

Studying Prevalence and Pattern of Taking Narcotic and Ecstasy Drugs by Patients Admitted to Special Care Centers of Shahid Bahonar Hospital, Kerman, Iran

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Abstract

Background: Addiction is the repeated use of a chemical substance which affects the biological function of the brain and endangers physical health of the addicted person. Prevalence and pattern of taking drugs were assessed in the current study in a Special Cares Trauma Center. So the specialized physician could manage the medical procedure more easily through identification of addicted patients and type of their narcotics.

Methods: This cross-sectional study was conducted on 545 patients admitted to the Special Cares Center of Shahid Bahonar Hospital, Kerman, Iran, during 2010-2012. The data were collected by special information collection forms and then analyzed using SPSS software.

Findings: Among the total studied samples, around 55% of admitted patients were addicts. Opium was the most frequently used narcotic among the addicted patients with a percentage of 62%. Smoking was the most common method of taking the narcotics. 90% of addicted persons were male and 95% of them held diploma and under-diploma educational degrees. Among the reasons for admission of addicted patients to the Special Cares Clinic of Trauma Center, head trauma was the dominant cause (51%).

Conclusion: Addiction is considerably more prevalent among the population admitted to the Special Cares Center compared to the society, indicating greater vulnerability of addicted individuals in the society. Addiction to traditional and indigenous drugs are still the most prevalent, and fortunately, these drugs are easier to substitute and medicate compared to the new industrial narcotics.

Keywords: Addiction, ICU, Trauma center.

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Introduction

Addiction is generally defined as continued and exceeding use of a certain substance, whose deficiency causes emergence of sadness symptoms and an uncontrollable desire for repeated usage; this trend leads to psychological and physical devastation. Such a substance is mainly a chemical, and not a nutrient, which affects the biological function of the brain. Overall, these substances (narcotics) cause alterations in the addicted person's mood, thought, perception, and finally, behavior by influencing their central nervous system. Considering the young population of Iran, the largest percentage of addicts is reported in the youth and adolescents. Factors such as poverty, low education level, presence of personality disorders, and family problems (like divorce) greatly impact the occurrence of addiction. Addiction is a widespread problem in different countries. The necessity for paying attention to the addiction problem is absolutely vivid since its occurrence in any society is intricately linked to economy, culture, and politics of the respective country.

One of the major concerns of most experts of social pathology in Iran is the unprecedented growth in use of narcotics among university students and educated people. A reviewing paper in 2006 indicates that alcohol, opium, and grass are the most prevalent addiction items among Iran's university students.¹ The same study suggests that the estimated number of addicted university students is 6000 to 10000 people. According to the results of the last evaluation of addiction status in the country, Iranian addicts annually spend 3 billion US dollars (15% of petroleum export revenue) on narcotics in normal conditions.

Estimated number of drug addicts is approximated 200 million people worldwide (discounting alcohol addicts), from which 163 million are addicted to cannabis (a less dangerous narcotic) while addiction to opium and heroin accounts for the largest percentage in our country. Unfortunately, no precise statistics of Iran's addicted people is available; however, the use of narcotics and particularly ecstasy pills and amphetamines is definitely increasing. Official figures in the country show that around 3.7 million are taking narcotics including those taking drugs occasionally and for recreational purposes; 1.2 million of them

are permanently addicted and dependent on the drugs. In the same population, there are 250 thousand of injecting addicts among whom 5-7% are infected by AIDS virus. According to the results of the same research, 5% of Iran's addicted people are female.

In addition to numerous social and economical complexities, drug addiction culminates in physical damages such as suffering from infectious and contagious diseases like AIDS, hepatitis, and tuberculosis. Complications of long-term use of narcotics include pulmonary (lung) blocking diseases, cardiovascular diseases, drug withdrawal syndrome, aspiration pneumonia, bedsores, difficult weaning, and so on. Obstructive pulmonary diseases are commonly observed in people taking narcotics through smoking or inhaling. Inhaling narcotics impairs mucocilliary activity and thus the performance of the immune system of the lung, leading to hyperreactivity of the aerial path.

