

TRENDS AND STATISTICS OF DRUG ADDICTION IN A METROPOLITAN CITY OF PAKISTAN

Muhammad Naeem Aamir^{1*}, Aimen Umer Khan¹, Qandeel Waheed¹, Sonia Kanwal¹,
Maria Manan¹, Atif Usman²

¹ Faculty of Pharmaceutical Sciences, Government College University Faisalabad, Pakistan

² SEGi University Kota Damansara, Malaysia

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Background: The use of illicit drug is curse for a society. It not just only destroys one's life but the whole family and community is affected. To deal with this issues statistical analysis of prevalence is essential.

Method: The present study aimed to collect data from different rehabilitation centers in Faisalabad. It was a descriptive cross-sectional study, interviewing 150 respondents about characteristics of drugs.

Results: After statistical analysis of respondents, it was found that males were more prone to addiction and alcoholism as compared to females. The females were inclined towards the addiction of drugs which were prescribed by physician and available at pharmacies. The male population was using all sorts of illicit drugs including alcohol, cannabis, hashish, opium, alprazolam, nalbuphine, morphine, cocaine, heroin, lorazepam and codeine.

Conclusion: Females were more prone to addiction of benzodiazepam due to ease of availability to them from pharmacy stores. A higher family burden compare to low income was a main element to trigger addiction in married males.

Key words: Drug Abuse, Addiction, Rehabilitation Centers, Cross-sectional Study.

*Corresponding Author. E-mail: naeem.aamir@gcuf.edu.pk ; Phone: +92-321-4527428

INTRODUCTION

Drug abuse is the continuous use of psychoactive drug despite the knowledge that it is causing social, occupational, psychological or physical problems. Substance dependence is more severe condition where drug taking is compulsive and associated with the physiological signs of dependence (tolerance or withdrawal syndromes) [1]. The neuropharmacological studies were conducted in the animal model shows that changes in the stressed and reward system in the brain causes addiction. The human stress system is associated with the negative feeling that evokes addiction. The dysfunction of specific neurochemical mechanism in the reward system and activation of stress system opposes the homeostasis of the body and hence causes addiction. Illicit drug use includes the non-medical use of a variety of drugs that are prohibited by international law. These drugs include: amphetamine-type stimulants, cannabis, cocaine, heroin and other opioids, and ecstasy.

Alcoholism is drinking to a level that interferes with normal body homeostatic functions and mental problems and social issues. It is divided into two types alcohol addiction and abuse. Alcohol abuse, means drinking too much amount of alcohol that's

really causes social and mental health problems but aren't dependent on alcohol. Alcohol abusers don't have physical compulsion of alcohol and don't feel withdrawal symptoms [2]. Alcohol addiction occurs gradually with the passage of time. It interferes with the neurotransmitters present in the brain specially the dopamine and increases its level to produces euphoric sensations.

One survey indicated that 32% of the heavy drinkers were also illicit drug user. In United State there are 79,000 deaths due to excessive amount of alcohol consumption in each year. In 2005- 2006 there were 187,640 alcohol related hospital admissions in England. In 2002, the harmful use of alcohol was estimated to cause about 2.3 million premature deaths worldwide. It is the fifth leading contributor to global disease burden. It causes cancer of mouth, oropharynx, esophagus, colorectal, liver and breast [3-5], cardiovascular diseases, liver cirrhosis, neurological imbalance and social isolation [6, 7].

The consumption of illicit drugs has increased drastically throughout the world. We should estimate the contribution of total disease burden associated with illicit drug use because it is the major contributor in increased mortality due to over dose,

suicide and trauma [8]. Pakistan is one of those countries which are being exploited by the curse of this addiction [9].

Faisalabad district has an area of 5,856 sq km and a population of 6.5 million souls. It is the third largest city of Pakistan after Karachi and Lahore. This metropolitan city was selected to figure out the prevalence of addiction. The scheme was planned to find out the frequency of male and female drug addicts and which drug, either prescription or non-prescription, is more liable to be abused. The data from different rehabilitation centers was collected and it may be helpful to screen and devise new preventive measures and influential intervention [10, 11].

