Correlation Between Quality of Life and Common Mental Disorders in Healthcare Students

Correlação Entre Qualidade de Vida e Transtornos Mentais Comuns Em Estudantes da Área da Saúde

Correlación entre Calidad de Vida y Trastornos Mentales Comunes en Estudiantes del Área de la Salud

RESUMO
Trata-se de um estudo transversal quantitativo, com amostra de 204 acadêmicos. Cujo objetivo foi verificar a prevalência de transtornos mentais comuns e seu impacto na qualidade de vida de estudantes da área da saúde da Universidade Estadual de Ponta Grossa Os dados foram coletados através do Self Reporting Questionare e pelo World Health Organization Quality of Life versão abreviada. Encontrou-se prevalência de transtornos mentais comuns de 70,1%, associados positivamente fonte de renda não própria e sexo feminino, além de negativamente aos estudantes de Medicina. Quanto a qualidade de vida, a média do escore foi de 58,37, sendo maior no domínio das relações sociais (62,95) e menor no psicológico (51,86). Dessa maneira, os acadêmicos pesquisados apresentaram prevalências elevadas de transtornos mentais comuns e escores inferiores de qualidade de vida comparados com estudos em outras universidades que utilizaram os mesmos questionários.
PALAVRAS-CHAVE: Ansiedade. Depressão. Transtornos somatoformes. Estudantes de ciências da saúde

ABSTRACT
This is a quantitative cross-sectional study with a sample of 204 students. The porpouse of the study was ascertain the prevalence of common mental disorders and their impact on the quality of life of healthcare students at the Universidade Estadual de Ponta Grossa. Data were collected using the Self-Reporting Questionnaire and the World Health Organization Quality of Life abbreviated version. The prevalence of common mental disorders was 70.1%, positively associated with female gender and not having their own source of income, and negatively associated with the Medicine course. Regarding quality of life, the mean score was 58.37, with highest score in the social relationship domain (62.95) and the lowest in the psychological domain (51.86). Therefore, the surveyed students showed high prevalence of common mental disorders and lower quality of life scores compared to other universities that used the same questionnaires.
KEYWORDS: Anxiety. Depression. Somatoform Disorders. Students Health Occupations

RESUMEN
Este es un estudio transversal cuantitativo, con una muestra de 204 estudiantes. Su objetivo fue verificar la prevalencia de trastornos mentales comunes y su impacto en la calidad de vida de los estudiantes de la carrera de salud de la Universidad Estatal de Ponta Grossa. Los datos se recopilaron a través del Self Reporting Questionnaire y la versión abreviada del World Health Organization Quality of Life. Se encontró una prevalencia de trastornos mentales comunes del 70,1%, asociados positivamente con la falta de fuente de ingresos propia y con el sexo femenino, y negativamente con los estudiantes de Medicina. En cuanto a la calidad de vida, la puntuación promedio fue de 58,37, siendo mayor en el dominio de las relaciones sociales (62,95) y menor en el psicológico (51,86). De este modo, los estudiantes investigados mostraron prevalencias elevadas de trastornos mentales comunes y puntuaciones más bajas en calidad de vida en comparación con estudios en otras universidades que utilizaron los mismos cuestionarios.
PALABRAS CLAVE: Ansiedad. Depresión. Trastornos somatoformes. Estudiantes de ciencias de la salud.

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INTRODUCTION

Common Mental Disorders (CMD) refers to a group of disorders that encompass conditions such as anxiety, non-psychotic depression, and somatization, as outlined by Goldberg and Huxley in the 1970s. Symptoms frequently reported by individuals with CMD include insomnia, asthenia, irritability, difficulties with concentration, memory, and decision-making, and somatic complaints. [1-6]

Although these disorders are not as severe as those related to psychosis, they have a significant impact on quality of life, causing emotional suffering, difficulties in interpersonal relationships and impairment in professional life. [1,3,4] Studies indicate that CMDs are responsible for a high degree of disability, with estimates suggesting that one in every six years of life is affected. In addition, premature mortality is a concern, since individuals with mental illnesses can die between 10 and 20 years earlier than the rest of the population, which also makes them vulnerable to suicide. [4,7]

The prevalence of CMDs is alarming. According to the World Health Organization (WHO), approximately 970 million people worldwide had some form of these disorders in 2019, with anxiety standing out, with 301 million cases, and depression, with 280 million. In Brazil, the prevalence is even more worrying, ranging from 12% to 22% (4, 8), compared to 9% to 12% in the rest of the world. [4,7]

