenges faced by adolescents (Molina Moreno et al., 2023). Therefore, in this research it was proposed to evaluate the quality of life of the adolescent population in technical secondary schools to describe the main risk factors related to the quality of life and psychological well-being of this population.

METHOD

A cross-sectional, descriptive, analytical and correlational study was carried out in which 797 students participated (50.6% men and 49.4% women), between 11 and 15 years old (*M*=12.95, *SD*= 0.94), all from two technical secondary schools in vulnerable areas from San Luis Potosí. The 35.94% of the sample was made up of first-year high school students, 38.39% were second-year students, and 26.47% were third-year students. Each participant had prior authorization from their parents and themselves by signing a letter of consent and informed assent. The KS-52 was applied to each of the participants, which evaluates QoL on a scale from 0 to 100 (Galán-Cuevas & Díaz-García, 2021). A higher score implies a better QOL, there are various cross-cultural adaptations, the one used in the present work was the one standardized for the Mexican population (Hidalgo-Rasmussen et al., 2014).

Instruments

The KS-52, which is a screening instrument that particularly rates QoL in adolescents, was applied on a scale of 1 to 100 points using a Likert scale with 5 response options from Never to Always. The instrument consists of the following ten dimensions, the number of items is inserted in parentheses, and they are: Physical well-being (5), Psychological well-being (6), Mood and Emotions (7), Self-perception (5), Autonomy (5), Relationship with Parents and Family Life (6), Economic Resources (3), Friends and Social Support (6), University Environment (6) and Social Acceptance (Bullying) (3). Obtaining a score of less than 40 points indicates that the impact is significant.

RESULTS

The analyzes of the data collected were done with the JASP statistical software and were grouped into two main categories:

a) internal factors, with these dimensions: self-perception, autonomy, mood, physical and psychological well-being, and b) external factors: acceptance social, friendships and social support, school environment, economic resources and relationship with parents and family. The analysis was segmented considering the variables sex and school grade. Finally, a *Student t tes*t was applied to compare the different subgroups.

The raw scores for each scale were transformed to z scores and subsequently to T scores to ensure equivalence of comparisons. For the internal factors the range of scores was from 9 to 82 and for the external factors from 18 to 74, both with a $M = 50$ and $SD = 10$. When comparing the scores by sex, statistical differences were found for internal factors ($t = 5.87$; $df = 795$; $p < .001$). The fact that women show the lowest minor atypical scores stands out, Figure 1.

Figure 1.

*Internal factors by sex.*
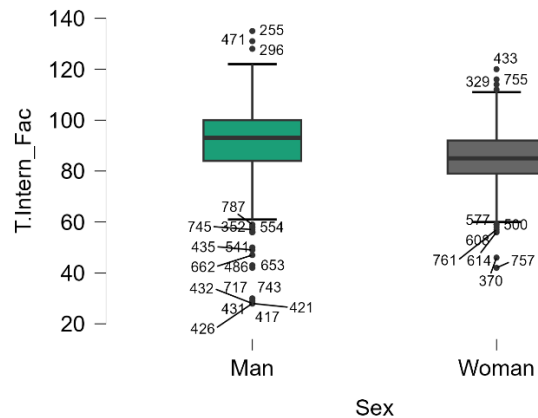
Note: Own elaboration

It was identified that there are also statistical differences in terms of composition by school level in external factors ($F = 3.076$; $p = 0.047$).

Table I shows the *Student's t tests*. Significant differences are observed between sexes for external factors in the dimension of relationship with parents and family, however, most of the dimensions that make up the internal factors show statistical differences.

It is observed that in the dimensions that make up the external factors there are no statistical differences in terms of composition by grade, except for the school environment. Regarding internal factors, we did not find significant differences in terms of composition by grade. Finally, the representation of the results was enriched with the use of radial graphs, allowing an intuitive and comprehensive visualization

of the data. This methodology not only facilitated the interpretation of the results, but also highlighted the complex interactions between the different factors examined.

Figure 2.

*External factors by grade.*
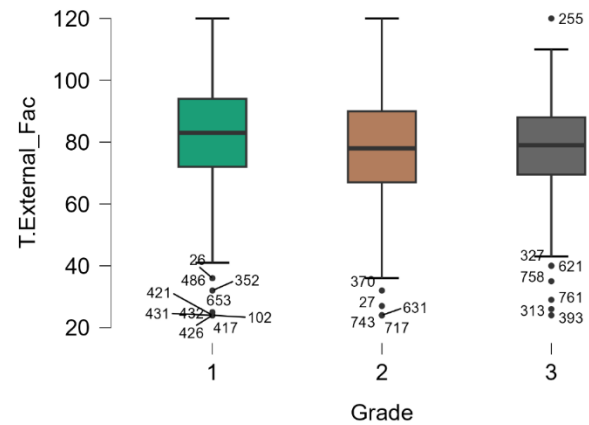
Note: Own elaboration

DISCUSSION AND RECOMMENDATION

Adolescence is a crucial stage in the development of personality, in the consolidation of daily habits for adult life and in the prevention of behaviors that are harmful to health (Jiménez, et al., 2022). The multiple changes experienced at a physical, emotional, psychological and social level, as well as changes in adolescents' self-perception, affect health-related quality of life (Javier-Juárez, et al., 2022).

