MEDICAL SCIENCE

To Cite:
Mufti RE, Alsawadi BH, Alahmadi WT, Abunaji AM, Alnhas KH, Sebaa FS, Alraddadi AA, Elbarbary MA. Prevalence of substances misuse and predisposing factors at various stages of medical carrier at Al Madinah province KSA. *Medical Science* 2023; 27: e211ms3012.
doi: https://doi.org/10.54905/disssi/v27i135/e211ms3012

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Peer-Review History
Received: 16 April 2023
Reviewed & Revised: 18/April/2023 to 30/April/2023
Accepted: 01 May 2023
Published: 02 May 2023

Peer-review Method
External peer-review was done through double-blind method.

Medical Science
pISSN 2321–7359; eISSN 2321–7367

Prevalence of substances misuse and predisposing factors at various stages of medical carrier at Al Madinah province KSA

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ABSTRACT

Background: Substances use is widespread, including among students, especially medical students. *Objective:* We conducted this study to estimate the prevalence of substances misuse and predisposing factors at various stages of medical carriers at Al-Madinah Provence KSA. *Methodology:* Utilizing a certified questionnaire, a cross-sectional study was transmitted among 279 undergraduate and postgraduate students at Al-Rayan Medical College. *Results:* Data showed that 29.4% of medical students use these subjects. The prevalence of drug use was 5.4% using Captagon, 9.3% using cannabis and 14.7% using other substances among medical students raising in drug misuse has been noticed in recent years of medical education. About 63.8% of those students using these substances were aware of the adverse effects. The most common reason these students take up these subjects is to relieve psychological stress and occasional parties. Of the 29.4% of substance users, 11.5% tried it once at university and 13.7% took it with their friends. The current study revealed that 10% of drug use among students was due to a lack of parental participation and interactions and 10% may be due to some students losing their parents. *Conclusion:* Roughly one third of students who attend medical school misuse at least one substance in spite of knowing the adverse effects of the chief preparedness factor are psychological stress. The most important independent factors that predicted the risk of drug involvement were male.

Keywords: Psychological Stress, Medical Students, substances misuse.

1. INTRODUCTION

Substances misuse refers to the unfavorable or dangerous use of psychoactive

substances (Lapsley and Edgerton, 2020) involving alcohol and illicit drugs, which is one of the world's major problems (Ahmadi et al., 2004). According to the 2017 Global Burden of Diseases study, there were 585,000 deaths and 42 million years of "healthy" life missed as a consequence of substance misuse (Melchior et al., 2007). The World Drug Report 2019 approximated that 271 million people or 5.5% of the world's population aged 15 to 64, had used drugs in the previous year, while 35 million people were calculated roughly to be troubled with substance use disorders4. Alterations in lifestyle status are invariably correlated with stress and students attending universities experience profound changes in their lifestyles.

For most students, university enrollment is a period of upheaval and stress (Lee and Tsang, 2004). It deems that some individuals, including students, may select hazardous behaviors, such as drug misuse, to release upsets and psychological stress (Saules et al., 2004). Statistics have displayed a notable increase in substance misuse in different societies, particularly among young individuals, in recent decades (Papadaki et al., 2007). Substance misuse among doctors is believed to start initially in their careers and the prominence of pursuing medical lifestyles. Students who want to explore drug misuse are well identified Investigators proposed that drug misuse in medical school is perhaps at the root of the frequent problem of rising drug misuse among practitioners. No data are available on substances misuse among students in Saudi Arabia.

The Kingdom of Saudi Arabia's medical fields must appreciate the enormity of the problem so that suitable prophylactic and initial intervention measures can be initiated. The aim of this survey was to evaluate the prevalence of substance use and abuse, including cannabis, prescription drugs and illicit drugs, at different levels of a medical career. The population of the study was composed of the medical students of Al-Rayan Medical School in Madinah. Reasons for drug misuse, whether the prevalence rates alter over the progression of medical school, residency and entrance into practice were analyzed and these rates were linked with the rates in the public.

2. MATERIAL AND METHODS

Study design

A descriptive cross-sectional study was performed through medical students enrolled at Al-Rayan Medical College, Madinah Al Munawara, from August 2022 to February 2023. 279 students from Medical College were included; all medical students, both males and females and junior students were inclusion criteria and any sporadic use or refusal to be enrolled was exclusion criteria. The full sampling technique has been used.