Among university students, CMD rates are notably higher, ranging from 28.8% to 44.7% in several national and international surveys [6, 8], while among students in the health field this prevalence is 31.5% to 44.9%. [6] This situation is attributed to several stressors that accompany academic life, including performance-related anxiety, difficulty in time management, lack of motivation to study, low performance, excessive workload, lack of support and financial insecurity. [1, 2, 6]

Therefore, it can be stated that the manifestation of CMD is multifactorial, with the main determinants including genetics, environment, sex, age group and quality of life. [1, 2, 6] In this context, the present study aims to investigate the prevalence of CMD and its effects on the quality of life of health students at the State University of Ponta Grossa (UEPG).

METHOD

This is a cross-sectional epidemiological study with a quantitative approach, carried out with undergraduate students in the health field at the State University of Ponta Grossa (UEPG), in the state of Paraná. The study population consisted of students from the Pharmacy, Dentistry, Nursing, Medicine and Bachelor's Degree in Physical Education courses enrolled in 2023 at UEPG. For the sample calculation, the Epi-Info statistical software, version 7.0, was used, employing a 95% confidence interval, a 5% margin of error and an expected frequency of 50%. Thus, from the total population of 1,167 students (Physical Education: 182; Nursing: 191; Pharmacy: 208; Medicine: 292; Dentistry: 294), a desired sample of 289 students was calculated, which was stratified according to the proportion of students per course.

Participants were selected based on convenience, considering university admission as an inclusion criterion, regardless of age. Those who did not agree to participate in the research or who were unable to answer the questionnaire were excluded. Data were collected between May 11th, 2023 and June 1st, 2023, through an online questionnaire via Google Forms. The link to access the form was sent via WhatsApp by representatives of each

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class, in order to allow greater coverage of the target population. Access to the questionnaire was granted by logging in with an institutional email and agreeing to the Free and Informed Consent Form (FICF). In case of questions, a telephone number was made available for the researcher to contact.

Three anonymous and self-administered questionnaires were applied. The first, developed by the authors, addressed socioeconomic issues (age, course, year of graduation, gender, marital status, ethnicity, family income, predominant source of income, whether currently employed or in an internship, and hours dedicated to this purpose). For analysis purposes, the age variable was categorized as: 17-18, 19-20, 21-22, 23-24, and over 25 years old.

To screen for common mental disorders, the Self Reporting Questionnaire (SRQ-20), a free, open-access questionnaire from the World Health Organization that has been validated in Brazil (9), was used. This instrument consists of 20 dichotomous (yes/no) questions (10), 16 of which are about psychoemotional aspects and 4 about somatic complaints. The data evaluated by the SRQ-20 consider the last 30 days, in which each affirmative answer adds one point and negative answers add zero, resulting in a score from 0 to 20 points. Thus, individuals with a score equal to or greater than 7 (sensitivity of 68% and specificity of 70.7%) (9) were classified as having CMD.

The last questionnaire aimed to assess individuals' quality of life using the World Health Organization Quality of Life Short Form (WHOQOL-bref), also a free, open-access instrument from the World Health Organization, validated in Brazil (11). The WHOQOL-bref consists of 26 questions (12), the answers to which follow the Likert Scale. Of these, 2 questions address general quality of life, while the remaining ones are divided into four domains (physical, psychological, social relationships, and environment), with scores ranging from 0 to 100.

For statistical analysis, the data were entered into a Microsoft Excel 2019 spreadsheet. The statistical analysis was performed using both Microsoft Excel 2019 and the statistical software R, version 4.3.0. First, a descriptive analysis of the socioeconomic variables, the quality of life score, and the presence of CMD was performed.

To measure the association between socioeconomic variables and the SRQ-20, the odds ratio (OR) was used, using the chi-square test, considering a 95% confidence interval and p-value ≤ 0.05. To determine the association between the quality of life score and the other variables, the Shapiro normality test was initially performed for the WHOQOL-bref domains.

The environmental and social domains presented non-normal distribution; therefore, the p-value was calculated using the Mann-Whitney test for dichotomous variables (sex, marital status, employment/internship relationship, and screening for CMD) and the Kruskal-Wallis test for polytomous variables (course, ethnicity, income, source of income, age, and hours dedicated to employment/internship). The physical and psychological domains and the overall score presented normal distribution, so the p-value was calculated using Student's t-test for dichotomous variables and ANOVA for polytomous variables. In all analyses, it was considered statistically significant when $p \leq 0.05$.

