Health-Related Quality of Life of Chilean Students from Risky Contexts

Amaranta Úrsula Ortiz-Bermúdez

Universidad de Cadiz, Instituto de Investigación e Innovación Biomédica de Cádiz

Yolanda Sánchez-Sandoval (✉ yolanda.sanchez@uca.es)

Universidad de Cadiz <https://orcid.org/0000-0001-8341-7386>

Research

Keywords: Quality of Life, adolescents, at-risk students, wellness

Posted Date: August 3rd, 2021

DOI: <https://doi.org/10.21203/rs.3.rs-727487/v1>

License: © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License. [Read Full License](#)

Abstract

Background. The study of Health-Related Quality of Life (HRQoL) is receiving increasing attention, thus facilitating the use of well-being indicators to establish public policies and health programs in contexts of high social risk. It is a subjective assessment that the person makes of their life concerning the cultural context and the normative standards of the person's society. In contexts where violence, neglect, and abuse exist, a decrease in physical and mental well-being is more likely to be observed in adolescents. The aims of this paper are to evaluate the HRQoL of vulnerable Chilean students and analyze its relationship with socio-family variables, and to compare their HRQoL with the Chilean and European standards of adolescent population.

Methods. 246 adolescents (9 to 16 years) from public schools of with a high School Vulnerability Index (SVI) of the Commune of Quilpué (Chile) completed the KIDSCREEN-27 (*Physical Well-being, Psychological Well-being, Autonomy and Parent Relation, Social Support and Peers, School Environment*), and their parents provided sociodemographic data.

Results. The Chilean students of the study showed a significantly lower HRQoL than the comparison European and Chilean populations. Girls and older participants had worse HRQoL. Concerning family characteristics, children of mothers with higher educational levels had greater well-being. Other socio-family characteristics are described in depth in the work.

Conclusion. These findings could be considered for the planning of psychoeducational programs in schools with high SVI.

Introduction

The World Health Organization (WHO) defines Quality of Life (QoL) as “individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns” [1]. The study of QoL in adolescence evaluates the perception of emotional, physical, and material well-being, adolescents' integration into the community and their personal development, taking into account the differences in the students' cultural context [2]. QoL begins to occupy an important place in the study of health and well-being, with interest in health-related QoL (HRQoL) increasing in recent years.

HRQoL is a multidimensional construct that includes social, physical, and psychological components of human well-being [3–4]. Although there is no single definition, HRQoL consists of the subjective evaluation a person makes of their life, considering the dimensions that allow them to improve their health status and well-being [5–6]. The individual perception of HRQoL is not alien to the cultural context. Mental, social, and emotional dilemmas are expressed in different ways depending on the normative standards of the person's society [7]. Despite the growing interest in HRQoL, studies during childhood and adolescence are scarce [5]. Considering the great physical, social, and psychological changes during adolescence, it makes sense to study adolescents during this stage. How adolescents adapt to their evolutionary changes will directly affect their well-being [8]. The first years of life are fundamental stages to promote the improvement of QoL through longitudinal actions that guarantee good health in the future society [9]. Adolescents should construct their identity, and this search can lead to the cultivation of inappropriate habits affecting their health status [10]. According to the model of positive adolescent development, a perspective focused on well-being, healthy adolescence is not only based on the avoidance of risky behaviors, but also requires evolutionary achievements [11] to ensure well-being at the emotional, physical, social, and, psychological levels [2].

In South America, and specifically in Chile, there are few published studies on QoL in adolescence and childhood that can be useful for making health diagnoses [12–13]. Although many studies have been carried out with a sick population [14], fewer have been dedicated to analyzing this topic with psychosocial variables. Specifically, in Chile, there is a high presence of a population at high social risk, with the School Vulnerability Index (SVI) of 86.88% in 2019 [15]. It is well known that in contexts where there is neglect and abuse of fundamental rights, a decrease in the mental and physical dimensions of HRQoL in the adolescent population is more likely [16]. In contexts of socio-family vulnerability, the school turns into a common space for protection and mediation where the HRQoL of adolescents at high social risk can be safely monitored [3]. These schools can generate important environments for health promotion, through initiatives that encompass students, families, and the school community and directly impact the students' present and future health [17].

There are some individual differences in adolescent HRQoL, including those related to gender and age. As of adolescence, girls perceive their HRQoL as worse than that of boys [18]. This difference could be related to the fact that the physical changes in female adolescence appear earlier, and also that girls have a greater capacity to reflect and verbalize the perceived problems [19]. On the other hand, different studies have shown that HRQoL decreases as adolescence progresses; younger adolescents have a more positive perception of their HRQoL. This finding is accentuated in the dimensions of the school environment, psychological well-being, and physical well-being [3, 20]. As adolescents grow older, they become more sensitive to perceptions of unhappiness and impotence, which affects their psychological well-being, considered as a set of positive emotions ranging from satisfaction with life to negative feelings such as sadness and loneliness [3]. Family economic circumstances are also related to HRQoL, as high monthly incomes correlate positively with better adolescent HRQoL [21], and a worse family economic situation poses a risk of low HRQoL [22]. In addition, it has been shown that families with sufficient economic stability to own a home have a positive influence on their children's HRQoL [23]. The authors explain this relationship by the fact that, when adolescents feel satisfied to live with their family, their HRQoL increases. Other studies, however, find no such relationship. Nunes et al. [7] show how poorer and less educated people have an HRQoL similar to richer and more educated people. A possible explanation, based on the theory of social comparisons and expectations of Krupinski [24], is that the subjective perception of HRQoL, where there is a distance between the real and the desired situation, is independent of the socioeconomic context. Studies conducted in Chile also show relationships between family, socioeconomic status, and adolescent HRQoL [14]. Maheri et al. [23] have shown how families' higher occupational status positively influences the adolescent students' resilience and HRQoL, and illiteracy and unemployment in the parents are directly related to their children's low HRQoL.

