Research Article

Level of quality of life and health self-care in university students of health sciences at the National University of Villa María

Abstract

The purpose of this study is the analysis of self - perceived quality of life and self-care of university students in their first years of Health Sciences Degrees at Instituto Académico Pedagógico de Ciencias Humanas (IAPCH) - National University of Villa María (UNVM).

Methods: An observational, descriptive and correlational, cross-sectional design was implemented to conduct this study. It involved all the students in the first three years of the Medicine and Occupational Therapy degrees, with an estimated total of 280 students. The socio-demographics considered were: age, gender, origin and level of education of the immediate family members (father, mother and brother/sister). The Quality of Life assessment was carried out based on the SF-36 and the self-care assessment was performed according to the "Appraisal of the Capacity for Self-Care Agency Scale".

Results: Regarding quality of life, the Physical Component Summary (PCS) is higher than the Mental Component Summary (MCS) and with regard to the analysis based on gender, men revealed a higher perceived quality of life in both the physical and mental aspects. Women revealed a lower perceived quality of life regarding their physical functioning, emotional role, vitality, mental health, social role, bodily pain and general health. The analysis of self – care capacity showed that the total score in men and women corresponds to a medium level of self-care capacity, however, the highest proportion, in men as well as in women, was found in the category of low self-care capacity.

Conclusion: the highest scores obtained for perceived quality of life regarding the physical and mental aspects were associated to the highest scores obtained for self- care.

Keywords: self-care, quality of life, students, health promotion, university, student health services

Romero DE, Gili JA, Trecco P, Torres V, Chiriotti V, Fernández AR
National University of Villa María, Argentina

Correspondence: Fernández A Ruth, Medicine, National University of Villa María, Arturo Jauretche 1555, X5900 Villa Maria, Cordoba, Argentina, Tel 0353 453-9103, Email ruthfernandez@unvm.edu.ar

Introduction

The interest and challenge of Human Health degrees rely on generating useful knowledge that can be applied to boost and improve the quality of life and health of the members of the university community.[1] Higher education institutions have committed themselves, for some time now, to promote health and well-being of students,[2] concept that has been taken up by the World Health Organization (WHO) in their document related to Universities Promoting Health.[1,3,4] In this document, the WHO states that the lifestyle, and thus, the person's care, is the basis of the quality of life. It is therefore assumed, that taking care of oneself, taking care of others and being taken care of are essential natural functions for people and the society's life, and that they contribute to promoting and developing a better quality of life as well.[5,6]

For many decades, the WHO has defined quality of life as the individual's perception of their position in life; in the context of culture and the system of values in which they live as well as in relation to their goals, expectations, standards and concerns.[7] It is of great importance to recognize that the individuals' perception of their state of physical, mental, social and spiritual well-being mostly depends on their own values and beliefs, their cultural context and personal background as well.[8–10] Concerning people's assessment related to self-care, the measurement scales assess the capacity of the individual to perform productive operations. Those abilities for self-care operations are understood as the most immediate abilities of the human being to perform self-care practices.[4,9] Professionals of different health areas have dedicated to the study of self-care to

culturally adapt themselves to the individuals' needs.[6] From the conceptualization of this approach, this research proposed the analysis of the self - perceived quality of life and self-care of university students in their first years of Health Sciences Degrees at Instituto Académico Pedagógico de Ciencias Humanas (IAPCH) from the National University of Villa María (UNVM).[1,11,12] Thus, the proposed aim was to assess self - perceived quality of life and health self-care among university students of Health Sciences Degrees of the National University of Villa María.

