QUALITY OF LIFE AND DEPRESSION IN PROFESSORS IN THE HEALTH AREA

ORIGINAL ARTICLE

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ABSTRACT

Context: Quality of life, in general terms, can be considered as the perception of expectations and ways of thinking about their satisfaction with life. Due to the accumulation and variety of their functions, such as workload, environment and work demand, teachers are exposed to major psychosocial risks, which can trigger overload and make them susceptible to work stress, which can lead to mental exhaustion and consequently lead to the depression. **Objective:** To analyze the quality of life (QoL) and depression in health professors at a public university in the state of Sergipe. **Methods:** Descriptive, cross-sectional study with a quantitative approach, carried out with 146 professors in the health area of the Federal University of Sergipe. Three data collection instruments were used, the Whoqol-Bref, the Beck Depression Inventory and a sociodemographic questionnaire. Data collection took place from February to November 2015. Data were analyzed descriptively and analytically. **Results:** Of the 146 professors evaluated in the health area, 58.2% were female, with a mean age of 44.44 years. The majority worked in an exclusive dedication regime (52.05%), and were dissatisfied with the conditions (70.5%) and salary remuneration (78.8%). Most professors had a positive perception of their quality of life (84.9%) and were satisfied with their health (67.8%). The prevalence of professors with depression was 29.5%, most of which were mild. **Conclusions:** Professors, in the majority, were satisfied with QoL and health. However, the prevalence of depression was high and there was an association with QoL, dissatisfaction with work conditions and leisure activities. Greater attention to professors in the health area by university management is

recommended, with a view to developing health promotion actions in the university environment.

Keywords: College education, Depression, Quality of life.

1. INTRODUCTION

Higher education is responsible for training professionals in different areas of knowledge, which is accompanied by several problems generated during its exercise (Lima; Lima-Filho, 2009). The accumulation and variety of their functions can trigger overload and make them susceptible to work stress, identified as a risk factor for depression (Silverio *et al.*, 2010; Sun; Wu; Wang, 2011; Brun; Monteiro, 2020; Souza, 2021). In the case of teaching practice in the health area, this is doubly subject to stressful situations, generated by the need that these professors have to be caregivers during the teaching-learning process (Skevington; O'Connell, 2004).

Depression is a psychiatric disorder characterized by mood swings that further compromise Quality of Life (QoL) (Garcia; Oliveira; Barros, 2008). The term QoL is used by several segments of society, however, QoL at work seeks the possibility of rescuing the meaning of human work, aiming to add well-being, efficiency and effectiveness in the work environment (Rusli; Edimansyah; Naing, 2008; Oliveira Filho; Netto-Oliveira; Oliveira, 2012). Consequently, the relationship between health and QoL involves several aspects of people's daily lives, and among these aspects, the psychological, social and physical domains stand out as the most studied (Buckner *et al.*, 2008; Brun; Monteiro, 2020). In this context, there is a search for and confirmation of associations between working conditions and numerous health disorders, such as physical and psychosomatic problems (D'Orsi; Xavier; Ramos, 2011; Rios; Barbosa; Belasco, 2010). In this sense, in order to improve the mental health conditions of university professors, it is necessary to increase the level of job satisfaction of these professors, which may result in a positive influence on QoL (Koetz; Rempel; Périco, 2013; Shen *et al.*, 2014).

From this point of view, it becomes relevant to know the health conditions of higher education professors, in particular, regarding QoL, prevalence of depression,

sociodemographic profile, and other factors that can influence the QoL and depression of these professionals. In this way, it is expected to provide information that may be useful to help public policy promoters to create measures that contemplate improvements, both in the work environment and for the health of this population, thus collaborating to improve QoL, which may reflect directly on teaching excellence. It is hoped that this study can stimulate research of this nature in other contexts and mobilize critical reflections that enable movements to improve the work processes of professors in the health area, especially in view of the potential of the academic environment to become a health promotion space.

2. METHODS

This work is cross-sectional, with a quantitative approach, developed in the health departments of the Campus São Cristóvão of the Federal University of Sergipe (UFS) from February to November 2015. The seven health departments make up a population of 186 professors of clinical teaching. Sampling was non-probabilistic for convenience. All professors of health courses of clinical teaching at UFS, São Cristóvão campus in activity, who had teaching time equal to or greater than one year, of both genders, were included. Professors of these courses who were on leave (training, illness, maternity leave) or on vacation during the period of the interviews were excluded. In the end, the sample consisted of 146 volunteer teachers.