METHODOLOGY

It is center based, descriptive cross sectional study that was conducted by the pharmacy students of Government Degree College Faisalabad. Various

rehabilitation centers (Roshan Zindagi Center, Pieces Psychiatric Clinic, and Allied Hospital Faisalabad) were visited and in consultation with the administrative staff the addicts profiles was collected. The prescriptions were examined and face-to-face interviews were also conducted from the abusers and addicts.

RESULTS

Frequency of Addicted

Among males 73% were married while in case of females unmarried were more addict (77%).

Frequency of Male and Female Addiction to Specific Drugs

Frequency of specific agents was versatile. Alcohol, Hashish, Opium, Morphine, Cocaine, and Heroine were used by males only. Nalbuphine, Lorazepam, Codeine, Diazepam, and Alperazolam were used by both gender. Paroxetine was found to be used by females only (Fig. 1).

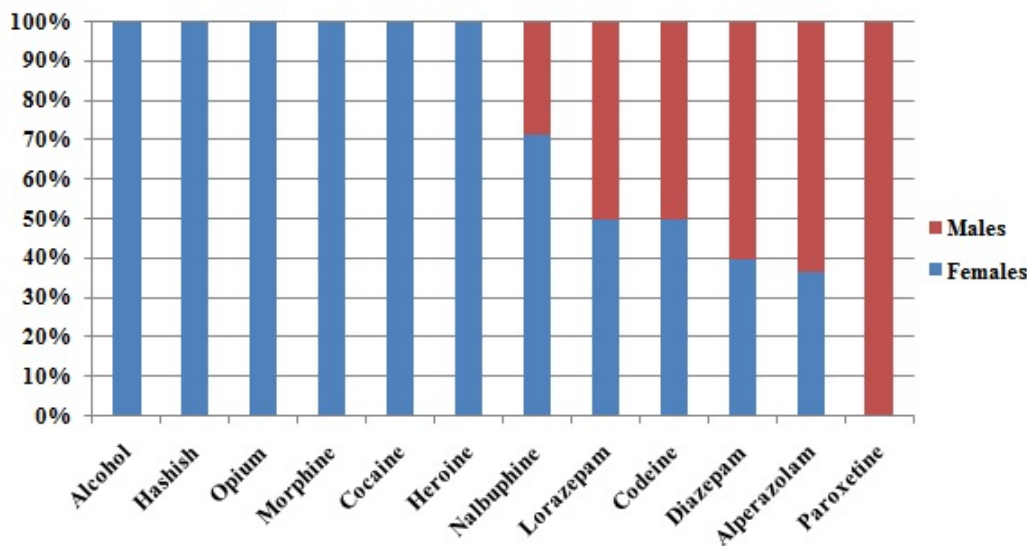


Figure 1: Frequency of male and female addiction to specific drugs

DISCUSSION

Undoubtedly it's not easy to eradicate drug abuse but it can be reduced to some extent. Men are more likely to use illicit drugs than female and in hospitals emergency cases and deaths due to addiction is more for men [12]. For most of the age groups men having higher rates of addiction abuse and alcohol use as compared to females [13-15].

Sex differences are present for all the phases of abuse which are initiation, progression and addiction. The married males are at higher risk of abusing or getting dependent towards addiction abuse and alcoholism as compared to unmarried. Due to family burden, increased demands of wife and children, less monthly

income are the triggering causes of addiction in married males.

Females who were unmarried were more prone to addiction. Being unmarried with fears regarding aging, marriages of other cousins in family and absence of parent's supervisor in hostels, are the probable reasons for increased rate of addiction in unmarried female. Female uses much more pharmaceutical products which were easily available in pharmacy even without prescription [16, 17]. These agents are taken by female in over doses to get mental relaxation and to reduce depressive symptoms or to overcome psychological problems. These drugs were given to female for depression by the physicians but due to its euphoric effects it was used constantly

and led to slow and steady progression of abuse and addiction.

Frequency of Male and Female Addiction to Specific Drugs

The potential of development of abuse and addiction is equal in both gender but due to ease of availability of drugs to male than of female is an important factor to be considered. The male population is more prone towards Alcohol, Hashish, Opium, Morphine, Cocaine and Heroin [18, 19]. These substances were used by their family members at homes or friends at hostels. Initially people were using for pleasure or as adventure but later due to physical dependence they became addicts. On the other hand, female population was more addicted to Nalbuphine, Lorazepam, Codeine, Diazepam and Alprazolam. This is because the ease of availability of such drugs from medical stores where sale without prescription

was common. Access to Hashish and Heroin was difficult for females due to social barriers.

