Research Article

Anxiety, Depression and Antidepressant Drug Usage Among Indian College Students

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Abstract

Background: We aimed to assess the prevalence of anxiety and depression as well as using antidepressant drugs among students at colleges affiliated to Rajiv Gandhi University of Health Sciences.

Methods: The study subjects were 428 pharmacology students of Rajiv Gandhi University of Health Sciences. Anxiety and depression were evaluated using the Hospital Anxiety and Depression Scale.

Results: Overall, 34.0% of students had anxiety signs. Also, 27.0% had mild, 11.0% had moderate and 7.0% had severe signs of depression. The most common antidepressant medications included Moclobemide or Clorgyline, tricyclic antidepressants, and otonin-norepinephrine reuptake inhibitor. Living alone, relationship with friends and family, parental loss, body image, family income, fear of future life, exercise, alcohol intake, and smoking were the correlates of both depression and anxiety.

Conclusion: A significant number of students suffer from depression and anxiety leading psychological drugs usage. This psychological condition is potentially affected by their socioeconomic status and lifestyle.

Keywords: Student; Depression; Anxiety; Antidepressant; Lifestyle

Introduction

The college years of an individual are emotionally and mentally more needing than other stages of education. At this stage, an individual faces a lot of demands and difficulties that form physical, social and emotional challenges [1]. University students are increasingly prone to stress, anxiety, and depression, which increase the psychological morbidity and influence their academic performance and their mental health [2]. University students suffer from many types of academic stressors during their education experiences. Furthermore, stress, anxiety, and depression are linked to several risk factors, such as age, gender, specifically being female, which can be attributed to biological factors, academic pressure stemming from factors, including exams and study load and accommodation [3-5]. Medical students experience higher risk of mental disorders in comparison to the general population

as medical training is full of stress due to difficult circumstances (such as the long length of schooling, clinical practice stress, difficult patients, financial concerns, homesickness etc.). Anxiety and depression in medical students need wider awareness and greater attention because medical students are more susceptible to mental disorders and mental health of a medical student remains affected throughout training [6]. This may have adverse effect on patient care and impact on their academic performance and quality of life [7]. Also previous studies have been shown which an anxious medical student were less empathetic and less enthusiastic when caring for patients with chronic illness [8]. So there is a need for understanding the prevalence rate of anxiety and depression among pharmacy students in Bangalore, India, in order to identify at risk students and provide timely assistance and intervention.

By using of these data, medical schools can help medical students by addressing some of the modifiable factors and promotion of available wellness programs and resources for mental health in medical school. This study may help in designing appropriate intervention strategies to enhance the learning abilities which will improve the patient care by achieving good communication, increasing quality of care and decreasing medical errors in addition to burden the costs paid by the society through anxiety and depression attenuation.

Use of psychoactive drugs (such as antidepressants) by medical students is a sensitive and important issue because it can potentially effect on their health, performance and interfere with their concentration [9]. The long-term and uncontrolled use of antidepressant medicines by medical students can lead to addiction with serious consequences on health and professionals performance [10]. The study finding also will provide data related to antidepressant medicines usage among pharmacy students in Bangalore. By considering of this data medical schools can provide an environment in which medical students are encouraged to adapt responsible attitudes to the use of these medicines. Medical colleges must be ensure that they provide appropriate educational programs on antidepressants abuse and promote a healthy lifestyle. Also medical schools can consider organizing structured programs that are shown by research to reduce anxiety and usage of related medicines. The findings of this study also can help to set certain policies to improve medical curriculum.

Materials and Methods

Study population

This was a cross-sectional study which the prevalence of anxiety, depression and use of antidepressants drugs among students, were investigated at Rajiv Gandhi University of Health Sciences around Bangalore city, India, on the month of November 2019 to May 2020. The study subjects included the pharmacology students of Rajiv Gandhi University of Health Sciences Colleges in Bengaluru district of Karnataka state participated in the study. In this regard, those who were refuse to fill the questionnaire, were absent during the study period, would not complete the questionnaire, or already were diagnosed with a mental illness or on treatment were all excluded from our survey.