The present work aims to describe the socio-family context and analyze the HRQoL of Chilean children and adolescents enrolled in areas of high social risk, as well as to study its relationship with sociodemographic and family factors. We also intend to establish the baseline for further psychoeducational intervention in these educational centers. According to the previous review, these children from vulnerable backgrounds are expected to have a worse QoL than other children in contexts without this risk. We also expect to find some differences related to sociodemographic and family variables: girls, older ages, and adolescents from more vulnerable families will have worse HRQoL.

Method

Participants

This study involved 246 students (54.1% boys, 45.9% girls), aged between 9 and 16 years, mean age 12.23 years (SD = 1.44). They were enrolled in 5th grade (26.4%), 6th grade (19.9%), 7th grade (27.2%), and 8th grade (26.4%) of Basic Education in two Public Schools of the Commune of Quilpué (Chile) with an SVI above 85%. Given the need to obtain a sample with specific characteristics, the selection was non-probabilistic and incidental, according to the following inclusion criteria for the selected schools: number of students enrolled in Basic Education, SVI, economic resources allocated by the Preferential School Subsidy Law (SEP), monitoring report of School Coexistence and categorization of the Education Quality Evaluation System (SIMCE).

Procedure

The work had the support of the Municipal Corporation of Quilpué (CMQ) and the Chilean Ministry of Education (MINEDUC), which contributed to the elaboration of the inclusion criteria for the selection of the schools with high SVI. The families of the students of the schools that met the inclusion criteria were informed about the characteristics of the research, signed the informed consent, and completed a structured survey that collected the family sociodemographic variables. Data collection was carried out by the researchers, accompanied by the tutors of each group of students, who completed the questionnaires in their classrooms. This project was approved by the Scientific Ethics Committee of the University of Playa Ancha.

Variables and Instruments

We used a sociodemographic questionnaire designed for this study, collecting individual (age, grade, and gender) and family information (paternal and maternal educational level, family structure, housing, and income). Housing was coded as owned, rented, social, or irregular housing. The houses or irregular settlements, popularly called "tomas" in Chile are very precarious and present low habitability, low levels of infrastructure service, and high incidence of citizen security problems [25].

For the analysis of HRQoL, the KIDSCREEN-27 instrument was used, which measures QoL through children's and adolescents' subjective well-being. We used the Chilean version [26]. It consists of 27 items, organized into 5 dimensions. Its psychometric properties have been previously validated. In this study, the subscales have adequate validity (Cronbach's alpha greater than .76 in the dimensions and .92 in the full scale). This scale has shown adequate reliability also in other studies with Chilean adolescents [13].

The five dimensions studied by this instrument are: *Physical Well-being* (5 items) explores the level of the child's/adolescent's physical activity, energy, and fitness as well as the extent to which a child or adolescent feels unwell and complains of poor health; *Psychological Well-being* (7 items) examines the psychological well-being of the child/adolescent including positive emotions and satisfaction with life as well as the absence of feelings such as loneliness and sadness; *Autonomy & Parent Relation* (7 items) explores the quality of the interaction between child/adolescent and parent or carer as well as whether the child/adolescent feels loved and supported by the family, and the child's/adolescent's perceived level of autonomy and the perceived quality of the financial resources of the child/adolescent; *Social Support & Peers* (4 items) explores the quality of the interaction between the child/adolescent and peers as well as their perceived support; *School Environment* (4 items) explores a child's/adolescent's perception of his/her cognitive capacity, learning, and concentration and his/her feelings about school. In addition, the dimension explores the child's view of the relationship with his/her teachers. Higher scores indicate a higher QoL. Rasch scores were used for this work, transformed into scores with a mean of 50 and a standard deviation of 10.

Data analysis

KIDSCREEN-27 scores were calculated globally by gender and age. We compared the norms of the Chilean [13] and European [27] adolescent population, using the mean comparison t-test and Cohen's *d* [28] for the effect size. Comparisons were made stratified by gender and age (9 to 11, and 12 to 16 years). Whereas for the comparisons with the European population, we have the total score of the scale and its subscales, for the Chilean population, we only have those referring to the subscales. A description of the sociodemographic characteristics of the sample of both the students and their families was made. The means of the dimensions of KIDSCREEN-27 were compared according to the sociodemographic variables through Student's *t*-test and ANOVA, followed by Scheffé's post hoc test. Effect sizes from .2 to .5 were considered small, between .51 and .8 moderate, and above .8 large.

