



RESEARCH ARTICLE

ANXIETY, DEPRESSION, AND PSYCHOTROPIC DRUGS USAGE BY UNIVERSITY STUDENTS OF MEDICAL GROUP IN BASRA, IRAQ

Sheima Nadim Kadhim^{1*}, Zainab Haroon Ahmed¹, Muntadher Luay Abdulsahib²

¹Department of Pharmacology and Toxicology, College of pharmacy, University of Basra, Iraq.

²MuntadherLuayAbdulsahib, Doctor, Department of Infection Control, Al-Mawaneh General Hospital, Basra, Iraq.

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*Address for Correspondence:

Sheima Nadim Kadhim, Department of Pharmacology and Toxicology, College of pharmacy, University of Basra, Iraq. Tel: +009647801372042; E-mail: ph.sheimanadim@yahoo.com

Abstract

Background: Psychological disease is strongly prevalent among college and university students worldwide with negative impacts on students' life. Specifically, medical group students have long time of study with suffer from competitive ambience and sleep privation, that lead to out of the way from perfect learning environment. When medical students are abused psychotropic drugs that lead to defect on performance, health, life style and interpose with their concentration.

Aim: To investigate the prevalence rate of depression and anxiety in university students of medical group in Basra, and estimate the rate and type of psychotropic drugs consumption by them.

Method: The study data was collected from 376 students of medical group at College of Medicine, College of Dentistry and College of Pharmacy of Basra University by questionnaire forma.

Results: The prevalence rate of mental disorders was low about and many factors that affected on psychiatric state of them like gender, age, Family and friends Relation, missing one of parents etc. Among medical group students that used sedatives and hypnotics about (46%) than other psychotropic drugs like serotonin-norepinephrine reuptake inhibitor (SNRIs) (42.9%) tricyclic antidepressants (21.4%), and atypical antipsychotic (7.1%).

Conclusions: Medical group students are more likely to consumption antipsychotic drugs by physician prescription or self-medications. Therefore, there are required more interesting and pursuits for college students especially medical college students for amelioration their college and social lives.

Keywords: anxiety, depression, medical group students, psychological disease, psychotropic drugs.

INTRODUCTION

Psychological disease is an emotional distress with symptoms include anxiety (like tenseness, stress), depression (like sadness, loss of attention) and somatic or functional symptoms (like loss of appetite, headache, wakefulness, paucity of energy)¹. The prevalence of depression in worldwide is appeared by World Health Organization (WHO) about 6% in women and 4% in men. Where, the total numbers of populations that suffering from depression elevated by 18.4% at 2005 to 2015. On the other hand, the prevalence of anxiety which is the other most common psychiatric disease about 5% in women and 3% in men². Psychotropic drugs are any drug that influence on the emotion, mood, and behavior like antidepressants, stimulants, anxiolytics, antipsychotics, and hypnotics. On other hand, psychological disease is astonishing elevation in young adults and

adolescents^{3,4}. In the last decade, psychotropic drugs are strongly used by adolescents in many countries^{5,6}. Psychological disease is strongly prevalent among college and university students worldwide with negative impacts on students' life⁷⁻⁹. Specifically, medical group students have long time of study with suffer from competitive ambience and sleep privation, that lead to out of the way from perfect learning environment. These factors can be produced highly incident of stress, anxiety, depression, and burnout that lead to negative effect on both their mental and physical health among medical students¹⁰⁻¹³.

The uses of psychotropic drugs may be a benefit factor when well used, on other hand, they may be peril factor for psychical health when abused¹⁰. When medical students are abused psychotropic drugs that lead to defect on performance, health, life style and interpose with their concentration¹⁴. Also, the uses of psychotropic drugs by medical group students for

uncontrolled and long-term that lead to addiction and serious effects on their professionals' performance and health^{7,15}. On other hand, Mental disorders with higher risk in university students of medical group than other university students because they have full of stress with medical practice and hard circumstances like clinical

training stress, long term of study (reach 6 years), financial burden etc. Medical group students required more interest and alertness because mental disorders are oversensitive in medical group students throughout their clinical practice and life style¹⁶.