Material and methods

We implemented an observational, descriptive and correlational, cross-sectional study design, carried out in students of the first three years of the degree programs delivered and taught at Instituto Académico Pedagógico de Ciencias Humanas, National University of Villa María. The group under study involved all the students in the first three years of the Medicine and Occupational Therapy degrees, with an estimated total of 280 students. The socio-demographics considered were: age, gender, origin and level of education of the immediate family members (father, mother and brother/sister). The Quality of Life assessment was carried out based on the SF-36 (Health-Related Quality of Life (HRQL) survey instrument).[13,14] It is a survey instrument developed on the basis of a large battery of questionnaires used in the Medical Outcomes Study.[15] It consists of 36 questions and covers 8 different dimensions representing the health concepts most frequently used when measuring HRQL. These dimensions involve: physical functioning, physical role (limitations), bodily pain, general health, vitality, social functioning, emotional role (limitations) and

Level of quality of life and health self-care in university students of health sciences at the National University of Villa María

Copyright:
©2022 Romero et al.   93

mental health of the survey respondent. There is one question that is not included in these eight dimensions, which explores the changes being experienced in the state of health during the last year, and which is not used in the calculation of any of the previously mentioned dimensions. The questionnaire allows the calculation of two summary scores or "components summary" - physical and mental -, through the weighted sum of the main eight dimensions scores. The components summary will be identified in this study as Physical Component Summary (PCS) and Mental Component Summary (MCS), as they are referred to by the authors of the instrument.[15] The assessment of the score obtained will be performed on the basis of the Rand Group method, which establishes a grading of the responses for each topic from 0 to 100. Not all the responses possess the same value since it depends on the number of possibilities of responses per question. The characteristics of the scores deserve the following considerations: a) The questionnaire's topics and dimensions provide some scores that are directly proportional to the state of health; the higher they are, the better the state of health; b) The scores range for each dimension varies from 0 to 100, whose grade is expressed by means of a normalized value, in which 50 is considered an appropriate average in the health assessment.[11,16] The questionnaire detects positive as well as negative states of health.[17] The Argentinian version of the instrument was used, which presents an SF-36 semantic and idiomatic adaptation.[8]

In order to assess the perceived health self-care, the "Appraisal of the Capacity for Self-Care Agency Scale" -ASA- instrument was used.[18,19] This instrument has 24 items, with four response's alternatives, and it also assesses the capacity for self-care agency in the categories: social interaction, sufficient food consumption, personal well-being, promoting the functioning and personal development as well as (physical) activity and rest. Score 1- corresponds to 'never', Score 2 - corresponds to 'almost never', Score 3 - corresponds to 'almost always' and Score 4 - corresponds to 'always', therefore, the subject with the maximum self-care capacity has a score of 96 while the one with the minimum self-care capacity has a score of 24. In order to classify the effectiveness of the capacity for self- care agency, the following ranges were established: High: for scores equal or greater than 76 points; Medium: for values equal or greater than 70 points and lower or equal to 75 points; and Low: for values of 69 points or lower. In turn, the instrument permits, on the basis of gathering questions, to determine 5 dimensions: "social interaction" (questions 12, 22), which measures the ability to ask for help to others in case of needing to do so; "personal interaction" (questions 2, 4, 5, 7, 8, 14, 15, 16, 17, 19, 21 and 23), which measures the ability to obtain responses related to self-care based on inquiry and reflection; "(physical) activity and rest" (3,6,11,13,20), which highlights human, environmental factors and specific conditions that interfere in the balance between (physical) activity and rest; "sufficient food consumption" (question No 9) that measures the ability to change eating habits so as to maintain the body weight; and finally, "promoting functioning and personal development" (1,10,18, 24), which identifies the ability to adapt to the environment and the circumstances for their self-care, that means, this represents the activities and changes a person does in order to maintain the conditions that support vital processes and foster human progress.