Results

Descriptive analysis of the socio-family context

Regarding the sociodemographic variables, most of the fathers (74.8%) and mothers (80.7%) had a medium educational level (Medium and Technical Education). The proportion of those who only had primary education (14.1% of the fathers and 12.3% of the mothers have at most Basic Education) or university studies (11% of the fathers and 7% of the mothers) was lower. In terms of family structure, just over half of the sample lives in a family headed by a single adult (51.6%), either because the parents are separated (33.3%), single (17.1%), or widowed (1.3%). Except for 3 children living in supervised homes of the National Service for Minors (SENAME), the rest live in a family headed by two adults (45.9%), married (27.2%), or living as a couple (18.7%). The type of housing in which they live most frequently are rented (37.4%) or owned (35.3%). Furthermore, 19.3% of the students live in irregular housing, and finally, a minority (8%) live in social housing. Concerning income, 74.6% of the families receive less than \$276,000 Chilean pesos (approximately €295) per month, 19.9% between \$276,000 and \$552,000 (about €590), and 5.5% receive a higher monthly payment.

Comparison of HRQoL in different populations

Table 1 shows that all the mean HRQoL scores of the Chilean adolescents at high social risk are lower than the European norms of the HRQoL scales. These differences are statistically significant, with a medium effect size.

This sample was also compared with the European sample, stratifying the groups by gender and age range (Table 2). In the dimensions of Physical Well-being, Psychological Well-being, Autonomy and Parent Relation, all students from high-risk contexts had significantly lower scores than the European adolescents. In the Social Support and Peers dimension, older adolescents in social risk contexts had significantly lower scores than the European sample. Finally, in the School Environment dimension, older

adolescents of both genders and younger adolescents in the Chilean at-risk group obtained lower scores, and the difference was statistically significant. The effect size of all the significant differences was medium-high.

Concerning the norms of the Chilean adolescent population (Table 3), Physical Well-being was significantly lower in at-risk students in all the comparisons, except for older girls. In Psychological Well-being, the mean score was significantly higher in younger male adolescents living in contexts of social risk. In the dimensions Autonomy and Parents, Social Support & Peers, and School Environment, all the adolescents from at-risk contexts had significantly lower scores. The effect size of all the significant differences was medium-high.

Analysis of HRQoL concerning sociodemographic and family factors

Table 4 shows the results of the comparison of the HRQoL means concerning the sociodemographic variables of the adolescents and their families. Older students had worse HRQoL in all its dimensions, and this difference was statistically significant. Regarding gender, and controlling for age, girls had significantly worse Psychological Well-being ($t = 41.75$), $p < .05$), with a medium effect size of the difference. The type of family, income level, and type of housing were not related to the adolescents' HRQoL. Finally, a higher level of education in the mothers reflected higher well-being in the School Environment dimension.

Discussion

This research work contributes to the need proposed by Urzúa et al. [13] to provide empirical evidence on HRQoL in Chilean children and adolescents. Gradually, the concept of HRQoL in adolescence has been gaining relevance in the field of health, thus facilitating the use of well-being indicators for the formulation of public policies and health and well-being programs [1] in school contexts of high social risk.

The results found in the evaluation of HRQoL in this paper partly support the hypotheses proposed and reinforce the findings of other research. In our research, students from high social risk contexts have on average a lower HRQoL than that posed by other studies both with European adolescents and Chilean adolescents without high social risk [13–27], thus confirming our first hypothesis. This difference is greater in comparison with European adolescents, occurring at practically all age and gender levels analyzed. This could be due to several factors, including lower educational levels of the parents, less access to material resources, and low habitability of housing in Chile [13]. Also, when compared with the Chilean population, the adolescents in public schools with an SVI above 85% of our study have, in general, a worse HRQoL than the Chilean adolescents without this social risk, reported by Urzúa et al. [13]. Our data thus support the worse QoL of students who grow up in situations of serious social need. Exceptionally, these differences between Chilean adolescents do not occur in the Psychological Well-being dimension, where there are hardly any differences between the two groups. This coincides with previous studies of Urzúa et al. [29], who also found no differences in HRQoL concerning the mood between students of private schools and municipal schools in this country. The homogeneity in the mental health status of Chilean adolescents regardless of their social context may be due to the deterioration of mental health at the country level suffered in Chile. The WHO ranks Chile among the countries with the highest burden of disease due to psychiatric illness (23.2%) in the world [30].

The study of HRQoL requires considering individual differences, such as age and gender, to adapt interventions to the specific needs of each population. Gender as a category of analysis helps to explain the factors that condition the hierarchical inequalities between men and women related to health [31]. The differences found between boys and girls in other studies are not fully corroborated in this study, as the participating boys and girls present very similar levels of QoL in several of the dimensions analyzed. They only showed gender differences in the Psychological Well-being dimension, so our hypothesis in this regard is only partially fulfilled. These findings coincide in general with other research conducted in Spain [19–32–33] and other European countries [20–34], where girls show worse HRQoL in the dimensions *Physical activity and Psychological Well-being*. These differences could be related to the earlier and more intense physical changes that girls experience compared to boys, and to the hormonal fluctuations that can disrupt psychological well-being. In addition, some adolescents are dissatisfied with their bodies due to the firmness with which society maintains the demanding female stereotypes about the ideal of beauty, which can lead to a deterioration in the psychological and physical dimensions. Finally, some authors associate the arrival of menstruation with physical and psychological discomfort [31], thus relating it to the pathologization of menstruation in today's society [35]. The perception of HRQoL itself could be determined by cultural conceptions of gender roles [36].

