

Quality of Life in Students of Medicine of the University of Gurupi-TO

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Abstract—Introduction: Medical academics face many difficulties in meeting the training requirements. The difficult routine with intense hours of study, lack of time to carry out leisure activities compromises the quality of life of this public. Objectives: To evaluate the quality of life (QoL) of academics and academics of the medical course of the University of Gurupi-TO. Materials and methods: We included students over the age of 18, from the 1st to the 8th period, who agreed to voluntarily participate in the study. To evaluate the quality of life, the WHOQOL-BEF questionnaire was used. The data collected were inserted into a Microsoft Excel 2019 spreadsheet and the calculations followed the standards established by Pedroso et al., 2010 [1]. The statistical analysis of group comparison was performed using SPSS software, version 19 from the test protocol of Student. The tests were performed with a significance level of 5%. Results: 140 students participated in the study, in which 54.28% were female and the other 45.72% were male. As for the self-evaluation of the quality of life, the students presented a total average of 14.41, while the average between the male and the female were 14.52 and 14.11 respectively ($p=0.166$). The mean QoL scores of the four domains were 14.59 for the physical domain, 14.12 for the psychological domain, 14.50 for social relations and 13.96 for the environment. When analyzing the differences between genders, it was observed significantly in the physical ($p=0.001$) and psychological ($p=0.017$) domains, with men being better classified than women. Conclusion: It is concluded that the QoL of medical students is average and high, however, male students have better QoL when compared to women in the physical and psychological domains.

Keywords—Quality of life, Students, Medicine.

I. INTRODUCTION

The concept of quality of life is a modern construct and an old concern since the idea of living with quality was already present in antiquity. Aristotle in 384 and 322 BC referred to the association between happiness and well-being. Hippocrates in 460 and 370 BC and Galen in 132 and 200 AD argued that balance supports a healthy body [2] (FIEDLER, 2008). In the 1990s, the World Health Organization (WHO) defined QoL as "the individual's perception of their position in life, in the context of the culture and value system in which they live and in relation to their goals, expectations, standards, and concerns" (WHO, 1998) [3].

Quality of life is assessed from questionnaires, the most used are WHO, WHOQOL-100 and WHOQOL-BREF, these two questionnaires have questions related to the quality of life in general and some domains. The physical domain includes aspects about the presence of pain and discomfort, energy and fatigue, sleep and rest, mobility, activities of daily living, dependence on medication or treatments and work capacity. The

psychological domain correlates with positive feelings, self-esteem, negative feelings among others. There are also questions about personal relationships, emotional support, physical security and protection, financial resources, health care, and other aspects that are involved with the domains of social relationships and the environment.

According to Araújo et al. (2014) [4], since the arrival of the student in the university, most of them young, in the process of change, carrying with them doubts and uncertainties about their adaptation in the academic environment, the university is vulnerable to the stress caused by the college. Part of these concerns is due to the fact that the central object of work of this future professional will be related to the needs of prevention, promotion or recovery of the health status of the human being. Such a concern is clearly expressed in the National Curricular Guidelines of Nursing, Medicine and Nutrition Undergraduate Courses, which require the university to have competent, humanistic, ethical, critical and reflective professional training [5] (BARALDI et al., 2015).

According to Carvalho et al. (2017) [6], health courses, such as dentistry, were recognized as a source of stress during the training of their students, affecting the physical and mental well-being of the students due to pressure from activities, examinations and acquisition of knowledge, professional skills and attitudes, financial concerns, sleep deprivation, and exposure to patient suffering and death. Accordingly, Chazan and Campos (2013) [7] evaluated the quality of life of 394 UERJ medical students in 2010, the mean QOL reported was 66 and the health satisfaction 62. The lowest QOL scores were observed in female students, with reported chronic morbidity. This is due to the perception that medical students are constantly influenced by stressors [8] (FIGUEIREDO et al., 2014). The pressure begins with the competitiveness of the college entrance examination and extends the teaching methodology, full-time course, the relationship of academic activity with leisure and social aspects [9] (Aguar et al., 2009), the requirement of high income, volume of information, contact with sick people and death [10] (BAMPI et al., 2013). The framework described implies, increasingly, the quality of life of graduates of this course [11] (FEODRIPPE; BRANDÃO; VALENTE, 2013).

