Brief Report

Drug Dependence in Adolescents: Changing Trends at a De-Addiction Centre in North India

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ABSTRACT

Introduction: There is scarcity of Indian data on substance dependence in children and adolescents. *Methods:* Case records of 85 adolescents with the final diagnosis of substance dependence were analyzed (out of 115 registrations during 1978-2003). *Results:* Time trends showed an increase in individuals with good social support and higher family income, a decrease in individuals with psychiatric comorbidity. Intravenous drug use was prominent during 1988-1997. *Conclusions:* Clinic attendance may reflect secular trends in the community.

Key words: Adolescents, Drug dependence, Substance abuse, India

INTRODUCTION

Substance abuse in adolescents has become a matter of concern. In the West substance use among students had increased over the 1990s[1]. Many adolescents use multiple drugs[2]. Also, they are initiating substance abuse at earlier ages[2], which may have led to increased morbidity and criminality, decreased productivity, and high societal cost of substance abuse[3,4].

Like many developing countries, India does not have a national drug use/abuse data collection systems pertaining to children and adolescents. Though some data are available from surveys in special populations[5,6]; they are not informative about changes in profile of substance abusing youth. The present research examines changes in sociodemographic and clinical profile of substance abuse in treatment seeking adolescents. Related data on this set of patients has been published previously[7].

METHODS

The Drug De-addiction and Treatment Centre at the Postgraduate Institute of Medical Education and Research, Chandigarh, a government funded tertiary-care multi-specialty institution in North India caters mainly to patients referred by self (family) or professionals; a few referrals originate from the criminal justice system. At the centre, patients are diagnosed according to ICD descriptions by trained psychiatrists. Sociodemographic, and clinical and substance use data were abstracted from case notes for 85 of 115 (74%) children and adolescents (<18 years) registered during 1978-2003 based on availability of sufficient case notes on specified variables.

RESULTS

There was a consistent increase in adolescents registered: 27 in the first 20 years (1978-1997), 31 over the next four years (1998-2001) and 27 over the final 2 years (2002-2003).

Table 1: Sociodemographic and clinical profile of treatment seeking adolescent substance abusers (N = 85)

VARIABLES	1978-1997 N=27 (%)	1998-2001 N=31 (%)	2002-2003 N=27 (%)	Kruskal Wallis Anova (W)[b]/ χ^2
Occupation Student Unemployed Unskilled/Semiskilled/Shop owner/Farmer	16 (59.26) 10 (37.04) 01 (03.70)	11 (35.48) 15 (48.39) 05 (16.12)	12 (44.44) 13 (48.15) 02 (07.41)	1.30 (p=0.27)
Educational Status Regular school attendance Irregular school attendance Dropouts	04 (14.81) 12 (44.44) 11 (40.74)	02 (06.45) 09 (29.03) 20 (64.52)	04 (14.81) 08 (29.62) 15 (55.55)	1.56 (p=0.21)
School Background: Private Schools	07 (25.93)	08 (25.81)	09 (33.33)	0.24 (p=0.78)
Religion Hindu Sikh/Others	15 (55.55) 12 (44.44)	17 (54.84) 14 (45.16)	17 (62.96) 10 (37.04)	0.31 (p=0.73)
Family Type: Nuclear	17 (62.96)	18 (58.06)	19 (70.37)	0.63 (p<0.53)
Locality: Urban	24 (88.89)	24 (77.42)	23 (85.19)	0.71 (p=0.49)
Social support: Fair/good	19 (70.37)	25 (80.65)	24 (88.89)	2.51(p=0.08; I<III)
Education in years	8.88 ± 2.83	9.48 ± 2.56	9.81 ± 2.09	1.05 (p=0.59)
Income (Rupees per month)	2887.03 ± 2147.07	5449.67 ± 4266.23	8451.85 ± 6588.82	14.32*** (p<0.001)
Age at first use of any drug (Years)	14.25 ± 2.87	14.46 ± 2.14	14.64 ± 1.71	0.02 (p=0.98)
Age at first use of primary drug (Years)	14.34 ± 2.85	15.22 ± 1.78	14.90 ± 1.65	1.31 (p=0.51)
Age at first use of secondary drug (Years)	14.73 ± 2.24	14.58 ± 2.19	14.63 ± 1.81	0.25 (p=0.88)
Duration of illness at presentation (Months)	29.11 ± 22.27	28.09 ± 19.70	22.29 ± 15.42	1.25 (p=0.53)
Reason for first use Curiosity Peer pressure Others	19 (70.37) 05 (18.51) 03 (11.11)	28 (90.32) 03 (09.67) 00	20 (74.07) 06 (22.22) 01 (03.70)	0.46 (p=0.62)
Referred by Self/Relatives Other treating agency	22 (71.49) 05 (18.51)	29 (93.54) 02 (06.46)	23 (85.18) 04 (14.82)	0.85 (p=0.43)
Multiple sexual contacts	03 (11.11)	10 (31.25)	05 (18.51)	2.04 (p=0.73)
Primary substance of abuse/dependence# Opioids Heroin Pentazocine/Buprenorphine Dextropropoxyphene/Codeine (cough syrup) Poppy husk /Crude opium/poppy seeds Alcohol Tobacco (smoking/chewing) Benzodiazepines Cannabis Inhalants	07 (25.92) 03 (11.11) 07 (25.92) 02 (07.40) 01 (03.70) 02 (07.40) 01 (03.70) 04 (14.81) 00	14 (45.16) 03 (09.67) 08 (25.80) 01 (03.22) 01 (03.22) 02 (06.45) 00 02 (06.45) 00	10 (37.03) 00 08 (29.62) 02 (07.40) 00 01 (03.70) 00 02 (07.40) 04 (14.81)	
Using more than one substance	16 (59.25)	24 (77.41)	22 (81.48)	1.34 (p=0.26)
Secondary substance of abuse/dependence Tobacco (Smoking/chewing)	11 (40.74)	16 (51.61)	16 (59.25)	0.92 (p=0.41)
Physical comorbidity	03 (11.11)	03 (09.67)	01 (03.70)	0.55 (p=0.58)
Psychiatric comorbidity	13 (48.14)	05 (16.12)	03 (11.11)	6.66 (I>II,III,)
Family history of substance dependence	06 (22.22)	18 (58.06)	10 (37.03)	4.18 (I<II)

