A survey of medical students' attitudes and practices towards narcotics and psychotropic drugs

Shahab Dastmardi1, Morteza Rahbar Taromsari2, Hamid Mohammadi Kojidi2, Ardalan Majidinia3, Fariba Asgari Bozayeh4, Kourosh Delpasand5,*

1Student Research Committee, School of Pharmacy, Guilan University of Medical Sciences, Rasht, Iran
2Department of Forensic Medicine and Toxicology, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran
3Student Research Committee, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran
4Department of Nursing, School of Nursing and Midwifery, Medical Education Research Center (MERC), Guilan University of Medical Sciences, Rasht, Iran
5Department of Medical Ethics, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran

Abstract

Substance abuse is one of the major behavioral problems in today's human society. One of the medical uses of drugs is to relieve the pain and suffering of patients. Today, due to the widespread use of narcotics and psychotropic drugs in the control and treatment of the disease and also its use among medical students, the present study aimed to determine the attitude and practice of medical students towards the use of narcotics and psychotropic drugs. The present study was a cross-sectional analytical study that was performed on 102 medical interns of Guilan University of Medical Sciences who were selected by available methods. To collect information, a researcher-made questionnaire was used which has three sections including a checklist of demographic information, attitude assessment questionnaire of medical students and performance assessment questionnaire. The mean age of the interns was 23.8±0.21 years. In the analysis of the results, it was found that there is a significant relationship between marital status and residence status with performance score (P <0.05). Based on the results of the present study, the level of students' knowledge about narcotics and psychotropic drugs among them is not at the desired level. Therefore, due to the lack of knowledge of medical students about the dangerous side effects of these drugs, education on the nature, symptoms, and side effects of psychotropic substances is recommended.

Keywords: Narcotics, Psychotropic, Medical students, Drugs

1. Introduction

Substance abuse is one of the major behavioral problems in today's human society, which the World Health Organization has described as a worrying event in the world [1]. Narcotics (A substance used to relieve pain such as morphine and codeine, but are not made from opium) and psychotropic (A drug or chemical substance such as alcohol, caffeine, nicotine, marijuana, and certain pain medicines that affects how the brain works and results in alterations in mood) drugs use in young people is an important issue and is considered a public health problem. Substance use is associated with an increased risk of death, psychological and interpersonal problems, academic failure, difficulties in establishing relationships and having unwanted or unprotected sex, crime, accidents, and injuries [2]. In this regard, educational institutions...
should be an organizing element in a system for preventing and confronting addictive substances [3].

Drug addiction is one of the major problems in developing countries. Since these countries have a young population, they are naturally more at risk and therefore these young people as the main and most vulnerable group are more at risk [4]. High school and college students, like other young people, are not immune to this problem [5, 6].

People may turn to addictive substances to reduce anxiety and avoid problems such as financial poverty, family problems, marital discord, inappropriate patterns of assimilation, and ultimately unemployment or euphoria. Substance abuse is a maladaptive pattern of using drugs that leads to recurring problems and adverse outcomes and involves a set of cognitive, behavioral, and psychological symptoms [7, 8]. Drug use sometimes increases physical or psychological dependence. Physical dependence increases drug tolerance, i.e., reduced drug sensitivity and withdrawal symptoms when the drug is not available [9-11]. There are many types of drugs and their range is increasing every day and new compounds are produced. The criterion of being addictive and not addictive is not a good criterion for distinguishing illegal drugs from other substances because some substances, although addictive, are not banned, such as benzodiazepines. Addictive substances are classified in several ways. In medicine and pharmacology, an addictive substance can be classified based on its chemical structure or on the effects, side effects, and conditions it causes as a result of consumption [12]. According to the Controlled Substances Act (CSA), addictive substances are often divided into five categories, including narcotics, sedatives, stimulants, hallucinogens, and anabolic steroids [13]. Due to the widespread use of narcotics and psychotropic drugs in society and also its use among medical interns, the present study was designed and conducted to determine the attitude of medical interns towards the use and prescription of narcotics and psychotropic drugs and their performance.