CONCLUSION

Family burden in married male whereas absence of parent's supervisor in unmarried females looks the main element to aggravate addiction. Selection of specific agents depends upon ease of availability, for male acquiring drugs from friend community is easy while females can get prescription drugs from pharmacies. Sale without prescription should be monitored. Moreover production and smuggling of narcotics should be controlled.

Conflict of Interest

No conflict declared

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REFERENCES

1. George F. Koob. Neuroadaptive mechanism of addiction: studies on extended amygdala. *Eur Neuropsychopharmacol.* 13(6), 442-52, 2003.
2. Christo Ballas, psychiatrist, hospital of the University of Pennsylvania, Philadelphia. Alcoholism. Search Medline plus. June 2nd 2008
3. R. Baan, K. Straif, Y. Grosse, B. Secretan, F. ElGhissassi, V. Bouvard, A. Altieri, V. Coglianò, WHO International Agency for Research on Cancer Monograph Working Group. Carcinogenicity of alcoholic beverages. *Lancet Oncol*, 8 (4), pp. 292-293, 2007.
4. Schiff ER. Hepatitis C and alcohol. *Hepatology.* 26 (3 Suppl 1):39S-42S, 1997.
5. Leshner S.D.H., Lee Y.T.M. Acute pancreatitis in a military hospital. *Military Medicine*, 154(11), 559-64, 1989.
6. Rehm J, Gmel G, Sempes CT, Trevisan M. Alcohol-related morbidity and mortality. *Alcohol Res Health.* 27(1), 39-51, 2003.
7. Castaneda R, Sussman N, Westreich L, Levy R, O'Malley M. A review of the effects of moderate alcohol intake on the treatment of anxiety and mood disorders. *J Clin Psychiatry.* 57(5), 207-12, 1996.
8. Nayyar A. Pattern and trends of Drug Abuse in Pakistan. Islamabad, Pakistan Narcotic Control Board, 1984.
9. Afridi MI. Drug Demand Reduction Concepts & Strategies. Anti-Narcotics Force. Yearly Digest, 1997.
10. Kelly MG. Some characteristics of drug abusers, attending a drug abuse center in Dublin. *Journal of the Irish Medical Association*, 68: 121-125, 1975.
11. Muhammad Hussain Khan, Saeed Anwar, Iftikhar Ahmad Khan, Iftikhar Ahmad Khan, Rashid Hassan Khan, Zakia Subhan, Nadia Noreen, Halima Sadia. Characteristics of drug abusers admitted in drug abuse treatment centres at Peshawar, Pakistan. *Gomal Journal of Medical Sciences.* Vol. 2, No. 2, 2004.
12. Women of color: health data book. National Institutes of Health. NIH Publication No. 14-4247, 2014.
13. Zilberman M, Tavares H, Guebaly N. Gender similarities and differences: the prevalence and course of alcohol- and other substance-related disorders. *J Addict Dis.* 22, 61-74, 2003.
14. Mann K, Ackermann K, Croissant B, Mundle G, Nakovics H, Diehl A. Neuroimaging of gender differences in alcohol dependence: are women more vulnerable? *Alcohol Clin Exp Res.* 29(5), 896-901, 2005.
15. Jill B. Becker and Ming Hu. Sex difference in drug abuse. *Front Neuroendocrinol.* 29(1), 36-47, 2008.
16. Van Etten ML, Anthony JC male and female differences in transition from first drug opportunity to first use: searching for sub groups variation by age race region and urban status. *Journal of women Health and gender based medicines* 10,797-804, 2001.
17. Van Etten ML, Neumark YD Anthony JC Male- Female differences in the earliest stages of drug involvement. *Addiction.* 94, 1413-9, 1991.
18. Jill B. Becker and Ming Hu. Sex Differences in Drug Abuse. *Front Neuroendocrinol.* 29(1), 36-47, 2008.
19. Gabriela Arantes Wagner, Vladimir de Andrade Stempluk, Monica L Zilberman, Lúcia Pereira Barroso, Arthur Guerra de Andrade. Alcohol and drug use among university students: gender differences. *Rev Bras Psiquiatr.* 29(2), 123-9, 2007.