[a] 3 subjects were not dependent on the primary substance of use (one each using alcohol, nicotine and opioid)

[b] post hoc test/ 2X2 chi square (p<0.05)

The majority of subjects were single (97.6%) and educated in government schools (66.7%-74.2%). A large proportion of subjects were unemployed (37.0%-48.4%). The majority of subjects had fair/good social support (70.4%-88.9%) and there was a time trend (p<0.1) for increased attendance by adolescents with fair/good social support. The mean monthly income increased significantly from 2887 to 8452 rupees per month.

Opioids were the preferred drug of misuse with 25.8%-29.6% of subjects using dextropropoxyphene/codeine-containing cough syrups. Heroin dependence peaked around the late 1990s (45.2%). Intravenous drug use (pentazocine and buprenorphine) occurred during a specific time window (1988-1997). Cannabis is the second most common drug of dependence (6.5%-14.9%). Alcohol dependence was reported in less than 4% of subjects. Inhalant dependence was reported only recently (2002-2003). There was a steady increase in dependence on more than one substance with nicotine dependence being the most common second drug dependence.

A substantial minority (25.6%) of the subjects had comorbid psychiatric disorder, the most common being conduct disorder. The rate of psychiatric co-morbidity was significantly higher during 1978-1997 in comparison to other time periods. The proportion of subjects with a family history of substance dependence was significantly higher during 1998-2001 in comparison to 1978-1997.

DISCUSSION

A retrospective chart review over a 26 year period provided a unique opportunity to observe time trends of substance abuse/dependence in a clinical population However, because of the exclusive focus on clinic-attenders, the findings of this study cannot be generalized to the drug use pattern in the community. The limitation notwithstanding, longitudinal trends in clinic attendance can provide valuable clues regarding secular patterns in substance abuse. Absence of females from the sample does not rule out the occurrence of substance abuse/ dependence among adolescent females in the community, however, it does suggest a lower rate of substance abuse/dependence among them.

One-third of all adolescent cases were registered in the last 2 years (2002-2003), which indicates recognition about the need for treatment of substance dependence in at least a subset of the community. Increase in the number of cases in recent years may be reflective of the transitional nature of India's urban society with its alterations in lifestyle, changing parental role, lack of supervision of children, and emphasis on freedom and independent decision making for adolescents[8,9].

The increase in help seeking by individuals with good social support could suggest the concern of the families towards the males who are considered precious in our community[10]. The improved economy of the country is reflected in the increasing levels of family income reported over the years. Another Indian study has reported a positive link between family income and drug abuse[11]. However, it is possible that substance dependent adolescents with poor financial background may not be seeking treatment.

In the present study the preferred drug of misuse over the years were opioid derivatives. While dextropropoxyphene/codeine-containing cough syrup has been used consistently, misuse of heroin peaked around 2001. The second position held by cannabis, despite its likely prevalence in the community, is not surprising because of its greater acceptance in the society. Alcohol dependence was not common in our sample probably because of the time taken (usually

years) to develop dependence. Use of nicotine along with other drugs probably suggests that it acts as a gateway drug, as evidence by the lower age of onset for the second drug.

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