Int. J. Envi Sci. & Tech. Vol. 1 (1) 2012, pp. 7-13 ISS No.: 2778-0785

A Study to Assess the Magnitude of the Problem of Substance Abuse in a Peripheral District Town of West Bengal

Prasanta Kumar Das[1], Nirmalya Kumar Sinha[2], Asish Mukherjee[3], Kartik Maiti[4], Kanti Bhusan Chowdhury[5]

[1]Associate Professor, Dept. of Psychiatry,
Midnapore Medical College & Hospital, Midnapore
[2]Dept. of Nutrition, Raja N.L. Khan Women's College, Midnapore
[3]Associate Professor, Dept. of Psychiatry,
Calcutta National Medical College & Hospital, Kolkata
[4]Dept. of Zoology (UG & PG), Raja N.L. Khan Women's College, Midnapore
[5]Assistant Professor, Dept. of Community Medicine,
Calcutta National Medical College, Kolkata
*P.G Department of Environment Sciences, Sambalpur University, Jyotibihar, Burla
[1]*Email: pkdas_46@yahoo.co.in*

(Date of Receipt : 23-02-2012; Date of Acceptance for Publication : 25-05-2012)

ABSTRACT

Background: Substance abuse is a complex and multidimensional problem and this problem is not merely that of an individual and a drug or a community, but of the interaction between the triad. At the present moment, substance abuse has been showing a rising trend all over the world including India.

Aims: To study the severity of substance abuse (magnitude) among the participants who attended psychiatric outpatient department for the treatment in a remote town Midnapore.

Design and method: The present epidemiological survey was conducted by the Department of Psychiatry, Midnapore Medical College & Hospital, Midnapore to assess the severity of substance abuse e.g. alcohol, drug, sedative and other substances in the patients of psychiatric outpatients department. To diagnosis the severity of substance abuse, Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) score, developed by WHO, was followed.

Findings: Total ninety male patients, aged 12 to 79 years, came at psychiatry outpatient department treatment for substance abuse. Among the substance abusers, 26.67% were drug addicts, 14.44% alcohol user and 51.11% tobacco user.

Conclusions: The newer and greater stresses related to rapid changes in life styles may the cause of this substance abuse. Surprisingly consumption of the traditional drugs like cannabis was remarkably low as compared to alcohol and sedatives. It showed effects of urbanization and shifting from traditional way of life to modern life. This survey reflects the need to intensify efforts at the community level to provide the health education to immediate stop this situation.

Keywords: Substance abuse; Psychiatry OPD; ASSIST score.

Pages: 7 **References: 10**

ISS No.: 2778-0785

Introduction

Substance use refers to the use of any psychoactive substance or drug, including licit and illicit drugs, other than when medically indicated.[1,2] Psychoactive substance use poses a threat to the health, social and economic fabric of families, communities and nations.[3] A report showed that the turnover of drug was around $500 billion made it the third largest business in the world, next to petroleum and arms trade.

It has been showing a rising trend all over the world perhaps as a result of newer and greater stresses related to rapid changes in life styles. About 190 million people all over the world consume one drug or the others.[4] According to a UN report, One million heroin addicts are registered in India, and unofficially there are as many as five million. Drug users are twice as likely to visit an emergency department and nearly 7 times more likely to be hospitalized than comparably aged persons who do not use illicit drugs.[5]

Many people view drug abuse and addiction as strictly a social problem. Parents, teens, older adults and other members of the community tend to characterize people who take drugs as morally weak or as having criminal tendencies. They believe that drug abusers and addicts should be able to stop taking drugs if they are willing to change their behavior. This myth is common to their families, their communities and the health care professionals. Drug abuse and addiction comprises a public health problem that affects many people and has wide-ranging social consequences. Recent scientific research provides evidence that not only do the drugs interfere with normal brain functioning creating powerful feeling of pleasure, but they also have long term effects on brain metabolism and activity. At some point, changes occur in brain that can turn drug abuse into addiction, a chronic relapsing illness. Those addicted to drugs suffer from a compulsive drug craving and usage and cannot quit by themselves. Treatment is necessary to end this compulsive behavior. The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) guidelines developed by WHO for use in primary care,[6] were used in this study to assess the magnitude of the problem in and around a district town Midnapore.

This may be the first study among the substance abuser in Paschim Medinipur District by using ASSIST guideline as per our knowledge concerned.