Data from study contributors was gathered using a questionnaire delivered via Google Form, which was sent to their emails using levels representatives each year. Students who were unreachable by email or who denied participating in the digital consent form were not included in the study. Participation was totally voluntary and no incentives were given to study participants. Anonymity was maintained constantly.

Study sample

The simple randomized method was used due to the uniformity of the number of study participants. The objective sample size is 279 participants. The purposes and consequences of the study were explained to contributors using the questionnaire sent via Google Forms in their emails. The online strategy was favorable for maintaining confidentiality.

Inclusion criteria

All participants, both males and females

Exclusion criteria

Any sporadic use—or refusal to be enrolled. The questionnaire method was adopted to determine the topic, which is to gather the information required to verify the questions under consideration as facts.

The study or questionnaire tool consists of two parts

The first part is about recognizing demographic alterations, where some questions about demographic variables and information about participants are as follows: Age, gender and level of the student. The second part contains an analysis of the factors motivating students, including sociocultural data and the perceived stress scale.

Data management

Statistical analysis was used and data were coded, entered and analyzed using the Statistical Package for Social Science (SPSS) version 21.0 (SPSS, Chicago, IL, USA). Categorical variables using T-test. Data is considered significant if *(P <0.05)*.

3. RESULTS

In this article, 279 female medical students with ages ranging from 19 to 24 and a mean of 22 years old are described. Out of the 279, 53.8% are male and 46.2% are female. 48.4% of the participants were from the school of medicine, compared to 12.2% of student laboratories. The 20–25 age groups referred to the highest percentage of the sample study, with a recurrence of 226 students and 81%. The highest level in the sample in terms of student level was the early level of 37.1 and the most frequent level of 103 (Table 1).

Table 1 Demographic data

Age	%	Frequency
20-<25	81	226
25-<30	17.2	48
20>	1.7	5
Level of student	%	Frequency
Early	37.1	103
Lately	16.5	46
Graduate	20.1	56
Undergraduate	26.3	73

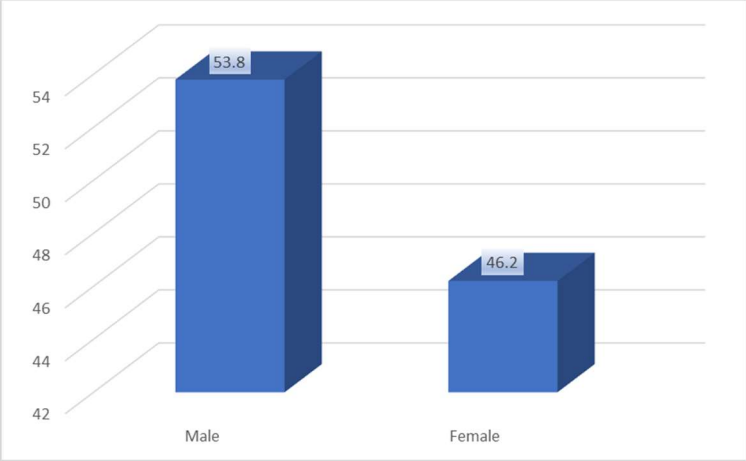

Figure 1 Shows distribution of male and female in study

Table 2 shows details of sociocultural data for participants. 209 out of 279 stayed with their parents, with the highest percentage being 74.9%. The mother is missing segment indicated a frequency of 14 and its percentage was 5%. Family income was enough with a frequency of 177 and a ratio of 63.4. The extent of a family's follow-up was high, with 210 and a percentage of 75.3. Satisfaction with the parental relationship was 72% good for someone and 9.7% unsatisfactory.

Table 3 the results showed that most students suffered from moderate levels of stress, with 14% having no concern and 38.1% feeling incapable of controlling significant things. Question 3 showed that 32.4% had a problem feeling nervous and stressed and 40.3% felt that things were going their way. This is a negative result that will affect the student in the future.

The most important details are that 42.1% of students found it difficult to cope with all the things they had to do, while 10.8% never did. The percentage always was 10.4%, and this result is negative. The phrases how often have you been able to control irritations in your life? was also negative, with 39.6% having it sometimes and 12.6% suffering from it always. 41.4% of students feel and suffer from difficulties that pile up so high that they cannot overcome them.