The data statistical analysis was performed through central and dispersion summary measures in the continuous and frequency distribution variables for the categorical ones (variables). For parametric variables Test t Student was used, while Mann-Whitney U Test was used for non-parametric variables. The association of categorical variables was performed on the basis of the χ^2 test. An analysis of interdependence of variables was carried out by applying the (factorial) multiple correspondence method (Multiple Correspondence Analysis), which generates the gathering of the individual's similar attributes. A 95% confidence level was considered in all of the cases. Ethical considerations: In all of the cases we proceeded with a previous informed consent and we respected the confidentiality of identity of all the participants in this study. Reliability on SF36 and ASA instruments in this group of study was estimated through Cronbach's alpha, thus obtaining values higher to 0.77 with acceptable reliability in the analyses performed.

Results

270 students in the first three years of the Medicine and Occupational Therapy degrees participated in the survey. The distribution according to gender revealed that women were predominant over men (74.81% and 25.19%, respectively p<0.001). The mean age among men (21.04±0.44 years old) and women (20.58 ±0.26 years old) was similar. The family's level of education (father, mother, brother/sister) reflected that the Higher Education and University level reached by the mothers of the students is proportionally higher than that of the fathers. (p<0.05). In the case of the siblings, more than a third of them are still in High School while more than the 40% reached a Higher Education and University level. Regarding the students' origin, 23 % of them come from the city of Villa María and 77% come from other cities.

In Table 1, the quality of life levels in their dimensions and components summary, based on the gender of the participants in this study, can be observed.

Table 1 Mean values and standard deviation of HRQL scores, in their dimensions and components summary based on the gender of the university students in their first years of Health Sciences Degrees at IAPCH UNVM (n=270)

	Men			Women			Wilcoxon Test
HRQL	n	Mean	D,E,	n	Mean	D,E,	P
Physical functioning	68	97.43	4.45	202	94.17	9.08	0.008
Physical role	68	77.57	31.78	201	72.51	32.98	0.22
Emotional role	68	67.65	41.92	201	54.06	38.24	0.007
Vitality	68	58.31	15.08	201	49.5	17.42	0.001
Mentalhealth	68	65.18	17.66	201	57.73	18.45	0.004
Social functioning	68	80.7	21.75	202	70.36	22.12	<0.001
Bodily pain	68	78.46	19.81	201	73.23	21.09	0.04
General health	68	71.25	16,96	202	60.48	18.14	<0.001
Physical component summary	68	81.18	13.77	201	75.06	15	0.002
Mental component summary	68	67.96	20.1	200	57.92	19.36	<0.001

Citation: Romero DE, Gili JA, Trecco P, et al. Level of quality of life and health self-care in university students of health sciences at the National University of Villa María. *MOJ Public Health.* 2022;11(2):92–95. DOI: 10.15406/mojph.2022.11.00381

Level of quality of life and health self-care in university students of health sciences at the National University of Villa María

Copyright:
©2022 Romero et al.

94

It is worth mentioning that the Physical Component Summary (PCS) is higher than the Mental Component Summary (MCS) ($p<0.01$) and that, in the analysis based on gender, men showed a higher perceived quality of life in the PCS ($p=0.002$) as well as in the MCS ($p=0.0002$). In that regard, when assessing the HRQL dimensions, women show a lower perceived quality of life regarding their physical functioning ($p=0.008$), emotional role ($p=0.007$), vitality ($p=0.0005$), mental health ($p=0.004$), social functioning ($p=0.0004$), bodily pain ($p=0.04$) and general health ($p=0.0001$).

Regarding health-related quality of life it was observed that, among Medicine degree students, their perceived quality of life is better during the third (3rd) year at University than during the first (1st) year ($p<0.01$), nevertheless, when self-care was assessed, no differences were revealed. Among Occupational Therapy degree students, no differences were shown regarding the year they were in at University in any of the two aspects being analyzed in this research.

With regard to self-care capacity, the analysis performed revealed that in both university degrees the total score in men and women corresponds to a mean level of self-care capacity (between 70 and 75 points), however, the highest proportion in men as well as in women was placed in the low self-care capacity category (Table 2).

