

QUALITY OF LIFE AND COMMON MENTAL DISORDERS AMONG MEDICAL STUDENTS

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ABSTRACT: The aim of this study was to evaluate the association between quality of life and common mental disorders among medical students from the State University of Southwest Bahia, Jequié campus. A cross-sectional study was conducted with 115 students (61 male and 54 female students) during the second half of 2016. The prevalence of common mental disorders was 32.2% (n=37). The lowest domain of quality of life among individuals with common mental disorders was the environment, with median of 56.4 (IQ 46.9-68.8), followed by psychological, 56.9 (IQ 50-66.6); physical health, 57.1 (IQ 46.6-67.8); and social relations, 65.5 (IQ 50-83.3). This study estimates that all domains of quality of life were reduced in individuals with suspected common mental disorders; and the final regression model showed the physical health and psychological domains as a protection factor for these individuals.

DESCRIPTORS: Quality of life; Mental health; Students; Mental disorders; Epidemiology.

QUALIDADE DE VIDA E TRANSTORNOS MENTAIS COMUNS EM ESTUDANTES DE MEDICINA

RESUMO: Objetivou-se avaliar a associação entre a qualidade de vida e transtornos mentais comuns em estudantes de medicina da Universidade Estadual do Sudoeste da Bahia campus de Jequié. Estudo de corte transversal desenvolvido com 115 estudantes (61 homens e 54 mulheres) durante o segundo semestre de 2016. A prevalência de transtornos mentais comuns foi de 32,2% (n=37). O menor domínio da qualidade de vida entre os indivíduos com transtornos mentais comuns foi o meio ambiente com mediana de 56,4 (IQ 46,9-68,8), seguido pelo psicológico 56,9 (IQ 50-66,6); físico 57,1 (IQ 46,6-67,8); e relações sociais 65,5 (IQ 50-83,3). Vislumbra-se que a totalidade dos domínios da qualidade de vida foram reduzidos em indivíduos com suspeição de transtornos mentais comuns, tendo o modelo final da regressão evidenciado os domínios físico e psicológico como fator de proteção para os mesmos.

DESCRIPTORIOS: Qualidade de vida; Saúde mental; Estudantes; Transtornos Mentais; Epidemiologia.

CALIDAD DE VIDA Y TRASTORNOS MENTALES COMUNES EN ESTUDIANTES DE MEDICINA

RESUMEN: Se objetivó evaluar la asociación entre calidad de vida y trastornos mentales comunes en estudiantes de medicina de la Universidade Estadual do Sudoeste da Bahia, campus de Jequié. Estudio de corte transversal desarrollado con 115 estudiantes (61 hombres y 54 mujeres) durante el segundo trimestre de 2016. La prevalencia de trastornos mentales comunes fue del 32,2% (n=37). El menor dominio de calidad de vida entre los individuos con trastornos mentales comunes fue medio ambiente, con mediana de 56,4 (IQ 46,9-68,8), seguido del psicológico 56,9 (IQ 50-66,6); físico 57,1 (IQ 46,6-67,8); y relaciones sociales 65,5 (IQ 50-83,3). Se observa que la totalidad de dominios de calidad de vida fueron reducidos en individuos con sospecha de trastornos mentales comunes, habiendo el modelo final de la regresión evidenciado los dominios físico y psicológico como factor de protección para los mismos.

DESCRIPTORIOS: Calidad de Vida; Salud Mental; Estudiantes; Trastornos Mentales; Epidemiología.

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● INTRODUCTION

The stressors inherent to the training processes in medical education are potential triggers of mental disorders, including common mental disorders (CMD). The consequences of these developments go beyond clinical issues, and may deteriorate the quality of life of students.

Common mental disorders are less severe and more frequent groups of mental disorders. Their symptoms include forgetfulness, difficulty concentrating, insomnia, irritability, and fatigue, as well as somatic complaints (that is, headache, lack of appetite, tremors, poor digestion)⁽¹⁻²⁾.

Undergraduate courses in the health area (for instance, nursing, physical therapy, medicine), because they are full-time programs, require more dedication and effort from the students, which may compromise their social life and physical well-being, thus affecting the quality of life (QoL) of these students⁽³⁾. QoL is defined as an individual's perception of the context in which they live and perform their activities, in relation to their goals, concerns, and expectations. It is a broad concept in which the individual's psychological, physical, social relations and environmental characteristics can be evaluated⁽⁴⁾.

The state of stress has been pointed out as frequent among students, who, in turn, extend this condition to post-academic life. In addition, studies show use of drugs and high prevalence of suicide, and psychological and marital disorders among this population, which can harm not only themselves, but also their patients, due to care negligence⁽⁴⁾.

Thus, the evaluation of issues related to health conditions and QoL of medical students will help understand the aspects involved in this relationship and support prevention and care actions to this population⁽⁵⁾.

Considering the above, this study aimed to evaluate the association between quality of life and CMD among medical students from the State University of Southwest Bahia, Jequié campus.