Table 2 Sociocultural data

Residence	%	Frequency
Stay with parents	74.9	209
Residence with one of the parents	14	39
The mother is missing	5	14
The father is missing	6.1	17
Family income	%	Frequency
Enough	63.4	177
More than enough	15.8	44
Not enough	20.8	58
Extent of family's follow-up	%	Frequency
All the time Most time	75.3	210
Rare time	14	39
Never	10.8	30
Satisfaction with maternal relationship	%	Frequency
Satisfactory	71	198
Somewhat satisfied	19	53
Unsatisfied	10	28
Satisfaction with the parental relationship	%	Frequency
Satisfactory	72	201
Somewhat satisfied	18.3	51
Unsatisfied	9.7	27

Table 3 Perceived Stress Scale 1

How often have you been upset because of something that happened unexpectedly?	%	Frequency
Never	14	39
Occasionally	21.9	61
Sometimes	46	128
Often	8.6	24
Always	9.4	26
How often have you felt that you were unable to control the important things in your life?	%	Frequency
Never	12.9	36
Occasionally	28.8	80
Sometimes	38.1	106
Often	10.1	28
Always	10.1	28
How often have you felt nervous and stressed?	%	Frequency
Never	9.7	27
Occasionally	27.7	77
Sometimes	34.9	97
Often	15.8	44
Always	11.9	33
How often have you felt confident about your ability to handle your personal problems?	%	Frequency
Never	12.2	34
Occasionally	21.6	60
Sometimes	32.4	90

Often	19.1	53
Always	14.7	41
How often have you felt that things were going your way?	%	Frequency
Never	11.9	33
Occasionally	22.3	62
Sometimes	40.3	112
Often	14.7	43
Always	10.8	33

Table 4 Perceived Stress Scale 2

How often have you found that you could not cope with all the things that you had to do?	%	Frequency
Never	10.8	30
Occasionally	24.8	69
Sometimes	42.1	117
Often	11.9	33
Always	10.4	29
How often have you been able to control irritations in your life?	%	Frequency
Never	10.4	29
Occasionally	24.5	68
Sometimes	39.6	110
Often	15.1	42
Always	10.4	29
How often have you felt that you were on top of things?	%	Frequency
Never	11.5	32
Occasionally	19.1	53
Sometimes	46.4	129
Often	12.2	34
Always	10.8	30
How often have you been angered because of things that happened that were outside of your control?	%	Frequency
Never	12.6	35
Occasionally	20.5	57
Sometimes	41 7	116
Often	12.6	35
Always	12.6	35
How often have you felt difficulties were piling up so high that you could not overcome them?	%	Frequency
Never	12.9	36
Occasionally	25.9	72
Sometimes	41.4	115
Often	9	25
Always	10.8	30

Table 5 shows that 70.6% do not use any substance, 5.4% use Captagon, 9.3% use Cannabis and 14.7% use other substances. It also shows that 14% obtain it in an easy way and that Co-user drugs were by self and by 6.3%, indicating that the use of these substances was an individual result of reasons that the individual always suffers.

The results of the study showed that distribution by date of use for those who take these substances tried to use it once in university by 11.5% The results also showed that 3.1% suffer from Low-dose, addict, Intermediate-dose addict and that 1% of students are high-dose addict, these are serious negative consequences that must be countered by addressing social and other causes was clear from Table 5 for Distribution by hazard knowledge about these substances 63.8% knew that these substances were very dangerous and that 11.8% answered that these substances were not dangerous and that 12.9% answered that these substances were not dangerous.

Table 5 The detection of the type of substance used the degree of knowledge in the gravity of these substances

Distribution by type and participation of the substance?	%	Frequency
Captagon	5.4	15
Cannabis	9.3	26
Other	14.7	41
I have never addressed	70.6	197
Accessibility	%	Frequency
Easy	14	39
Difficult	17.6	49
I never use it	68.3	190
Co-users drugs	%	Frequency
My friend	13.7	38
My brother	3.1	9
My mother	1.2	6
My father	0.7	1
Myself	6.3	19
I never use it	73.3	205
Distribution by date of use	%	Frequency
I never used it	77.8	217
I tried to use it once in School	2	8
I tried to use it once in university	11.5	32
Low-dose addict	3.1	9
Intermediate-dose addict	3.1	9
High-dose addict	1	4
Distribution by hazard knowledge about these substances	%	Frequency
No danger	12.9	36
Little danger	11.8	33
Fairly reasonable risk	11.5	32
High risk	63.8	178

4. DISCUSSION

This study focused on the prevalence of substance abuse and risk among students. It was revealed that students had higher grade point averages regarding the perception of independence and tambourine from their parents. Students ordered higher in relation to Edraak Parental involvement of students and this highly supportive parental bond decreased their susceptibility of drug misuse by 85%, indicating the positive effects of a warm and emotional relationship with the father, potentially raising parental appreciation and monitoring of teens' life choices.