This research was approved by the Ethics and Research Committee of the State University of Ponta Grossa under opinion 6.015.151 of April 22nd, 2023.

RESULTS

A total of 204 responses to the questionnaires were obtained, representing 70.58% of the planned sample, with the average age of the participants being 21.10 years (SD=3.33). Among the respondents, the majority were medical students, totaling 75 (36.8%), followed by dentistry students, totaling 40 (19.6%), pharmacy and nursing students, both with 31 (15.2%), and a bachelor's degree in physical education, totaling 27 (13.2%).

In addition, the majority of the respondents were female, totaling 143 (70.1%), and the vast majority were single, totaling 201 (98.5%). The majority were in the first year of undergraduate studies, totaling 56 (27.5%), and 171 (83.8%) self-identified as white. Regarding family income, 65 (31.9%) had a range of 2 to 5 minimum wages, and 166 (80.9%) had no employment or internship, with the main source of income coming from their parents, with 184 (90.2%). Table 1 shows the distribution of the sample according to socioeconomic characteristics.

Table 1 – Distribution of the sample according to socioeconomic variables of academics in the health field

Variable		N	%
Graduation year	1st	56	27,5%
	2nd	44	21,6%
	3rd	47	23%
	4th	31	15,2%
	5th	16	7,8%
	6th	10	4,9%

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Sex	Female	143	70,1%
	Male	61	29,9%
Marital status	Single	201	98,5%
	Married	3	1,5%
	Divorced	0	0,0%
	Widow	0	0,0%
Ethnicity	White	171	83,8%
	Black	11	5,4%
	Brown	17	8,3%
	Yellow	4	2,0%
	Indigenous	0	0,0%
	Rather not say	1	0,5%
Family income	Up to 2 minimum wages	26	12,7%
	2 - 5 minimum wages	65	31,9%
	5 - 10 minimum wages	62	30,4%
	10 - 20 minimum wages	35	17,2%
	More than 20 minimum wages	10	4,9%
	No income	6	2,9%
Main income source	Own	12	5,9%
	Parents	184	90,2%
	Other	8	3,9%
Currently employed/internship	No	166	80,9%
	Yes	3	19,1%
Hours spent working/internship*	Up to 4 hours	12	30,8%
	4 - 6 hours	10	25,6%
	6 - 8 hours	10	25,6%
	More than 8 hours	7	17,9%
Age	17-18	34	16,7%
	19-20	61	29,9%
	21-22	61	29,9%
	23-24	31	15,2%
	25 or older	17	8,3%

Source: field research; prepared by the authors

The prevalence of Common Mental Disorders in the study population was 70.1% (n=143) (95% CI; 63-76%). The analysis revealed a higher frequency of CMD among women, with 116 (81.1%), among individuals aged 19 to 20 years, totaling 44 (30.8%), among singles, with 141 (98.4%), among whites, totaling 117 (81.8%), and among medical students, with 40 (28.0%). The results showed a higher frequency in the first year of graduation, totaling 38 (26.6%), and among those with a family income in the range of 2 to 5 minimum wages, totaling 49 (34.3%). Regarding income, 131 (34.3%) reported that they received financial support from their parents, and 115 (80.4%) had no employment or internship relationship.

Table 2 describes the association between CMD and socioeconomic variables. It was observed that being a woman [OR 5.34 (95%CI 2.78-10.45)] and having a source of income other than one's own [for source from parents, OR 3.40 (95%CI 1.02-12.32) and for other sources, OR 8.03 (95%CI 0.94-251.10)] were factors that showed a statistically significant association ($p \leq 0.05$) and of a positive nature. On the other hand, being a medical student [OR 0.28 (95%CI 0.09-0.73)] showed a negative correlation with the presence of CMD.

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Table 2 – Prevalence of common mental disorders, according to socioeconomic variables in UEPG health students, 2023.