● METHOD

This is an analytical, cross-sectional epidemiological study. A total of 115 students (61 male, 54 female) enrolled in the medical course of the State University of Southwest Bahia, Jequié campus, participated in this study. Data were collected during the first and second school terms of 2016. Students who were regularly enrolled, over 18 years old, and who agreed to participate were included. Medical undergraduate students who were taking elective disciplines outside the Jequié campus were excluded.

For analysis purposes, the suspicion of CMD was used as a dependent variable, whereas QoL was the main independent variable. Other variables included as independent were: sex, race/skin color, marital status, and housing arrangement (living alone or in university facilities).

Data collection on QoL was performed using the WHOQOL-BREF, an instrument that evaluates the quality of life of adult populations, consisting of 26 questions grouped into four domains: physical health, psychological, social relations and the environment⁽⁶⁾. The suspicion of CMD was measured using the Self Reporting Questionnaire (SRQ-20), a multidimensional instrument containing 20 questions of binary answers (yes or no) that include a group of symptoms such as regarding depressive-anxious mood, somatic symptoms, reduced vital energy, and depressive thoughts⁽⁷⁾.

Regarding the classification of suspicion of CMD, it is worth noting variations in the cut-off points adopted for the diagnosis of suspicion of psychic morbidity. Thus, the chosen criterion considers scores ≤ 6 as non-suspicion of CMD, and >6 as suspicion of CMD⁽⁷⁾.

Data were evaluated by descriptive statistics. The distributions of relative and absolute frequency were developed, and medians and interquartile ranges for each variable were calculated using the non-parametric characteristic of the studied variables (that is, Kolmogorov Smirnov <0.05).

The Mann Whitney test was used to compare the medians of the domains of QoL according to

suspicion or non-suspicion of CMD. Subsequently, a logistic regression model was applied considering the variables presenting p value of <0.2 in the comparison of medians. Significant associations in the multivariate model were expressed by the beta coefficient and its respective confidence interval. All analyses were performed with the Statistical Package for the Social Sciences (SPSS), version 21.0.

This study was approved in May 2013 by the Research Ethics Committee of the State University of Southwest Bahia (UESB), protocol 274.134.

● RESULTS

In total, 115 medical students (61 male and 54 female students), mean age of 24.7 years (± 4.8), were interviewed. The prevalence of common mental disorders was 32.2% (n=37). Table 1 shows the characteristics of the studied population according to the suspicion of CMD. Among individuals with a suspected CMD, 70.3% (n=26) were female; 48.6% (n=18) of brown color; 64.9% (n=24) had a domestic partner; and 75.0% (n=27) did not live alone.

Table 1 - Characteristics of the studied population according to suspicion of common mental disorders. Jequié, BA, Brazil, 2016

	Suspicion of CMD	
	No [n (%)]	Yes [n (%)]
Sex		
Female	28 (35.9)	26 (70.3)
Male	50 (64.1)	11 (29.7)
Race/skin color		
White	24 (30.8)	13 (35.1)
Brown	35 (44.9)	18 (48.6)
Black	10 (12.8)	55 (13.5)
Indigenous	5 (6.4)	0 (0)
Marital status		
No domestic partner	39 (51.3)	13 (35.1)
With a domestic partner	37 (48.7)	24 (64.9)
Lives alone		
Yes	24 (30.8)	9 (25)
No	54 (69.2)	27 (75)

Table 2 shows the variables of quality of life. This study estimates that all domains of quality of life were reduced in individuals with suspected CMD. The lowest domain of QoL among individuals with CMD was the environment, with median of 56.4 (IQ 46.9-68.8), followed by psychological, 56.9 (IQ 50-66.6); physical health, 57.1 (IQ 46.6-67.8); and social relations, 65.5 (IQ 50-83.3). This difference between the medians was statistically significant by the Mann Whitney test.

Table 2 – Distribution of the domains of quality of life and suspicion of common mental disorders. Jequié, BA, Brazil, 2016 (continues)

	No suspicion		With suspicion		p
	Median	IQ	Median	IQ	
Physical health	76.8	67.8-85.7	57.1	46.6-67.8	<0.05

Psychological	74.2	66.6-83.3	56.9	50.0-66.6	<0.05
Social relations	77	75.0-91.6	65.5	50.0-83.3	<0.05
Environment	65	56.2-75	56.4	46.9-68.8	<0.05
General index	71.4	62.5-75	60.4	50-75	<0.05

Table 3 shows the final logistic regression model, with regression β coefficients of each variable remaining in the model, as well as the adjusted β coefficient. Attenuated coefficients were observed, but the psychological and physical health domains remained associated with the suspicion of CMD.

Table 3 - Regression β coefficient with and without adjustment, and confidence interval 95% of the final regression model for CMD risk. Jequié, BA, Brazil, 2016.

	β	IC 95%	Adjusted β	IC 95% for adjusted β
Physical health	0.918	0.875-0.964	0.929	0.892-0.969
Psychological	0.942	0.899-0.986	0.949	0.911-0.989

● DISCUSSION

This study showed a higher prevalence of CMD in female white students, with a domestic companion, and who did not live alone or in university facilities. Regarding quality of life, all domains were reduced in individuals with suspected CMD.