Table 2 Distribution of students in self-care levels, according to gender, university degree programs and origin, university students in their first years of Health Sciences Degrees at IAPCH UNVM (n=270)

Variables	High (%)	Medium (%)	Low (%)	Total (%)
Men	29.41	22.06	48.53	100
Women	33.66	29.7	36.63	100

In the ASA's different dimensions, it was found that, concerning "social interaction", "personal interaction" and "promoting the functioning" the students showed a medium self-care capacity, whereas in "(physical) Activity and rest" the self-care capacity was low in men as well as in women. The dimension measuring the "sufficient food consumption" capacity was lower in men than in women (Low category vs Medium category respectively $p=0.01$). Such dimension is constructed on the basis of a single question: *"Do I make any changes in my eating habits in order to maintain the appropriate weight"*. This self-care behavior presents a better score in students with a mean age higher than those who present lower scores ($p<0.05$), and this is consistent with the year they are in at university since the students in the 3rd year of their university degrees present a higher self-care capacity in this respect than those students who are in lower years ($p<0.05$).

The self-care capacity measured according to origin revealed similar results in each dimension and in the ASA total score. When the perceived quality of life and the perceived self-care shown by the students were associated, it could be observed that the Physical Component Summary (PCS) and the Mental Component Summary (MCS) higher scores are associated to the "Medium" and "High" categories mentioned in self-care ($p<0.05$ y $p<0.002$ respectively).

Based on the factorial analysis of gender, current academic year at university, category of responses in ASA and percentile of responses in HRQL variables, we can observe association levels between the first and second years completed with the lowest HRQL scores (Percentile 25(P25)) and the lowest response in ASA (Low Capability). In the upper left, the percentile 50 (P50) responses from the HRQL are associated with the ASA Medium capacity and the female students. On the other hand, male students are grouped into HRQL higher scores (P75), concerning physical and mental health as well (lower right).

The same analysis logic was implemented, by gathering the previous variables, the father, mother and siblings' educational backgrounds. Thus, in the lower left, it can be observed that the Primary and Secondary level of education of the father, mother and siblings is associated to the female students with medium category responses in ASA and mean values in HRQL (Figures 1&2).

Discussion

A healthy university is a university that takes responsibility for improving its physical and social environment. Higher education institutions have adopted this concept since the XX century,[20] considering that the salutogenic attitude involves the contexts of people's daily life.[21,22] The mean age values and distribution according to gender are similar to those registered in the Academic Department area for the university degrees involved in this study.
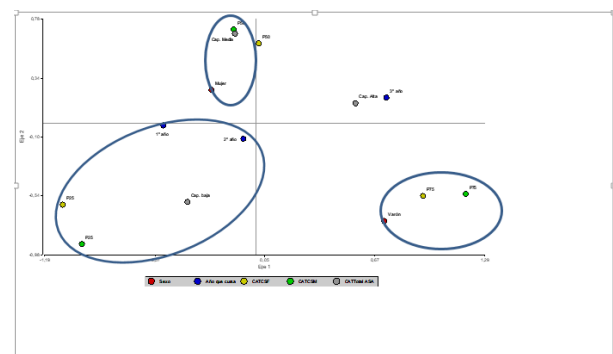

Figure 1 Group of variables: gender, current academic year, category in percentiles of the Physical Component Summary (PCS) and the Mental Component Summary (MCS) and ASA category.

Reference: CATCSF [CATPCS] (category in percentiles P25, P50, P75) of the HRQL Physical Component Summary; CATCSM [CATMCS] (category in percentiles P25, P50, P75) of the HRQL Mental Component Summary; CATTotalASA (low Cap., medium Cap., high Cap.) from ASA questionnaire.
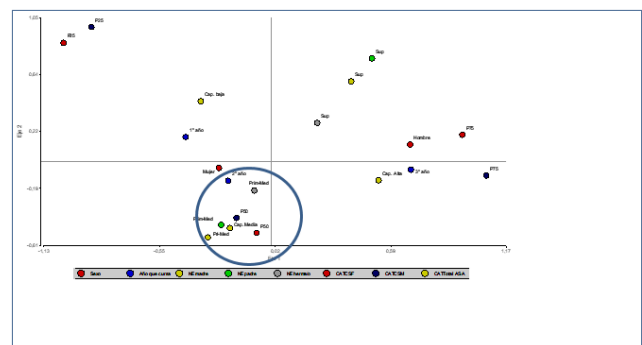

Figure 2 Group of variables: gender, current academic year, level of education of the father, mother and siblings, responses in HRQL and ASA.