Non-coronary lung edema occurs following intake of certain narcotics including heroin and cocaine.² Aspiration pneumonia, which is defined as the acute lung damage after the aspiration of contents returning from stomach, occurs in patients with considerable consciousness disorder such as medicine overdose. Weaning from a mechanical ventilator is difficult in addicted people because inefficiency of the respiration pump is the most dominant mechanism of unsuccessful separation. The following factors hampers weaning from the mechanical ventilator: decrease in neuromuscular capacity, depression of respiration center accompanied with decline in coughing reflex and also reduction of reflexes securing aerial space.³ Bedsores are prevalent in people with records of drug abuse including cigarettes and also in those with a low body mass index (BMI).⁴ It was shown in a research that addiction to narcotics is regarded as an independent risk factor for cardiovascular patients.⁵ In another study, stress level of hydrocortisone hormones was measured 24 hours after operation in two groups of addicted and non-addicted individuals, who were both subject to major threats in terms of factors associated with operation risks. The values for addicted and non-addicted groups were respectively 288 and 195 nano-grams, indicating a more severe stress response of

addicts to surgical operation compared to non-addicted individuals.⁶

Other adverse effects of addiction to narcotics include infections (such as bacterial endocarditic, staphylococcus and fungal infections, AIDS, hepatitis, abscesses, tooth decay and related anaerobic infections), pulmonary infections (like bacterial and fungal pneumonia, aspiration, and tuberculosis), dermal complications (injection-induced scars, abscesses, cellulite), nervous complications (cerebral edema, cerebral abscess, seizures, myopathy), liver complications (liver cirrhosis, hepatitis), digestive complications (chronic constipation, diarrhea, pancreatitis), and kidney complications (nephritic syndrome accompanied with proliferative glomerulonephritis).

Narcotics are widely used by patients in Special Cares Center, which could complicate the medication of underlying diseases. Use of drugs is common for traumatic and acutely ailing patients with damages caused by accident, plummeting, thermal injuries, and etcetera.⁷ Since the process of the brain's full or partial recovery to its initial state in neurosurgical traumatic patients takes a long time, this paper is intended to help the specialist to design a medical plan by the knowledge of the patients' pattern of taking narcotics and ecstasy pills. The measures which need to be taken include prediction of short and long-term complications, providing aid to cure patients' agitation through replacing the narcotics by the medicines available in ICU, and finally helping to make the separation of patients from the ventilator faster and simpler.

Methods

In the present paper, the patients admitted to the Special Cares Center were assessed through a cross-sectional study by completing questionnaires. Sample size was calculated equal to 545 according to the formula. Along with the main objective (studying prevalence and pattern of taking narcotics by patients admitted to Special Cares Center), frequency of the associated parameters were also evaluated including prevalence of the narcotic used, method of using the narcotics, education level of drug users, pattern of taking the narcotics, gender distribution, occupational status, family's revenue level, age, marital status, and reason of being admitted to the ICU. The data were then collected and analyzed by means of SPSS software version 16. Moral considerations were also taken into account while filling the respective forms.

Results

Among the studied samples, 55% were proven addicted and others were considered as non-addicted individuals. It is noteworthy that the people who take narcotics recreationally and occasionally are classified as non-addicts. The study also showed that the average ages of addicted and non-addicted people are 48 and 39 years, respectively. Gender distribution analysis revealed that 90% of the addicted patients are male and the rest (10%) are female. The results of addiction prevalence for the admitted addicts are separately illustrated in figure 1. It must be also noted that the addicted patients who used to use both cigarettes and opium have overlap in the percentage calculations.

