

Camp Approach - an Effective, Alternate Inpatient Treatment Setting For Substance Dependence: A Report from India

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Abstract

Objectives: There is a need for developing effective inpatient treatment settings. We evaluated 'camp approach' as an alternate form of inpatient treatment. A comparative study of patients treated in camp and hospital was carried out. **Methods:** Sixty-seven patients with substance dependence in study (camp) group and forty-four patients with substance dependence in comparison (hospital) group were provided inpatient de-addiction services. Cases of substance dependence, treated in two different inpatient settings, were clinically evaluated at time of discharge and 3 months after discharge. **Results:** Patients treated by 'camp approach' were older, less educated but more frequently employed, with longer duration of dependence, abusing mainly alcohol and natural opioids, and with absence of comorbidity in comparison to the hospital treated patients. Both groups were, however, comparable on clinical status at discharge and at follow up after 3 months. **Conclusion:** 'camp approach' is a viable and effective alternate form of inpatient treatment (German J Psychiatry 2003; 6:17-22).

Keywords: Substance dependence, camp, inpatient, treatment setting

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Introduction

From the 1980s, there has been worldwide concern over the effectiveness, of treatment for substance dependence; more so for alcohol. Numerous series, published in the 1980s, in relation to the inpatient and outpatient treatment have shown that treatment is only slightly more effective than no treatment, with no evidence of superiority of inpatient over outpatient treatment (Miller & Hester, 1986). Recently, Finney et al (1996) showed that inpatient setting was superior to outpatient setting, provided one accounted for the mediating / moderating variables thereby strengthening the debate over the effectiveness of various treatment settings for substance dependence.

Focus of research has been on comparing inpatient and outpatient treatment (Finney et al, 1996). In recent times, a need for comparing various types of inpatient treatment has been highlighted. In this regard, psychosocial and community based treatment has been shown to increase the effectiveness of inpatient treatment for alcohol (Patterson et al, 1997) and opioid (McLellan et al, 1993) dependence.

One such community-based approach is the 'camp approach'. Utilization of health care services increases substantially with community participation or delivery of services in the community itself. In India, from early 1980s, voluntary and government agencies have addressed health issues by organizing 'camps' - eye camps, immunization camps, family planning camps etc (Ranganathan, 1994). The success of these camps prompted Indian health profes-

sionals to adopt the 'camp approach' for the treatment of substance dependence. Purohit & Razdan (1988), probably the first to try out this approach, treated 640 cases of opioid dependence over a period of 4 years by conducting 14 camps. They reported 'camp approach' to be as effective as hospital approach, if not more effective. Datta et al. (1991) presented data on 14 DSM-III cases of alcohol dependence with gratifying results i.e. 90% being abstinent over a 1 year follow-up period. Ranganathan (1994) studied 105 cases of alcohol dependence, treated in four different camps, and reported one year abstinence rate of around 85%. Chavan & Priti (1999) treated 22 cases of alcohol and opioid dependence and achieved detoxification in majority of patients.

Thus, these studies provide evidence that 'camp approach' is clinically feasible and cost-effective w.r.t inpatient hospital treatment (Chavan & Priti, 1999; Datta et al, 1991; Purohit & Razdan, 1988). Methodological issues like - heterogeneity in the type and diagnosis of substance dependence (Chavan & Priti, 1999; Datta et al, 1991; Purohit & Razdan, 1988; Ranganathan, 1994), and lack of comparison group from a tertiary care hospital setting (Datta et al, 1991; Ranganathan, 1994) limit generalizability of the results obtained.

Hence, the present study was undertaken with the aim to evaluate whether 'camp approach' could be taken as a viable inpatient alternative in lieu of the general hospital inpatient setting. The objectives so outlined were (a) to compare substance dependence patients treated by 'camp approach' and hospital approach, and (b) to evaluate the clinical effectiveness of either approach by measuring outcome (i.e. abstinence) at 3 months.