Studies that evaluate the prevalence of CMD have been conducted with different populations in the country. When analyzing findings from studies with medical students in Brazil, the prevalence of CMD presented here (32.2%) was lower than the results of studies conducted in Espírito Santo (37.1%)⁽⁸⁾, Pernambuco (42.6%)⁽⁹⁾, and São Paulo (44.7%)⁽¹⁰⁾. On the other hand, it was similar, lower or slightly higher than the findings of studies conducted in Bahia (29.6%)⁽¹¹⁾, Sergipe (33.3%)⁽¹²⁾, and Paraíba (33.6%)⁽¹³⁾.

These different results regarding the prevalence of CMD from various studies may be related to differences in the teaching-learning process, curricular structure, and regional or methodological differences related to study design⁽¹⁴⁾.

This study showed a higher prevalence of CMD among female students (70.3%). Similarly, studies reported a higher incidence of CMD in female medical students, ranging from 40.0 to 88.0%^(8,15-17).

Female students, when compared to male students, have difficulty in reconciling full-time program with the studies, that is, difficulty with full-time dedication. Possible causes of this increased risk in women are: interactions among hormonal influences, sexual differences linked with neuronal aspects involved with mood and anxiety, psychosocial stressors, prescribed gender roles, and the importance of social support for women⁽¹⁸⁻¹⁹⁾.

Living away from the family is another factor that influences QoL, and in the first few months it causes social isolation, as it is a phase of integration with a new lifestyle and the emergence of feelings, such as longing and sadness. Thus, the psychological dimension can be affected, which justifies the occurrence of common mental disorders, and a high rate of suicide and depression in this population^(4,8).

Medical training seems to have a negative impact on the mental health of students, caused by several determinants, such as academic overload⁽²⁰⁻²¹⁾, high frequency of stress⁽²²⁻²³⁾, anxiety and depression⁽²⁴⁻²⁶⁾, and relation of these factors with lower levels of quality of life.

The great demand impacting medical students generates strong pressure and stress as they are

required to present high performance, which reduces the amount of sleep, causing them to stay awake longer in order to meet the academic requirements and understand broad content of practice in this field. As a result, their sleep cycle is altered, considering that insomnia, resulting from sleep fragmentation, makes the students tired and drowsy during the day, compromising their performance and causing physical and mental exhaustion⁽²⁷⁾.

Considering the evaluation made by the SRQ-20, the students should be submitted to a professional mental health evaluation when QoL is notably affected, especially in its psychological and social relations domains. These are perhaps the most influential domains in the development of common mental disorders, since stress, often evidenced among medical students, is increasingly worrying, as it can cause physiological alterations, cardiovascular diseases and imbalance in the nervous system activity, which cause reduced QoL, generating irritation, impatience, depression, personal unhappiness, ultimately changing the individual's essence⁽¹⁸⁾.

The relationship of CMDs with quality of life was also measured in a study with 1,762 young people, aged 18 to 24 years, from the city of Pelotas, state of Rio Grande do Sul. All domains of QoL showed significant associations with CMD, and the people with CMD obtained lower scores when compared to those without CMD⁽²⁸⁾.

Higher education institutions should consider the health needs and conditions that medical education promotes, knowing the characteristics of their students and the critical moments during the program, aiming to develop strategies to support the students. The importance of mental health is recognized by the World Health Organization as the concept of health includes mental health, physical health, and social relations⁽⁸⁾.

The QoL of medical students shows changes in their behavior, and consequently, in their personality in adverse situations related to the medical training⁽²⁹⁾. The transition from school to higher education is associated with increased incidence of mental health problems due to the multiple stressors and changes in lifestyle⁽³⁰⁾.

The fact that the physical health and psychological domains are protective factors for the development of CMD seems to be closely related to the internal content evaluated by each of these domains. The physical health domain evaluates issues related to pain and discomfort, energy and fatigue, sexual activity, sleep and rest, and motor functions; the psychological domain assesses positive and negative feelings, memory and concentration, and self-esteem⁽³¹⁾.

Thus, increased values obtained in these domains will consequently represent greater energy and disposition, better sleep and rest patterns, better memory and concentration, better self-esteem, etc. Such increments are related to improved mental health conditions and reduced incidence of common mental disorders⁽²⁸⁾.

Despite the results obtained here, the study's cross-sectional methodological design does not enable to state the causal relationships among the studied variables. However, as it involved all medical students of the institution in question, it presents a real picture of the health situation and the risk to which these individuals are exposed.

● CONCLUSION

The results show that the physical and psychological domains of quality of life are protective factors for the development of common mental disorders among medical students. Hence, measures that improve such domains should be adopted urgently, such as physical and leisure activity, not allowing CMDs to reduce the general health of students or impact other aspects of their lives.

It should be noted that health training programs, not exclusively medical courses, are predisposing factors for mental disorders and reduced quality of life, given the factors discussed here (that is, excessive hours, contact with human suffering, responsibilities, etc.). Thus, further studies should be conducted with students from different areas (Nursing, Physical Therapy, etc.) for the development of targeted preventive and corrective approaches.

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