### 2. Materials and Methods

The present study is a cross-sectional analytical study that was performed on 102 medical interns of Guilan University of Medical Sciences, Rasht, Iran. Sampling was done by the available method in 2020. The instrument used includes a researcher-made questionnaire that has three parts. The first part includes a checklist of demographic information that includes questions about gender, age, marital status, residence status, income, and education of parents. The second part of the questionnaire was to evaluate the attitude of medical interns in the use of narcotics and psychotropic drugs and the third part is a questionnaire to evaluate the performance of medical interns in the use of narcotics and psychotropic drugs. The attitude questionnaire had 16 items and the answer method was 5-point Likert. To determine the validity of the content, the content validation method (survey of 5 clinical faculty members of Guilan University of Medical Sciences) and content validity index (CVI) and content validity ratio (CVR) were used, which were 0.88 and 0.92, respectively.

To evaluate the interns' performance, a researcher-made checklist with 8 questions was used and the answers were in the form of "yes" and "no" options, which were awarded 1 and 0 points, respectively. To assess the reliability, the questionnaires were distributed twice but one week apart among 25 medical interns, and the retest test method was used and the Cronbach's alpha value was 0.84. Data were collected in SPSS software version 22 and descriptive (mean, frequency, and standard deviation) and inferential (Mann-Whitney and Kruskal-Wallis) tests were used. The P-value of less than 0.05 was considered statistically significant.

### 3. Results

Out of 102 distributed questionnaires, four were excluded due to incomplete responding and 98 questionnaires were reviewed, of which 50 (51%) were male and 48 (49%) were female and their mean age was 23.8±0.21 years. Other demographic characteristics are presented in Table 1.

According to Mann-Whitney and Kruskal-Wallis tests, no significant relationship was found between the attitude score of medical interns and their place of residence, income and education of parents, and marital status (P > 0.05).

On the other hand, marriage status had a significant relationship with the performance score of narcotics and psychotropic drugs use among medical interns (P = 0.031). The average performance score of married people is higher than the average performance score of single people (Table 2).
Residence status had a significant relationship with performance score on narcotics and psychotropic drugs use among medical interns (P = 0.022). The average performance score of medical interns who lived with their friends was lower than the average score of other interns (Table 2). Also, the performance score on the use of narcotics and psychotropic drugs among medical interns was not significantly related to the relationship between parents' education and parents' income and gender and age (P > 0.05).

Table 1. Demographic characteristics of medical interns

| Variable name          | Frequency | Percentage |
|------------------------|-----------|------------|
| Gender                 |           |            |
| Male                   | 50        | 51         |
| Female                 | 48        | 49         |
| Marital status         |           |            |
| Single                 | 70        | 71.4       |
| Married                | 28        | 28.6       |
| Place of residence     |           |            |
| With parents           | 45        | 45.9       |
| With friends           | 19        | 19.4       |
| Dorm                   | 18        | 18.4       |
| Private house          | 16        | 16.4       |
| Parents' education     |           |            |
| High school            | 6         | 6.1        |
| Diploma                | 13        | 13.3       |
| Bachelor and associate Degree | 48 | 49         |
| Masters and PhD        | 12        | 12.2       |
| MD                     | 19        | 19.4       |
| Parents' income (IRR)  |           |            |
| Under 5 million        | 21        | 21.4       |
| Between 5 and 10 million | 27   | 27.6       |
| Between 10 and 15 million | 30 | 30.6       |
| Over 15 million        | 20        | 20.4       |