Study methodology

The study was performed through 3 stages of the procedure. In the beginning, literature review was done from online literature regarding the prevalence of anxiety, depression and use of antidepressants drugs among university going students. The aim of literature review was to observe the rate of depression, anxiety prevalence and antidepressants drugs use in other studies in both male and female students. Followed by the literature review, data collection step was executed by collecting data with the help of a survey questionnaire. Demographic data were collected on age, gender, course, year of study, year back status, number of siblings, birth order, relationship status with family and friends, and family income status. Also antidepressants and illicit drugs usage was assessed by two type of questions about frequency of use and type of use. The alcohol, coffee consumption and exercise, sleeping patterns and smoking habits also were evaluated. Anxiety and depression were evaluated using a valid and reliable 14 items self-administered scale "Hospital Anxiety and Depression Scale" (HADS). The questionnaire comprises seven questions for anxiety and seven questions for depression, and takes 2-5 min to complete [11]. To assure the data quality more emphasis was given in designing data collection instrument. For its simplicity the questionnaire was pre-tested on 25 randomly selected students who were not included in the main studies followed by modification. As a self-administered questionnaire, it can be designed to be answered easily. Proper instruction was given before the survey as to the importance of the study for the study subjects, the data collectors as well as the supervisors. The collected data has been reviewed and checked for completeness before data entry thereby the incomplete data has been discarded. The study was conducted after obtaining permission from principals of the colleges affiliated to Rajiv Gandhi University of Health Sciences in Bangalore city, district of Karnataka state, India. The students were clearly explained about the aims and objectives of the study. They were requested to complete the questionnaire with full assurance about the confidentiality and anonymity of their information. The subjects were assured that the data will be used only for scientific purpose of the study. Pharmacy students were invited to take part in the study 10 minutes before the end of regularly scheduled classes. The students were asked to complete the questionnaire in a class at the end of lecture and return them to researcher in the same session.

Statistical analysis

Data entry and statistical analysis performed by using IBM SPSS Inc. version 19 (Armonk, NY, USA). Statistically, the significance level was set at $p < 0.05$ or less throughout the analysis.

To address the objectives of this thesis, both descriptive (percentages, mean and standard deviation) and inferential (Pearson chi square test and one way analysis of ANOVA) statistics were used. To analyze categorical variables, we calculated frequencies and percentages. Analytic statistics were done using the chi-square test (χ^2) and Fisher test to assess the difference between categorical variables.

Results

Among 465 invited candidates, 428 (response rate = more than 90%) students, who agreed to participate and completed the questionnaires, were included in the analysis. Among those included, 28 participants did not complete the questionnaires of the survey. Of the 400 students participated in the study, 145 (36.25%) were males and 255 (63.75%) were females that 136 (34%) from government pharmacy college and 264 (66%) from private pharmacy college. Among of 400, 164 (41%) were under 20 years old and 236 (59%) above 20 years old. The details of the baseline demographic and socioeconomic characteristics are presented in table 1. Fear of future life status was as 44.25% always, 47.0% sometimes and 8.75% never. Also, 31.0% of respondents stated that parental pressure was reason for joining to pharmacy versus 69.0% that personal choice was the reason to join pharmacy, 420.0% were not satisfied to join the present College and 58.0% were satisfied with the College. Additionally, 68.0% of participants were satisfied with regard to pharmacy as a professional carrier and 32.0% were unsatisfied. The details of daily activities and social habits are summarized in table 2. The majority of student stated which daily sleeping hours about 5-8 hours, about 296 (74%) participants did not intake coffee, and one-third of them had never exercise training. Regarding smoking habits status, 76.0% were non-smoker, 16.0% used less than half pack per day, and only 2.25% used more than one pack per day. Also, 74.0% of study participants never took any antidepressant medicines, while 3.0% used these medicines lifetime, 7.0% respondents reported past 30 days and 16.0% used of antidepressant medicines past 12 months.