According to Bampi et al. (2013) [10], the medical students of the University of Brasília obtained social relations as the best-evaluated domain and the psychological one with the worst score. The facets sleep, energy degree, ability to perform day-to-day activities, acted negatively on the quality of lives of academics, in agreement with the study Figueiredo et al. (2014) [8] who, after analyzing the factors that determined the quality of life of medical students at the Federal University of Ouro Preto, concluded that the extensive curricular workload associated with excessive extracurricular load impaired the practice of sports, leisure and sleep quality, negatively influencing the interviewee. In contrast, Cunha et al. (2017) [12] despite being in agreement with Bampi et al. (2013) [10] on social relations as the best score, reported that the worst score in his research was the physical domain. In addition to this finding, Cunha et al. (2017) [12] also state that males had a higher QoL score when compared to females, as did Chazan and Campos (2013) [7].

Taking into account all the considerations made so far and seeking a better understanding of this complex subject, the present study aims to evaluate the quality of life of the medical students of the University of Gurupi — TO in different domains and in the general quality of life, in addition to comparing the differences between the sexes.

II. MATERIALS AND METHODS

This is a quantitative descriptive study carried out with undergraduate medical students from the University of Gurupi, an institution located in the south of Tocantins state, from April 2018 to February 2019. The present study was submitted and approved by the Research Ethics Committee of the Institution of Higher Education (CAAE 86994718.8.0000.5518), and all subjects who participated in the research read and signed the Informed Consent Term (TCLE).

The study included 140 students, from the 1st to the 8th period of the medical course, at the University of Gurupi, aged 18 years or over. The WHOQOL-BREF questionnaire was used for the evaluation of QoL of UnirG medical students. It is composed of 26 questions, in which the first one refers to the perception of the general quality of life and the second about satisfaction with one's own health. The other 24 questions are distributed in four domains: physical (seven questions on pain and discomfort, energy and fatigue, sleep and rest, mobility, daily life activities, use of medications and work capacity), psychological (six questions on feelings positive and negative, thinking and learning, memory and concentration, body image and spirituality), social relations (three questions about personal relationships, social support and sexual activity), environment (eight questions about physical security and protection, home environment, financial availability, and quality of health and social care, opportunities to acquire new information and skills, leisure activities, physical environment and transportation).

All questions have five Likert type response options, and the fifteen days prior to self-completion of the instrument should be considered, with ten to fifteen minutes. The questionnaires were always applied by the same researchers who were previously trained. The data collected from the WHOQOL-BREF questionnaire were inserted into a Microsoft Excel 2019 spreadsheet, all calculations follow the standards established by Pedrosa et al., (2010) [1]. For the analysis, SPSS software version 19 was used from the protocol Student's t-test. The tests were performed with a significance level of 5%.

III. RESULTS AND DISCUSSION

In the table below (table 1), the results concerning the quality of life domains, separated by sex and the total sample, are presented 140 students participated in the study, in which 54.28% (n=76) of the interviewees were females and the other 45.72% (n=64) males.

As for the question of self-rated quality of life, the students presented a total mean of 14.41, while the

average between the male and the female was 14.52 and 14.11 respectively ($p=0.166$).

Considering the total sample of students, the mean QoL scores of the four domains of the WHOQOL-BREF questionnaire were 14.59 for the physical domain, 14.12 for the psychological, 14.50 for social relations and 13.96 for the middle environment, thus obtaining the best index for the physical domain and the worst for the environment when comparing the domains with each

other.

When analyzing the differences in QoL between genders, it was observed that males presented higher averages in all domains, with a significant difference in the physical ($p=0.001$) and psychological ($p=0.017$) domains. The highest mean area of the investigated group was the physical one (14.59 ± 2.41), the highest mean was in the physical domain (15.56 ± 1.81), while the female had the highest mean domain social relations (14.30 ± 3.59).

Table 1: Quality of life outcome.