On another hand, the level of HRQoL perceived by Chilean adolescents from risk contexts decreases at higher ages, corroborating the hypothesis proposed, thus pointing in the same direction as previous studies [3–20–37]. As they grow older, adolescents find greater challenges to respond to in their daily lives, and the efforts they have to make can involve higher costs. The greater capacity for abstraction, introspection, and metacognition allows them to analyze the physical and social world and the self with greater objectivity and breadth, better perceiving their difficulties. This difference can also be due to the development of secondary sexual characteristics [20] in older adolescents, causing identity insecurity about changes in their physical appearance.

This work was expected to provide evidence about the role of socio-family differences in the development of HRQoL in adolescents. However, it was not possible to corroborate the initial hypothesis. This study does not reveal important differences between HRQoL depending on the social and economic variables of the family. Only the educational level of the mothers is directly related to the well-being perceived by adolescents in the school environment. Having mothers with high educational levels facilitates the deployment of greater intellectual resources when facing schoolwork, and also provides a family context where academic expectations are higher [38]. In contexts of risk, the figure of the mother in the upbringing of children is even more influential. This finding coincides with other studies [13–23]. As mentioned, the variable type of housing is not related to the HRQoL. This lack of differences could be due to the homogeneous socioeconomic level of the group, and it is difficult to discriminate in such a similar group. The data show that a large part of the families in the study (76.4%) had a socioeconomic level below \$276,000 Chilean pesos, which places them at high social risk. The level of single-mother families in this sample is also high, with this family structure having a high risk of social exclusion [39].

After controlling for the social and structural variables of this group, our results suggest that it is necessary to design research to better define high-risk groups within this context in terms of parenting skills and styles. This research contributes to the knowledge of individual and socio-family factors of Chilean adolescents enrolled in municipal schools with an SVI above 85% in relation to HRQoL. The results suggest the need to promote psychoeducational programs for the inclusion of adolescents at high social risk. Along the same lines, Montserrat and Melendro [40] defend that these interventions "make it more viable for adolescents to get out of a spiral of failure, avoiding internalizing it as their own responsibility" (p. 132).

This work presents some limitations. Among them, the small sample size. It would be advisable to increase the number of participating schools. However, the sample size responds to the initial objective of the project, which was to establish the baseline before implementing a psychoeducational intervention project. However, the current political and health conditions in Chile and the rest of the world imply that the implementation of the project has had to be postponed. Another limitation is the exclusive use of self-reports. It would be advisable to use other sources such as parents and teachers. An attempt has been made to alleviate this limitation by obtaining part of the sociodemographic information from the families, although this has meant an added difficulty for data collection.

Conclusions

In our study, it was found that Chilean adolescents from high social risk contexts had lower HRQoL than that posed by other studies, both with European adolescents and Chilean adolescents without high social risk. There were no gender differences, only Psychological Well-being was higher on girls. Moreover, the level of HRQoL perceived by these adolescents decreased at higher ages. This study did not reveal significant differences between HRQoL depending on the socioeconomic variables.

Declarations

Funding

This work was supported by the University of Cádiz [Project PR2019-04 Prevention of risky behaviors of Chilean adolescents in vulnerable contexts]. Funded in the summons for Social Responsibility Projects of the University of Cádiz.

Author's Contributions

YSS designed and coordinated this research work, she contributed to the choice of instruments and variables to be measured. AOB collected the data in Chile with the support of the Municipal Corporation of Quilpué (CMQ) and the Chilean Ministry of

Education (MINEDUC). Both draw the theoretical framework and interpreted the data. The two authors read and approved the final manuscript.

Conflicts of interest/Competing interests

The authors declare that they have no conflicts of interest

Availability of data and material

The data that support the findings of this study are available on request from the corresponding autor.

Code availability

Not applicable

Ethics approval

This project was approved by the Scientific Ethics Committee of the University of Playa Ancha.

Consent to participate

Participants and their parents signed the informed consent. Information was anonymized and the submission does not include images that may identify the person.

Consent for publication

Not applicable

Acknowledgments

We thank the Provincial Department of Education of Valparaíso and Easter Island of the Chilean Ministry of Education, the Education Corporation of the Commune of Quilpué (Chile), the Department of Psychology of the University of Social Sciences of Playa Ancha (Chile), and the NGO of Desarrollo Evalutile for the support to carry out this research work.