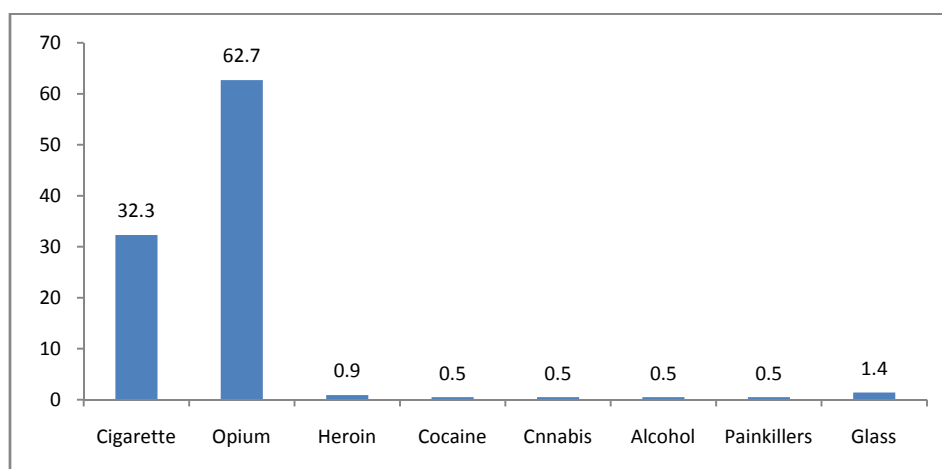


Figure 1. Percentages of type of narcotics taken by the addicted patients

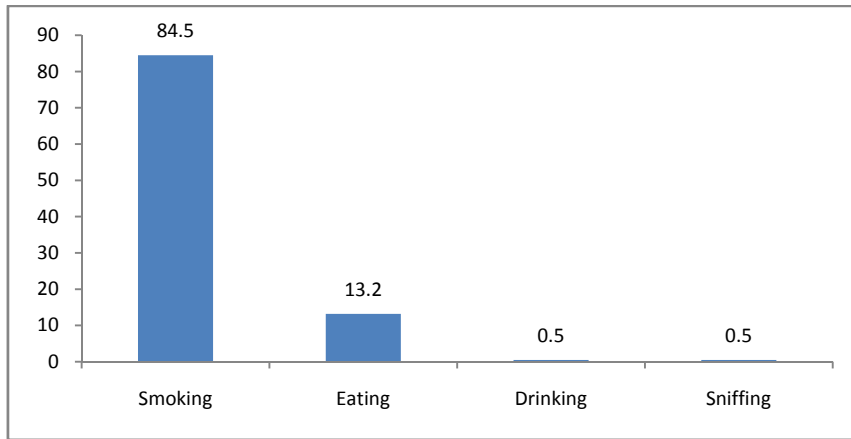


Figure 2. Percentages of method of taking narcotics by the addicted patients

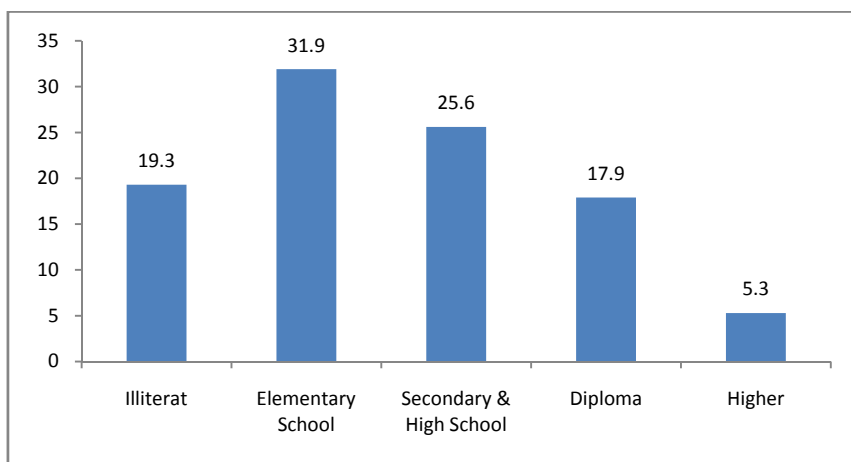


Figure 3. Frequencies of educational level among the addicted people

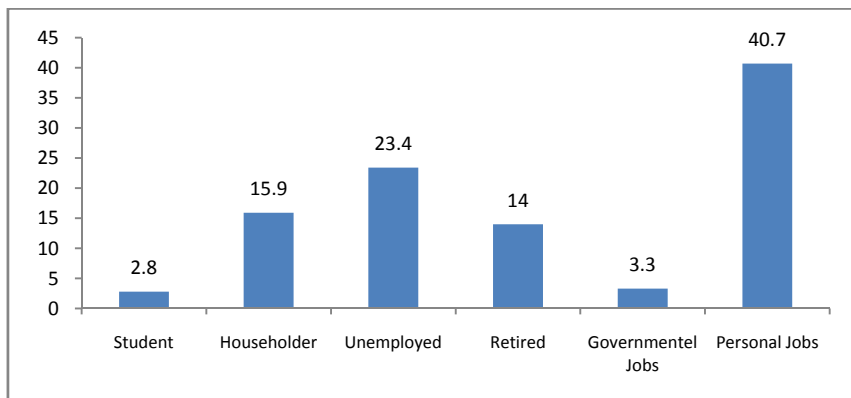


Figure 4. Frequencies of job type among addicted people

Smoking was observed to be the most common method of taking narcotics among the addicted population. Frequencies of other methods are shown in figure 2.

Another subject of study was education level of the addicted people and the related data, which are presented in figure 3. The results show that around 95% of the addicted patients have diploma and under-diploma degrees.

Investigation of occupational status indicates that the addicted patients did not mostly enjoy favorable job conditions and were doing low-income careers taking into account the fact that they mainly held low education degrees. Frequencies of addicted peoples' job type are manifested in figure 4. Note that private jobs incorporate non-official activities such as labor, masonry, and farming.