VARIABLE	Sex			
	Men (64)	Woman (76)	Totally (140)	Value p
Physical				
Mean ± SD	15,56 ± 1,81	14,00 ± 2,58	14,59 ± 2,41	0,001
Median (min.; max.;	15,43 (11,43; 18,29)	14,29 (8,00; 20,00)	14,86 (8,00; 20,00)	
CV (%) - amplitude	0,12	0,18	0,17	
Psychological				
Mean ± SD	15,28 ± 2,20	13,63 ± 2,77	14,12 ± 2,66	0,017
Median (min.; max.;	15,20 (9,60;18,40)	13,60 (7,20; 18,40)	14,40 (7,20; 19,20)	
CV (%) – amplitude	0,14	0,20	0,19	
Social relationships				
Mean ± SD	14,97 ± 2,73	14,30 ± 3,59	14,50 ± 3,33	0,426
Median (min.; max.;	14,67 (6,67; 20,00)	14,67 (4,00; 20,00)	14,67 (4,00; 20,00)	
CV (%) – amplitude	0,18	0,25	0,23	
Environment				
Mean ± SD	14,03± 1,78	13,80 ± 2,45	13,96 ± 2,26	0,379
Median (min.; max.;	14,50 (10,00; 17,00)	14,00 (7,50; 18,50)	14,00 (7,50;18,50)	
CV (%) – amplitude	0,13	0,18	0,16	
Self-assessment QoQ				
Mean ± SD	14,52 ± 2,63	14,11 ± 3,36	14,41 ± 2,95	0,166
Median (min.; max.;	16,00 (6,00; 20,00)	14,00 (8,00; 20,00)	14,00 (6,00; 20,00)	
CV (%) – amplitude	0,18	0,24	0,20	

SD: standard deviation; min.= minium; max.= maximum; CV= coefficient of variation; QoQ= quality of life.

The objective of this study was to evaluate the quality of life (QoL) of the medical students of the University of Gurupi - TO and to compare the gender differences in the quality of life scores in these students.

Araújo et al. (2014) conducted a study involving nursing academics that shows that from the student's arrival at the university, most of them are young, in the process of change, carrying with them doubts and uncertainties about their adaptation in the academic environment, under strong pressure and stress to match the expectation of relatives. The student will undergo changes in his or her life because he is vulnerable to stress caused

by the university, and the impacts will be addressed according to his psychological maturity, which will reflect moderate levels of stress for one or situations of crisis adaptive for others.

The data show that according to the WHOQOL-BREF questionnaire, all domains showed a good perception of the quality of life. The gender distribution (54.28% female and 45.72% male) was similar to the distribution found by Chazan and Campos (2013) (61% female and 49% male).

Considering the overall result, it was observed a better QoL in the physical domain (14,59) and worse in

the environment (13,96). As in the present study, Claumann et al. (2017) analyzed the quality of life of incoming students in the Physical Education course and presented the physical domain as being the best and the environment is the smallest. Considering that the environmental domain is related to physical security and protection, home environment, financial resources, health, and social care, opportunities to acquire new information and skills, recreation and leisure, physical environment and transportation (ESCAVE et al., 2009 apud ALFREDO, BIONDI, MANNA, 2016, p. 228) [13], this finding may be related to the fact that the students do not work, are dependent on the parents' help, live alone and far from the city of origin, besides having less time to leisure activity due to the academic life that requires more time and dedication.

Although the physical domain presents higher average in the present study as well as in the research of Claumann et al. (2017) [14] this is contrary to what is observed in the daily life of the medical student since they have an extensive study day, few hours of sleep, are hardly involved in physical activities, bad habits of life. As a result, they have less energy and ability to perform the activities of daily living, often needing help from medications. This fact can be observed in a study about the quality of life of undergraduate students in nursing showing that the capacity of concentration, daily energy degree, sleep, capacity for performance in daily and work activities, financial resources and leisure opportunities were negative factors to the participants' quality of life, due to their worse performance (DALMOLIN et al., 2012) [15].