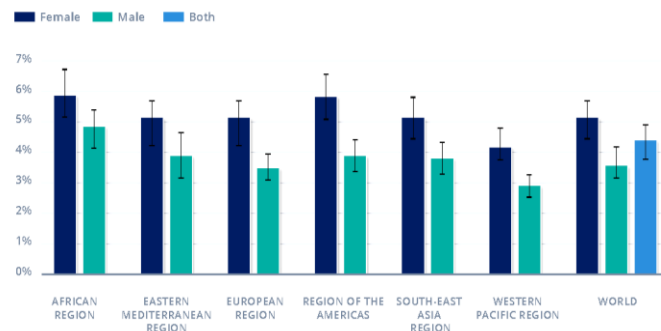


Figure 1: Prevalence of depression in different regions by WHO.

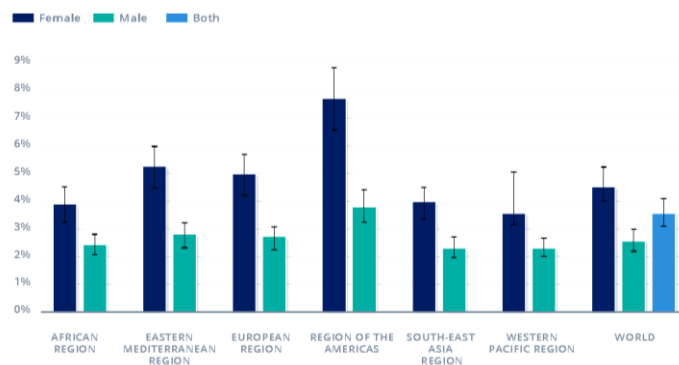


Figure 2: Prevalence of anxiety in different regions by WHO.

Aims of study to investigate the prevalence rate of depression and anxiety in university students of medical group in Basra, and estimate the rate and type of psychotropic drugs consumption by them.

MATERIALS AND METHODS

This study was a cross-sectional between the prevalence of depression, anxiety, and stress and the uses of psychotropic drugs among university students of medical group, this study was investigated at College of Medicine, College of Dentistry and College of Pharmacy of Basra University in Basra City, from October, 2022 to April, 2023. All university students of medical group aged 18-24 years and under graduated stages. Totally, 376 university students were 282 female and 94 males. Also, mental illness students were excluded from this study. All students were filled questionnaire forma included information about gender, age, college stage, marital status, family relation, friend relation, smoking, rate of sleep, coffee taking, type of emotional disorders, type and dose of psychotropic drugs, improvement status, other diseases, other treatments.

Statistical analysis

Data was analyzed by IBM SPSS system (version 28). Data was descriptive by stander deviation, means and percentages and inferential by Chi-square and Fisher's

exact statistic tests. Where these statistic tests (Chi-square and Fisher's exact tests) were used for estimating the difference between variables. The *p* value less than 0.05 that meaning statistically significant result.

RESULTS

Table 1 demonstrates the health and demographic features of university students, involving those that use psychotropic drugs, including psychological distress load, gender and age. Among 400 invited candidates, 376 (response rate = more than 90%) medical, dentistry and pharmacy colleges students, who consented to take part, completed the surveys, and were considered in the analysis. Of the 376 total students in this study, 28 who were taken psychotropic drugs. Total 94 (25%) of the 376 students that took part in the study were men, and 282 (75% of the students) were women. On other hand, of the psychotropic drug users were 10.7% males and 89.3% females. Total 28 out of 376, 165(43.9%) were 20 or under 20 years old and 211 (56.1%) above 20 years old. While (85.7%) of the psychotropic drug users were more than 20 years old and (14.3%) above 20 years old. Of the 376 students participated in the study, 337 (89.6%) of the participants were healthy, while 39 (10.4%) had achronic diseases.

Table 1: Demographic, health characteristics, daily activities and social habits of total medical group students and the psychotropic uses students in this study.