With regard to the ethical procedure, it should be mentioned that the study followed the precepts of Resolution No. 466 of December 12, 2012 of the National Health Council of the Ministry of Health and was approved by the Research Ethics Committee (CEP) with human beings UFS under opinion 922.945 (CAAE - 39001814.8.0000.5546). After approval, data collection began, which took place from February to November 2015. Initially, the dates of collegiate and department meetings were verified with the departments so that the collective approach was possible. Thus, an approach was taken at the beginning of the meetings and the research objectives, risks and benefits were explained, as well as the invitation to participate in the study. The professors who agreed to participate in the research signed the Term of Free and Informed Consent (TFIC) and took the instruments and a deadline for delivery was

determined. They made the documents available in a sealed envelope at the secretariats of the departments.

Three instruments were used to collect data relevant to this study. The first questionnaire contained sociodemographic variables and lifestyle variables (age, sex, skin color, marital status, maximum title, department, exclusive dedication, other employment relationship, satisfaction with working conditions and remuneration, practice of physical activity and leisure activity). The instrument to assess QoL was the WHOQOL-Bref, consisting of 26 questions, two general that comprise the perception of overall QoL and health in general and 24 distributed in four domains: physical, psychological, social relations and environment (Stansfeld; Candy, 2006). The answers followed a Likert-type scale from 1 to 5, in which the higher the score, the better the QoL. The domain scores were calculated by adding the average scores of the "n" questions that make up each domain. The result was multiplied by four, and represented on a scale of 4 to 20. These were later converted, on a scale from 0 to 100 (The WHOQOL Group, 1998; Pucci *et al.*, 2012). And the third instrument was the Beck Depression Inventory (BDI), a depression self-assessment instrument, which consists of 21 questions, including symptoms and attitudes, whose intensity varies from 0 to 3 points. The total number of points is 63 and the score for classification according to the intensity of the depressive symptoms is: from 0 to 11 absence, 12 to 19 mild, 20 to 35 moderate and 36 to 63 severe (Castro; Trentini; Riboldi, 2010).

For the analysis, the data were initially entered into the Excel program, version 2013. Next, the data were analyzed descriptively and analytically. Numerical variables were observed for normality distribution using the Shapiro-Wilk test. In cases where the assumptions were met, the variables were presented using mean ($\overline{x}$), standard deviation and their respective Confidence Intervals (CI), otherwise using Median (Md) and their quartiles (1st-3rd). Categorical variables were presented using absolute and relative frequency. For correlations, Spearman's Linear Correlation test was applied, where an r from 0 to 0.39 was considered weak, from 0.40 to 0.69 moderate and 0.70 to 1.0 strong. The values were explained through linear regression analysis, through the adjusted value and estimated standard error. For comparison analyzes of quality of life and depression between departments, the 1-way Anova test (One Way Anova)

with a Bonferroni post-test was applied. The association between categorical variables was performed using the chi-square (x2) or Fisher's exact test. Statistical significance was adopted at 5% (p<0.05). The statistical program used was the Statistical Package for the Social Sciences (SPSS 15.0). The scores obtained with the application of the WHOQOL-bref were transformed into a scale from 0 to 100, however, for a better understanding of the teachers' quality of life scores, the scale was divided into five items, following the proposal by Pedroso *et al.*, (2010) and Lima, Lima-Filho, (2009), who point out the quality of life as very bad (0-20); bad (21-40); neither bad nor good (41-60); good (61-80) and very good (80-100).

This current work is part of the Master's thesis of the student Viviane Freitas Andrade, which she defended in 2016.

3. RESULTS

A total of 146 professors from the departments of the health area of clinical teaching at UFS São Cristóvão were evaluated, distributed by course as follows: medicine 47 (32.2%); nursing, 25 (17.1%); physiotherapy, 13 (8.9%); pharmacy, 13 (8.9%); speech therapy, 13 (8.9%) and dentistry, 22 (15.1%). The highest frequency of professors was female (58.2%), with a mean age of 44.44±10.15 years, 54.8% white and 63% married. As for the work regime, 52.05% of the professors were full-time and of those who had another employment relationship, 80.95 were from the medical course (**Table 1**). Regarding the academic qualifications of the professors studied, the majority are doctors (56.16%) and masters (21.23%).