Methods & Materials

The present study was carried out in the outpatient department of Psychiatry, Midnapore Medical College, situated in district town Midnapore, West Bengal for three months period (12.7.2010 - 11.10.2010).

In this study the participants were male, aged between 12 to 79 years, they came from various socioeconomic zone with different educational background viz. illiterate to highly educated, technical or professional personals. This study selected only the male patients and excluded female patients as they do not attend regularly, mainly due to social stigma attached with mental diseases and also they are burdened with household works. The total number of patients covered in this study was ninety who attended the Psychiatry outpatient department.

To assess the magnitude of the problem of the studied population, the ASSIST score by WHO (2002), was followed.[6] The effects of each substance abused were noted. The bad effects of the substance abused were explained to each individual and "information about the substance", or "brief intervention", or "more intensive treatment" were instituted in accordance to the ASSIST score. The questions of ASSIST score are being mention as follows.

Question 1: asked about which substance have ever been used in the patient's lifetime.

Question 2: asked about the frequency of the substance use in the past 3 months, which gives an indication of the substances which are most relevant to current health state.

Question 3: asked about the frequency of experiencing strong desire or usage to use each substance in the last 3 months.

ISS No.: 2778-0785

Question 4: asked about the frequency of health, social, legal or financial problems related to substance use in the last 3 months.

Question 5: asked about the frequency with which use of each substance has interfered with the role, responsibilities in the past 3 months.

Question 6: referred to substance ever used and asks whether any one has ever expressed concern about the patient's use of each substance and how recently that occurred.

Question 7: asked whether the patient had ever tried and failed to cut-down or give up their use of each substance and how recently that occurred.

These questions provide indications of hazardous and harmful substance abuse and gives the guidelines of effective treatment also.

A Structured clinical interview schedule was employed to study the case history and examination of the participants. Diagnostic and statistical manual of mental disorders, fourth Edition, (DSM-IV) criteria were followed in the study.[7]

Ethics: Ethical issues have been followed throughout the study.

Results

Ninety male patients aged 12 to 79 years came for treatment (de-addiction) for substance abuse (Table 1).

Table 1

Age group (years)	Number	%
12 to 20	3	3.33
21-30	22	24.44
31-40	12	13.33
41-50	16	17.78
51-60	5	5.56
61-70	15	16.67
71-80	17	18.89
Total	90	100

Distribution of studied subjects according to age group

Among them the below 20 years are the minimum number and their severity score are also low (Table 2). But the 20 to 30 years age group having the maximum number showing though the severity of the substance abuse was found in 41 to 50 years age group (Table 2).

Among ninety substance abusers, 24 (26.67%) were drug addicts (Fig. 1). Among the users about 25% reported that they began their illicit drug use around the age of 20 years.

The total drug abusers studied were 24 which represent 26.67% of the total substance abusers of this study group. Among the drug users seventeen used different types of sedatives, four used heroin, and the number of cocaine, hallucinogens, amphetamine abuser were one.

The study revealed that among the drug user that their father, 83.33% were addicted with alcohol, 91.67% with smoking. Among the substance abusers about 77.78% reported that

ISS No.: 2778-0785

Table 2

Age group (years)	Route used	Substance	Number	Specific substance involvement score
12-20	**Inhalant**	Inhalants	3	2
21-30	**Smoking**	Tobacco Cannabis	12 1	2 20
	Oral	Alcohol Tobacco (chewing)	2 4	16 2
	Parentaral	Heroin (opioid)	3	18
31-40	**Smoking**	Tobacco Amphetamine	3 1	13 3
	Oral	Alcohol Tobacco (chewing)	6 2	22 10
41-50	**Inhalant**	Cocaine	1	30
	Oral	Sedatives (Tab) Hallucinogens	5 1	15 28
	Parentaral	Sedatives	9	15
51-60	**Oral**	Alcohol	4	12
	Parentaral	Heroin (opioid)	1	28
61-70	**Smoking**	Tobacco Cannabis	3 2	3 16
	Oral	Alcohol Tobacco (chewing)	1 6	20 4
	Parentaral	Sedatives	3	3
71-80	**Smoking**	Tobacco Cannabis	4 1	3 16
	Oral	Tobacco (chewing)	12	9

their mothers had history of at least one of substance abuse and further reported that 11.11% abused alcohol, 72.22% chewing tobacco abuser.