References

1. The WHOQOL group. The World Health Organization quality of life assessment (WHOQOL): Position paper from the World Health Organization. *Soc Sci Med*. 1995;41(10):1405. [https://doi.org/10.1016/0277-9536\(95\)00112-k](https://doi.org/10.1016/0277-9536(95)00112-k).
2. Muñoz-Cantero J, Losada-Puente L. Calidad de vida en adolescentes y factores personales influyentes. *Revista de Estudios e Investigación En Psicología y Educación*. 2017;11:006–12. <https://doi.org/10.17979/reipe.2017.0.11.2113>.
3. Agathão BT, Reichenheim ME, de Moraes CL. Qualidade de vida relacionada à saúde de adolescentes escolares. *Ciencia e Saúde Coletiva*. 2018;23(2):659–68. <https://doi.org/10.1590/1413-81232018232.27572016>.
4. González-Cabrera J, Machimbarrena JM, Ortega-Barón J, Álvarez-Bardón A. Joint association of bullying and cyberbullying in health-related quality of life in a sample of adolescents. *Qual Life Res*. 2020;29(4):941–52. <https://doi.org/10.1007/s11136-019-02353-z>.
5. Rajmil L, Estrada M, Herdman M, Sutton S, V., & Alonso J. (2001). Calidad de vida relacionada con la salud (CVRS) en la infancia y la adolescencia: revisión de la bibliografía y de los instrumentos adaptados en España. *Gaceta Sanitaria: Organo Oficial de La Sociedad Española de Salud Pública y Administración Sanitaria*, 15(Supl. 4), 34–43. <https://www.redalyc.org/pdf/2972/297225770004.pdf>.
6. Urzúa A. Calidad de vida relacionada con la salud: Elementos conceptuales. *Rev Med Chil*. 2010;138:358–65. <https://doi.org/10.4067/s0034-98872010000300017>.
7. Nunes C, Bodden D, Lemos I, Lorence B, Jiménez L. Prácticas parentales y calidad de vida en adolescentes holandeses y portugueses: un estudio transcultural. *Revista de Psicodidáctica*. 2014;19(2):327–46.

<https://doi.org/10.1387/RevPsicodidact.10493>.

8. Sánchez-Sandoval Y. (2015). Self-perception, self-esteem and life satisfaction in adopted and non-adopted children and adolescents / Autopercepción, autoestima y satisfacción vital en niños y adolescentes adoptados y no adoptados, Infancia y Aprendizaje. *Journal for the Study of Education and Development*, 38(1), 144–174.
<https://doi.org/http://dx.doi.org/10.1080/02103702.2014.996406>.
9. Laborda C, Jariot M, González H. Quality of life and employability skills in workers in special employment centers). *Educacion XX1*. 2021;24(1):117–39. <https://doi.org/10.5944/educXX1.26570>.
10. Figueroa LA, Figueroa L. Conductas sexuales de riesgo en adolescentes desde el contexto cubano Risky sexual behaviors in adolescents from the Cuban context. *Revista de Ciencias Médicas de Pinar Del Río*. 2017;21(2):193–301.
<http://scielo.sld.cu/pdf/rpr/v21n2/rpr20217.pdf>.
11. Oliva A, Pertegal MA, Antolin L, Reina MC, Rios M, Hernando A, Parra Á. M^a Pascual, D., & M^a Estévez, R. (2011). Desarrollo positivo adolescente y los activos que lo promueven. Un estudio en centros docentes andaluces. *Junta de Andalucía. Consejería de Salud*. http://personal.us.es/oliva/DESARROLLO POSITIVO_2010_v6.pdf.
12. Guedes DP, Ariel H, Astudillo V, María J, Morales M, Vecino C. (2014). Calidad de vida relacionada con la salud de adolescentes latinoamericano. *Rev Panam Salud Publica*, 35(1), 46–52.
<https://www.scielo.org/article/rpsp/2014.v35n1/46-52/>.
13. Urzúa A, Cortés E, Prieto L, Vega S, Tapia K. Autoreporte de la calidad de vida en niños y adolescentes escolarizados. *Revista Chilena de Pediatría*. 2009;80(3):238–44. <https://doi.org/10.4067/s0370-41062009000300005>.
14. Urzua A, Mercado G. La evaluación de la calidad de vida de los y las adolescentes a través del Kiddo-Kindl. *Terapia Psicologica*. 2008;26(1):133–41. <https://doi.org/10.4067/s0718-48082008000100012>.
15. JUNAEB. Prioridades 2019 con IVE SINAIE básica média y comunal. Ministerio de Educación. Gobierno de Chile; 2019.
16. Afifi TO, Enns MW, Cox BJ, De Graaf R, Ten Have M, Sareen J. Child abuse and Health-Related Quality of Life in Adulthood. *Journal of Nervous Mental Disease*. 2007;195(10):797–804. <https://doi.org/10.1097/NMD.0b013e3181567fdd>.
17. Monsalve L. (2013). La educación para la salud en la escuela en la adquisicion de estilos de vida saludables. *Revista Internacional de Educación y Aprendizaje*, 1. <https://doi.org/https://doi.org/10.37467/gka-revedu.v1.617>.
18. Haraldstad K, Kvarme L, Christophersen K-A, Helseth S. Associations between self-efficacy, bullying and health-related quality of life in a school sample of adolescents: a cross-sectional study. *BMC Public Health*. 2019;1(757):1–9.
<https://doi.org/10.1186/s12889-019-7115-4>.
19. Fuentes RM, Simón MJ, Garrido M, Serrano MD, Larrañaga ME, Yubero S. Síntomas psicosomáticos como expresión del deterioro de la calidad de vida relacionada con la salud en adolescentes. *Aten Primaria*. 2018;50(8):493–9.
<https://doi.org/10.1016/j.aprim.2017.06.009>.
20. Michel G, Bisegger C, Fuhr DC, Abel T. Age and gender differences in health-related quality of life of children and adolescents in Europe: A multilevel analysis. *Qual Life Res*. 2009;18:1147–57. <https://doi.org/10.1007/s11136-009-9538-3>.
21. Gaspar T, Gaspar M, Ribeiro LJ, Leal I, Ferreira A. Health-related quality of life in children and adolescents and associated factors. *Journal of Cognitive Behavioral Psychotherapies*. 2009;9(1):33–48.
<https://www.researchgate.net/publication/233382008%0AHealth-related>.
22. Östberg V, Alfven G, Hjerm A. Living conditions and psychosomatic complaints in Swedish schoolchildren. *Acta Paediatr*. 2006;95:929–34. <https://doi.org/10.1080/08035250600636545>.
23. Maheri M, Alipour M, Rohban A, Garmaroudi G. The association of resilience with health-related quality of life (HRQoL) in adolescent students. *International Journal of Adolescent Medicine Health*. 2019. <https://doi.org/10.1515/ijamh-2019-0050>.
24. Krupinski J. (1980). Health and Quality of Life. *Social Science and Medicine*, 14A, 203–211. [https://doi.org/10.1016/S0271-7123\(80\)91661-2](https://doi.org/10.1016/S0271-7123(80)91661-2).
25. Tapia V. (2018). Geografías de la contención: El rol de las políticas de escala barrial en el Chile neoliberal. *Revista Electrónica de Geografía y Ciencias Sociales*, XXII(592).
26. Molina T, Montañó R, González E, Sepúlveda R, Hidalgo-Rasmussen C, Martínez V, Molina R, George M. Propiedades psicométricas del cuestionario de calidad de vida relacionada con la salud KIDSCREEN-27 en adolescentes chilenos. *Rev Med*

