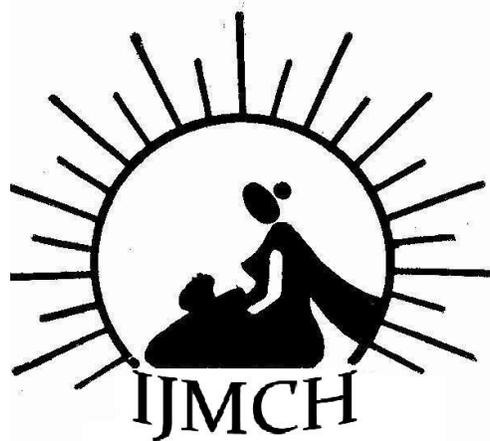


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To estimate relative frequency of different types of disorders i.e. pattern of psychiatric morbidity in adolescents with emphasis on psycho-active use disorder.

## Prevalence and Pattern of Psycho-active Substance Use in Adolescent Psychiatric Patients

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### Abstract

**Background-** To estimate relative frequency of different types of disorders i.e. pattern of psychiatric morbidity in adolescents with emphasis on psycho-active use disorder. To study the pattern of psycho-active use among adolescents.

**Materials and methods-** The study was conducted in Department of Community Medicine and Department of Psychiatry in Rajindra Hospital, Patiala which is attached to Government Medical College, Patiala. The period of study was from August 2005 to July 2006. The patients attending the OPD and admitted in the ward who included adolescent patients in the age group of 10-19 years were included. The study was conducted with the help of a pre-structured and pre-tested proforma.

**Results-** Out of the total, 12.4% patients were addicted, males were 11.6% and females were 0.8%. Addiction was statistically more ( $p < .001$ ) in males as compared to females. The most common type of addiction was intake of drugs (67.74%), with most patients (61.3%) being daily addicts. 83.87% addicts shared the company of friends and the friends only served as a source of addictive substance in 61.3% addicts.

**Keywords-** *adolescents , psychiatric morbidity , psycho-active use disorder*

### Introduction

Adolescence is the transition phase between childhood and adulthood, characterized by psychological and biological changes, extending from the onset of puberty to the attainment of physical maturity and adulthood.<sup>(1)</sup> During this phase of growth and development, most significant changes occur which need the supportive environment of family, teachers, community, health personnel and peer groups. The health needs especially the mental health needs have seldom been addressed. Behaviours like smoking, diet, exercise, use or abuse of drug and alcohol, sexuality and sexual practices, attitudes and preference related to health and disease in general, are largely developed at adolescence. The biggest threat to the lives, health and well being of young people is addictive behaviour. It starts as an experiment with peers as for thrill; in form of occasional use. Mental health problems frequently start in this age group. Mental and behavioural disorders resulting from psychoactive substance use include disorders caused by the use of alcohol, opioids such as opium or heroin, cannabinoids such as marijuana, sedatives and hypnotics, cocaine, other stimulants, hallucinogens, tobacco and volatile solvents. The conditions include intoxication, harmful use, dependence and psychotic disorders. Harmful use is diagnosed when damage has been caused to physical or mental health. Dependence syndrome involves a strong desire to take the substance, difficulty in controlling use, a physiological withdrawal state, tolerance, neglect of alternative pleasures and interests, and persistence of use despite

harm to oneself and others. Though the use of substances (along with their associated disorders) varies from region to region, tobacco and alcohol are the substances that are used most widely in the world as a whole and that have the most serious public health consequences.<sup>(2)</sup>

### Material and Methods

The study was conducted in Department of Community Medicine and Department of Psychiatry in Rajindra Hospital, Patiala which is attached to Government Medical College, Patiala. The period of study was from August 2005 to July 2006. The patients attending the OPD and admitted in the ward who included adolescent patients in the age group of 10-19 years were included. The study was conducted with the help of a pre-structured and pre-tested proforma comprising of three parts:

Socio-demographic questionnaire

Psychiatric case history

Psychological and socio-cultural factors

The following categories were considered for classification-<sup>(3)</sup>

F00-F09	Organic, including symptomatic, mental disorders.
F10-F19	Mental and behavioural disorders due to psychoactive substance use.
F20-F29	Schizophrenia, schizotypal and delusional disorders.
F30-F39	Mood (affective) disorders
F40-F48	Neurotic, stress related and somatoform disorders.
F50-F59	Behavioural syndromes associated with physiological disturbances and physical factors
F60-F69	Disorders of adult personality and behaviour.
F70-F79	Mental retardation
F80-F89	Disorders of psychological development.
F90-F98	Behavioural and emotional disorders with onset usually occurring in childhood and adolescence.
F99	Unspecified mental disorder.
G40	Epilepsy

Informed consent was taken from the patients. In case of minors the consent was sought from the parents/guardians.

**Results**

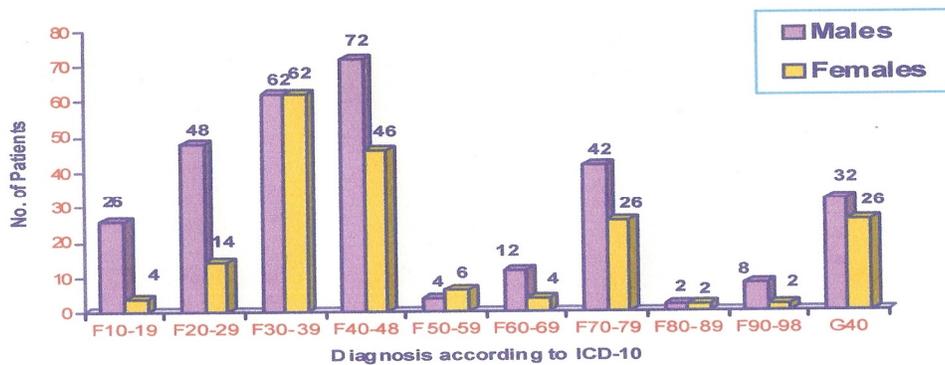
The present study is a cross sectional descriptive epidemiological study. In the total 500 adolescents who were interviewed 376(71.2%) responded themselves. In case of 36(7.2%) the respondents were parents while in 108(21.6%) the information was collected from both the parents and the patient. Out of the total 500, 30 patients (i.e. 6%) presented with the chief diagnosis of psychoactive substance abuse. However 32 (i.e.6.4%) patients more presented with this abuse as comorbidity. Thus out of total 12.4% adolescents presented with abuse in some form.

Out of the total 12.4% patients that were addicted, males were 11.6% and females were 0.8%. Addiction was statistically more ( $p < 0.001$ ) in males as compared to females.

The mean age of first episode of addiction was 15.19 while the median and mode were 15years.

**Fig.1**

**Bar diagram showing distribution of various psychiatric diagnosis according to ICD-10 in Relation to sex**



**Table 1: Addiction in self according to sex**

Addiction in self	Males	Females	Total
Yes	58	4	62 (12.4%)
No	250	188	438(87.6%)
<b>Total</b>	<b>308</b>	<b>192</b>	<b>500</b>

Chi square=29.02;  $p < 0.001$

Table 2 shows the association between the addiction in parents as a risk factor for addiction in patients themselves. The result was found to be statistically significant ( $p < 0.01$ ) that when the addiction is present in parents it serves as an increased risk for addiction for patients themselves.

**Table 2: Association between addiction in self and addiction in parents**

Addiction in parents	Addiction in self		Total
	Yes	No	
Yes	28(5.6%)	98(19.6%)	126
No	34(6.8%)	340(68%)	374
Total	62	438	500

Chi square=14.96;  $p < 0.01$

**Table 3: Type of addiction**

	Males	Females	Total
Drugs	38	4	42(67.44%)
Alcohol	12	0	12(19.35%)
Smoking	8	0	8(12.90%)
Total	58	4	62

**Table 4: Frequency of addiction**

Daily	38	61.3%
Occasional	24	38.7%
Total	62	

The most common type of addiction was intake of drugs (67.74%), with most patients (61.3%) being daily addicts. The drugs most commonly abused were cannabis, opium,

sedatives and hypnotics, tobacco and hallucinogens. In few cases use of volatile solvents and multiple drug use were also seen. Occasional users were those who did not consume the substances on daily basis but had frequency varying from some days of week to some days in a month

83.87% of patients had the company of friends while taking addiction while 12.90% preferred to be alone. The friends served as a source of addictive substance in 61.3% addicts. Only 3.2% of patients shared the company of father while taking addiction.