Reference: LE (level of education), [CATPCS] (category in percentiles P25, P50, P75) of the HRQL Physical Component Summary;CATCSM [CATMCS] (category in percentiles P25, P50, P75) of the HRQL Mental Component Summary; CATTotalASA (low Cap., Medium Cap., High Cap.) from ASA questionnaire.

The perceived quality of life of the students involved in this research shows that the physical component obtains a better score than the mental component and these are perceived as more affected in women than in men, which reveals that the male gender possesses a higher self-perceived quality of life, and this is concurrent with other studies.[23,24] In general terms, as Marcos-Marcos and collaborators explain[25] in the public health area, it is inaccurate to search equality

Level of quality of life and health self-care in university students of health sciences at the National University of Villa María

Copyright:
©2022 Romero et al.　95

in men and women's health and, when analyzing their differences and similarities in health, it is interesting to take into consideration that they are rarely of pure biological nature or social order.[26]

After dwelling in rural areas and moving to live in urban areas, life conditions vary, the places become narrower, the services more limited and the economy turns to be insufficient.[27] On the other hand, alienation makes reference to three situations: the first: being imposed to eradicate the feelings onto places, objects or people; the second implies forcing someone to isolate themselves from their way of thinking or their opinion and the third, the physical exile of people from their place of residence.[28] The bibliography explains that displacement is a situation in which a person loses the place where their history was built, and this constitutes a challenge for the students who must move to have access to higher education, being forced to accept customs, jobs, routines and unexpected activities, even when this may cause fear, frustration or alienation in these university students.[29] Nevertheless, this study did not reveal differences in the perceived quality of life or self-care among students who are residents of Villa María and students who come from other cities.

Conclusion

In this study it was observed that the highest scores of perceived quality of life regarding the physical and mental aspects were associated to the highest scores of self-care, and this is concurrent with what was described by Angelucci et al.[30]

Acknowledgments

None.

Conflicts of interest

The author declares there is no conflict of interest.

References

1. Cecilia MJ, Atucha NM, García-Estañ J. Health styles and healthy habits in Pharmacy degree students. *Medical Education*. 2018;19:294–305.

2. Duarte-Cuervo CY. Understanding and implementation of health promotion in higher education institutions in Colombia. *Journal of Public Health*. 2015;17(6):899–911.

3. Muñoz M, Cabieses B. Universities and health promotion: how to reach the meeting point? *Rev Panama Public Health*. 2008;24(2):139–146.

4. About Health Promoting Universities.

5. Lange I, Urrutia M, Campos C, et al. Strengthening of self-care as a strategy of Primary Health Care: The contribution of health institutions in Latin America. Chile: *Pan American Health Organization.* 2006. 60 p.

6. Prado Solar LA, González Reguera M, Paz Gómez N, et al. The self-care deficit theory: Dorothea Orem starting point for quality of care. *Electronic Medical Journal*. 2014;36(6):835–845.

7. Cardona-Arias JA, Higuita-Gutierrez LF. Applications of an instrument designed by the WHO for the evaluation of quality of life. *Cuban Journal of Public Health*. 2014;40(2):175–189.

8. Augustovski FA, Lewin G, García-Elorrio E, et al. The Argentine–Spanish SF-36 Health Survey was successfully validated for local outcome research. *Journal of Clinical Epidemiology*. 2008;61(12):1279–1284.