Figure 3.

Quality of life in Potosí adolescents.
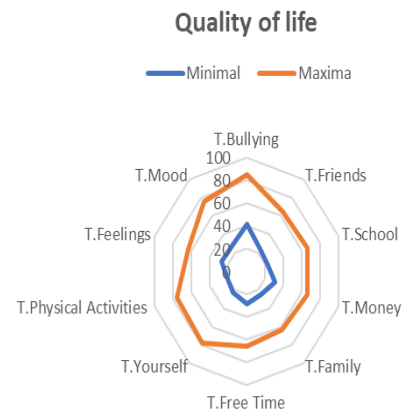
Therefore, the main objectives of this work were to evaluate the quality of life of the Potosí adolescent population and describe the different factors, internal or external, that hinder or facilitate the psychological well-being of this population.

Table 1.
Differences by sex between dimensions.

	Raw scores		T-scores				
	Mean	*S. D*	*Min*	*Max*	*T*	*Gl*	*p*
I. External factors							
a) Social acceptance	5.5	2.8	41	85	1.88	795	0.061[a]
b) Friendship and social support	21.3	6.0	24	65	1.33	795	0.185[a]
c) School environment	21.1	5.4	22	66	-0.07	795	0.946[a]
d) Economic resources	9.4	3.4	31	67	2.27	795	0.023[a]
e) Relationships with parents and family	21.6	6.4	26	63	2.7	795	0.007
II. Internal factors							
a) Autonomy	16.4	5.4	29	66	5.63	795	< .001[a]
b) Self-perception	17.7	4.4	23	78	-5.15	795	< .001
c) Physical well-being	16.1	13.8	21	76	6.58	795	< .001[a]
d) Psychological well-being	17.4	3.8	28	64	8.11	795	< .001
e) Mood	20.3	5.8	27	76	1.5	795	0.136*

Note: SD = Standard Deviation [a] The Brown-Forsythe contrast is significant ($p < .05$), suggesting non-compliance with the assumption of equality of variances *The Mean and Standard Deviation are presented in raw scores.

Likewise, it seeks to offer valuable data for researchers, educators and politicians interested in promoting healthier educational environments conducive to adequate adolescent development. Our results show differences in internal factors related to quality of life, with a trend of lower scores in the female population. These findings coincide with those reported by other researchers, who also argue that this difference may be due to the biological changes that the female population experiences at this stage or cultural factors (González-Carrasco, et al., 2017). In any case, this result suggests that when designing any type of psychosocial or psychoemotional intervention in the adolescent population, aspects related to gender equity must be considered to ensure that this type of programs are beneficial for the global population of adolescents regardless of the sex.

Another important finding of this research is related to the difference observed in the studied population with respect to school grade. In this sense, the data suggest a difference between the three grades, with a tendency towards low atypical scores during the first and third grades. These differences observed according to the school level point out the need for differentiated strategies to address the different stages of adolescent development in interaction with academic contextual factors, such as entry and exit to different educational levels.

In general, socioeconomic status and the relationship with parents are reported as the most important external factors in the perception of quality of life, which suggests the importance of including these aspects in the care of the Potosí adolescent population. The above coincides with what has been reported in some research in which both socioeconomic level (Grimaldo, 2012) and the relationship with parents and the support network (Chávez-Lopéz, et al., 2020), have been reported as predominant factors in determining the quality of life of the adolescent population. Regarding internal factors, deficiencies were observed in physical and psychological well-being, autonomy and self-perception. Because physical well-being encompasses aspects such as physical activity, feelings of energy and physical fitness, this suggests an urgent need for interventions aimed at promoting more active and healthy lifestyles among adolescents. Likewise, it is essential to understand that the components of psychological well-being are fundamental and cannot be postponed for the promotion of comprehensive well-being, so comprehensive health care programs for this area of the population must focus on both internal physical and psycho-emotional aspects such as the state mood, emotion regulation, stress management (Higuita-Gutiérrez & Cardona-Arias, 2016). But more importantly, it is necessary to understand that any intervention designed outside the contextual reality of each population is doomed to failure. Therefore, it is noteworthy to include family factors and support networks in the interventions, as well as the tropicalization of information considering the socioeconomic and cultural reality of the populations. Finally, quality of life is built from the interaction of personal and cultural factors. psychosocial aspects with which human beings can develop or obstruct their potential to create their comprehensive well-being and satisfaction with the sociocultural context in which they operate (Guadarrama, 2014).

The findings of this research add to the body of scientific evidence to identify priority areas of action and develop effective strategies that address the specific needs of this

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population, such as group and individual interventions to address particular problems in the adolescent population. They underline the importance of addressing adolescents' QoL from a comprehensive perspective, considering internal and external factors influencing their well-being. From this perspective, the importance of creating public policies and intervention programs that address the specific needs of adolescents, promote healthy lifestyles, strengthen interpersonal relationships, and create positive school and family environments is highlighted. We can ensure healthy and safe development for adolescents worldwide through a multidimensional and collaborative approach.