Table 1. Sociodemographic characteristics of the 146 professors from the health departments at UFS São Cristóvão, Sergipe, 2016.

Department	Age Average (SD)	Gender	Skin color	Marital status	Exclusive dedication	Another bond
Medicine	48.20 (9.23)	16 F 31 M	29 white 1 black 17 brown	4 singles 33 married 7 separated	Yes 3 (6.4%) No 44 (93,6%)	Yes 38 (80.9%) No 9 (19.1%)

				3 live together		
Nursing	42.71 (11.20)	24 F 1 M	13 white 12 brown	9 singles 15 married 1 separated	Yes 17 (68.0%) No 8 (32.0%)	Yes 10 (40.0%) No 15 (60.0%)
Physiotherapy	38.62 (5.95)	7 F 6 M	7 white 1 black 5 brown	2 singles 9 married 2 separated	Yes 12 (92.3%) No 1 (7.7%)	Yes 1 (7.7%) No 12 (92.3%)
Nutrition	35.15 (4.50)	12 F 1 M	7 white 4 brown 2 Yellow	5 singles 6 married 1 separated 1 live together	Yes 12 (92.3%) No 1 (7.7%)	Yes 1 (7.7%) No 12 (92.3%)
Pharmacy	39.67 (5,82)	6 F 7 M	7 white 2 black 4 brown	3 singles 8 married 2 separated	Yes 12 (92.3%) No 1 (7.7%)	Yes 1 (7.7%) No 12 (92.3%)
Speech therapy	42.50 (11.04)	10 F 3 M	8 white 4 brown 1 Yellow	3 singles 7 married 3 separated	Yes 10 (76.9%) No 3 (23.1%)	Yes 1 (7.7%) No 12 (92.3%)
Dentistry	51.09 (9.39)	10 F 12 M	9 white 13 brown	28 singles 88 married 26 separated 4 live together	Yes 10 (45.5%) No 12 (54.5%)	Yes 6 (27.3%) No 16 (72.7%)

Source: Authors, 2024.

The frequency of dissatisfaction with working conditions and remuneration reached 70.5% and 78.8% respectively. Most of the researched professors (68.5%) reported that they practiced physical and leisure activities (97.95%) (**Table 2**).

Table 2. Satisfaction with working conditions and remuneration, physical activity and leisure practices among the 146 professors from the health departments at UFS São Cristóvão, Sergipe, 2016.

Department	Satisfaction with work conditions	Satisfaction with remuneration	Physical activity	Leisure activity
Medicine	Yes 13 (27.7%) No 34 (72.3%)	Yes 8 (17.0%) No 39 (83.0%)	Yes 33 (70.2%) No 14 (29.8%)	Yes 44 (93.6%) No 3 (6.4%)
Nursing	Yes 6 (24.0%) No 19 (76.0%)	Yes 8 (32.0%) No 17 (68.0%)	Yes 17 (68.0%) No 8 (32.0%)	Yes 25 (100%) No -
Physiotherapy	Yes 4 (30.8%) No 9 (69.2%)	Yes - No 13 (100%)	Yes 9 (69,2%) No 4 (30.8%)	Yes 13 (100%) No -
Nutrition	Yes 6 (46.2%) No 7 (53.8%)	Yes 3 (23.1%) No 10 (76.9%)	Yes 9 (69.2%) No 4 (30.8%)	Yes 13 (100%) No -
Pharmacy	Yes 3 (23,1%) No 10 (76,9%)	Yes 4 (30,8%) No 9 (69,2%)	Yes 9 (69.2%) No 4 (30.8%)	Yes 13 (100%) No -
Speech therapy	Yes 6 (46.2%) No 7 (53.8%)	Yes 4 (30.8%) No 9 (69.2%)	Yes 6 (46.2%) No 7 (53.8%)	Yes 13 (100%) No -
Dentistry	Yes 5 (22.7%) No 17 (77.3%)	Yes 4 (18.2%) No 18 (81.8%)	Yes 17 (77.3%) No 5 (22.7%)	Yes 22 (100%) No -

Source: Authors, 2024.