Methods

Sample and Setting

The sample comprised two groups of substance dependence treated in two different inpatient settings viz. community setting (camp approach) and general hospital inpatient setting. The former is designated as the study group and latter as comparison group for future reference in the text.

The study group comprised 67 patients treated in three different camps organized over a period of three years. A brief outline of the camp approach is provided for clarification of the data collection procedure. The Department of Psychiatry of this Govt. Medical College & Hospital has been running community based de-addiction services since early 1997. These were initiated in Village Palsaura and later on extended to Village Maloya in 1999 - both within a radius of 10 kms from the hospital. The initial two camps, organized at Village Palsaura in May 1997 and November 1998, treated 20 and 24 patients, respectively. The third

camp, organized at Village Maloya in November 1999, comprised 23 patients.

The comparison group included patients treated over the same time frame in the hospital setting. To reduce heterogeneity of the sample and the related confounding effects, only those patients were included in this group who hailed from the same catchment area i.e. within a radius of 3 kms of Village Palsaura (and within a 10 km radius from the hospital). By this parameter, 44 patients were identified in the comparison group. The same staff was involved in both treatment settings. Use of medication (nature, dose, duration) was almost similar in both the groups.

Patients in both groups fulfilled the ICD-10 (WHO, 1992) diagnosis for substance dependence. Following intake, both groups were evaluated as regards socio-demographic, clinical and outcome (at 3 months) profile.

Treatment Components

Camp Approach

The camp approach comprised two phases:

Phase - I (Activities prior to camp) - In collaboration with the panchayat (a five member group comprising senior or reputed persons elected by the people of the village) of the villages, the hospital community team planned the logistics of the camp about a month prior to it being held in that village. Patients were identified by the community leaders and motivated jointly by them and the social workers of the community team. The community team provided the manpower and medicines while the community leaders arranged the infrastructure and basic amenities. A prominent and relatively frequented central place was identified in the villages for setting up of the camp. This was a religious centre (i.e. place of worship) of the dominant religious community of the villages viz. Gurudwara. The community team comprised the village sarpanch (head of the village), a local general practitioner and priest of the Gurudwara for making decisions and motivating patients. The patients brought their own beds and linen while the community leaders provided security arrangements and food to the patients. Additionally, a few weeks prior to holding of the camp, a psychiatric social worker made home visits and discussed with the family members of the prospective patients about the activities to be carried out during the camp and to motivate them to attend the same. The patients did not have to pay for the treatment carried out during their period of stay in the camp.

Phase-II (Activities during the camp) - The total duration of inpatient stay was for 10 days. Smoking was actively discouraged during the period of stay. De-toxification regime was started and patients were evaluated for medical complications. Screening of urine for detection of illicit drugs was

carried out at the time of admission and on random basis after at least 72 hours of last drug intake.

The treating staff comprised a resident doctor and a psychiatric staff nurse on a regular, round-the-clock basis. A psychiatric social worker was available for a period of eight hours daily for conducting psychoeducation group sessions. The treatment consisted of both pharmacological and non-pharmacological modalities. Pharmacological therapy comprised detoxification regime i.e. either dextropropoxyphene, clonidine, or buprenorphine for opioid dependence depending upon the type and severity of dependence and benzodiazepines (for alcohol withdrawal reactions) and vitamins (for prophylaxis of Wernicke's encephalopathy) for alcohol dependence. Symptomatic treatment for insomnia, aches and pains, loose motions, vomiting etc. was additionally carried out. Non-pharmacological therapy comprised psychoeducation sessions, recreational and religious activities. Psychoeducation sessions were both patient based (eight in number) and family based (four in number), of one-hour duration, didactic in nature but interactive towards the end addressing drug related complications, cues, coping strategies, relapse prevention and role of family. Recreational and religious activities involved yoga (a form of relaxation), indoor and outdoor games, and religious songs being played for a few hours every day. Wherever deemed necessary, disulfiram therapy (as a mode of relapse prevention) was initiated after informed consent.