- Chil. 2014;142:1415–21. <https://doi.org/10.4067/S0034-98872014001100008>.
27. The KIDSCREEN Group Europe. The KIDSCREEN questionnaires. Quality of life questionnaires for children and adolescents. Pabst Science Publishers; 2006.
 28. Cohen J. (1989). Statistic_ Statistical Power Analysis for the Behavioral Sciences (2nd ed.). *Journal of the American Statistical Association*, 84(408). <http://www.jstor.org/stable/2290095>.
 29. Urzúa A, Godoy J, Ocaño K. Competencias parentales percibidas y calidad de vida. *Revista Chilena de Pediatría*. 2011;82(4):300–10. <https://doi.org/https://doi.org/10.4067/s0370-41062011000400004>.
 30. Vicente B, Saldivia S, Pihán R. Prevalencias y brechas hoy; salud mental mañana. *Acta Bioethica*. 2016;22(1):51–61. <https://doi.org/10.4067/s1726-569x2016000100006>.
 31. Castañeda IE. Reflexiones teóricas sobre las diferencias en salud atribuibles al género. *Revista Cubana de Salud Pública*. 2007;33(2):1–20. <https://doi.org/10.1590/s0864-34662007000200011>.
 32. del Río Lozano M, García-Calvente MM, Calle-Romero J, Machón-Sobrado M, Larrañaga-Padilla I. Health-related quality of life in Spanish informal caregivers: gender differences and support received. *Qual Life Res*. 2017;26(12):3227–38. <https://doi.org/10.1007/s11136-017-1678-2>.
 33. Sánchez-Sandoval Y, Melero S, Jiménez-Luque N. Exploring health-related quality of life of Spanish domestic adult adoptees: sociodemographic characteristics, chronic medical conditions, and gender differences. *Qual Life Res*. 2019;28(12):3281–91. <https://doi.org/10.1007/s11136-019-02262-1>.
 34. Prigent A, Kamendje-Tchokobou B, Chevreul K. Socio-demographic, clinical characteristics and utilization of mental health care services associated with SF-6D utility scores in patients with mental disorders: contributions of the quantile regression. *Qual Life Res*. 2017;26(11):3035–48. <https://doi.org/10.1007/s11136-017-1623-4>.
 35. Ramírez M del R. (2019). Ciberactivismo menstrual: feminismo en las redes sociales. *Paakat: Revista de Tecnología y Sociedad*, 17. <https://doi.org/10.32870/pk.a9n17.438>.
 36. Rodríguez P, Matud MP, Álvarez J. Género y calidad de vida en la adolescencia Gender and quality of life in adolescence. *Journal of Behavior Health Social*. 2017;9:89–98. <https://doi.org/10.1016/j.jbhsi.2017.11.001>.
 37. Gaitán-López DF, Correa-Bautista JE, Vinaccia S, Ramírez-Vélez R. Self-report health-related quality of life among children and adolescents from Bogotá, Colombia. The FUPRECOL study. *Colombia Medica*. 2017;48(1):12–8. <https://doi.org/10.2510/colomb>.
 38. Labin A, Taborda A, María B. La Relación entre el Nivel Educativo de la Madre y el Rendimiento Cognitivo Infanto-Juvenil a partir del WISC-IV. *Psicogente*. 2015;18(34):293–302. <https://doi.org/https://doi.org/10.17081/psico.18.34.505>.
 39. Santibañez R, Flores N, Martín A. Familia monomarental y riesgo de exclusión social. *IQual Revista de Género e Igualdad*. 2018;1:123–44. <https://doi.org/10.6018/igual.307701>.
 40. Montserrat C, Melendro M. ¿Qué habilidades y competencias se valoran de los profesionales que trabajan con adolescencia en riesgo de exclusión social? Análisis desde la acción socioeducativa. *Educacion*. 2017;XX1(2):113–35. <https://doi.org/10.5944/educXX1.20>).