The QoL assessment using the WHOQOL-BREF instrument showed that the mean of the questionnaire was 15.34±1.84 with a 95% CI [15.03;15.65]. In this sense, the results of the first two general questions indicated that 84.9% of the professors considered their QoL good or very good and 67.8% were satisfied or very satisfied with their health. The WHOQOL-BREF domain that had the highest average was the physical with 15.80±2.27 and the domain with the lowest average was the environment with 14.69±2.01 (**Table 3**).

Table 3. Descriptive statistics of the WHOQOL-bref Quality of Life domains in 146 professors from the health departments at UFS São Cristóvão, Sergipe, 2016.

Domains	Average (SD)	IC
Physical domain	15.80 (2.27)	15.43-16.17
Psychological domain	15.74 (1.91)	15.43-16.05
Social domain	15.07 (3.08)	14.57-15.58
Environmental domain	14.69 (2.01)	14.36-15.02

Source: Authors, 2024.

The prevalence of professors with depression was 29.5%, distributed as follows: 23.97% with 95% CI [17.77;31.51] with mild depression, 5.48% with 95% CI [2.80; 10.44] with moderate depression (**Table 4**).

Table 4. Prevalence of depression among the 146 professors of the health departments at UFS São Cristóvão, Sergipe, 2016

Depression	Average	IC
No depression (0-11)	70.55	62.70-77.34
Mild depression (12-19)	23.97	17.77-31.51
Moderate depression (20-35)	5.48	2.80-10.44

Source: Authors, 2024.

When correlating QoL and depression values, a strong and negative correlation was found (r= -0.727) (**Figure 1**). The association between the dependent variable (depression) and the independent variable (QoL) was considered strong (R = 0.713). Approximately 51% of the variance in depression can be explained by the variance in QoL. More precisely, through the adjusted value, the variance can be explained at 50.5%. The estimated standard error was 4.1. The associated probability was p< 0.001. The value of b in the regression equation was -2.26. Which means that for each point of variation in QoL, depression changes 2.26 points.

Figure 1. Spearman's linear correlation between quality of life (WHOQOL-Bref) and depression (Beck Depression Inventory)
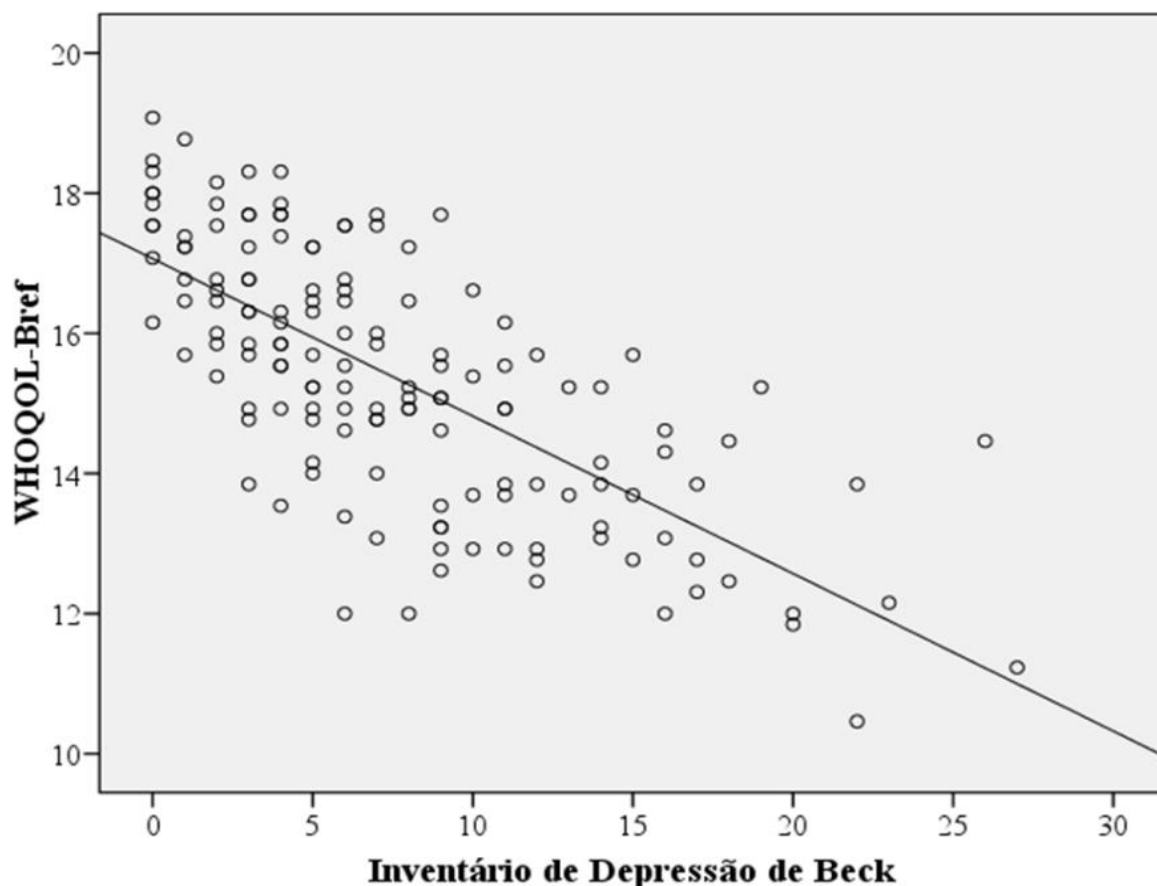
Source: Authors, 2024.