		With disorder		Without disorder		OR (CI 95%)	p-value
		N	%	N	%		
Course	Pharmacy	25	80,6%	*6*	*19,4%*		
	Nursing	26	83,9%	*5*	*16,1%*	1,28 (0,32-4,95)	*0,74*
	Medicine	40	53,3%	*35*	*46,7%*	0,28 (0,09-0,73)	*0,008*
	Dentistry	34	85,0%	*6*	*15,0%*	1,35 (0,37-4,94)	*0,63*
	Bachelor's Degree in Physical Education	18	66,7%	*9*	*33,3%*	0,49 (1,38-1,63)	*0,22*
Year of graduation	1st	38	67,9%	18	32,1%		
	2nd	35	79,5%	9	20,5%	1,82 (0,73-4,80)	0,19
	3rd	32	68,1%	15	31,9%	1,01 (0,44-2,35)	0,98
	4th	20	64,5%	11	35,5%	0,86 (0,34-2,23)	0,75
	5th	11	68,8%	5	31,3%	1,03 (0,31-3,77)	0,95
	6th	7	70,0%	3	30,0%	1,08 (0,26-5,79)	0,89
Sex	Female	116	81,1%	27	18,9%	5,34 (2,78 – 10,45)	<0,0001
	Male	27	44,3%	34	55,7%		
Marital status	Single	141	70,1%	60	29,9%		
	Married	2	66,7%	1	33,3%	0,80 (0,06-25,50)	0,90
Ethnicity	White	117	68,4%	54	31,6%		
	Black	9	81,8%	2	18,2%	1,69 (0,47-14,48)	0,35
	Brown	13	76,5%	4	23,5%	1,46 (0,48-5,55)	0,49
	Yellow	3	75,0%	1	25,0%	1,27 (0,14-37,09)	0,78
	Rather not say	1	100,0%	-	-	-	-
Family income	Up to 2 minimum-wages	20	76,9%	6	23,1%		
	2-5 minimum wages	49	75,4%	16	24,6%	0,93	0,88
	5-10 minimum wages	42	67,7%	20	32,3%	(0,29-2,66)	0,39
	10-20 minimum wages	22	62,9%	13	37,1%	0,64 (0	0,24
	More than 20 minimum wages	6	60,0%	4	40,0%	20-1,79)	0,30
	No income	4	66,7%	2	33,3%	0,52 (0,15-1,60)	0,60
Main income source	Own	5	41,7%	7	58,3%	0,46 (0,09-2,40)	
	Parents	131	71,2%	53	28,8%	0,60 (0,08-5,77)	0,03
	Other	7	87,5%	1	12,5%		0,04
Currently employed/ internship	No	115	69,7%	50	30,3%	3,40 (1,02-12,32)	
	Yes	28	71,8%	11	28,2%	8,03 (0,94-251,10)	0,79
Hours spent working/internship	Up to 4 hours	9	75,0%	3	25,0%		
	4 -6 hours	6	60,0%	4	40,0%	1,10 (0,51-2,48)	0,45
	6-8 hours	8	80,0%	2	20,0%		0,78
	More than 8 hours	5	71,4%	2	28,6%	0,52 (0,07-3,39)	0,86
Age	17-18	24	70,6%	10	29,4%	1,29 (0,16-12,51)	
	19-20	44	72,1%	17	27,9%	0,83 (0,09-9,14)	0,87
	21-22	39	63,9%	22	36,1%		0,51
	23-24	23	74,2%	8	25,8%	1,08 (0,41-2,73)	0,75
	25 or more	13	76,5$	4	23,5%	0,74 (0,30-1,83)	0,66

Source: field research; prepared by the authors

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Regarding the responses to the SRQ-20, the three most prevalent complaints were nervousness, tension or worry, totaling 177 (89.8%); feeling tired easily, with 150 (73.5%); and feeling tired all the time, accounting for 144 (70.6%), as shown in Table 3.

Table 3 – Prevalence of symptoms according to responses to the SRQ-20 among UEPG health students, 2023.

Variable	n (N=204)	%
Nervousness, tension or worry	177	86,80%
Feeling tired more easily	150	73,50%
Feeling tired all the time	144	70,60%
Sleeping poorly	128	62,70%
Difficulty thinking clearly	117	57,40%
Frequent headaches	112	54,90%
Difficulty making decisions	112	54,90%
Unpleasant sensations in the stomach	101	49,50%
Feeling scared easily	90	44,10%
Suicidal thoughts	89	43,60%
Poor digestion or digestive upset	82	40,20%
Unhappiness	74	36,30%
Difficulty enjoying daily activities	73	35,80%
Loss of interest in things	71	34,80%
Crying more than usual	70	34,30%
Trembling hands	69	33,80%
Feelings of worthlessness	62	30,40%
Lack of appetite	59	28,90%
Difficulty or suffering in daily work	48	23,50%
Inability to play a useful role in life	38	18,60%

Source: field research; prepared by the authors

The overall average of the quality of life scores obtained in the survey was 58.37 (SD=13.66). The average by domains varied between 51.86 and 62.95, being classified in ascending order: psychological domain with an average of 51.86 (SD=18.47), physical with 57.72 (SD=16.36), environment with 60.95 (SD=15.25) and social relationships with 62.95 (SD=18.43). The perception of the students indicated that the majority considered themselves to have a good quality of life, totaling 103 (50.5%), while 70 (34.3%) reported that they were neither dissatisfied nor satisfied with their health status.

