

Barriers to Treatment of Substance Abuse in a Rural Population of India

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Abstract: *Background:* In spite of having strong religious and cultural influences, substance abuse among adult population is very high in Punjab, a north Indian state of India in the border of Pakistan. A large majority of individuals with alcohol and substance dependence do not seek treatment. The primary objective of the study was to evaluate the barriers for which people in general population having alcohol and substance dependence do not seek treatment. There is paucity of data in India regarding barriers in treatment of substance abuse. Therefore, it was very tempting to evaluate these barriers.

Method: Data was collected from the rural population of a randomly selected village by directly going to their home. Substance dependence was diagnosed by DSM-IVTR criteria in 412 persons and was assessed by Barriers to Treatment Inventory scale (BTI).

Results: Among all the barriers 'time conflict' predominated in the study population by 51.2% followed by two other barriers 'absence of problem' (48.8%) and 'fear to treatment' (40.3%). Admission difficulty and poor treatment availability were relatively less prominent barriers. Female substance dependents had major problem with privacy (87.5%), fear to treatment (75%) and absence of problem (75%).

Conclusion: This study shows that there are several barriers, certain beliefs, social influences and obligations in the population for which people can't take treatment. Social stereotypes and fear to treatment due to poor health services add further vulnerability. Minimization of the barriers should be done by changes in education, screening, outreach, detection, and referral patterns in alcohol & substance abuse treatment delivery systems.

Keywords: Barriers, substance abuse, rural India.

INTRODUCTION

Drug dependence has been showing a rising trend all over the world including India, perhaps as a result of newer and greater stresses related to rapid changes in life styles. Drug dependence is a growing problem and consequences of drug dependence cost heavily to the community and form a major health problem [1]. Alcohol and drug related behavioural and medical complications are a major concern for policy planners and health professionals of most of the countries. However, this problem has received some attention in the recent years among the general public and mental health professionals [2]. The existence of fermented beverages dates back to 10000 B.C. Wine appeared as finished product in Egyptian pictographs in around 4000 B.C. In India alcoholic beverages in the Indus valley civilization appeared in the Chalcolithic era i.e. 3000 B.C. to 2000 B.C. Now use of alcohol is present everywhere in India. Consumption of alcohol in Kerala is 8.3 litres per year as compared to 7.9 litres per capita per year in Punjab. WHO

study reveals the fact that per capita consumption of alcohol is 0.82 litre and is 1.7 litre per year, among Indians who are more than 15 yrs of age (WHO Global Status Report [3] 2004). It is estimated that in India, by the time most boys reach ninth grade, about 50% of them have tried at least one of the substances of abuse in nature [1].

The pattern of drinking in India has undergone a change from occasional and ritualistic use to being a social event. Currently, the common purpose of consuming alcohol is to get drunk, get drunk as quickly as possible and to stay drunk for a long as possible [4]. These developments have raised concerns about the health and social consequences of excessive drinking [5]. Among the states of India, substance abuse in Punjab is now an alarming situation. Deb and Jindal [6] in a survey of 4 villages in Punjab found that 78.3% of the population used alcohol. In another study Varma *et al.* [7] found that rates of current use of alcohol in Punjab were 45.9% in Jalandhar and 27.7% in Chandigarh whereas it was 28.1% in rural areas of Punjab [8]. According to the World Drug report [9], of 81,802 treatment seekers in India in 2004-2005, 61.3% reported use of opioids, 15.5% cannabis, 4.1% sedatives, 1.5% cocaine, 0.2% amphetamines and 0.9% solvents. A study by WHO survey in India, involving nearly 5000 persons between 16 and 25 years has warned that

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substance abuse is seeping into the vitals of Punjabi society and it has become synonymous with Punjab's culture.