Tables

Table 1 *Comparison of means in HRQoL between the sample and European norms*

Subscales	Chilean adolescents in vulnerable contexts	European norms KIDSCREEN adolescents		
	<i>M (SD)</i>	<i>M (SD)</i>	<i>T</i>	<i>d</i>
Physical Well-being	43.13(10.92)	48.75(9.95)	-8.05***	.53
Psychological well-being	43.23(10.60)	49.52(10.05)	-9.27***	.60
Autonomy and Parent Relation	43.24 (10.54)	49.80(10.12)	-9.74***	.63
Social Support and Peers	46.45(13.51)	50.19(10.00)	-4.32***	.31
School Environment	46.10(10.99)	50.90(9.87)	-6.80***	.45

*** $p < .001$.

Table 2 *Comparison of means in HRQoL according to gender and age*

Chilean adolescents at high social risk				European norms KIDSCREEN adolescents 8-18			T	
							Males	Females
	Age	Males	Females	Age	Males	Females	<i>t (d)</i>	<i>t (d)</i>
Physical Well-being	9-11	45.68(11.18)	44.24(11.34)	8-11	53.20(9.49)	52.10(9.46)	-5.82*** (.72)	-5.62*** (.75)
	12-16	40.92(9.75)	40.26(10.42)	12-18	50.33(9.95)	47.13(9.78)	-7.35*** (.96)	-4.52*** (.68)
Psychological Well-being	9-11	46.41(11.41)	43.63(11.31)	8-11	51.54(9.58)	51.90(9.56)	-3.89*** (.48)	-5.89*** (.79)
	12-16	42.01(10.11)	39.15(6.87)	12-18	49.98(10.05)	48.36(10.08)	-6.00*** (.78)	-9.20*** (1.08)
Autonomy-Parents	9-11	44.77(10.35)	45.19(10.68)	8-11	50.45(9.46)	51.03(9.83)	-4.75*** (.57)	-4.44*** (.56)
	12-16	41.27(11.12)	40.52(9.17)	12-18	50.10(10.11)	49.22(10.20)	-6.04*** (.83)	-6.50*** (.89)
Support & Peers	9-11	48.03(13.22)	47.88(15.33)	8-11	50.20(9.47)	50.66(9.31)	-1.42	-1.47
	12-16	42.95(13.20)	46.29(11.02)	12-18	49.53(10.30)	49.96(10.31)	-3.79*** (.55)	-2.28* (.34)
School Environment	9-11	49.55(10.45)	49.19(12.01)	8-11	51.53(10.08)	54.30(9.45)	-1.62	-3.45** (.47)
	12-16	42.19(9.81)	41.29(8.30)	12-18	47.56(9.75)	49.23(9.64)	-4.17*** (.54)	-6.56*** (.88)

*** $p < .001$. * $p < .01$. * $p < .05$.

Table 3 *Comparison of means in HRQoL between the sample and Chilean population according to gender and age*

	Chilean adolescents at high social risk (sample of the study)			Chilean adolescents (Urzúa et al., 2009)			T	
							Males	Females
	Age	Males	Females	Age	Males	Females	t (d)	t (d)
Physical Well-being	9-11	45.68(11.18)	44.24(11.34)	8-11	48.86(7.77)	48.60(7.76)	-2.46* (.33)	-3.12* (.45)
	12-16	40.92(9.75)	40.26(10.42)	12-18	45.63(7.58)	42.16(7.76)	-3.68** (.53)	-1.25
Psychological Well-being	9-11	46.41(11.41)	43.63(11.31)	8-11	42.02(4.31)	42.30(4.04)	3.31** (.55)	.95
	12-16	42.01(10.11)	39.15(6.87)	12-18	40.45(3.56)	40.39(3.90)	1.17 (.22)	-1.24
Autonomy and Parents	9-11	44.77(10.35)	45.19(10.68)	8-11	47.51(9.48)	49.77(10.31)	-2.29* (.27)	-3.48** (.43)
	12-16	41.27(11.12)	40.52(9.17)	12-18	47.02(8.46)	46.30(8.74)	-3.93** (.58)	-4.32** (.64)
Support & Peers	9-11	48.03(13.22)	47.88(15.33)	8-11	51.62(10.55)	53.45(10.88)	-2.35* (.30)	-2.95* (.42)
	12-16	42.95(13.20)	46.29(11.02)	12-18	51.28(9.26)	52.07(10.19)	-4.80*** (.74)	-3.59** (.54)
School Environment	9-11	49.55(10.45)	49.19(12.01)	8-11	52.14(10.22)	56.19(10.01)	-2.12* (.25)	-4.73*** (.63)
	12-16	42.19(9.81)	41.29(8.30)	12-18	48.28(8.51)	48.71(8.43)	-4.73** * (.66)	-6.13** (.88)