Characteristics No.	Male (No. 145)			Female (No. 255)		Total (No. 400)	
	%	No.	%	No.	%		
Age							
Under 20 years old	58	40%		106	41.56%	164	41%
Above 20 years old	87	60%		149	58.44%	236	59%
Nationality							
Indian	122	84.13%		187	73.33%	309	77.25%
Foreigner	23	15.86%		68	26.66%	91	22.75%
Course							
Pharm. D	65	44.82%		104	40.78%	169	42.25%
B. Pharm	80	55.18%		151	59.21%	231	57.75%
Study Year							
First Year	25	17.24%		34	13.33%	59	14.75%
Second Year	23	15.86%		55	21.56%	78	19.50%
Third Year	26	17.93%		44	17.25%	70	17.50%
Fourth Year	27	18.62%		46	18.03%	73	18.25%
Fifth Year	28	19.31%		47	18.43%	75	18.75%
Sixth Year	16	11.03%		29	11.37%	45	11.25%
Year Back Status							
None	120	82.75%		226	88.63%	346	86.5%
One Year	18	12.42%		19	7.45%	37	9.25%
Two Years	5	3.45%		7	2.75%	12	3%
More than Two Years	2	1.37%		3	1.17%	5	1.25%

| Living Status						
With Family	63	43.45%	145	56.86%	208	52%
With Roommate(s)	58	40%	92	36.08%	150	37.50%
Alone	24	16.55%	18	7.06%	42	10.50%
Birth Order						
Oldest	30	20.68%	52	20.39%	82	20.50%
Middle	77	53.10%	123	48.24%	200	50%
Youngest	38	26.20%	80	31.37%	118	29.50%
Relationship with Friends						
Strong	30	20%	48	19%	78	19.50%
Fair	94	65%	173	68%	267	66.75%
Poor	21	15%	34	13%	55	13.75%
Relationship with Family						
Strong	35	24.14%	77	30.19%	112	28%
Fair	83	57.24%	152	59.60%	235	58.75%
Poor	27	18.62%	26	10.21%	53	13.25%
Body Image						
Satisfied	123	84.82%	163	63.92%	286	71.5%
Unsatisfied	22	15.18%	92	36.08%	114	28.5%
Family Income						
Satisfied	67	46.20%	121	47.45%	188	47%
Unsatisfied	78	53.79%	134	52.55%	212	53%
Parental Loss						
Yes	6	4.13%	18	7.05%	24	6%
No	139	95.87%	237	92.95%	376	94%
Health Change of Family						
Yes	19	13.10%	38	14.90%	57	14.25%
No	126	86.90%	217	85.10%	343	85.75%

Table 1: Demographic and socioeconomic parameters in study population.

Characteristics	Male (No. 145)		Female (No. 255)		Total (No. 400)	
	No.	%	No.	%	No.	%
Daily Sleeping Status						
1-4 Hours/day	10	6.90%	26	10.19%	36	9%
5-8 Hours/day	97	66.90%	195	76.48%	292	73%
More than 8 Hours/day	38	26.20%	34	13.33%	72	18%
Coffee Intake						
None	90	62.07%	206	80.78%	296	74%
1-2 cups per day	36	24.83%	40	15.70%	76	19%
3 or more cups per day	19	13.10%	9	3.52%	28	7%
Exercise						

Daily	14	9.65%	6	2.35%	20	5%
5-6 times per week	21	14.48%	23	9.02%	44	11%
3-4 times per week	26	17.93%	50	19.61%	76	19%
1-2 times per week	37	25.52%	75	29.41%	112	28%
None	47	32.42%	101	39.61%	148	37%
Alcohol Intake						
None	39	26.90%	173	68.84%	212	53%
3-6 times per week	9	6.20%	3	1.18%	12	3%
1-2 times per week	23	15.86%	9	3.53%	32	8%
2-3 times per month	34	23.45%	26	10.20%	60	15%
Once a month	40	27.59%	44	17.25%	84	21%
Smoking Habits						
None	89	61.38%	215	84.31%	304	76%
Less than half pack/day	33	22.76%	31	12.16%	64	16%
Half pack to one pack/day	17	11.72%	6	2.35%	23	5.75%
More than one pack/day	6	4.14%	3	1.18%	9	2.25%

Table 2: The details of daily activities and social habits in study population.