**Table 5: Addiction pattern**

<b>In company of</b>	<b>Males</b>	<b>Females</b>	<b>Total</b>
<b>Father</b>	<b>2</b>	<b>0</b>	<b>2</b>
<b>Friends</b>	<b>50</b>	<b>2</b>	<b>52</b>
<b>Alone</b>	<b>6</b>	<b>2</b>	<b>8</b>
<b>Total</b>	<b>58</b>	<b>4</b>	<b>62</b>

**Table 6: Most common sources of addictive substances**

<b>Most common sources</b>	<b>Number</b>	<b>%age</b>
<b>Friends</b>	<b>38</b>	<b>61.3</b>
<b>Local</b>	<b>12</b>	<b>19.4</b>
<b>Market</b>	<b>4</b>	<b>6.5</b>
<b>School</b>	<b>4</b>	<b>6.5</b>
<b>Chemist</b>	<b>2</b>	<b>3.2</b>
<b>Father</b>	<b>2</b>	<b>3.2</b>

## Discussion

Out of 500 patients, 308 (61.6%) were males and 192 (38.4) were females. This male preponderance is consistent with Anita et al (2003) <sup>(4)</sup> where psychiatric disorders were 18.37% in males and 14.44% in females. Also more male patients were attending psychiatric clinics as indicated by Chowdhary (2005) <sup>(5)</sup>. Malhotra and Chaturvedi (1984) <sup>(6)</sup> reported 3:2 ratio between males and females which reflects more attention and care given to male children as also the concern for the well being of a male child. It could also be that male children exhibit these problems more due to biological or psycho-social factors. In west also, emotional problems have been found more often in male children. Singhal et al (1988) <sup>(7)</sup> reported male predominance (72.31%) in his study male female ratio was 2.8:1. The reflects association with some biological or psychosocial factors which need to be examined.

Isaacs et al (2006) <sup>(8)</sup> reported Alcohol dependence syndrome F1x.2 (3.3%). Chowdhury (2005) <sup>(5)</sup> reported according to diagnostic category as per DSM-IV criteria. Among new cases the patients of mood affective disorder headed the list (overall 27.7%) followed by Schizophrenia (12.4%). As a single diagnostic category, Major Depressive disorder was the most frequent diagnosis (19.9%). Anxiety disorders were less common Generalized tonic-clonic seizure (9.9%) and mental retardation (6.4%) also constituted a significant portion of the clinic patients. Study carried out by Sidana (1998) <sup>(9)</sup> at child guidance clinic made diagnosis using ICD-10 criteria at GTBH, Delhi. The major diagnosis were mental retardation (20.6%), epilepsy (20%), hysterical conversion reaction (6.3%), ADHD (5%), and childhood depression (6%). Rahim (1997) <sup>(10)</sup> in his study at psychiatric out patient department of Sir Salimullah Medical College and Miyard hospital, Dhaka in year 1994 showed that dissociative disorder (hysteria) comprised the largest group (21.65%) followed by epilepsy (19.59%).