Participation in treatment has generally been associated with positive outcomes among substance abusers. To achieve these benefits, however, it is necessary for substance abusers to enter into the treatment, which is a major problem in many settings. Psychological characteristics of individuals, elements of their lifestyles and treatment system factors may all serve as barriers to successful linkage with treatment [10]. A useful paradigm for viewing barriers to treatment is Andersen's conceptualization of health care utilization (Andersen [11], 1995; Andersen & Newman [12], 1973). In its most recent iteration, Andersen [11] stresses that characteristics of the health care system as well as individual determinants (predisposing static characteristics, enabling/inhibiting factors, and situational need factors) interact to influence health care utilization, including substance abuse treatment. Specific influences in each of these areas may serve as barriers or obstacles to obtain treatment [13]. The characteristics of the health care system that may interfere with treatment entry may range from policy issues about how much financial support treatment services should receive, to characteristics of individual treatment programs. The latter includes: complex eligibility and admission criteria, absence of appropriate services for groups such as women, lack of cooperation across service organizations and waiting lists [14].

Related situational need factors such as problem recognition, readiness for treatment and desire for help are often, although not always, associated with treatment linkage [15]. The substance abusers sometime remain reluctant to visit rehabilitation centre. The less number of these centre and not proper care at the centre, longer stay and side effects of drugs attribute as barriers in treatment of substance abusers [14]. Help seeking in substance use disorders has not been well integrated in mainstream health-related research. Even the randomized controlled clinical trials tend to treat the help-seeking process as a nuisance variable, which is controlled, in part through randomization [16].

Melnyk [17] operationalized the treatment barrier variables and identified five categories of the barriers construct: relationship, site-related aspects, cost, fear, and inconvenience. Treatment non seeking in persons with alcohol use disorders may be especially important in developing countries as those may have large recent increase in alcohol production and import [18].

It is clear that the substance abusers suffer from various psychiatric, medical and social problems. Even after having awareness of consequences of taking alcohol and substances, many of them don't opt for treatment. Now in India, detoxification facilities are available everywhere but rehabilitation, relapse prevention programs are not in full motion in all places. People are also aware that treatment is available. But they don't feel to stop addiction mostly. This was the basic reason for which we did the survey in the community, not within the hospital set up to find out the barriers to approachability to treatment. There are lots of differences in the socio-demographic and cultural pattern between developed and developing countries. It is the first initiative in India to identify the barriers in substance

abusers, so it would also add information about developing countries in international database.

MATERIALS AND METHOD

This study was undertaken during the period of March-July 2009 in a rural village of Punjab in India. The village was selected randomly within 150 km of the district Patiala. Survey was done in 562 houses, among 2148 people. Only 2 people refused to participate in the study. The subjects in this study were (1) > 18 yrs of age, (2) were diagnosed as having a substance dependence using criteria from the Diagnostic and Statistical Manual of Psychiatric Disorders (DSM-IV TR) [19], (3) not having any psychotic disorder and (4) who were willing to participate in the study. The data was collected by visiting the houses in the village, selected randomly and people were interviewed by the psychiatrists. Purpose of the study was explained and their consent was taken. Two performas were used to gather information from the subjects- (1) Identification data- to know the details of the individual, (2) Barriers to Treatment Inventory (BTI) questionnaires [20]. BTI has good content validity and is a reliable instrument for assessing barriers to drug treatment. It includes 59 questions. Factor analysis identified by 25 items in 7 well-defined latent constructs: Absence of Problem, Negative Social Support, Fear of Treatment, Privacy Concerns, Time Conflict, Poor Treatment Availability and Admission Difficulty. The factorial structure of the barriers is consistent with the findings of other studies that asked substance abusers about barriers to treatment and is conceptually compatible with Andersen's model of health care utilization. Factors were moderately to highly correlated, suggesting that they interact with one another (Rapp *et al.* [20], 2006). Patients were asked to indicate on a five point scale includes: 1 = disagree strongly, 2 = disagree, 3 = uncertain, 4 = agree and 5 = agree strongly. Statistical analysis was done by Fisher's exact test, Chi Square, Yates' correction where needed and p value determination. P value <0.05 was considered to be significant.

RESULTS

Total no of 412 substance dependent patients were included in this study (19.1% of the study population). Among them 396 were male (96.1%) and 16 were female (3.9%). Their mean age was 41.4±6.9 year, most of them were illiterate (49.5%), married (74.5%) and by religion Sikh (65.1%). Most of them were labourer (38.1%) and farmer (18.9%) by occupation.