Studies in Saudi Arabia have found that parents' preoccupation with their care (at the expense of parenting roles) can develop a feeling state of isolation and unreliability for adolescents (Hall et al., 2005) and the family unit is negatively connected to the use of the internet, as parents spend much of time on electronic devices experiencing more difficulties in marriage, which can influence the time assigned to their children (Coleman et al., 1997). Previous studies have described that the common age group in Saudi Arabia for substances misuse is between 12 and 22 years, and 40% of users depend on the substances used; this in spite of government campaigns to increase appreciation about the probability & susceptibility of drug use, containing drug involvement (Flaherty and Richman, 1993; Ibrahim et al., 2018).

The current survey obviously showed that higher grades for students regarding perceived parental engagement were a protective factor against drug involvement. The outcomes of this study also displayed that student those who have a higher total risk of substance involvement have higher total results on the Sensation of Anxiety Search Scale and were automatically used by themselves because the propensity to seek sensation is not just limited to substance abuse, but not exclude. Also, various components such as thrill-seeking, adventure, seeking experiences and getting rid of boredom. In addition to, it may be private with the features of this age group (24-18 years).

However, there is restricted literature on the bond between the pursuit of sensation and risky behavior in adolescents, especially in Arab communities (Wagner, 2001; Moore et al., 1990; Sarhan and Binder, 2018). Search in described sensation, anxiety sensitivity and self-enhancement as variables related to high-risk participation conducted among 155 undergraduate students and showed meaningful multivariate effects assignable to the research on Sensation and sensitivity of anxiety. This study confirms its conclusion that the search for sensation and anxiety sensitivity were important factors for drug use among students from both universities.

Hwang and Park (2015), Hughes et al., (1992) and Wagner, (2001) investigated the correlation among four constituents of sensation seeking (disinhibition, thrill-adventure seeking, involvement, boredom susceptibility) and three kinds of smoking behavior (non-smoking, tentative smoking and recent smoking) among secondary school students in Korea. The two statistically significant subscales of sensation seeking were positively linked with the risk of smoking behaviors. Where the current study showed that there is 10% of drug use among students and this percentage was due to lack of parental participation and interaction and the 10% may be due to the loss of some students to their fathers or mothers.

Limitations

Our Subject is a sensible matter and there is a tendency of response bias in our survey. Another restriction is that our subject is a single center study and the outcomes from our survey may not be generalizable across other parts of the country.

5. CONCLUSION

The most important self-determination factors that predicted the amenability of substances misuse were males, with a use rate of 10% and the supportive parental bond. This indicates the impact of relative lifestyle and child-rearing practices, particularly the function of parents, on drug misuse by medical students.

Acknowledgements

We thank the participants who were all contributed samples to the study

Author Contributions

REM, MAE, BHA: Conceived and designed the study, conducted research, provided research materials, collected and organized the data and wrote the initial and final drafts of article; WTA, AMA, KHA: Provide research materials, collected and organized the data analyzed and interpreted the data; FSS, AAA: Collected and organized the data analyzed, interpreted the data and provided logistic support. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

Informed consent

Written informed consent was obtained from all individual participants included in the study. Additional informed consent was obtained from all individual participants for whom identifying information is included in this manuscript.

Ethical approval

This study was approved by the Institutional Review Committee of the National Bioethics Committee of KACST Saudi Arabia (Ref. No.: HA-03-M- 122). All participants were informed of the study through the electronic form attached in the questionnaire sent to them and Informed consent was obtained. The anonymity of the study participants was maintained all the time.

Funding

This study has not received any external funding.

Conflict of interest

The authors declare that there is no conflict of interests.

Data and materials availability

All data sets collected during this study are available upon reasonable request from the corresponding author.

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