In addition, it was observed that CMD, undergraduate course, gender, marital status, family income, and employment or internship relationship were associated ($p \leq 0.05$) with all the domains evaluated. In the psychological domain, the association was also verified with the source of income. In the environmental domain, the lowest means with statistically significant association were found among women, married individuals, those who screened positive for CMD, pharmacy students, those with income below 2 minimum wages, and those without employment or internship relationships.

The data observed in the physical domain were similar to those in the environment domain, with the exception of the Nursing course. The same pattern was identified in the social relations domain, except for marital status and employment or internship (single and presence, respectively). In the psychological domain, this population differed from the environment domain

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in relation to the presence of employment or internship and the source of income that was neither their own nor that of their parents.

Table 4 presents the averages of the quality of life score in relation to the socioeconomic variables and the presence of CMD.

Table 4 – Average WHOQOL-bref according to socioeconomic variables and SRQ-20 result, among health students at UEPG, 2023.

Variables		Physical			Psychological			Social Relations			Environment		
		Mean	SD	p-value	Mean	SD	p-value	Mean	SD	p-value	Mean	SD	p-value
Absence of disorder		72,01	12,29	*<0,0001**	*69,33*	13,11	*<0,0001**	72,68	15,82	*<0,0001***	71,62	*12,53*	*<0,0001****
Presence of disorder		51,62	13,91		*44,41*	15,1		58,8	14,02		56,4	*17,93*	
Course	Pharmacy	52,76	17,24	*0,007**	*42,74*	18,82	*0,054***	56,72	18,56	*0,01****	54,64	*15,24*	*0,007****
	Nursing	51,27	16,07		*47,04*	19,81		60,22	21,49		57,46	*13,37*	
	Medicine	61,38	16,36		*58,56*	17,83		68,67	16,37		65,46	*15,67*	
	Dentistry	55,27	15,6		*50,73*	14,06		60,21	17,04		60,08	*16,07*	
	Bachelor in Physical Education	64,29	12,21		*50,93*	18,47		61,42	18,94		61	*11,61*	
Year of graduation	1st	58,23	15,96	0,41**	51,49	17,76	0,90**	61,9	21,19	*0,81****	61,22	*16*	*0,36****
	2nd	56,57	15,46		52,56	18,18		62,31	19,23		61,72	*15,39*	
	3rd	55,09	16,66		50	17,87		64,54	16,06		60,77	*17,05*	
	4th	61,06	16,53		56,32	19,24		66,13	16,66		63	*12,55*	
	5th	54,24	17,11		46,88	17,38		57,29	19,21		54,3	*12,85*	
	6th	58,23	17,53		53,75	26,09		63,33	13,15		61,25	*13,03*	
Sex	Male	63,52	17,17	<0,0001*	59,22	21,27	<0,0001*	68,31	19,89	*<0,0001***	65,52	*16,14*	*<0,0001****
	Female	55,24	15,4		48,72	16,22		60,66	17,34		59	*14,49*	
Marital status	Single	57,87	16,36	<0,0001*	52,05	18,25	<0,0001*	62,77	18,48	*<0,0001***	61,02	*15,33*	*<0,0001****
	Married	47,62	14,87		38,89	32,36		75	8,33		56,25	*8,27*	
Ethnicity	White	57,79	16,36	0,92**	52,75	18,49	0,19**	63,84	18,37	*0,24****	61,24	*15,75*	*0,80****
	Black	55,52	20,48		48,11	15,96		56,06	12,96		55,97	*13,07*	
	Brown	56,93	12,59		45,1	16,75		59,8	20,88		60,48	*11,26*	
	Yellow	65,18	24,46		53,13	31,8		66,67	13,61		64,06	*18,13*	
	Rather not say	53,57	-		50	-		25	-		62,5	-	
Family income	Up to 2 minimum-wages	52,75	16,94	0,03**	44,87	18,38	0,001**	54,81	19,32	*0,051****	53,13	*14,5*	*<0,0001****
	2-5 minimum wages	57,25	17,16		47,56	19,28		60,13	18,72		56,88	*13,67*	
	5-10 minimum wages	57,14	15,93		55,04	16,72		65,32	16,61		62,1	*15,11*	
	10-20 minimum wages	60,92	13,88		57,02	19,19		69,05	19,96		69,46	*13,11*	
	More than 20 minimum wages	63,21	17,98		58,75	13,67		68,33	12,3		73,13	*9,68*	
	No income	62,5	19,27		54,17	15,59		59,72	15,29		57,29	*22,59*	
Main income source	Own	63,39	22,44	0,10**	58,33	22,68	0,02**	62,5	23,16	*0,39****	60,94	*8,37*	*0,36****
	Parents	57,63	15,96		52,04	17,75		62,64	18,27		61,23	*15,78*	
	Other	51,34	14,28		38,02	23,51		70,83	14,09		54,69	*8,84*	
Currently employed/ internship	Não	57,06	15,85	<0,0001*	52,12	18,15	<0,0001*	63,54	17,64	*<0,0001***	60,72	*15,55*	0,57****
	Sim	60,53	18,3		50,75	19,96		60,47	21,52		61,94	*14,06*	