When comparing the QoL and depression values between the departments, no significant differences were found. Comparison was performed using a 1-way Anova test with a Bonferroni post-test. Quality of life showed significance with p= 0.183 and depression p= 0.462. However, a significant association was found between depression and satisfaction with working conditions (p= 0.002), thus, it was possible to verify that among professors with mild depression, 85.7% were not satisfied with working conditions and among those with moderate depression, 100% were dissatisfied with working conditions. There was also a significant association between depression and the performance of leisure activities (p= 0.003), since, among those who did not perform any activity (2.1%), only 1.4% had moderate depression. Of the

total number of professors who performed some leisure activity, 71.3% did not have depression, 24.5% had mild depression and 4.2% had moderate depression.

4. DISCUSSION

The sociodemographic characteristics of the individuals who participated in this study were similar to those identified through the execution of other studies carried out with teachers, where there was a slight predominance of the female gender (58.2%), that is, the female figure is highlighted in the scope of teaching (Lu; Zhong; Chen, 2013; Machado; Almeida; Dumithc, 2020; Bispo de Almeida *et al.*, 2022); the average age was 44.44 years (Lima; Lima-Filho, 2009; Ferreira *et al.*, 2009); and most participants were married (63%) (Delcor *et al.*, 2004; Lu; Zhong; Chen, 2013; Machado; Almeida; Dumithc, 2020; Bispo de Almeida *et al.*, 2022; Alves *et al.*, 2022). In this view, the predominance of the female gender seems to be a historical issue, since this profession was one of the few that could be exercised by women (Delcor *et al.*, 2004; Terra; Secco; Robazzi, 2011; Santos; Espinosa; Marcon, 2020). With regard to qualification, the professors surveyed had a high and satisfactory level of qualification, in which the majority were doctors and masters, in addition to a high percentage of post-doctors (13.01%) compared to other higher education institutions (Liu *et al.*, 2015; Machado; Almeida; Dumithc, 2020; Bispo de Almeida *et al.*, 2022; Alves *et al.*, 2022). It is worth emphasizing that the need for professors qualification is a requirement of current times. Therefore, they emphasized that professors have the important task of assisting in the healthy development of students, as well as providing quality intellectual training (Silva; Silva, 2013). To this end, the current work model to which professors are submitted requires an excess of extra-class work, through corrections of activities and planning, and, mainly, due to the demand for updating and the need for a degree (Delcor *et al.*, 2004; Padrão; Sens, 2009; Santos; Espinosa; Marcon, 2020; Alves *et al.*, 2022).