The adverse effects of the substance abuse are described in the table 3. In most of the substance abuser, they faced the problem of premature aging, different psychological and neurological disorders. They also suffered from impaired functioning of different organs specially stomach, liver, kidney, heart.

ISS No.: 2778-0785

Table 3: Adverse effects of substance abuse in the studied group

	Substance abuse	Adverse effects
a)	Regular tobacco smoking:	Premature aging, wrinkling of skin respiratory infection and asthma, high blood pressure diabetes mellitus, allergies, kidney diseases, chronic obstructive airways disease, heart diseases, stroke, vascular diseases, cancer.
b)	Tobacco chewing	Develop Leukoplakia, cardiovascular disease, gum and tooth disease, weakens the tooth enamel resulting in cavities, weakens the stability of the tooth, tooth fall.
c)	Alcohol:	Hang over, aggressive and violent behavior, accidents and injury, reduced sexual performance, premature aging, digestive problems, ulcer, pancreatitis- high blood pressure, anxiety and depression, relationship difficulties, financial and work problems, difficulty remembering things and solving problems-stroke, permanent brain injury, muscle and nerve disorder, liver disease, pancreatic disease, cancer, suicidal tendency.
d)	Cannabis:	Problems with attention and motivation, anxiety, paranoia, panic, depression, decreased memory and problem solving ability, high blood pressure, asthma, bronchitis, psychosis in those with a personal or family history of schizophrenia, heart disease and chronic obstructive airways disease, cancer.
e)	Sedatives:	Drowsiness, dizziness and confusion, difficulty in concentrating and remembering, nausea, headache, unsteady gait, sleeping problems, anxiety and depression, tolerance and dependence after a short period of use, severe withdrawal symptoms.
f)	Hallucinogens:	Hallucination (pleasant or unpleasant visual, auditory, tactile, olfactory), difficulty in sleeping, nausea and vomiting, increased heart rate and blood pressure, mood swings, anxiety, panic, paranoia, flash, increase the pre-existing mental illness.
g)	Opioids:	Itching, nausea, vomiting, drowsiness, constipation, tooth decay, difficulty concentrating and remembering, reduced sexual desire and sexual performance, relationship difficulty, financial and work problems, violation of law- tolerance and dependence withdrawal symptoms.
h)	Cocaine:	Difficulty in sleeping, palpitation, headache, weight loss, numbness, tingling, clammy skin, scratching and picking, accidents and injury, financial problems, irrational thoughts, mood swing, anxiety, depression, mania, aggression and paranoia, instance craving, stress, psychosis.
i)	Amphetamines:	Difficulty sleeping, loss of appetite, weight loss, dehydration, jaw clenching, headache, muscle pain, mood swings. anxiety, depression, agitation, mania, panic, paranoia- tremors, arrhythmia, shortness of breath, aggressive and violent behavior, psychosis, permanent brain damage, liver damage, brain hemorrhage.
j)	Inhalants:	Dizziness, hallucinations, drowsiness, disorientation, blurred vision, flu-like symptoms sinusitis, nose-bleeding indigestion, stomach ulcer, accidents and injury, memory loss, confusion, depression- aggression, coordination difficulty, slowed reactions, hypoxia, delirium, seizure, coma, organ damage.

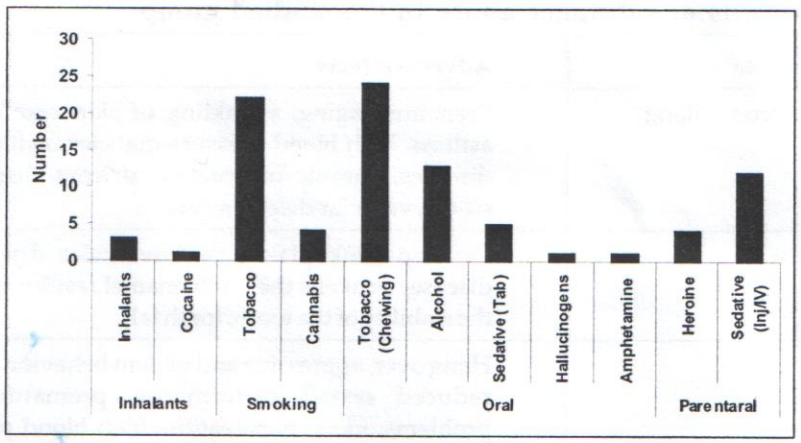

Fig 1: Distribution of the studied subjects according to the type of substance abuse

Discussion

Midnapore, a district town situated in Jungalmahal area, at eastern part of India. It is 23 meters above the sea-level and 127 km away from Kolkata.