REFERENCES

Benítez, & Isabel. (2016). La evaluaciòn de la calidad de vida: retos metodològicos presentes y futuros. https://www.redalyc.org/pdf/778/77844204009.pdf

Chávez-Flores, Y. V., Hidalgo-Rasmussen, C. A., & Navarro, S. M. (2018). Relaciones intrafamiliares y calidad de vida relacionada con la salud en adolescentes mexicanos que se autolesionan sin intención suicida. Salud & Sociedad, 9(2), 130-144. https://doi.org/10.22199/S07187475.2018.0002.00001

Felce, D., & Perry, J. (1995). Quality of life: Its definition and measurement. Research in Developmental Disabilities, 16(1), 51-74. https://doi.org/10.1016/0891-4222(94)00028-8

Galàn - Cuevas, S., & Díaz - García, D. E. (2021). Psychometric Properties of the Kidscreen-52 in Mexican Students Aged 11 to 16 Years-Old. Revista Iberoamericana de Diagnostico y Evaluacion Psicologica, 58(1), 105–116. https://doi.org/10.21865/RIDEP58.1.09

González-Carrasco, M., Casas, F., Viñas, F., Malo, S., Gras, M. E., & Bedin, L. (2017). What leads subjective well-being to change throughout adolescence? An exploration of potential factors. Child Indicators Research, 10, 33-56. https://doi.org/10.1007/s12187-015-9359-6

Grimaldo, M. M. P. (2012). Calidad de vida en estudiantes de secundaria de la ciudad de Lima. Avances en Psicología, 20(1), 89-102. https://doi.org/10.33539/avpsicol.2012.v20n1.1946

Guadarrama, R., Hernández, J. C., Veytia, M. y Márquez, O. (2014). Significado psicológico de la calidad de vida para los adolescentes mexicanos. Pensando Psicología, 10(17), 53-60. http://dx.doi.org/10.16925/pe.v10i17.784

Hidalgo-Rasmussen, C. A., Rajmil, L., & Espinoza, R. M. (2014). Adaptación transcultural del cuestionario KIDSCREEN para medir calidad de vida relacionada con la salud en población mexicana de 8 a 18 años. Ciencia e Saude Coletiva, 19(7), 2215–2224. https://doi.org/10.1590/1413-81232014197.0968201

Higuita-Gutiérrez, L. F., & Cardona-Arias, J. A. (2016). Calidad de vida de adolescentes escolarizados de Medellín-Colombia, 2014. Revista Facultad Nacional de Salud Pública, 34(2), 145-155. https://doi.org/10.17533/udea.rfnsp.v34n2a03

Javier-Juárez, P., Hidalgo-Rasmussen, C. A., Chávez-Flores, Y. V., Torres-Chávez, L., & Rosales-Damián, G.. (2022). Relación entre el abuso cara a cara y digital en el noviazgo con la calidad de vida relacionada con la salud en adolescentes mexicanos. Cadernos De Saúde Pública, 38(8), e00071121. https://doi.org/10.1590/0102-311XES071121

Jiménez, B. R., Arriscado, A. D., Gargallo, I. E., & Dalmau, T. J. M. D. (2022). Hábitos y calidad de vida relacionada con la salud: diferencias entre adolescentes de entornos rurales y urbanos. In Anales de Pediatría (Vol. 96, No. 3, pp. 196-202). Elsevier Doyma. https://doi.org/10.1016/j.anpedi.2020.11.022

Molina Moreno, P., Pérez Fuentes, M. del C., & Fernández Gea, S. (2023). Instrumentos de evaluación del bienestar adolescente: una revisión sistemática. Acción Psicológica, 20(1). https://doi.org/10.5944/ap.20.1.39174 https://dialnet.unirioja.es/servlet/articulo?codigo=9243132

Molla, S., Yitayal, M., & Amare, G. (2021). Health-Related Quality of Life and Associated Factors Among Adult Patients with Heart Failure in Wolaita Zone Governmental Hospitals, Southern Ethiopia. Risk Management and Healthcare Policy, 14, 263. https://doi.org/10.2147/RMHP.S288326

Moreno, A. G., María, /, Mar, D., Jurado, M., & González, A. (2023). Recursos de intervenciòn para trabajar las habilidades sociales con adolescentes: Revisión sistemática cualitativa. Revista Mexicana de Investigación Educativa RMIE, 28, 863–886. : https://www.redalyc.org/journal/140/14075704008/html/

WHO. (1995). The World Health Organization quality of life assessment (WHOQOL): Position paper from the World Health Organization. Social Science & Medicine, 41(10), 1403–1409. https://doi.org/10.1016/0277-9536(95)00112-K

6]WHO. (2024). Adolescent pregnancy. https://www.who.int/es/news-room/fact-sheets/detail/adolescent-pregnancy