Regarding the type of antidepressant medicines used (Figure 1), the most common medications included Moclobemide or Clorgylime (41.0%) followed by tricyclic antidepressants (22.0%), and otonin-norepinephrine reuptake inhibitor (SNRIs) (18.0%). Using Hospital Anxiety and Depression Scale (HADS), it was found that among 400 students, 42.0% were normal, 24.0% had mild (mood disorder), 21.0% had moderate and 13.0% had severe signs of anxiety Generally, 42.0% were normal, 24.0% were borderline abnormal and 34.0% had anxiety signs. Out of 136 anxiety cases scoring 8 or more on the anxiety component of the HADS, 29.6% were male and 36.4% were female, and this difference was not significant statistically (p = 0.12). Prevalence of anxiety in students of first year, second year, third year, fourth year, fifth year and final year was 15.0%, 14.0%, 17.0%, 20.0%, 21.0% and 13.0% respectively. Prevalence of anxiety was highest amongst fourth and fifth year students but this difference was not significant (p = 0.18). Similarly, it was found that among 400 students, 55.0% were normal, 27.0% had mild (mood disorder), 11.0% had moderate and 7.0% had severe signs of depression. Out of 72 depression cases scoring 8 or more on the depression component of the HADS, 44.44% were males and 55.56% were females. Prevalence of depression in students of first year, second year, third year, fourth year, fifth year and final year was 21.0%, 14.0%, 16.0%, 13.0%, 22.0% and 14.0% respectively. Prevalence of depression was highest amongst first and fifth year students and this difference was not significant (p = 0.11).
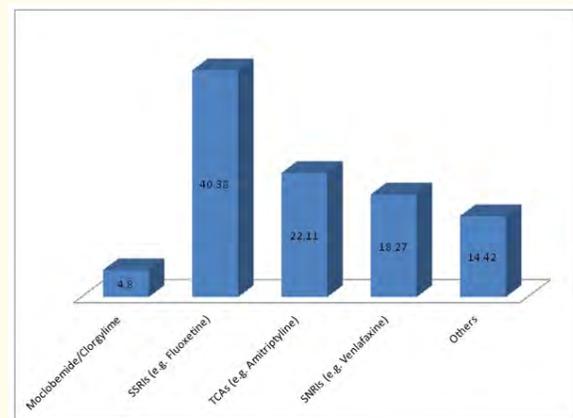
Figure 1: Antidepressant type intake (total number = 104).

As shown in table 3, there was a significant association of year back status of participants with depression (p < 0.001), but not with anxiety. We found a statistically significant relationship between living status (with family, with roommate and alone) and depression. The proportion of pharmacy students with depression were significantly associated with living alone (p = 0.01). The students who had stronger relationship with their family or friends had lower depression scores significantly (p < 0.05). The proportion of students with depression and anxiety were significantly associated with body image, family income and parental loss. It was also found