It was seen that in whole population, major barriers were time conflict (51.2%), absence of problem (48.8%) and fear to treatment (40.3%). In majority of the male, the barriers were time conflict (209 male, 52.8%) and absence of problem (198 male, 47.7%). Among 16 females, majority (14) had concern of privacy (87.5%) and 12 recognized fear to treatment (75%) and absence of problem (75%) both as their major barriers. Negative social factors, fear to treatment, admission difficulty and privacy concern were significantly higher (p 0.008) in female while time conflict was higher in male population (p 0.004) (Table 1).

In comparatively younger (<30yrs) and the older (>55 yrs) people, absence of problem (55.9%, 48.9% respectively) was the main problem. Privacy concern and time conflict

Table 1. Barriers by Age, Sex and Education

	Male (n=396)		Female (n=16)		Total (n=412)		P Value
	No.	%	No.	%	No.	%	
Absence of problem (AP)	189	47.7	12	75.0	201	48.8	0.04 (S)
Negative social factor (NSS)	95	23.9	10	62.5	105	25.5	0.002 (H.S)
Fear to treatment (FT)	154	38.9	12	75.0	166	40.3	0.008 (H.S)
Privacy concern (PC)	107	27.0	14	87.5	121	29.4	<0.001 (H.S)
Time conflict (TC)	209	52.8	02	12.5	211	51.2	0.004 (H.S)
Poor t/t Availability (PTA)	129	32.6	08	50.0	137	33.2	0.177 (N.S)
Admission difficulty (AD)	90	22.7	09	56.2	99	24.0	0.004 (H.S)
	15-30 yrs (n=136)		30-55yrs (n=188)		>55yrs (n=88)		
Absence of problem (AP)	76	55.9	82	43.6	43	48.9	0.093 (N.S)
Negative social factor (NSS)	34	25.0	49	26.1	22	25.0	0.971 (N.S)
Fear to treatment (FT)	57	41.9	72	38.3	37	42.1	0.752 (N.S)
Privacy concern (PC)	41	30.1	68	36.2	12	13.6	<0.001 (H.S)
Time conflict (TC)	73	53.7	106	56.4	32	36.4	0.006 (H.S)
Poor t/t Availability (PTA)	46	33.8	67	35.6	24	27.3	0.349 (N.S)
Admission difficulty (AD)	39	28.7	41	21.8	19	21.6	0.301 (N.S)
	Illiterate (n=204)		Middle School (n=112)		≥ High School (n=96)		
Absence of problem (AP)	139	68.2	34	30.3	28	29.2	<0.001 (H.S)
Negative social factor (NSS)	68	33.3	32	28.6	05	5.2	<0.001 (H.S)
Fear to treatment (FT)	142	69.6	18	16.1	06	6.2	<0.001 (H.S)
Privacy concern (PC)	62	30.4	34	30.3	25	26.1	0.715 (N.S)
Time conflict (TC)	130	63.7	24	21.4	57	59.4	<0.001 (H.S)
Poor t/t Availability (PTA)	67	32.8	38	33.9	32	33.3	0.981 (N.S)
Admission difficulty (AD)	76	37.2	18	26.1	05	5.2	<0.001 (H.S)

t/= treatment, H.S= Highly Significant, N.S= non significant, S= Significant.

were significantly higher barriers ($p < 0.05$) in both the age groups of below 55 years in comparison to the age group >55 years. Among 204 illiterate people, 142 had fear to treatment (69.6%), 139 had absence of problem (68.2%) and 130 had time conflict (63.7%). On the other hand in the more educated group, time conflict (59.4%) was the major barrier. It is seen in the table that all the barriers except privacy concern and poor treatment availability, were significantly higher ($p < 0.001$) in the illiterate population in comparison to both of the literate population. (Table 1) In married people, the major barriers were absence of problem (53.4%) and time conflict (50.4%) while majority of the unmarried group were occupied by time conflict (53.3%) and privacy concern (48.6%).

Absence of problem was significantly higher in married ($p < 0.001$) than the unmarried substance dependents while negative social factors and privacy concern were significantly higher in the unmarried group ($p < 0.001$). Majority of both the Sikh and Hindu substance dependents had time conflict (54.1%, 50.4%) while people of other religion had absence of problem (42.4%) more than the other barriers. Negative social factor (43.2%) and privacy concern

(42.3%) were significantly higher (< 0.001) in Hindu population in comparison to Sikh or other religion. On the other hand fear to treatment (46.6%) was significantly higher ($p < 0.001$) in Sikh substance dependents (Table 2).