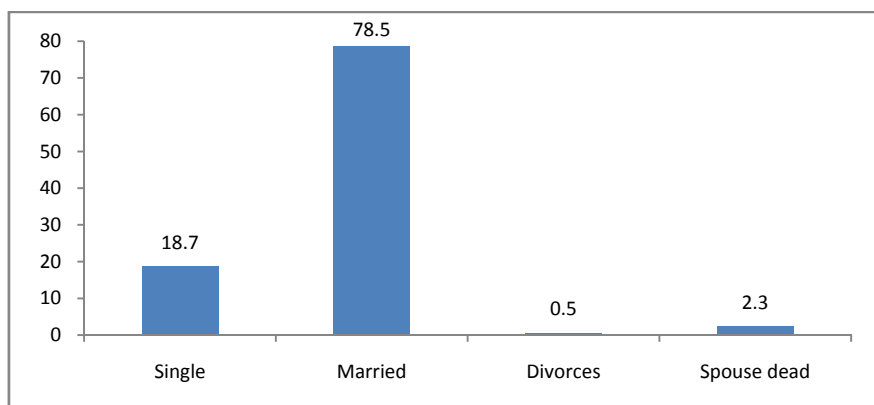


Figure 5. Percentages of marital status for addicted people

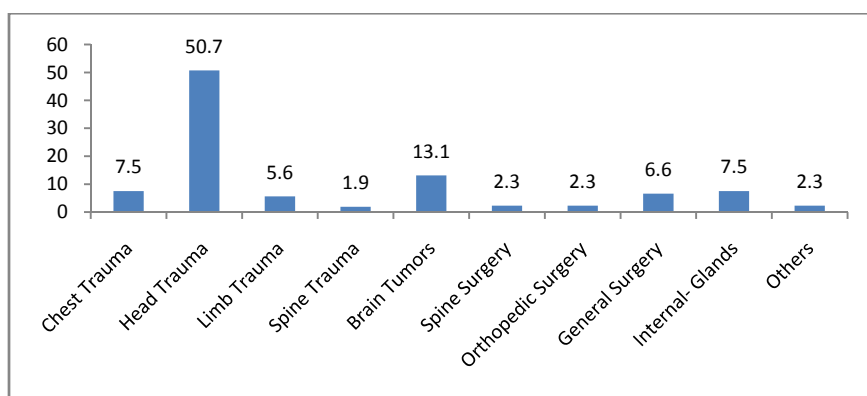


Figure 6. Percentages of causes of addicted patients' admission to ICU

Analysis of marital status is indicative of the fact that the majority of addicted patients are married and other statuses such as single, divorced, and widowed account for lower percentages (Figure 5).

Nonetheless, the principal point of conducting this research was investigating the reason of addicted patients' admission to the Special Cares Center. The result was interesting because a blow to the head and associated trauma were the reason of more than half of admissions to ICU. Percentages of other causes have also been demonstrated in figure 6.

Discussion

In the current research, addiction prevalence was studied among the patients admitted to the Special Cares Center; the results imply that addiction prevalence was 55% among the patients who had been mainly admitted due to traumatic causes. This figure is much higher than the average addiction prevalence in the society. Addiction prevalence percentage in the society has been also investigated. For example during a pilot study in Kerman city (2004), urine samples of individuals referring to large

laboratories were measured in terms of narcotic metabolites (using RSA filtering test and subsequently confirmatory tests of solid-liquid columnar chromatography and thin layer chromatography TLC). 14.6% of urine samples yielded positive responses to presence of narcotic metabolites (opoid compounds).⁸ In another research conducted in Mashhad city, 17% of patients admitted for motorcycle accidents were proven to have taken narcotics.⁹ Results of the present study suggest that the addicts suffer from such a trauma which needs further special care following the damage. In terms of frequency of narcotic type, opium was the most prevalent choice and frequent use of opium is expectable due to the geographical situation of Kerman Province. This finding is in agreement with the result of the fast evaluation of addiction method in which opium had been reported as the most commonly used narcotic in the country with a prevalence of 68.5%.¹⁰ Smoking was the most frequent method of taking narcotics. Concerning education level, approximately 95% of addicts in our study had diploma and under-diploma degrees. In the research called "fast evaluation of addiction