9. Pacheco Rodríguez MD, Michelena González M, Mora González RS, et al. Health-related quality of life in university students. *Cuban Journal of Military Medicine*. 2014;43(2):157–168.

10. Schwartzmann L. Health-related quality of life: conceptual aspects. *Science and nursing*. 2003;9(2):09–21.

11. Durán AS, Castillo AM, Vio del R F. Differences in the quality of life of university students from different years of admission to the Antumapu campus. *Chilean magazine of nutrition*. 2009;36(3):200–209.

12. Leiva Díaz V, Cubillo Vargas K, Porras Gutiérrez Y, et al. Validation of the Self-Care Agency Appreciation Scale (ASA) for Costa Rica, for population with chronic disease. 2016.

13. Cáceres-Manrique FDM, Parra-Prada LM, Pico-Espinosa OJ. Health-related quality of life in the general population of Bucaramanga, Colombia. *Rev public health*. 2018;20(2):147–154.

14. Vilagut G, Ferrer M, Rajmil L, et al. The Spanish SF-36 Health Questionnaire: a decade of experience and new developments. *Sanitary Gazette*. 2005;19(2):135–150.

15. Ware JE, Sherbourne CD. The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection. *MedCare*. 1992;30(6):473–483.

16. Ware JE, Kosinski M. Interpreting SF-36 summary health measures: a response. *Qual Life Res*. 2001;10(5):405–413.

17. Alonso J, Prieto L, Antó JM. The Spanish version of the SF-36 Health Survey (the SF-36 health questionnaire): an instrument for measuring clinical results. *Med Clin (Barc)*. 1995;104(20):771–776.

18. Arias AV, Alvarez LNR. Reliability of the "Self-care Agency Appreciation" (ASA) scale, second version in Spanish, adapted for the Colombian population1. *Av enferm*. 2009;27(1):38–47.

19. Manrique-Abril F, Fernández A, Velandia A. Factor analysis of the Self-Care Agency Rating Scale (ASA) in Colombia. *Aquichan*. 2009;9(3):222–235.

20. Bastías Arriagada EM, Stiepovich Bertoni J. A Review of the Lifestyles of Ibero-American University Students. *Science and nursing*. 2014;20(2):93–101.

21. Antonovsky A. The salutogenic model as a theory to guide health promotion. *Health Promotion Int*. 1996;11(1):11–18.

22. Raphael D, Steinmetz B, Renwick R, et al. The Community Quality of Life Project: a health promotion approach to understanding communities. *Health Promotion International*. 1999;14(3):197–210.

23. Cortes Ibarra RG, Alejo Lopez SJ, Moreno Perez NE, et al. The Nottingham Health Profile (NPH), an excellent indicator in the comprehensive assessment of the elderly.

24. López-Rincón FJ, Morales-Jinez A, Ugarte-Esquivel A, et al. Comparison of the perception of quality of life related to health in older men and women. *Global Nursing*. 2019;18(54):410–425.

25. Marcos-Marcos J, Mateos JT, Gasch-Gallén À, et al. The study of men's health from a gender perspective: where we come from, where we are going. SC. 2020;16:e2246–e2246.

26. Lara RMM, Ávila FDS, García BL, et al. Evaluation of the perception of quality of life and lifestyle in students from the context of Health Promoting Universities. *Rev Educ Desa*. 2008;5(8):12.

27. Camargo Escobar ÍM, López Marín Y. Uprooting, displacement and higher education. *Foro por la vida.* 2019;3(8):19–26.

28. Rodriguez-Perez MAR. Uprooting and the educational crisis. *R Scientific*. 2012.

29. Meertens D. Displacement and Social Identity. *Journal of Social Studies*. 2002;(11):101–102.

30. Angelucci LT, Cañoto Y, Hernández MJ. Influence of lifestyle, gender, age and BMI on physical and psychological health in university students. *Av Psicol Latinoam*. 2017;35(3):531–546.