Professionals, business group and laborers identified time conflict (81.5%, 55.5%, 69.8%) as the major barrier, while majority of the agricultural group told about absence of problem (69.8%) and most of the unemployed substance dependents had fear to treatment (50.0%). Negative social factor, privacy concern and time conflict were significantly higher ($p < 0.001$) in professionals in comparison to other occupational groups. Agricultural dependents had the barrier absence of problem higher ($p < 0.001$) than others. On the other hand, fear to treatment was significantly higher ($p < 0.004$) in both unemployed (50.0%) and agricultural substance dependents (51.9%) while admission difficulty was prevalent (47%, $p < 0.001$) in unemployed group (Table 3).

The most prevalent barriers in alcohol dependent patients were absence of problem (57.9%) and time conflict (55.5%) while major opioid dependents had fear to treatment (83.1%). Tobacco and sedative dependents had absence of

Table 2. Barriers by Religion and Marital Status

	Sikh (n=268)		Hindu (n=111)		Others (n=33)		P Value
	No.	%	No.	%	No.	%	
Absence of problem (AP)	134	50.0	53	47.7	14	42.4	0.691(N.S)
Negative social factor (NSS)	46	17.2	48	43.2	11	33.3	<0.001 (H.S)
Fear to treatment (FT)	125	46.6	32	28.8	09	27.3	0.001 (H.S)
Privacy concern (PC)	70	26.1	47	42.3	04	12.1	<0.001 (H.S)
Time conflict (TC)	145	54.1	56	50.4	10	30.3	0.035 (S)
Poor t/t Availability (PTA)	98	36.6	36	32.4	03	9.1	0.006 (H.S)
Admission difficulty (AD)	71	26.5	25	22.5	03	9.1	0.079 (N.S)
	Married (n=307)				Unmarried (n=105)		
Absence of problem (AP)	164		53.4	37	35.2		0.001 (H.S)
Negative social factor (NSS)	59		19.2	46	43.8		<0.001 (H.S)
Fear to treatment (FT)	124		40.4	42	40.0		1.0 (N.S)
Privacy concern (PC)	70		22.8	51	48.6		<0.001 (H.S)
Time conflict (TC)	155		50.4	56	53.3		0.651 (N.S)
Poor t/t Availability (PTA)	109		35.5	28	26.6		0.118 (N.S)
Admission difficulty (AD)	68		22.1	31	29.5		0.145 (N.S)

t/= treatment, H.S= Highly Significant, N.S= non significant, S= Significant.

Table 3. Barriers by Occupation

	Professionals (n=27)		Business (n=78)		Agriculture (n=106)		Labourer (n=157)		Unemployed (n=44)		P value
	No.	%	No.	%	No.	%	No.	%	No.	%	
AP	2	7.4	28	35.9	74	69.8	89	56.7	08	18.2	<0.001 (H.S)
NSS	14	51.8	31	39.7	23	21.7	27	17.2	10	22.7	<0.001 (H.S)
FT	06	22.2	23	29.5	55	51.9	60	38.2	22	50.0	<0.004 (H.S)
PC	15	55.5	21	26.9	37	34.9	37	23.6	11	25.0	0.012 (S)
TC	22	81.5	43	55.1	27	25.5	99	63.1	20	45.4	<0.001 (H.S)
PTA	12	44.4	21	26.9	38	35.8	47	29.9	19	43.2	0.206 (N.S)
AD	05	18.5	21	26.9	27	25.5	25	15.9	21	47.7	<0.001 (H.S)

AP= absence of problem, NSS= negative social factor, FT= fear of treatment, PC= privacy concern, TC= time conflict, PTA= poor treatment availability, AD= admission difficulty. H.S= Highly Significant, N.S= non significant, S= Significant.

problem as a form of the major barrier (58.6%, 78.8% respectively), however in cannabis dependents, most prevalent barriers were negative social factor (78.3%) and privacy concern (78.2%). Negative social factor and privacy concern were significantly higher ($p<0.001$) in cannabis dependents, fear to treatment in opioid dependents ($p<0.001$), time conflict in alcohol dependents ($p<0.001$) in comparison to other groups of, while in case of other barriers, no significant differences between the groups could be found (Table 4).