The percentage of dissatisfaction with working conditions was high and was associated with depression, since professors dissatisfied with working conditions were depressed. In this sense, the work environment and psychosocial factors have been considered the main causes of health problems in professors (Ferreira *et al.*, 2009), among the

most common problems is work stress, which has been identified as a risk factor for depressive symptoms, as well as, it can also influence mental health, QoL and job satisfaction (Mikkelsen *et al.*, 2010; Bispo de Almeida *et al.*, 2022). In this sense, dissatisfaction with salary remuneration also had an important representation. Silva; Silva, (2013) highlighted that teaching work can be characterized by low pay, structural inadequacy of institutions and overcrowding in classrooms. So for Jonsdottir *et al.*, (2010), the financial issue is one more aspect to be considered as a generator of work stress and damage to the teacher's QoL.

The professors had a positive perception of their QoL. These findings are similar to other studies with university professors (Lima; Lima-Filho, 2009; Furegato; Santos; Silva, 2008; Alves *et al.*, 2022). Regarding the WHOQOL-BREF averages, the results showed that the averages are considered good, with the environmental domain having the lowest average and the physical domain having the highest. A possible explanation for this finding of a lower score for the environmental domain would be that financial and social aspects such as health, education and leisure are included (Terra; Secco; Robazzi, 2011), although 98% of professors report developing leisure activities, 78, 8% were dissatisfied with wages and 70.5% with working conditions.

The prevalence of professors with depression was high in relation to some studies carried out in Brazil with higher education professors (The WHOQOL Group, 1998; Liu *et al.*, 2015). Studies have reinforced that among the factors that can contribute to the development of mental health problems is the pressure in the work environment and also suggest that the workload and an adverse psychological effect in the work environment significantly influence depression among teachers (Mahan *et al.*, 2010; Mikkelsen *et al.*, 2010; Fernandes; Rocha, 2009; Castro; Trentini; Riboldi, 2010; Rajgopal, 2010; Machado; Almeida; Dumithc, 2020; Camarini *et al.*, 2022). The present study also pointed out a strong and negative correlation between depression and QoL, suggesting that depression can negatively interfere with the QoL of individuals. Studies reinforce the association between work stress and depression and their interference in health-related QoL (Yang *et al.*, 2013; Santos; Espinosa; Marcon, 2020; Camarini *et al.*, 2022). These results encourage the continuation of research and development of preventive techniques to relieve occupational stress and depressive

symptoms among university professors (Silva; Silva, 2013; Freitas *et al.*, 2021; Alves *et al.*, 2022), in addition to the need for actions to improve mental health and organizational climate (Tabeleão; Tomasi; Neves, 2011).

The practice of leisure activities was associated with depression, since the professors who practiced them did not show manifestations of the disease, in this sense, according to D'Orsi, Xavier, Ramos (2011), it is possible to state that social support arising from monthly relationships with friends protects against functional loss. Leisure activities, such as watching TV and performing manual activities, can have a protective effect through mechanisms similar to work activities, except that they do not necessarily involve contact with other people. On the other hand, although in the present study no statistically significant association was found between depression and the practice of physical activity, some prospective studies in adults suggest that physical activity may have a protective effect on mental health (Oliveira *et al.*, 2012; Kataoka *et al.*, 2015; Sanchez *et al.*, 2019). The evaluation of the practice of physical activities among the professors who participated in the present study indicates that the majority are active, therefore, physical activities, whether performed in the workplace, leisure or domestic activities, are associated with a healthy lifestyl, thus, as a consequence, it provides better standards of health and QoL (Tsai, 2012; Ricarte; Bommarito; Chiari, 2011; Sanchez *et al.*, 2019).

5. CONCLUSION

Most professors had a positive perception of their QoL and considered themselves satisfied with their health. The prevalence of depression among professors was high when compared to other studies carried out in Brazil with university professors. The study also pointed out a correlation and association between depression and QoL, suggesting that depression can negatively interfere with the QoL of individuals. Likewise, dissatisfaction with working conditions and the practice of leisure activities were associated with depression, and the latter is associated with poor quality of life, since professors who were dissatisfied with working conditions had depression, and those who practiced leisure activities did not present manifestations of this disorder. Therefore, dissatisfaction with working conditions may be associated with the

development or worsening of depression, on the other hand, the results point to a possible protective effect that leisure activities offer for the mental health.

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