Abbreviations: MD: medical doctor; IRR: Iranian Rial

Table 2. Distribution of performance scores on the use of narcotics and psychotropic drugs among medical interns

| Status            | Performance score | P-value |
|-------------------|-------------------|---------|
|                   | x ± S.E.          | Min     | Max     |
| Marital status    |                   |         |         |
| Single            | 4.0 ± 44.21       | 2       | 8       | 0.031   |
| Married           | 5.0 ± 43.32       | 2       | 8       |
| Total             | 4.0 ± 72.18       | 2       | 8       |
| Residence status  |                   |         |         |
| Parents           | 4.0 ± 56.28       | 2       | 8       | 0.022   |
| Dorm              | 5.0 ± 17.41       | 2       | 8       |
| Friends           | 3.0 ± 89.40       | 2       | 7       |
| Private house     | 5.0 ± 69.35       | 3       | 8       |
| Total             | 4.0 ± 72.18       | 2       | 8       |

4. Discussion

Substance abuse is one of the scourges that has befallen communities and, unfortunately, it is most prevalent among young people and adolescents. Since these materials are more emerging, the knowledge of the society is not enough about it [14]; therefore, it is necessary to conduct extensive research in this area. The present study showed that medical interns do not have the desired knowledge and attitude towards psychotropic substances. In this regard, in a study conducted on medical students in Shiraz (South of Iran), it was found that the rate of drug use was higher among single people than married people [6]. In our study, marriage status was significantly associated with performance scores on the use of narcotics and psychotropic drugs among medical interns. So that the average performance score of married people was higher than the average performance score of single
people, which can indicate the responsibility of married people compared to single people regarding the performance of these people. The results of our study were consistent with a study by Masibo et al. in Tanzania, which was conducted in both qualitative and quantitative ways [14]. In the present study, there was no significant relationship between gender and attitudes towards narcotics and psychotropic substances, which is consistent with the previous Iranian study [6].

One of the most important factors in the spread of drug use is the influence of peers and friends. Young people who have drug-addicted friends are more likely to use drugs. Therefore, if they are close friends of drug users, these young people are more likely to be driven to use drugs [2]. In this regard, in our study, residence status had a significant relationship with performance scores on narcotics and psychotropic drug use among medical interns, so that the average performance score of medical interns living with friends is lower than the average score of other interns. Peer pressure can have both positive and negative effects, depending on the quality of the peer group. In this study, living with friends may in some ways lead to poor performance.

In a study by Masibo et al., which examined high school students' knowledge and awareness of psychotropic substances, they found that students were sufficiently aware of drugs, their effects, and the problems associated with their use. The reason for reporting sufficient knowledge about psychotropic substances and their effects was to have information about the dangers of using psychotropic substances that they received from parents, siblings, media, and teachers. In the Masibo study, students were unaware of the long-term effects of psychotropic substance use, but more than 50% of our students were sufficiently aware [14]. Factors associated with narcotics and psychotropic drugs abuses are many and vary depending on individual contexts, family characteristics, complex social and environmental factors. The results of the Masibo study showed that the majority of participants had never used psychotropic substances, and few reported that they intended to use psychotropic substances [14]. In our study, 63% of students even refused to be friends with these people.

In our study, it was shown that parents 'education and parents' income had no significant relationship with performance scores on the use of narcotics and psychotropic drugs, which was consistent with other studies [14, 15]. Finally, it should be acknowledged that our sample size and studied population were limited, so our findings can not be generalized and further studies are demanded.

The results of the present study showed that the level of knowledge and practice of medical students about narcotics and psychotropic drugs is not at the desired level; therefore, due to the lack of knowledge of medical students about the dangerous side effects of psychotropic substances, education on the nature, symptoms and side effects of psychotropic substances is recommended. Also, because an unprincipled prescription of narcotics can be a violation of ethical codes, it is very important and necessary to inform the staff of the medical department about the legal and ethical standards in prescribing narcotics.

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Author contributions
All authors contributed equally to this manuscript, and approved the final version of manuscripts.

Conflict of interests
The authors declare that they have no conflicts of interest.

Ethical declarations
It should be noted that this research design has been approved by the ethics committee of Guilan University of Medical Sciences and has an ethics code of IR.GUMS.REC.1399.46.

Consent to publish
A written informed consent was taken from the participants to publish their data.

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