A cross-sectional study on the symptoms of depression in dental students in Kerbela

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Abstract
Major depressive symptoms are a frequent mental illness with a wide range of clinical manifestations and disease associations. The aim of the present study was to evaluate psychological depressive symptoms among Kerbela dental students. This is cross-sectional study in Kerbela universities, dental colleges from (January - February 2023). The nine Questionnaire of Patient Health is a self-administered tool for diagnosing common mental symptoms dependent on (DSM-IV) criteria ranging from "0 to 3", which (0) is representing no appearance of any symptoms) and "3" is representing appearance of the symptoms. The diagnostic algorithm calculated a total score out of (27), classifying scores of (5-9) mild, (10-14) moderate, (15-19) fairly severe, and more than or equal to (20) severe depressive symptoms. The sociodemographic inquiries concerned living circumstances, dental classes, and gender. A prior study carried out in the Kingdom of Saudi Arabia examined the validity and reliability of the Arabic version. Each university including all stages from first to fifth stages, who do not take any medication previously or had no depressive symptoms previously and any chronic disease. The participation in this study is voluntary, and completion of the questionnaire considered as an informed consent. The data showed significant difference for gender and living condition. Whether there no significant difference for dentistry class. The prevalence of depressive symptoms was substantial among our sample. A high prevalence found during dental classes. Psychological supporting preventive programs are needed to apply for supporting students' mental health.

Keywords: Dental students, living conditions and psychological disorder.

Introduction

Depressive symptoms are a normal physiological response that results in a mental disorder, namely depression, when emotional, psychological, or even physical problems interfere with an individual's functioning over an extended period (1-3). A common mental illness with a broad spectrum of clinical presentations and disease correlations worldwide is severe depressive symptoms. It is usually ignored, and the practitioner often does not identify it (4). More women than males are affected by the 300 million or so people who experience depression symptoms globally. Signs of depression appeared to include feeling depressed or

having a disability that interferes with one's ability to function normally at work, at home, or when participating in social activities (5).

Serious symptoms of depression were (2.5) times less common in people living below the poverty line than in those above it. Major depressive disorder is associated with the increasing prevalence of chronic illness and its effects on healthcare systems (6). The diagnosis of depression symptoms accounted for almost 10.4% of all visits to practitioners' clinics (7). The Nine Questionnaire of Patient Health (PHQ-9) is a major depressive disorder screening tool that is based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) diagnostic criteria. The questionnaire consists of nine items, each of which has a value between 0 and 3. The overall score ranges from 0 to 27 degrees. However, depression is not identified by the PHQ-9 scores. The questionnaire is a useful and reliable tool in terms of data validity. Gender is neither distinguishing nor identifying in order to avoid the establishment of bias (8-10) Stress has been found to affect dental students over their five years of education. Stress has been found to affect dental students over their five years of education. Stress reduces life quality and academic performance, according to research. Thirty per cent of dentistry students had symptoms of depression, which were associated with the stress they experienced. The likelihood of developing depressive symptoms was highest among all dental students, and the proportion of students with depressive symptoms rose by about 31% between the first and fifth classes. It implies that the symptoms of depression in dental students might get worse over time if it is not recognized and treated properly (11) Because of their personality, dental students are more likely than other collagenous students to suffer from depression symptoms.

Social pressure to perform well in all facets of dentistry, fear of infection during practical training, and familiarity with the discipline. The results of the study showed that female dental students had greater depressive symptoms than their male counterparts. The purpose of this study was to ascertain the prevalence and severity of depression symptoms among dental students enrolled in Kerbela universities.

Materials and Methods

This cross-sectional study, which used a convenience sample and a multi-item questionnaire, was conducted over the course of two months in January and February of 2023 in Karbala dentistry colleges. The PHQ-9 is a self-administered tool for diagnosing common mental symptoms based on DSM-IV criteria. The scale goes from 0 to 3, where 0 indicates no appearance of depression symptoms and 3 indicates the appearance of depression symptoms roughly daily. A total score out of 27 was determined by the diagnostic criteria, which classified scores of 5–9 as mild, 10–14 as moderate, 15–19 as fairly severe, and greater than or equal to (20) as severe symptoms of depression.

The sociodemographic questions centered on gender, dental classes, and housing arrangements. The validity and reliability of the Arabic version had been assessed in a previous study conducted in Saudi Arabia. A team of twenty-seven data collectors from three universities has been put together to collect data from dentistry students at their respective institutions. Unfortunately, there weren't many volunteers to assist with the data collection. Originally, we wanted two data collectors per university, one for each gender of students. The questionnaire to collect responses was then given in hard form to each data collector, who then submitted it using a Google Form for data processing. Participation in this study is entirely

voluntary, and answering the questionnaire is considered informed consent. Dental students were excluded from this study if they did not answer the questions. SPSS Version (23.0) was used to analyse the data. The Chi-squared test and descriptive statistics, which are represented as mean SD, are used to determine P-values related to sociodemographic factors. The institutional review board approval obtained from college of medicine/Karbala University by research ethics committee, and the research had conformed in accordance with the Declaration of Helsinki.