method", 88% of the addicted individuals had diploma and under-diploma degrees.¹⁰ This could imply the close relationship of addiction and low education level. Family's revenue could not be measured in the current study because over 40% of participants had non-official jobs whose earnings vary in different seasons of the year. In Babol City (2006), poverty and addiction were reported to be tightly interrelated.¹¹ Age of the patients in the current research was in the range 18-89 years. Average ages of addicted and non-addicted people were respectively 39 and 48 years; considering dominant use of traditional drugs in the present study, the average age of addicted people is justifiable. 78.5% of the addicted population was married, while 18.5% was single; this result is expectable due to the average age of the addicts and more remarkable use of traditional drugs among the population. In terms of gender distribution, more than 70% of addicted patients were male. Furthermore, head trauma was the major cause of admission of addicted patients (51%), the second most frequent cause was head tumor (13.5%), and next ranks belonged to thoracic (chest) trauma and internal diseases (each 7.5%), and so on. This indicates that addiction might cause the trauma of the addicts to appear mostly in the form of head injuries.

Conclusion

As suggested by the results, the addicted population admitted to the Special Cares Center had an extremely higher addiction percentage than the average prevalence in the

society (55% versus 15-20%). This finding can be indicative of the high prevalence of damages among the addicted population. Considering the understudied Special Cares Center which was devoted to traumatic patients, the results show high prevalence of trauma among the addicted patients. Among the variety of injuries, head trauma was the most frequent in the addicted population of the research. Fortunately, opium still remains the main narcotic used by the addicted population of this province. This drug can be easily substituted and its quitting symptoms (which vary from light withdrawal syndrome to advanced withdrawal syndrome depending on the extent and duration of addiction to the drug) can also be simply alleviated using medicines such as clonidine and methadone. In a study conducted in Shiraz University, condition of the addicted patients improved after one month of methadone maintenance treatment. In another research on addicted rats, hydrocortisone with dosage of 5-10 mg per one kg of body weight caused reduction in drug withdrawal symptoms.¹² N-Acetyl-Cysteine (NAC) with a dosage of 1200 mg per day had a remarkable impact on improvement of life quality in addicted people.¹³ Accordingly, incompatibility of addicted patients to the mechanical ventilator, for example emerging as intense panic and exceeded respiration rate, can be diagnosed and controlled by prescribing substituent medicines.

Conflict of Interest: The Authors have no conflict of interest.

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بررسی شیوع و الگوی مصرف مواد مخدر و روان گردان در بیماران بستری در مرکز مراقبت ویژه بیمارستان باهنر کرمان

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چکیده

مقدمه: اعتیاد، مصرف مکرر یک ماده شیمیایی است که بر عملکرد بیولوژیک مغز اثر گذاشته و سلامت جسمی فرد معتاد را به خطر می‌اندازد. در مطالعه حاضر، شیوع و الگوی مصرف مواد در یک مرکز مراقبت ویژه سانتر تروما، ارزیابی شد تا پزشک متخصص با شناسایی بیماران معتاد و نوع ماده مصرفی آن‌ها، بتواند آسان‌تر سیر درمان این بیماران را اداره کند.

روش‌ها: مطالعه مقطعی حاضر، در طی سال‌های ۹۰-۱۳۸۹ بر روی ۵۴۵ بیمار بستری در مرکز مراقبت‌های ویژه بیمارستان شهید باهنر کرمان انجام شد. اطلاعات توسط فرم مخصوص، جمع‌آوری و توسط نرم‌افزار SPSS مورد تجزیه و تحلیل قرار گرفت.

یافته‌ها: از مجموع نمونه‌های بررسی شده، حدود ۵۵ درصد بیماران بستری معتاد بودند. بیش‌ترین ماده مصرفی در بین معتادان بیمار، تریاک با فراوانی ۶۲ درصد و بیش‌ترین روش استعمال مواد، روش کشیدن بود. ۹۰ درصد معتادان مرد و سطح تحصیلات ۹۵ درصد بیماران معتاد دیپلم و زیر دیپلم بود. در میان علل بستری بیماران معتاد در مرکز مراقبت‌های ویژه سانتر تروما، تروما به سر بیش‌ترین فراوانی با مقدار ۵۱ درصد را داشت.

نتیجه‌گیری: جمعیت معتاد بستری در مرکز مراقبت ویژه شیوع قابل توجهی نسبت به متوسط شیوع اعتیاد در جامعه را شامل می‌شود، که بیانگر آسیب‌پذیر بودن بیش‌تر فرد معتاد در جامعه است. هنوز اعتیاد به مواد سنتی و بومی بیش‌ترین شیوع را دارد که خوش‌بختانه این مواد نسبت به مواد صنعتی جدید جایگزین، راحت‌تر درمان شده و درمان آسان‌تری دارد.

واژگان کلیدی: اعتیاد، واحد ICU، سانتر تروما.

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