Variable	Not taking Anti depressant (n=348)	Taking Anti depressant (n=28)	p-value
	N (%)	N (%)	
Age			
=< 20	161 (46.3)	4 (14.3)	0.001
> 20	187 (53.7)	24 (85.7)	
Sex			
Male	91(26.1)	3 (10.7)	0.073
Female	257(73.9)	25 (89.3)	
Family Ordering			
Oldest	115 (33)	5 (17.9)	0.338
Middle	170 (48.9)	17 (60.7)	
Youngest	58 (16.7)	5 (17.9)	
The Only Son	5 (1.4)	1 (3.6)	
Marital Status			
Married	29 (8.3)	1 (3.6)	<0.001
Single	318 (91.4)	25 (89.3)	
Divorced	1 (0.3)	2 (7.1)	
Family Relation			
Good	274 (78.7)	16 (57.1)	0.017
Fair	63 (18.1)	9 (32.1)	
Bad	11 (3.2)	3 (10.7)	
Friends' relation			
Good	207 (59.5)	11 (39.3)	0.05
Fair	128 (36.8)	14 (50)	
Bad	13 (3.7)	3 (10.7)	
Missing one of Parent			
No	305 (87.6)	23 (82.1)	0.401
Yes	43 (12.4)	5 (17.9)	
Graduation Year			
Graduation year	78 (22.4)	10 (35.7)	0.11
Before graduation year	270 (77.6)	18 (64.3)	
Chronic Diseases			
Healthy	312 (89.7)	25 (89.3)	1
Have chronic diseases	36 (10.3)	3 (10.7)	
Study Years			
1 st Year	53 (15.2)	2 (7.1)	0.01
2 nd Year	95 (27.3)	1 (3.6)	
3 rd Year	67 (19.3)	6 (21.4)	
4 th Year	39 (11.2)	8 (28.6)	
5 th Year	16 (4.6)	1 (3.6)	
Graduation Year	78 (22.4)	10 (35.7)	
Years of Failure			
No years of failure	336 (96.6)	25 (89.3)	0.005
One year of failure	10 (2.9)	1 (3.6)	
Two years of failure	2 (0.6)	2 (7.1)	
College in same Governorate			
College in same Governorate	296 (85.1)	18 (64.3)	0.004
College out Governorate	52 (14.9)	10 (35.7)	
Study Satisfy			
Study Satisfy	308 (88.5)	19 (67.9)	0.002
Study Unsatisfied	40 (11.5)	9 (32.1)	
Awareness of Study Future			
Not Awareness of study future	105 (30.2)	8 (28.6)	0.859
Awareness of study future	243 (69.8)	20 (71.4)	
Sleep Hours			
1-4 hrs	17 (4.9)	5 (17.9)	0.004
5-8 hrs	223 (64.1)	11 (39.3)	
>8 hrs	108 (31)	12 (42.9)	
Smoking			
Non-smoker	329 (94.5)	26 (92.9)	0.663
Smoker	19 (5.5)	2 (7.1)	
Coffee Drinking			
Not drinking coffee	211 (60.6)	10 (35.7)	0.002
Drinking 1-2 cups of coffee	126 (36.2)	14 (50)	
Drinking >2 cups of coffee	11 (3.2)	4 (14.3)	
Depression or Stress			
Not complain from depression or stress	147 (42.2)	1 (3.6)	0.001
Have depression or stress before college	110 (31.6)	10 (35.7)	
Have depression or stress after college	91 (26.1)	17 (60.7)	

Total 89.3% of the users were single, 7.1% were divorced and 3.6% were married. The majority of the students were nonsmoker. 89.3% of the psychotropic drug user were healthy and had no chronic diseases. Furthermore 12 (42.9%) of them stated daily sleeping hours more than 8 hrs. Half of the drug users were drinking 1-2 Cups of Coffee. 10(35.7%) were in Graduation Year and 18 (64.3%) were in nongraduating year. Total 35.7% of the drug user had depression or stress before college and 60.7% had depression or stress after college. Prevalence of psychoactive drug use among first-year, second-year, third-year, fourth-year, fifth-year, and final-year students 7.1%, 3.6%, 21.4%, 28.6%, 3.6%, and 35.7%, respectively. Total 89.3% were had no Years of Failure, 3.6% had one year of failure and 7.1% had more than one year of failure.