Results

Results for living conditions, gender, and the impact of COVID-19 were significant. There isn't much of a change for the year of dentistry. Table (1) provides a summary of the study participants' descriptive statistics. Table (2) summarizes the relationship between the participants' characteristics and their level of depression. The table (3) summarizes the relationship between the participants' characteristics and the presence of depressive symptoms.

Table 1: The Descriptive Statistics of Study Participants(N=310)

Variables	Category	N (%)	
Gender			
	Female	217 (70.5)	
	Male	93 (29.8)	
Living condition			
	Family	277 (91)	
	Friend	21 (6.6)	
	Alone	12 (3.6)	
Dentistry Year			
	First	32 (10.4)	
	Second	24 (7.4)	
	Third	90 (29.3)	
	Fourth	101 (32.9)	
	Fifth	63 (20.3)	
Age	Mean (SD)	21.1 (1.5)	

Table 2: Association between severity of depression symptoms& participant's characteristics.

Gender		Normal	Mild	Moderate	Moderately severe	Severe	P value
	Female	29 (12.6)	78 (36.1)	72 (33.3)	25 (11.6)	14 (6.5)	
	Male	14 (13.4)	41 (45.1)	29 (31.9)	7 (7.7)	2 (2.2)	
	Total	42 (13.1)	119 (38.8)	101 (32.9)	32 (10.4)	16 (5.2)	
living condition							
	With family	33 (12)	108 (39.1)	90 (32.6)	30 (10.9)	15 (5.4)	
	with friends	4 (20)	8 (40)	5 (25)	2 (10)	1 (5)	
	Alone	2 (18.2)	3 (27.3)	6 (54.5)	0 (0)	0 (0)	
	Total	39 (12.7)	119 (38.8)	101 (32.9)	32 (10.4)	16 (5.2)	
Level							
	1	3 (9.4)	15 (46.9)	11 (34.4)	3 (9.4)	0 (0)	
	2	2 (9.1)	4 (18.2)	12 (54.5)	1 (4.5)	3 (13.6)	
	3	11 (12.2)	31 (34.4)	30 (33.3)	9 (10)	9 (10)	
	4	15 (14.9)	38 (37.6)	34 (33.7)	15 (12.1)	2 (2)	
	5	8 (12.9)	31 (50)	14 (22.6)	7 (11.3)	2 (3.2)	
	Total	39 (12.7)	119 (38.8)	101 (32.9)	35 (10.7)	16 (5.2)	

Table 3: Association between presence of depression symptoms & participant's characteristics.

Variable	Category	Presence of depression				P-value
		yes		No		
Gender	Male	12	(13.2%)	79	86.8%	0.501
	Female	30	(12.8)	189	87.5%	
Dentistry Year						
	1.00	3	9.4%	29	90.6%	0.907
	2.00	2	9.1%	20	90.9%	
	3.00	11	12.2%	79	87.8%	
	4.00	18	15.2%	86	85.1%	
	5.00	8	12.9%	54	87.1%	
Living Condition						
	With family	33	12.0%	243	88.0%	0.497
	with friend	4	20.3%	16	80.0%	
	Alone	2	18.2%	9	81.8%	

Discussion

This study evaluated the prevalence and intensity of depression symptoms among dentistry

students at Kerbela Universities. The students also reported positive patient interactions and a low risk of infection while performing dental work. Information regarding the existence and intensity of depressive symptoms among dental students at Kerbela universities was gathered for this purpose using a questionnaire made up of closed-ended questions. Our findings supported our theory, indicating that dental students were most likely to exhibit signs of sadness (12, 13).

According to the gender criteria, women were more likely than men to have mild-to-mild depressive symptoms, and there was a notable difference between the sexes because women were more likely to experience stress, sadness, and sleep problems when they were depressed, whereas men tended to be irritable and impulsive. This is consistent with readings [14, 15,] and [15], which denied the idea that males experience "irritable depression."

Of our sample, 277 (91) reported feeling depressed when living with family, 21 (6.6) when living with friends, and 12 (3.6) when living alone. The percentage of people who reported feeling depressed with family was high, and there was a significant difference between living with friends, family, and alone. The reason for this could be because friends could understand and support them without notifying the family, who might not be aware of the slightest aspects that occur during daily life. This is consistent with the results of earlier research involving high school and college students. (13, 16) The fourth class at dentistry colleges had the largest percentage of depressive symptoms, according to our research, although there was no statistically significant difference across the classes.

This contrasts with a study by Liu et al. (2019) 17, which discovered that after displaying the highest levels of stress, anxiety, and depressive symptoms during their first three years of college, students' mental health gradually improved in their fourth year.

CONCLUSION

The prevalence of depressive symptoms was substantial among our sample of dental students in Kerbela universities. A highly prevalence of depressive symptoms found during dental classes, with all educational institution's rules and programs. Programs of psychological supporting preventive are needing to apply for supporting mental health of dental students.

Acknowledgment

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