Claumann et al. (2017) [14] observed a better mean in the physical domain (72.7) corroborating with the results of the present article (physical domain with a mean of 14.59). Thus, it seems that the academics in this study are more involved in sports practices and manage to maintain healthy habits of life. As a result, they probably have more energy and ability to perform the activities of daily living, feel less pain and discomfort, and need fewer medications, as well as sleep better (aspects related to the physical domain).

The domain social relations composed of facets personal relationships, social support and sexual activity presented an average of 14.50 in the present study, losing only to the physical domain in the general classification and occupying the highest mean for the female corroborating with study by Raquel, Kuroishi and Mandrá (2016) [16] who, when comparing the QOL of speech-language pathology students in different graduation periods, observed a higher average in this area, being

higher in the fourth period ($G2 = 73.74$, $SD \pm 18.41$), followed by the second ($= 72.22$, $SD \pm 13.38$), eighth ($G4 = 68.91$, $SD \pm 21.67$) and sixth ($G3 = 64.46$, $SD \pm 20.95$). Serinolli, Oliva, and El-Mafarjeh (2015) [17] also observed higher mean in the domain of the social relation in medical students with no history of medical diagnosis of anxiety, panic or depression.

Moritz et al. (2016) [18] evaluated the quality of life of nursing students of a Brazilian public university and found a good average in the psychological domain (67,7), losing only to social relations (77,2), as opposed to the one found in the present study in which this domain was the second worst. However, as for sex, both this and that study had a better mean score in this domain for males, respectively 15.28 and 69.3, a fact that can be justified by the man compared to the woman presenting several risk behaviors perceiving less the psychological symptoms besides the social requirement that it is always physically and psychologically strong (ARAÚJO et al., 2014) [4].

When analyzing the domains regarding sex, it was observed that women have worse QoL in relation to men in all domains, a result also observed in the study carried out by Luz (2015) [19, 20]. We can observe that the best performance among females is related to the social relation domain (14,30) and the worst performance related to the psychological domain (13,63). Considering males, the best performance is observed in the physical domain (15,56) and the worst in the environment domain (14,03).

Gouveia et al. (2017) [21] points out that factors such as little / no activity for leisure, busy schedule, overload of activities, lack of time for extracurricular activities, conflicting relationship with teachers, competitiveness among students and situations requiring interpersonal relationship are cause of fatigue, fatigue, and anxiety, directly affecting students' QoL. According to Luz (2015) [19] regarding the quality of life, males achieved better results than females in the areas of vitality, social function, emotional performance, and mental health, as well as to overcome in the mental component and quality of general life. This fact may explain why girls present worse indexes in the physical and psychological domains.

The university students are considered a vulnerable group in relation to psychiatric disorders such as depression and anxiety (SOUZA et al., 2018) [22], because during their formation they face several stressful situations such as lack of time and exhaustion due to intense study, with themselves in order to meet the expectations of teachers, colleagues, and society and are constantly affected by insecurity, fatigue, lack of

concentration, sleep disturbance and even depressive symptoms compromising their quality of life. This fact can be observed in the study by Aguiar et al. (2009) [9] in which they evaluated 200 medical students of the University of Ceará on stress and identified that of these, 73.5% considered their academic activities as a source of stress.

Other research carried out by Leão et al. (2018) [23] showed that anxiety and depression were part of daily academic life, with girls ($p = 0.001$) being the most affected, followed by insomnia and sedentary patients. Chazan and Campos (2013) [7] observed lower QoL scores with reported chronic morbidity and reported a predominance of mental and endocrine-metabolic diseases in UERJ academics. Given the above, considering that the prevalence of anxiety and depression among health students is higher than that of students from other areas and from the general population (GALVÃO et al., 2017; LANTYER et al., 2016) [24, 25], it is important to investigate the mental health of this public, since it directly affects the QoL of this population as well as interfere in their training.

Future studies should evaluate factors such as age, schooling, and working or not during the course, having or not having children, whether or not they are in a marriage, which directly interfere with the results of QoL.

IV. CONCLUSION

The QoL of medical students assessed, mean to high scores, although male students presented better values when compared to women in the physical and psychological domains. It is important in future studies to evaluate the motives that favor these results.

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