PSYCHOPATHOLOGY AND QUALITY OF LIFE
OF MEDICAL STUDENTS AND DOCTORS
FROM BRAZIL PARTICIPATING IN A
CONTINUING MEDICAL EDUCATION EVENT

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Background: Recent systematic reviews with meta-analysis of the Brazilian and international literature present evidence that medical students experience high rates of depressive symptoms and suicidal ideation. Similar findings were observed among resident physicians. The deterioration of mental health in medical students and residents is associated with worse quality of life indicators, defined as the “individual’s 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” (World Health Organization). There is also literature that associates psychiatric morbidity in different studies with: living alone and away from family, living away from college, difficulty making friends, sleep problems, poor self-rated academic performance, female gender and be part of a minority, despite low replication. Several studies correlate medical education and practice with the occurrence of mental disorders and reduction in quality of life, less effective patient care, increased medical errors and greater abstention.

Objectives: To evaluate mental health and quality of life of medical students and physicians of the Brazilian state of Tocantins (located in the Northern area of Brazil) participating in a continuing medical education event promoted by the state’s Regional Medical Council.

Materials and Methods: In 2018, 49 participants voluntary and anonymously were online surveyed about demographics characteristics, psychopathology measured by the State-Trait Anxiety Inventory and 16-item Quick Inventory of Depressive Symptomatology Self-Report, and quality of life measured by the World Health Organization Quality of Life-Bref (WHOQOL-BREF). The FMUSP Ethical Review Board approved this study (Registration number 01000318.7.0000.0065). All data are presented as mean $\pm$ SD and range for continuous variables and n and percentages (%) for categorical variables. Mann-Whitney test was conducted to analyze the relationship between gender and continuous variables. We used Spearman’s ρ correlation to investigate the relationship between two continuous variables. In all data analysis we used SPSS Statistics for Machintosh (IBM Corp. Released 2016. IBM SPSS Statistics for Macintosh, Version 24.0. Armonk, NY: IBM Corp.). Significance level was set at 0.05 and all tests were bicaudal.

Results and Conclusions: The characteristics of our sample are presented in table 1 and QIDS-SR 16 distribution is presented in figure 1, State-Anxiety in figure 2 and Trait-Anxiety in figure 3. We found a high prevalence of psychopathology and lower quality of life among medical residents/physicians attending the event, with similar rates when compared to other studies worldwide. Female participants presented higher trait anxiety (mean: 45.68 males, 47.57 females, $p=.045$), with no statistically significant difference was present for depressive symptoms and state anxiety.

Depressive symptoms, Trait-anxiety and State-anxiety were negatively associated with general scores of quality of life ($-.654$, $p<.001$; $-.344$, $p=.016$; $-.582$, $p<.001$), psychological quality of life ($-.596$, $p<.001$; $-.392$, $p=.005$; $-.529$, $p<.001$), social relationships ($-.624$, $p<.001$; $-.479$, $p<.001$; $-.528$, $p<.001$).

Depressive symptomatology and State-Anxiety were also negatively associated with physical quality of life ($-.471$, $p=0.001$; $-.409$, $p=0.004$) and environment ($-.451$, $p=0.001$; $-.453$, $p=0.001$).

This finding can guide future research on interventions to improve mental health amongst Brazilian medical students and professionals.

Discrete variables	n		(%)
Gender	49		
male (n;%)		19	57,4
female (n;%)		30	42,6
Continuous variables		mean	SD
Age, years	47*		
– mean (SD)		30.45	$\pm$ 9.53
– range		17-59	
STAI-Trait (20-80)	49		
– mean (SD)		46.84	$\pm$ 3.22
– range		41-54	
STAI-State (20-80)	49		
– mean (SD)		45.14	$\pm$ 10.83
– range		23-63	
QIDS-SR16 (0-27)	49		
– mean (SD)		6.9	$\pm$ 4.23
– range		0-23	
WHOQOL-BREF – General quality of life (0-100)	49		
– mean (SD)		65.98	$\pm$ 8.91
– range		44.62-81.54	
WHOQOL-BREF – Physical health (0-100)	49		
– mean (SD)		61.4	$\pm$ 8.67
– range		40-77.14	
WHOQOL-BREF – Psychological (0-100)	49		
– mean (SD)		65.71	$\pm$ 10.32
– range		44.33-86.67	
WHOQOL-BREF – Social relationships (0-100)	49		
– mean (SD)		67.21	$\pm$ 18.85
– range		20-100	
WHOQOL-BREF – Environment (0-100)	49		
– mean (SD)		69.44	$\pm$ 10.65
– range		37.5-87.5	

Table 1: Characteristics of participants included in the study
STAI: State-Trait Anxiety Inventory; QIDS-SR 16: 16-item Quick Inventory of Depressive Symptomatology Self-Report; WHOQOL-BREF: WHO Quality of Life-BREF; SD: standard deviation; total sample = 49 applicants; * n may vary as a result of missing data

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Figure 1: QIDS-SR16 scores