General Hospital Approach

This is a tertiary care setting where patients either come

by themselves or are referred from other health care settings and services. The Department of Psychiatry provides both outpatient and inpatient treatment facilities for patients with substance abuse. The inpatient facility comprises a 15-bedded ward providing detoxification and relapse prevention regimes. The treating team comprises a consultant psychiatrist, senior resident (qualified psychiatrist with MD degree), graduate medical trainee, psychiatric staff nurse, clinical psychologist and psychiatric social worker. The doctors provide daily coverage to oversee various aspects of management with individual and group sessions beings conducted by the psychiatric social worker.

In this setting, patients willing for admission and providing written consent were treated and they constituted the comparison group. The patients would have to pay for the inpatient costs by themselves, as there was generally no insurance cover for them. The mean duration of stay was 12 days (range = 1-18 days). The patients were detoxified, screened for medical complications and random urine screening was conducted as outlined in 'camp approach'. Pharmacological treatment was similar to that in the 'camp approach' with the additional option of naltrexone as a relapse prevention measure. Non-pharmacological treatment comprised individual counseling and psychoeducation group sessions coupled with recreational activities.

Statistical Analysis: For categorical data, inferential statistics in the form of chi-square or Fisher's test were applied. For quantitative data, the t-test was applied.

Table 1. Socio-Demographic Profile of Patients Treated With 'Camp Approach' Versus Patients Treated With 'Hospital Approach'

Parameter	Camp Approach (N=67)	Hospital Approach (N=44)	Statistic (df)	Level of significance
Age at presentation (in years)	38. (12.33)	32.3 (9.0)	t= 2.03 (109)	p<0.05
15-24	4 (6%)	11 (25%)		
25-44	43 (64.2%)	30 (68.2%)		
>45	20 (29.8%)	3 (6.8%)		
Marital Status				
Single	19 (28.4%)	17 (38.6%)		
Married	48 (71.6%)	27 (61.4%)	X ² =1.28	NS
Education				
Illiterate	16 (23.9%)	2 (4.6%)		
Up to Matric	32 (47.8%)	4 (9%)	X ² =35.77	P<0.005
Beyond Matric	19 (28.3%)	38 (86.4%)		
Occupation				
Employed	61 (91%)	26 (59.1%)	X ² =16.02	p<0.005
Unemployed	6 (9%)	18 (40.9%)		
Religion				
Hindu	19 (28.3%)	17 (38.6%)		
Sikh	46 (68.7%)	26 (59.1%)	X ² =1.29	NS
Others	2 (3%)	1 (2.3%)		
Socio-economic Status				
Low	50 (74.6%)	32 (72.7%)		
High	17 (25.4%)	12 (27.3%)	X ² =0.05	NS

NS = Not significant

t = t-test

X²= Chi Square/Fisher's Exact Test

Results

A total of 111 patients with ICD-10 diagnosis of substance dependence underwent inpatient treatment in two different settings. 67 patients were treated using camp approach while 44 patients were treated in the hospital setting. Age at presentation in the study group (38.7, SD 12.29 years) was significantly higher than in the comparison group (32.3, SD 9.05 years; $t=2.03$, $df=109$, $p<0.05$); with significantly more patients being 45 years and older in the study group (Table 1). The study group comprised only males whereas there were 2 females (4.5%) in the comparison group. Socio-demographic profile of both groups is presented in Table 1; both groups were comparable on marital status, religious background, and socio-economic status. The study group had significantly more patients with below matriculation education and being employed.

As mentioned earlier (under Methods), patients of both groups belonged to the same catchment area. However, the study group comprised patients of rural background while the comparison group comprised patients of urban background. The clinical profile of both groups is presented in Table 2.