In poly substance abusers, the major barrier was time conflict (50%). The substance dependents, taken treatment previously, had fear to treatment as a major barrier (81.1%) which was significantly higher ($p<0.001$) than the people not taken treatment. Substance dependents who had not taken

treatment, identified absence of problem (53.6%) and time conflict (48.9%) as two major barriers which were significantly higher ($p<0.03$) than the people who had taken treatment before (Table 5).

DISCUSSION

These results would be interpreted in the light of socio-economical and cultural perspectives. Punjabi people are mostly Sikh by religion, having strong religious values, fun loving and believe in leading enjoyable life rather than strongly philosophical. In Punjab, taking alcohol has become a part of social custom. In most of the festivals, marriages, birthday parties, alcohol has grown its root as an important part of the life. The other most common reasons for taking alcohol are to get relief after strenuous work and peer pressure. Although most of them knew and agreed that it was

Table 4. Barriers by Single Substance Use

Single Substance Abuse	Alcohol (n=119)		Opioid (n=65)		Tobacco (n=58)		Cannabis (n=23)		Sedatives (n=33)		P Value
	No.	%	No.	%	No.	%	No.	%	No.	%	
AP	69	57.9	38	58.5	34	58.6	09	39.1	26	78.8	0.048 (S)
NSS	27	22.7	32	49.2	07	12.1	18	78.3	09	27.3	<0.001 (H.S)
FT	31	26.1	54	83.1	09	15.5	13	56.5	12	36.4	<0.001 (H.S)
PC	37	31.1	28	43.1	10	17.2	18	78.2	11	33.3	<0.001 (H.S)
TC	66	55.5	31	47.7	18	31.1	16	69.6	13	39.4	0.004 (H.S)
PTA	51	42.8	33	50.7	20	34.5	12	52.2	17	51.5	0.312 (N.S)
AD	38	31.9	25	38.5	03	5.2	09	39.1	08	24.2	<0.001 (H.S)

AP= absence of problem, NSS= negative social factor, FT= fear of treatment, PC= privacy concern, TC= time conflict, PTA= poor treatment availability, AD= admission difficulty, H.S= Highly Significant, N.S= non significant, S= Significant.

Table 5. Barriers by Multiple Substance Abuse and h/o Previous Treatment

	Poly Substance Abuse (n=114)		h/o- Previous Treatment				P Value
	No.	%	Yes (n=58)		No (n=354)		
			No.	%	No.	%	
Absence of problem (AP)	25	21.9	11	18.9	190	53.6	<0.001 (H.S)
Negative social factor (NSS)	12	10.5	19	32.7	86	24.3	0.193 (N.S)
Fear to treatment (FT)	47	41.2	47	81.1	119	33.6	<0.001 (H.S)
Privacy concern (PC)	17	14.9	21	36.2	100	28.2	0.217 (N.S)
Time conflict (TC)	57	50.0	38	65.5	173	48.9	0.023 (S)
Poor t/t Availability (PTA)	04	3.5	11	18.9	126	35.6	0.015 (S)
Admission difficulty (AD)	16	14.1	08	13.8	91	25.7	0.066 (N.S)

h/o= history of, t/t= treatment, H.S= Highly Significant, N.S= non significant, S= Significant.

not a good habit and had poor impact on the society, they continued using substances due to different reasons probably due to various socio cultural variations from rest of the India. For example I would like to put few quotes here: The labourer class people who used to work on the landlord’s field told “We can’t work all the day if we are not given opium (local terms-Bhukki, Smack, Afeem: these are offered by the landlords). How can we stop doing work? At least we have to earn on a daily basis.” They don’t get time to get admitted and can’t afford outdoor treatment as there is no as such easily accessible and well known health scheme for them. People whose friends/ relatives had previously taken treatment, expressed their fear for treatment “I know during the period of abstinence it’s a horrible time, full of pain, craving, unconsciousness, fits, anything can happen. I have heard from others”. Many of others say “We are having no problem, my father, grandfather, my neighbors everybody is taking alcohol/ opium/ tobacco why shouldn’t I? I would think of stopping only if I face some problem”. The person who has taken treatment before, start using again due to few commonly found reasons like incomplete treatment as they couldn’t control craving, feeling bodily symptoms, feeling boredom, depression, family stress, peer pressure and to escape from reality.