Determinants	Depression			Anxiety		
	Prevalence (%)	OR (95%CI)	p	Prevalence (%)	OR (95%CI)	p
Sex Male Female	22.0% 15.6%	¥1 1.89 (1.06-2.15)	0.73	29.6% 36.4%	¥1 0.99 (0.78-1.25)	0.12
Age Under 20 years old Above 20 years old	17.0% 18.6%	1 1.75 (1.06-3.45)	0.69	32.9% 34.7%	1 2.05 (1.01-2.65)	0.57
Nationality Indian Foreigner	16.8% 21.9%	1 1.55 (0.86-2.34)	0.21	33.6% 35.1%	1 1.27 (0.46-1.85)	0.09
Course of Study Pharm. D B. Pharm	18.3% 17.7%	1 0.98 (0.47-1.33)	0.09	33.1% 34.6%	1 0.85 (0.62-2.35)	0.4
Year Back Status Yes No	48.1% 13.2%	1 1.98 (0.99-2.23)	<0.001*	35.1% 33.8%	1 1.15 (0.96-2.35)	<0.08
Living Status Not Alone Alone	15.0% 42.8%	1 0.56 (0.29-1.35)	0.01	32.4% 47.6%	1 1.28 (1.01-3.05)	0.03*
Birth Order Oldest Middle or Youngest	21.9% 16.9%	1 1.09 (0.71-1.98)	0.18	41.4% 32.0%	1 0.65 (0.26-1.55)	0.04
Relationship with Friends Strong or fair Poor	15.3% 34.5%	1 1.08 (0.49-2.07)	0.01	31.5% 49.0%	1 1.18 (1.01-2.65)	0.038
Relationship with Family Strong or fair Poor	14.6% 39.6%	1 2.16 (1.04-3.23)	0.009	29.6% 62.2%	1 0.75 (0.36-1.65)	<0.001
Parental Loss Yes No	54.1% 15.6%	1 0.94 (0.69-1.45)	<0.001	66.6% 31.9%	1 1.43 (1.06-2.59)	0.001
Body Image Satisfied Unsatisfied	11.8% 33.3%	1 1.11 (0.39-2.16)	0.01	29.3% 45.6%	1 1.35 (1.06-2.71)	0.02
Family Health Change Yes No	43.8% 13.7%	1 0.74 (0.29-1.94)	0.008	63.1% 29.1%	1 0.52 (0.16-1.35)	0.001
Family Income Satisfied Unsatisfied	13.2% 22.1%	1 1.69 (0.98-2.34)	0.03	28.7% 38.6%	1 0.42 (0.26-1.55)	0.04

Table 3: Association of depression and anxiety with demographic and social factors.

*P value less than 0.05 is considered as significant ¥ Reference

that the proportion of participants with anxiety was significantly associated with birth order (p = 0.01). The proportion of pharmacy students with anxiety were significantly associated with living alone (p = 0.04). Among 57 pharmacy students with health change of family, 47.0% had depression while among 343 students with no health change of family, 28.0% had depression. The proportion of pharmacy students with depression was significantly associated with health change of family. The proportion of pharmacy students with anxiety were significantly associated with living alone (p = 0.03). The students who had stronger relationship with their family or friends had lower anxiety scores significantly (p < 0.05).

As shown in table 4, the proportion of pharmacy students with anxiety were significantly associated with fear of future life (0.001), but there were not found a significant association with depression (p = 0.06). We found a borderline statistically significant association between college satisfaction and depression (p = 0.057) but there were not significant for anxiety (p > 0.05). About sleeping hours status per day, the proportion of pharmacy students with depression were significantly associated with sleeping hours per day, but there were not found a significant association with anxiety (p = 0.09) (Table). The proportion of pharmacy students with anxiety and depression were not significantly associated with coffee intake (p > 0.05). We found a statistically significant relationship between exercise and depression. This relationship was borderline significant with anxiety (p = 0.048). The proportion of students with depression and anxiety were statistically significant with alcohol intake and smoking status. The proportion of pharmacy students with anxiety (p = 0.03) and depression (p = 0.001) were significantly associated with smoking habits.

Determinants	Depression			Anxiety		
	Prevalence (%)	OR (95%CI)	p	Prevalence (%)	OR (95%CI)	p
Fear of future life		¥1	0.06		¥1	0.001
Yes	21.4%	0.39		41.2%	0.86	
No	15.2%	(0.22-1.31)		28.2%	(0.31-1.41)	
Reason to Join Pharmacy		1	0.08		1	0.12
Personal Choice	17.0%	2.35		34.7%	1.45	
Parental Pressure	20.1%	(1.76-3.21)		32.2%	(1.11-2.31)	
College Satisfaction		1	0.057		1	0.08
Satisfied	16.3%	0.45		32.7%	1.15	
Unsatisfied	20.2%	(0.26-1.71)		35.7%	(0.82-1.71)	
Pharmacy Professional Satisfaction		1 1.15	0.09		1 0.34	0.07
Satisfied	17.3%	(0.86-2.01)		32.1%	(0.12-1.33)	
Unsatisfied	19.3%			37.9%		
Daily Sleeping Status		1	0.01		1	0.09
8 hours and less	14.6%	1.19		33.2%	1.18	
More than 8 hours	33.3%	(0.56-1.51)		37.5%	(0.94-2.11)	
Coffee Intake		1	0.07		1	0.1
Yes	17.2%	0.95		33.4%	0.69	
No	20.1%	(0.63-1.41)		35.5%	(0.19-1.61)	
Exercise		1	0.03		1	0.048
Yes	15.4%	1.84		30.5%	1.13	
No	22.2%	(1.02-2.43)		39.8%	(0.87-1.91)	
Alcohol Intake		1	0.01		1	0.01
Yes	24.4%	1.77		40.2%	1.42	
No	12.2%	(1.26-3.21)		23.5%	(1.11-3.01)	
Smoking Habits		1	0.001		1	0.03
Yes	33.3%	1.05		40.6%	2.15	
No	13.1%	(0.76-1.81)		31.9%	(1.44-3.21)	