The diagnostic break-up in the study group showed that the majority were dependent on alcohol (52.2%) followed by opioids (35.8%), cannabis (4.5%), and benzodiazepines (1.5%). Four patients (6%) had a diagnosis of polysubstance dependence. In the comparison group, the majority had dependence on opioids (59%) and the rest were dependent on alcohol (41%). Patients in study group had a significantly longer duration of dependence and were more fre-

quently dependent on alcohol and natural opioids as compared to the comparison group being more frequently dependent on synthetic opioids. Comorbid psychiatric diagnoses (epilepsy and personality disorders) were more frequently encountered in the comparison group. Disulfiram therapy was initiated in 5 of 36 cases in study group and 4 of 18 cases in comparison group ($\chi^2=0.60$, $df=1$, $p<0.05$). Naltrexone therapy was initiated in none in the study group but in 5 patients of comparison group ($\chi^2 =7.51$, $df=1$, $p<0.01$). All patients in the study group completed the specified duration of inpatient stay. However, 8 (18%) patients of comparison group did not complete treatment i.e. left against medical advice or had to be discharged on disciplinary grounds. Both groups were comparable for the parameter- 'status at discharge'. There was no statistical difference, but there was a trend ($p=0.055$) for a better outcome in the 'camp approach' group.

Discussion

The two groups were matched on the basis of the catchment area. However, analysis showed them to be additionally comparable on parameters of marital status, religion and socio-economic status. The age at presentation for the study group was significantly higher than the comparison group; greater number of patients being beyond 45 years in the study group. The possible reason for the study group being older could be lack of motivation for treatment amongst them. However this factor would be operating only prior to their seeking treatment from us, possibly because of the social sanction accorded to use of alcohol and natural

Table 2. Clinical and outcome profile of patients in Camp versus Hospital Approach

Parameter	Camp approach (N=67)	Hospital Approach (N=44)	Statistic (df)	Level of significance
Main substance of use				
Alcohol	36 (53.7%)	18 (40.9%)		
Synthetic opioids	11 (16.4%)	26 (59.1%)		
Natural opioids	16 (23.9%)	0 (0.0%)	$\chi^2=28.54$ (3)	$p < 0.005$
Others*	4 (6.0%)	0 (0.0%)		
Duration of dependence (in years)				
	14.17 (10.37)	8.60 (7.73)	$t=20.66$ (109)	$p < 0.01$
Comorbidity				
Absent	62 (92.5%)	32 (72.7%)	$\chi^2=8.04$ (1)	$p < 0.005$
Present	5 (7.5%)	12 (27.3%)		
Mean duration of treatment (in days)				
	10	12	-	-
Status at discharge				
Symptom free	42 (62.7%)	33 (75%)	$\chi^2=1.84$ (1)	NS
Symptomatic	25 (37.3%)	11 (25%)		
Outcome (3 months)				
Abstinent	43 (64.2%)	18 (40.9%)	$\chi^2=5.81$ (2)	NS
Lapsed/Relapsed	23 (34.3%)	25 (56.8%)		($p=0.055$)
Died	1 (1.5%)	1 (2.3%)		

*Cannabis/ Benzodiazepines

NS = Not significant

t = t-test

χ^2 = Chi Square/Fisher's Exact Test

opioids in India; especially in the rural parts (Purohit & Razdan, 1988). This could have led onto the belief that consuming alcohol or intake of natural opioids is not necessarily harmful. Further credence to this observation is the fact that patients in the study group were from a rural background, having inadequate services for treatment of drugs and alcohol abuse with less exposure to the mental health professionals and knowledge about substance abuse leading to lack of awareness. However, this could not be confirmed due to the design of the current study. During the camps, the authors interacted actively with the patients who expressed lack of desire for seeking treatment from hospital based de-addiction services. Keeping in line with the rural background of the study group and the general pattern of literacy rate in India, significantly more patients were either illiterate or educated below matriculation. Significantly more patients were unemployed or students in the comparison than in the study group.