In our study we found that the barrier ‘time conflict’ predominated in the population by 51.2% followed by two barriers ‘absence of problem’ (48.8%) and ‘fear of treatment’ (40.3%) (Table 1). Mostly this finding correlates with the above scenario as most of the people of the population were agricultural personnel. People who are unaware about the treatment facilities/ having a bad past experience of treatment/ heard about other people’s bad experiences, expressed their ‘fear to treatment’. Regarding privacy, 29.4% showed their concern as they didn’t like to talk in groups/ hate being asked personal questions/ didn’t like to talk about their personal life to other people. However ‘poor treatment availability’ and ‘admission difficulty’ were barriers for 33.2% and 24% of the substance dependents, respectively. Grant [21] (1997) in his study in USA, showed that lack of motivation, poor support of parents and friends, lack of confidence in treatment system keeps the person away from getting treatment. In general, enabling factors such as lack of financial resources or facilities for child care were much less important barriers to care than were individual predisposing factors including attitudes towards alcoholism treatment. In the study of Cunningham *et al.*, [13] in Canada, alcohol and drug users who entered treatment, tended to cite similar barriers reflecting embarrassment or pride, not wanting to share problems and the stigmatizing effects of treatment.

Female substance dependents had major problem with privacy (87.5%), fear to treatment (75%) and absence of problem (75%). Negative social factor was also present among 62.5% of them, which was significantly higher ($p < 0.002$) than the male population, while majority of male had time conflict (52.8%). There are only a few female substance abusers because of the north Indian culture where mostly society is male dominated and female gets less access and freedom to these substances. Intake of alcohol and other substances is somehow acceptable but if female take these, they would be socially isolated and would be immensely tortured. As female plays submissive role in most of the Indian societies and don't get freedom like male, this finding was quite obvious according to the local culture. It also corroborates with the findings of Beckman *et al.*, [22], who found that women had less favourable attitudes toward seeking general health care and perceived greater social reasons to be associated with alcoholism treatment. Almost half of the women experienced one or more problems because of entering treatment, such as problems with family, money or friends. Women encountered opposition to treatment from family and friends significantly more often than men, for whom such opposition was rare. According to Allen [23], the female substance abusers feel guilt and shame while seeking treatment. Their responsibility of child care, home care, insurance and money and community issues come as an obstacle in treatment of substance abusers

If we discuss the single barriers and its distribution in the population, we would see: Barrier as a form of absence of problem was a major problem for female, illiterate, married, in the age group < 30 yrs and > 55 yrs, people doing agriculture or labourer, persons taking alcohol, tobacco, sedatives and who have never been treated. This finding also corroborates with the rural culture as people were mostly farmers and labourers.

The second most common form of barrier was time conflict. Time conflict was a major barrier in male, age 30-55 yrs, in both illiterate and studied $>$ high school, both married and unmarried, in both Sikh and Hindu, in professionals, business personnel and labourer, in alcohol and cannabis dependents, in poly substance dependents and in the patients who had taken previous treatment.

Negative social factor was most prevalent in professionals, subjects taking cannabis and opioid. Fear to treatment was major barrier in female, illiterate, agricultural, unemployed, opioid dependents and with previous history of treatment. Privacy concern was more in female, cannabis dependents and in professionals. Poor treatment availability was mostly reported by female and cannabis dependents. Admission difficulty was told only by the female and unemployed substance dependents.

CONCLUSION

This study shows that there are several barriers, certain beliefs, social influences and obligations present in the study population. People including the children need proper education, awareness about alcohol and substances- both physical and psychological hazards, impact on family, society and on economy. The burden of taking alcohol and substances need to be evaluated properly and to be informed. Government should initiate health schemes and insurance

policy for the patients. Social stereotypes and negative social factors require to be reduced by proper health programmes. And then comes the issues of treatment availability, trained doctors, medical and paramedical stuffs for de-addiction with provision of community services, self help groups etc. to prevent the progression of people towards self-killing by substances.

CONFLICT OF INTEREST

None declared.

LIMITATIONS

Number of women is few to make comparisons between male and female.

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