Substance abuse is a complex and multi-dimensional problem. It is an established fact that urbanization, modernization, industrialization and poverty, joblessness etc. have adverse effect on mental health. It has various social, cultural, biological, geographical, historical and economic aspects. The stressful lifestyle, breaking of old joint family system, absence of parental love and care in modern families especially where both parents are working, decline of old religious and moral values etc lead to a rise in the number of substance abusers who take substances to escape hard realities of life.

A recent study revealed that the number of cases reporting for treatment of alcoholism and tobacco has decreased only because alcohol and tobacco have become more socially acceptable,[8] though in this study it was found that among the studied group 14.44% alcohol user and 51.11% tobacco user. Kumar (1991) from Kerala has reported an increase in the abuse of medicinal and over the counter drugs like benzodiazepines, buprinorphine and codeine preparations.[9]

In this study about 93% of the addicts, specially drug abuser with positive family history, taking into account both from paternal and maternal heredity, is remarkable, which is higher than the previous study in India.[10]

An abuser of substance in family had a tremendous impact in the family and the society at large. In case of smoking, it is noted that if child's older siblings and parents both with smoking habits, then the child concerned, is four times likely to smoke as one with no smoking history in the family.

Conlusion

During this study the bone-chilling experience of drug abuse and addiction, with its enormous potentiality to total destruction of our culture and society, is painful and only a silver-line hope of being a treatable chronic relapsing disease, similar to many other conditions that exist. Importance should be understood nationwide to avoid extinction. Drug abuse and addiction is not only a social problem, but it is a chronic, relapsing and treatable condition.

Limitation of the Study

Female patients are excluded. The small sample size of this study and various substance-subgroups were also too small for any definitive conclusions. Lastly, being based on a single centre catering to a certain geographic area, the

ISS No.: 2778-0785

study did not represent the diverse (substance use) cultures of India. The findings of this research can be generalized only within these limitations.

References

1. World Health Organization. *Guide to drug use epidemiology*. Available at *http://whqlibdoc.who.int/hq/2000/a58352_Part A.pdf* (accessed on 17 June **2007**).
2. Smart RG, Hughes PH, Johnston LD, Anumonye A, Khant U, Medina Mora ME, *et al. A methodology for student drug-use surveys*. Geneva:World Health Organization;**1980**.
3. Swadi H. Drug abuse in children and adolescents: An update. *Arch Dis Child* **1992;67:**1245–6.
4. Miller, WR. Sanchez, VC. Motivating young adults for treatment and lifestyle change. In: Howard G., editor. Issues in alcohol use and misuse in young adults. University of Notre Dame Press; **1993**. pp. 55–82.
5. Stein MD, O'Sullivan PS, Ellis P, Perrin H, Wartenberg A. Utilization of medical services by drug abusers in detoxification. *J Subst Abuse*. **1993**;5:187-193.
6. WHO ASSIST Working Group (2002) the Alcohol. Smoking and Substance . Involvement Screening Test (ASSIST); Development- reliability and feasibility. *Addiction*, **1997**, 1183-1194.
7. American Psychiatric Association. *Diagnostic and Statistical Manual*. 4th ed. Washington DC: American Psychiatric Association. **1994**.
8. Singh Sachdev J, Singh Yakhmi R, Sharma AK. Changing pattern of drug abuse among patients attending De-addiction centre at Faridkot. *Indian Journal of Psychiatry*, **2002**, 44(4), 353-355.
9. Kumar KA. The Alcohol and Drug scene in Kerala Facets of substance abuse: An update. Proceedings of the National CME. Conference on Drug Abuse and Dependence. **1991**.
10. Kadri AM, Bhagyalaxmi A, Kedia G. A study of socio-demographic profile of substance abusers attending a de-addiction centre in Ahmedabad city. *Indian Journal of Community Medicine* **2003**; Vol. XXVIII, No.2, Apr.-June.

*****