In cross cultural study conducted by WHO at 14 sites reported most common diagnosis as depression, anxiety and substance abuse disorders. These disorders are present alone or in addition to one or more physical disorders. There were no consistent differences in prevalence between developed and developing countries WHO (2001). <sup>(11)</sup>

From India, there is insignificant contribution to epidemiological, clinical and follow up data on childhood psychoses. In India childhood problems are less readily recognized and treated. In the state of California, depressive disorders was the most frequent diagnosis among hospitalized adolescents during 1994. Substance abuse as the second most common diagnosis. <sup>(12)</sup>

The table 2 shows that there were 5.6% patients in whom addiction was present both in the parents and the adolescents themselves, while there were 68% in whom there was no addiction reported neither in the parents, nor in self. 6.8% patients had reported addiction in self but not in parents while 19.6% reported addiction in parents but not in self. This shows the association between the addiction in parents as a risk factor for addiction in patients themselves. The result was found to be statistically significant that when the addiction is present in

parents it serves as a increased risk for addiction for patients themselves. Out of the total, 12.4% patients were addicted. The addiction was more common in males (11.6%) as compared to females (0.8%) and the result was statistically significant. The mean age of 1st episode of addiction was 15.19 while the median and mode were 15 years.

The most common type of addiction was intake of drugs (67.44%) followed by alcohol (19.35%) and then smoking (12.90%). The drugs most commonly abused were cannabis, opium, sedatives and hypnotics, tobacco and hallucinogens. In few cases use of volatile solvents and multiple drug use were also seen.

Most of the patients i.e. 61.3% were daily consumers while only 38.7% were occasional users of addictive substances. Occasional were those who did not consume the substances on daily basis but had frequency varying from some days of week to some days in a month.

83.87% of patients had the company of friends while taking addiction while 12.90% preferred to be alone. Only 3.2% of patients shared the company of father while taking addiction. The most common source from where the patients got the addictive substances was from friends (61.3%), 19.4% got from local sources while the rest obtained from either market, school, chemist or parents.

Gil (2004) <sup>(13)</sup> findings indicated that even experimental use during early adolescence drastically increases the risk for development of substance use disorders and psychiatric disorders during adulthood.

### **Limitations of the study**

The present study has few limitations. Being a hospital based study it addresses only to those problems of adolescents which have been severe enough to seek referral. Also being a hospital study it is not representative of the general population. Secondly, it is a cross-sectional study so there has not been the feasibility of follow-up so the response to treatment could not be checked. Nevertheless, the study brings out the common disorders which are encountered in the hospital and if diagnosed in the early stages in the population can help us to facilitate promotive, preventive, curative and rehabilitative measures.

### **Recommendations**

The high morbidity seen, seems to suggest much scope in all the three levels of prevention. In terms of Primary prevention adolescent counseling especially to the more vulnerable such as girls, those coming from nuclear families, adolescents with addicted parents need to be provided. Parent guidance clinics, workshops for parents, educational packages etc are the need of the day. School counselling programs which include vocational and career guidance, and at a community level, a need for youth guidance which includes guidance on family problems, sex, drug abuse etc. More emphasis on extra curricular activities in schools. Public health efforts aimed at prevention of substance disorders need to focus on the contexts in which substance use occur. Even experimental use during early adolescence drastically increases the risk for development of substance use disorders and psychiatric

disorders during adulthood. There is a need to develop culturally sensitive and competent treatment and services that target young substance users.

As regards to Secondary prevention parents, teachers and also the adolescents should be educated about substance abuse, the early symptoms and signs so that deviation from normal can be corrected early. All doctors should be aware of early signs and symptoms for early diagnosis and treatment of these disorders. To this end one recommends that psychiatry as a subject in the undergraduate curriculum should be given more importance than is being done at present. Along with routine medical check up that is conducted among schools, psychiatric check up should also be carried out by a skilled person, so that vulnerable students can be identified. Once they are identified they should undergo periodic check up and counselling. Special de-addiction centres for adolescents, screening programs --environment of these teens. Stigma, discrimination and neglect prevent care and treatment reaching people. Mental health literacy needs to be built strongly in the community to scale up the utilization of available mental health services.

There should be further research and training in the field of community mental health, substance abuse and child/adolescent psychiatric clinics. There is a need to develop an Apex Centre for training and research in child and adolescent psychiatry.

A small percentage of adolescents will require the intervention at the tertiary level. This may involve long term treatment to limit any disability or psycho-social and vocational rehabilitation, depending on the nature and severity of the handicap. Those who are unable to cope with pressure of studies, through education and guidance should be able to minimize the stress.

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