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Hours spent working/ internship	Até 4 horas	61,9	19,46	0,18**	50	18,97	0,97**	60,42	24,13	0,80****	63,28	*19,41*	0,57****
	De 4 a 6 horas	66,43	17,35		49,58	21,74		56,67	18,76		65	*12,13*	
	De 6 a 8 horas	60,36	15,29		56,25	18,87		63,33	16,29		60	*11,3*	
	Mais de 8 horas	50	20,82		45,83	23,2		61,9	29,99		58,04	*10,4*	
Age	17-18	55,04	16,17	0,81**	50,25	21,64	0,97**	62,01	22,3	0,99****	59,47	16,35	0,10****
	19-20	59,25	16,46		51,78	16,13		62,84	17,72		63,17	15,7	
	21-22	58,72	15,26		53,89	18,18		63,8	18,5		61,99	13,85	
	23-24	58,53	17,24		51,08	19,89		61,56	17,7		60,48	14,8	
	25 ou mais	52,52	18,72		49,51	19,43		64,71	14,89		53,13	15,93	

Source: field research; prepared by the authors
* Student's T test; **ANOVA*** ;Mann Whitney test;****Kruskall-Wallys test

DISCUSSION

The prevalence of common mental disorders (CMD) identified among health students was 70.1%, a higher rate than that found in several previous studies that used the SRQ-20 as an assessment instrument, whose rates ranged from 31.5% to 53.9%. [6, 13-16] This increase was observed both in the comparison between students from different courses and in the general comparison with other research in the health area. For example, a study carried out at the Federal University of Vale do São Francisco [6] reported a prevalence of CMD of 40.8% among Physical Education students, while at the State University of Ponta Grossa (UEPG), this rate was 66.7% for the same course.

Among Dentistry students, the prevalence of CMD was 85%, higher than that found at universities in the Northeast and Southeast of Brazil, where the rates were 36.8% and 45.2%, respectively. [13, 16] In the Nursing course, the prevalence of CMD in the present study was 83.9%, also high in relation to other investigations in the literature, which ranged from 39.8% to 56%. [6, 13, 17]

In Brazil, among medical students, the prevalence of CMD found varies between 30.1% and 50.9%. [3, 4, 6, 13, 18-20] A systematic review with meta-analysis, which covered 13 studies on mental disorders among medical students until 2016, found an average rate of 31.5% [15], both values remained below the rate observed in our UEPG students, which was 53.3%.

In addition, a strong association was observed between the presence of CMD and being a woman and not having a source of income, while studying medicine was related to lower chances of CMD than other courses in the area, similar to what was found in the literature. [3, 6, 13, 14, 17, 21] Not having your own income is associated with greater financial dependence and, possibly, less emotional maturity in the face of external pressures, which may contribute to a higher incidence of CMD. [13, 18]

The fact that females are more associated with CMD can be explained by the greater workload, double shifts, accumulation of functions and exposure to negative events, such as discrimination and abuse. [6, 14] Culturally, men find it more difficult to open up and seek psychological support services [14], which may justify the predominance of female responses in the questionnaires. Furthermore, in the last four decades, there has been an increase in the number of women entering higher education. [22]

Some studies have found an association with older ages [18], low family income [17], being single [21] and be in the final years of the course. [18] However, even with the higher prevalence of CMD among the population of this study, the authors were unable to find statistically significant associations for these variables.