Table 1 lists the specifics of the baseline demographic and socioeconomic parameters. Included variables on: Marital Status, 343(91.2%) of the students were single and the others were married or divorced, 88 (23.5%) of students were in a graduation year and the rest 287(76.5%) were not. 361(96%) had no year of failure,

11(2.9%) had one year of failure and 4(1.1%) have more than one year of Failure. The majority of the participants 314(83.5%) were studying in the same governorate and 26 (16.5%) were studying in college out of their governorate. The highest percentage of the participants (87%) were satisfied with their study and (13%) were not satisfied. worried of future life status was found in 263 (69.9%) of participants and 113(8.75%). They weren't worried. Additionally, Table 2 summarizes the specifics of everyday activities and social customs. Most students claimed to sleep for 5-8 hours each day, while 221 (58.8%) participants said they didn't drink coffee. Regarding smoking habits status, 35(94.4%) was non-smoker. Of the 376 participants 148 (39.4%) were not complaining from depression or Stress while 120 (31.9%) of them had depression or stress before college and 108 (28.7%) had depression or stress after college. Also, 7.4% of research participants utilized psychotropic medications, compared to 92.6% of people who never used any such medications. Of the drug user students were 67.9% satisfied with their college but most of the users (71.4%) were worried of their future life.

Table 2: Medication knowledge among the psychotropic drug used students.

Variable	Participant, (n=28) N (%)
How Take Drug	
On Need	17 (60.7)
Regularly	11 (39.3)
Way Take Drug	
Doctor Prescription	23 (82.1)
self-medications	3 (10.7)
Family and Friend advise Advice	2 (7.1)
Health status Improvement after taking drug	
Health status Improved	19 (67.9)
No Health Improvement	5 (17.9)
Health status Worsen	4 (14.3)
Chronic Disease Drug	
No Medication taken	21 (53.8)
Chronic Disease Drug	18 (46.2)

The proportion of participants those using the psychotropic drug was associated with birth order most of them 1(17, 60.7%) were the middle son in their family. 82.1% of drug users were living with parents and 17.9% were missing one parent (10.7%) of the drug user had a bad relationships with their families and friends. Table 2 shows the medication knowledge among the psychotropic drug users. The items included those on the source of taking the drugs in which the

higher percentage (82.1%) taking the drugs by doctor and pharmacist guidance while (10.7%) on self-medications and (7.1%) taking their drugs based on family and friend advice. Also, on rhythm of drug use (60.7%) were taking the drug on need and (39.3%) were taking drug regularly. Regarding health status improvement after psycho-tropic drug use most of the participants (67.9%) had improvement, (17.9%) had no health improvement and (14.3%) of them feel worse.

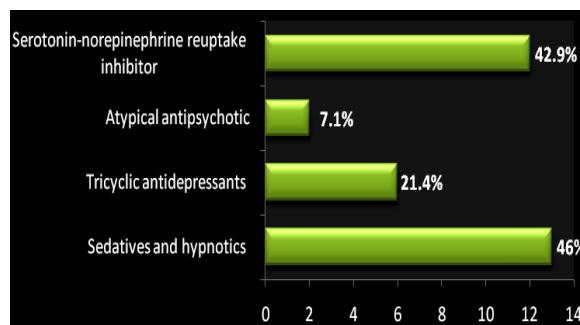


Figure 3: Psychotropic drug type intake.

Regarding the kind of psychotropic drugs that are taken (Figure 3), the most often used drugs were sedatives and hypnotics (46.4%), serotonin-norepinephrine reuptake inhibitor (SNRIs) (42.9%) followed by tricyclic antidepressants (21.4%), and atypical antipsychotic (7.1%).

DISCUSSION

The development of community was depended on an ambitious of university students; therefore, they should be full active, healthy and positive interests. In this study was concentrated on the prevalence of mental disorders among medical group students and the factors that affected on psychiatric state of them. Also, the percent of psychotic drugs that used by university students of medical groups. In recent study, the rate of prevalence of mental disorders of medical group students (medicine, dentistry and pharmacy) about 7.4% and among students were before graduation year and this result was agreement by Alsalameh *et al.*, study¹⁷. The percent of all students were similarly in both age groups (≤ 20 years=43.9% and >20 years=56.1%), while the individuals that taken psychotropic drug in >20 years age group (85.7%) were more than ≤ 20 years age group (14.3%) and there was significant relation between age and the mental disorders rate ($p < 0.05$) and this result agreement with Farooqui *et al.*, study¹⁸ and that mean age factor may be affected on the prevalence of mental disorders that associated with other items like clinical training stress, study load, financial burden^{16,19}.