Table 4: Association of depression and anxiety with daily habits.

*P value less than 0.05 is considered as significant ¥ Reference.

Discussion

The purpose of our study was to estimate the prevalence of anxiety and depression, and to determine factors related to these morbidities among pharmacy students. In this study, the prevalence of moderate and severe signs of depression and anxiety among pharmacy students were estimated 18% and 34%, respectively. The rate of anxiety prevalence in this study consistent with the findings of other studies carried out in medical undergraduate students in the India and Turkey [11,12]. Our finding is lower than results from some other studies in India [13,14]. The prevalence rate of anxiety disorder in various studies estimates ranged between 0.9% and 28.3%, globally [15]. The rate of prevalence of anxiety in general population of India was estimated about 3.6% during 2015-2016 [16]. The differences may be due to different types of questionnaire used, sociodemographic differences, grading, cut off used, sample size and academic situation. A cross sectional study on 332 medical students was carried out in Mysore, Karnataka using the DASS Questionnaire, observed the prevalence of anxiety and depression about 50.6% and 32.8%. The outcomes were higher than our study that may due to major differences and academic pressure, etc. Amritha., et al. reported the anxiety and depression prevalence rate among medical students about 24.5% and 60.3%, respectively [17]. They used HADS questionnaire same as in this study but different acquired results may due to differences in the sociodemographic status of the students and the differences in competition among medical field. The overall global prevalence of depression or depressive symptoms amongst medical students was about 27.2% [18]. The prevalence rate of depression varied from 8.7% to 71.3% in India [19]. In this study, the prevalence of moderate and severe signs of depression among pharmacy students estimated about 18%. The result was consistent with Sidana [20], Venkatesh [21]. But our finding was less than the results from Kumar [22] and Devi [23] in different areas of India and academic situations. The reason may be due to different instrument used for assessing depression and different college management. In the current study, we have not seen a significant relationship between age, gender, nationality, course of study and year of study of participants with anxiety and depression. These findings are similar to results from surveys by Jadoon [24], and Singh [25], while Karaoglu [26] reported a significant association between gender of medical students and depression. Findings showed a statistically significant association between year back status of participants and depression but not

with anxiety. This may be due to pressure from family or friends on these students and also possible disappointing thoughts in these students. We found a statistically significant relationship between living status (with family, with roommate and alone) and depression. The proportion of pharmacy students with depression were significantly associated with living alone that is consistent with the results from Rab [27]. The students who had stronger relationship with their family or friends had lower depression scores significantly. These findings may be related to provide of more supportive care by parents or friends. The proportion of students with depression and anxiety were significantly associated with body image, family income and parental loss. It was also found that the proportion of participants with anxiety was significantly associated with birth order. The significant relationship found between family income and prevalence of depression and anxiety that is inconsistent with result of Malik [28]. These differences may be due to sociodemographic status, country and area of study. We found a significant relationship between history of parental loss and rate of anxiety and depression which is in accordance with the results from Sahu [29]. The higher proportion of pharmacy students with depression was significantly associated with health changes of family, which is consistent with the findings from Khan [30], and Sahu [29]. We found a significant association between the proportion of pharmacy students with anxiety and fear of future life, but there were not found a significant association with depression. This result is consistent with the findings from Bar-Haim [31]. About sleeping hours status per day, the proportion of pharmacy students with depression were significantly associated with sleeping hours per day, but there were not found a significant association with anxiety. These results inconsistent with the results from Taylor [32], and Mellinger [33], but even these studies have shown the relationship between sleep disturbance and mental disorder like depression. There is a need for further studies in this regard to determine more aspects of this finding. We did not find any association between the proportion of pharmacy students with anxiety and depression with coffee intake. This finding is inconsistent with findings from some studies such as Thoits [34], but other studies claim that the caffeine intake is moderately associated with a range of psychiatric and substance use disorders in the population, the relationships do not prove causation [35]. Another consideration; understanding the nature and direction of association between such variables becomes even