Regarding quality of life, the scores obtained by UEPG students were lower than those of other studies carried out at universities that also used the WHOQOL-BREF, both in the general average and by domains. [8, 23-26] Although most academics rated their quality of life as good, [24, 26-28] self-assessment of health status showed a discrepant result; most students declared themselves dissatisfied or indifferent, while in other studies the majority considered themselves satisfied. [27, 28]

The highest quality of life scores in the present study were recorded in the domain of social relations, a finding corroborated by the literature [8, 23, 25, 27, 28], suggesting that entering university can facilitate the formation of new friendships and the expansion of social networks. [25] On the other hand, the lowest score was found in the psychological domain, in line with the reality found in universities in Minas Gerais. [8] Still, other studies reported lower scores for the environment domain. [23, 25-29] This discrepancy, both in the overall average and in the psychological domain, can be explained by the high prevalence of CMD observed in this study, with the presence of mental disorders being directly associated with lower quality of life scores, especially in the psychological domain. [8, 24]

Among the variables associated with lower quality of life scores, the following were found: presence of CMD, Pharmacy or Nursing courses (physical domain), female gender, married marital status (in social relationships, referring to singles), family income below 2 minimum wages, and the pres-

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ence of employment or internship (absent in the physical and environmental domains). Only in the psychological domain was the source of income a determining factor. Previous studies have also reported associations of CMD with gender and family income; however, these same studies did not find relevant associations with courses, marital status, and employment or internship. [8, 17, 23-25, 27, 29]

The discrepancies and similarities in the results between studies on quality of life and prevalence of CMD can be, in part, attributed to the curriculum, infrastructure and teaching methods. [13, 30] However, according to the literature, there are several factors that help explain the high prevalence of CMD among university students, especially among those in the general health field. [3, 4, 6, 8, 18] These conditions include competitiveness, fear of making mistakes, difficulty in dealing with failures; excessive pressure, feelings of inadequacy, desire to drop out of the course, lack of family contact, emotional stress, and constant contact with illness, psychological distress and death, in addition to the fear of getting sick. These problems can be exacerbated by work overload and full-time workloads, which cause difficulties in time management and the consequent reduction in leisure time, negatively affecting quality of life. [3, 4, 13, 14, 17, 18, 20, 21]

Finally, the aforementioned factors not only contribute to the presence of CMD, but also to the decrease in quality of life [24-29], which is associated with the development of mental disorders such as anxiety and depression. [24]

This study has several strengths that contribute to its relevance. The inclusion of a representative sample of students from different health courses allowed a comprehensive analysis of the prevalence of CMD and quality of life. In addition, the use of validated instruments, such as the Self-Reporting Questionnaire (SRQ-20) and the WHOQOL-BREF, ensures the validity and reliability of the data collected. Additionally, the research provides up-to-date information on the mental health of students at the State University of Ponta Grossa (UEPG), contributing to the local understanding of the situation and supporting the development of more effective health policies.

However, it is also important to recognize some limitations. The study presented a sample 29.4% below the intended sample, which resulted in an increase in the margin of error from 5% to 5.71% (95% CI). Furthermore, since this is a cross-sectional study, a causal relationship between the variables cannot be established. Another limitation is a possible overestimation of the result, since the SRQ-20 is a screening instrument, requiring an assessment with a psychiatric interview to confirm the diagnosis. Therefore, new studies with a longitudinal design, comparison with a psychiatric interview and the inclusion of courses outside the health area for comparative purposes are indicated.

CONCLUSION

The 70.1% prevalence of common mental disorders (CMD) among health students at the State University of Ponta Grossa (UEPG) highlights the vulnerability of this population to mental health. Factors such as being female and not having a source of income are associated with a higher incidence of CMD. Although many students rated their quality of life as good, the lowest scores were observed in the psychological domain, reflecting the negative impact of CMD on this aspect.

These results highlight the urgency of interventions that promote students' mental health and quality of life, in addition to the implementation of psychological support programs in educational institutions. Future studies should investigate specific interventions to mitigate CMD and improve the well-being of students.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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