Patients in study group had a significantly longer duration of dependence and were more frequently dependent on alcohol and natural opioids as compared to the comparison group being more frequently dependent on synthetic opioids. These findings, in combination, can be attributed to the social sanction theory enumerated earlier. High frequency of use of synthetic opioids in the comparison group could be a reflection of their urban background where heroin, injectable opioids and cough syrups containing codeine are more frequently used (Mattoo et al, 1997; Sharma & Mattoo, 1999). Comorbid psychiatric diagnoses (epilepsy and personality disorders) were more frequently encountered in the comparison group reflecting the fact that such 'difficult to treat' persons tend to seek hospital-based treatment more often (Basu & Gupta, 2000; Ries, 1993).

In relation to the immediate outcome of detoxification and treatment (i.e. status at discharge) and the outcome 3 months after discharge, both groups were found to be comparable though a higher percentage (69%) in the study group were abstinent at 3 months with respect to the comparison group (41%). Although previous studies had reported very good abstinence results immediately after detoxification (Chavan & Priti, 1999; Datta et al, 1991; Purohit & Razdan, 1988; Ranganathan, 1994) and at follow-up (Datta et al, 1991; Purohit & Vyas, 1982; Ranganathan, 1994) yet the generalization and comparability with this study is limited due to different treatment design. The duration of camp treatment in previous studies had varied from 7 days (Datta et al, 1991) to 15 days (Ranganathan, 1994). As nearly 30% of our sample was abstinent but symptomatic (i.e. presence of withdrawal symptoms) at discharge, there appears to be a need to extend the duration of camp treatment beyond the currently stipulated 10 days. 18% patients in comparison group did not complete the detoxification course while no such case was encountered in the study group. This could be due to a better sense of discipline (as a religious place was being used for treat-

ment), social pressure and degree of motivation being demonstrated by the study group.

The assessment of outcome (i.e. maintenance of abstinence) at 3 months was based on clinical assessment by a senior consultant. The observations were corroborated from the close family member. No structured instruments were employed. Although this poses limitation to the generalizability of the results obtained, yet the findings should be interpreted in light of the restricted resources at our disposal in the setting of a developing country, particularly in the community.

Camp approach appears to be more beneficial than the hospital approach for treating patients of substance dependence in an inpatient setting. An additional advantage in employing the camp approach is that the mental health professionals are able to promote community based psychiatry and de-addiction services by being amongst the people for treatment and dissemination of information. Such an approach, with active community participation, can be expected to reduce the stigma attached to addiction and psychiatric illnesses. Also, the hospital, through the camp approach, was bearing a cost of Rupees 15 per day in contrast to the hospital approach where the cost was nearly Rupees 600 per bed per day (Chavan & Priti, 1999).

Researchers have voiced the need for development and availability of effective inpatient options for patients with substance dependence (Finney et al, 1996; Long et al, 1998) and increasing the effectiveness of interventions by the community reinforcement approach (Longabaugh, 1996). Although this study has certain limitations - small sample size, lack of structured instruments for measuring course and outcome, no interim follow-up on structured basis, lack of sound techniques for corroboration of information obtained (related to abstinence) etc., yet it provides an insight into a form of inpatient setting which, if not being more effective, is at least as effective as hospital based setting. Hence, camp approach is a viable and clinically effective mode of treatment for substance abuse in an inpatient setting. However, the profile of the patients attending the 'camp' and the 'hospital' was different on the parameters of age, employment, education, diagnosis, and comorbidity. This could have affected the treatment seeking pattern and outcome substantially and cannot be ignored. Hence, the study should, in perspective, be seen as preliminary and naturalistic.

This research report can therefore serve as a building block for the knowledge base that shall help in the better understanding of the necessary and sufficient conditions required for successful intervention (Longabaugh, 1996); both from developing (where it is partially in vogue) and the developed countries.

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