On other hand, Gender factor may be affected in the prevalence of mental disorders. Of 376 individuals (75% female and 25% male) and of medical group students that taken psychotropic drugs (89.3% female and 10.7% male). Alsalameh *et al.*, and Kovess-Masfety *et al.*, studies appeared the same results on gender factor where female were more expressed mental and depressive disorders than male and also depended on severity and type of psychological problem^{17,20}. In the current study, there was significant relation between year of study, Years of Failure and place of college (in same or out Governorate) with the rate of prevalence of mental disorders among medical group students and this result disagreement by Amiri R and Jadoon NA *et al.*,^{16,21}. The family ordering of all student in this study was middle about 50% and the family ordering of among medical group students was middle about 61% and it was not significant with the rate of prevalence of mental disorders that meaning the family ordering of student may be affected on social situation due to less interest and concern by parents of students. On other hand, Marital Status of among medical group students was single and it was significantly ($p < 0.05$) reducing the prevalence of mental disorders. In the recent study, the students had strong relation and significant with their friends and family about 58% and 77% respectively. Also, they were not loss one of parent about 87% therefore the rate of prevalence of mental for students in this study was very faint^{16,22}.

Among medical group students were afraid from their future and was strong significant ($p < 0.05$) affected on the prevalence of mental disorders because students had depressed and stress after college due to fail in trial, overstate of responsibility and premonition from practice attempt. Both Alsalameh *et al.*, and Amiri R studies were consistent with these results while, Farooqui *et al.*, study was inconsistent it^{16,18}.

Fifty of psychotropic drugs used of medical group students with sleep hours more than 8 hr per day and there was inversely significant relation ($p < 0.05$) and this result was correspondence with Dong *et al.*, study²³. Also, among them were nonsmokers about 93% and non-significant relation with mental disorders. Despite, half of psychotropic drugs used of medical group students were drank (1-2) cup of coffee and strong relation between them ($p < 0.05$) because coffee was contained the phenolic acids that could be cross BBB and the cerebrospinal fluid where they could be effect on brain health^{24,25}.

Most of psychotropic drugs used of medical group students were take psychotropic drugs about 61% on need and they take drugs under doctor physician (82.1%) that lead to health status improved in among them (67.9%). The recent study was appeared among medical group students that used sedatives and hypnotics about (46%) than other psychotropic drugs like serotonin-norepinephrine reuptake inhibitor (SNRIs) (42.9%) tricyclic antidepressants (21.4%), and atypical antipsychotic (7.1%) because these drugs (sedative and hypnotic) were more present and less expensive. This result was inconsistent with Amiri and Farooqui *et al.*, studies that appeared SSRIs group was most commonly used by medical students^{16,18}.

Limitations of the study

We did not inquire of the students when they began taking psychotropic drugs in the survey. As a result, pinpointing the precise time (month and year) of psychotropic drug use was impossible. Furthermore, the type of anxiety or depression that the students in the Medical Group were diagnosed with was not mentioned, despite the fact that these conditions are known to differ greatly from one another and require different approaches to treatment. Despite the anonymity of the questionnaire, some students might not have been able to answer the survey honestly due to the stigma associated with mental illness.

CONCLUSIONS

The prevalence of mental disorders may be increased in general college students specifically medical group college students because stress of study, study for long time, more attention during practice life, financial awkwardness, social relationships embarrassment. Also, medical group students are more likely to consumption antipsychotic drugs by physician prescription or self-medications. Therefore, there are required more interesting and pursuits for college students especially medical college students for amelioration their college and social lives.

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AUTHOR'S CONTRIBUTION

Sheima NK: conceived and designed the study, conducted research, provided research materials, and collected and organized data. **Muntadher LA:** analyzed and interpreted data. **Zainab HA:** initial and final draft of article, and provided logistic support. All authors have approved final version of the manuscript.

DATA AVAILABILITY

The data will be available to anyone upon request from the corresponding author.

CONFLICT OF INTEREST

None to declare.

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