*** $p < .001$. * $p < .01$. * $p < .05$.

Table 4 *HRQoL according to sociodemographic characteristics*

*** $p < .001$. * $p < .01$. * $p < .05$.

Variables	Total well-being	Physical Well-being	Psychological Well-being	Autonomy and Parent Relation	Social Support and Peers	School
AGE						
9-10	50.37(6.78) ^{bcd}	48.39(9.90) ^{cd}	47.88(9.62) ^c	47.95(11.53) ^c	53.27(10.87) ^{cd}	54.36(9.66) ^{bcd}
11-12	45.38(8.84) ^{ad}	44.09(11.44)	44.36(11.77)	44.16(10.06)	46.51(14.67)	48(11.21) ^{acd}
13-14	42.23(7.49) ^a	41.21(10.09) ^a	41.07(9.17) ^a	41.20(9.21) ^a	45.22(12.49) ^a	42.44(9.44) ^{ab}
15-16	37.96(7.37) ^{ab}	36.44(8.54) ^a	38.26(6.13)	38.99(16.20)	38.96(9.81) ^a	37.13(4.43) ^{ab}
<i>F</i>	11.05***	5.45**	4.77**	4.29**	4.30**	15.32***
Gender						
Female	44.13(8.43)	42.58(11.10)	41.75(9.91)	43.25(10.30)	47.22(13.67)	45.90(11.28)
Male	44.67(8.65)	43.60(10.80)	44.49(11.04)	43.24(10.79)	45.81(13.40)	46.29(10.78)
<i>T</i>	-.50	-.73	-2.03*	.00	.81	-.27
TYPE OF FAMILY						
Biparental	44.13(8.32)	43.09(10.99)	42.98(10.20)	43.02(11.05)	45.56(13.15)	46.05(10.91)
Single parent	44.85(8.67)	43.64(10.64)	43.69(10.93)	43.47(10.32)	47.44(13.38)	46.10(11.12)
<i>T</i>	-.66	-.39	-.51	-.33	-1.10	-.04
INCOME						
< \$276.000	44.66(8.32)	43.28(10.74)	43.94(10.46)	43.55(9.94)	46.85(13.36)	45.79(10.97)
\$276.000-\$552.000	44.51(8.85)	43.97(10.92)	42.29(12.09)	42.79(11.62)	46.08(12.59)	47.43(11.27)
> \$552.000	44.17(9.99)	42.31(12.09)	41.36(6.72)	44.75(12.16)	47.39(16.95)	45.02(11.80)
<i>F</i>	.02	.14	.71	.20	.08	.47
FATHER'S STUDIES						
Basic	46.04(6.31)	45.22(10.95)	42.20(8.59)	45.28(8.14)	48.90(9.99)	49.32(9.75)
Technical-Medium	44.58(8.71)	42.60(10.86)	43.93(10.65)	43.73(10.86)	46.73(13.82)	45.98(10.77)
University student	46.20(10.95)	46.76(12.38)	45.82(12.47)	44.73(12.89)	46.90(13.86)	46.81(12.80)
<i>F</i>	.48	1.47	.59	.24	.26	.85
MOTHER'S STUDIES						
Basic	43.02(8.56)	42.84(12.73)	42.68(10.67)	42.37(8.05)	43.03(14.14)	44.32(11.07) ^c
Technical-Medium	44.49(8.59)	43.03(10.71)	43.48(10.74)	43.24(10.64)	46.87(13.42)	45.82(11.03) ^c
University Studies	47.22(7.28)	46.66(9.10)	40.93(8.94)	46.83(11.77)	49.13(11.99)	53.23(9.83) ^{ab}
<i>F</i>	1.25	.84	.47	1.03	1.31	3.59*
TYPE OF HOUSING						

Social	45.53(9.68)	46.83(11.97)	46.68(12.29)	44.41(9.97)	44.15(18.17)	45.59(11.12)
Irregular	45.14(7.56)	43.83(10.93)	43.24(9.28)	42.99(9.38)	49.77(11.53)	45.96(10.78)
Own home	44.86(8.59)	43.29(10.24)	43.07(9.97)	44.08(11.30)	46.91(12.98)	46.95(11.19)
Rent	43.75(8.61)	42.31(11.09)	43.07(11.54)	42.91(10.04)	45.33(13.29)	45.26(11.08)
F	.46	.96	.66	.27	1.37	.35