more complicated when take into account the self-medication hypothesis [36]. The concept in this regard is which people may intake the legal and/or illicit substances, evidences with studies suggested that some people with mental health disorders use coffee or caffeinated energy drinks for such purposes [37]. Our result is consistent with the findings from Luebbe [38].

We found a statistically significant relationship between exercise and depression. This relationship was borderline significant with anxiety. These findings are consistent with the result of the correlational and experimental studies show positive effects of exercise, in healthy subjects and in patients (also in patients with emotional disorders) regardless of gender and age [39,40]. The presumption is which exercise may increase temperature of body, blood circulation in the brain and effect on hypothalamic-pituitary-adrenal axis and mental reactivity to anxiety, depression and stress. These outcomes show that a relaxation breathing due to exercise may increase anxiety and depression levels. Other possibility is that exercising can be as a positive cycle: the person performs physical activity feels normal. Also high level physical activity makes it hard to think/worry excessively and exercise may be used as a distraction from hallucinations, thoughts, and conditions which can lead to anxiety and or depression. The proportion of students with depression and anxiety were statistically significant with alcohol intake and smoking status. The relationship between alcohol consumption and anxiety or depression is inconsistent with the results of Pickard [41], and Kumar [42]. Regarding to smoking habits and anxiety or depression prevalence, our result is in similar with the findings of Mancevska [43]. Our study and also the studies related to smoking habits or alcohol consumption have cross-sectional design so we cannot prove a causal association. We found about 74% of study participants never took any antidepressant medicines and only 3% of the participants used these medicines lifetime, 7% respondents reported past 30 days and 16% used of antidepressant medicines past 12 months. This result is consistent with the findings from Trkulja [44]. Substance intake is considered to be fragment of youth life-style and it appears which, there is no exception to medical students. We found that about 41% of respondents (who used antidepressants) took selective Serotonin reuptake inhibitor (SSRIs) (such as Fluoxetine, Sertaline, etc.) and 22% used tricyclic antidepressants (TCAs) (such as Amitriptyline, etc.).

Conclusion

In this cross-sectional study, the prevalence rate of moderate and severe signs of depression and anxiety among pharmacy students were estimated 18% and 34%, respectively, that is above the general population which is not surprising due to load of medical schools and other related factors. Mental disorders in students need wider awareness and greater attention because medical students are more susceptible to these disorders. This may have adverse effect on patient care and impact on their academic performance and quality of life. So there is a need for counselling services in house and medical universities can provide supportive program regarding mental disorders. Also we should teach and speak openly about alcohol, smoking, antidepressants intake and other substance use. Unfortunately medical students especially pharmacy students are in higher risk of substance abuse due to their access and load of medical programs. In this regard also, medical schools have geminate responsibilities related to their students. Mainly, they should provide an environment in that students are encouraged to adapt responsible tendency to drugs and alcohol intake. Also, they have to ensure which they provide appropriate educational programs on tobacco, alcohol and drug abuse. As Vergese (170) has illustrated "the measure of the health of our profession is not only how well we care for our patients, but also how well we care for ourselves". Clearly, Medical colleges have to improve a healthy lifestyle. At the end, early recognition and treatment are significant for the health of the individual and the public safety.

As a conclusion of our findings, we suggested which preventive mental health and counseling services have to be an undivided section of the routine clinical facilities caring for medical students to support them to acquit with the overload of medical education. Prospective studies require exploring the effect of factors association with the mental disorders.

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