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Addiction severity and motivation in a fifteen-day community de-addiction camp and thereafter: A longitudinal follow-up

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Abstract
Substance abuse is gradually increasing in all the society. A community base de-addiction approach in make shift de-addiction camps is a feasible option to tackle with the growing work load on secondary and tertiary care hospitals. This study was planned to find out the remission rates three months after one such de-addiction camp. 25 patients were admitted in a community de-addiction camp. Remission rates, addiction severity and readiness to change (motivation) was studied. Only 5 of the 21 patients who completed the camp relapsed after three months of culmination of the camp. Those who relapsed had a better (low) addiction severity and motivation after three months. The study proves the utility of such de-addiction camps and put emphasis on such de-centralized and inclusive approach.

Keywords: de-addiction camp, camp approach, community, addiction severity, motivation

Introduction

Substance misuse and dependence are increasing problems all over the world. India's geographical location has made it a part of the international trade in illicit drugs, but substance misuse as a clinical problem has gained recognition only in recent years. Existing de-addiction programs have been identified as being patchy, poorly coordinated and poorly funded. Though India has a large network of primary health centers and community health centers in rural areas but they fail to provide specialized care due to inadequate facilities. 1970s saw an overzealous implementation of a simplistic model of supply and demand. But a report in 1988 on training general practitioners on management of alcohol related problems suggests that their involvement in alcohol and health education was modest, involvement in control and regulatory activities minimal, and they perceived no role in the development of a health and alcohol policy [1].

The notion of community mental health is based on a widely promoted model of mental health care and prevention which is appropriate to many low-income countries and is one that is integrated into the local primary health care system. James Mills, describing the history of modern psychiatry in India, stated that it was only in the 1990s that an increasing emphasis on out-patient care and more modern facilities was seen [2]. It should be pointed out that in fact community-based programs were first initiated in the 1980s, the impetus being provided by the National Mental Health Program. Several national and international agencies have put forward such community-based treatment as a desirable model for substance use disorders in developing nations like India [3].

One such community-based approach in de-addiction is the 'camp approach'. Such treatment camps have enjoyed a mass appeal in rural India for eye, family planning and dentistry procedures. The success of these camps has prompted mental health professionals to explore the option of such camps for treatment of substance dependence. The camp approach was first explored as an option for opioid dependence. Purohit and his team conducted 14 camps over 4 years treating 640 cases of opioid dependence in the rural areas of Rajasthan and found it to be as effective as hospital approach [4]. It was further popularized by the TTK hospital camp approach at Manjakkudi in Tamil Nadu [5]. Chavan and Priti in 1999 treated 22 cases of alcohol and opioid dependence and achieved detoxification in a majority of them [6]. Some South-East Asian countries like Laos Thailand and Myanmar have also reported reasonably good abstinence rates following treatment in camp settings [7]. Treatment of alcohol and drug abuse in a camp setting as a model of drug de-addiction in the community through a 10 day camp treatment was found to have good retention rates and favorable outcome at six months [8]. The experience of establishing and running these services has shown that the cost and infrastructure of running community clinics/ outreach services is substantially less than hospital based or specialized services [9].

In present study we try to find out the abstinence rates after 3 months of one such community de-addiction camp. In addition, the addiction severity and the motivation level of those abstinent and not abstinent was also studied. Any change in addiction severity and motivation level of those who reverted back to substance use was also studied after a period of three months. This was done to find out if community camps can lower addiction severity and improve motivation of those who had sought treatment from community camp even though they have reverted back to substance use.

Materials and methods

The study was designed to find out the effectiveness of community de-addiction camps in terms of abstinence rate in those admitted for de-addiction after a 3 month follow up. The camp (and the study) was planned as a three rung event which consisted of: -

1. Preparation for the Camp

2. Implementation of the Camp
3. Follow up Services

Preparation for the Camp

The area for conducting the camp was identified by a committee which comprised of a specialist psychiatrist, a social worker and a psychiatric nurse. A tentative list of a few such areas was made and the local leaders, panchayat members, prominent citizens and social workers were contacted to get a rough idea of the burden of illness in these areas. The selection of areas was governed by a number of factors like perceived need of the de-addiction camp in the area, accessibility of the area, location of the area (i.e., having a sizable catchment area) and demographic characteristics of the area like migrants, occupational status of the people, etc. The area thus selected was village Chumbian Jattan in the Bishnah tehsil of Jammu District. The decision to this effect was made about 3 weeks before the commencement of the camp. The village is located about 10 kilometers from the Jammu city and has a population of about 10,000. According to reports the border with Pakistan is the source of illegal trafficking of Opium and its products like Heroin into Jammu and subsequently to rest of India [10]. The area selected is very close the international border with Pakistan and the fact that a large number of patients in de-addiction OPDs at Jammu city were coming from this area, prompted us to select this as our camp base. The place of the camp was a Dharamshala which was under the management of village panchayat. Four community level workers (CLWs) were identified to aid the program as they have local bonding and rapport with the villagers. These CLWs were the socially active persons in the village who volunteered for the project. Finances and local logistics for the camp were provided by an NGO.

Campaigning is one of the most important components for the success of any community camp [11]. Thus, for this camp also a lot of stress was given to effective and targeted campaigning to identify and hence treat as much patients as possible. The campaigning was started about 2 weeks prior to camp. The strategy of campaigning was two pronged. CLWs and panchayat members identified some patients and motivated them to seek de-addiction treatment. This sort of campaigning though reaches a limited population, but have a good motivating power and hence efficiency of the campaign is good. But a more vigorous campaigning strategy was adopted by the community team. From community team the social workers adopted the approach of door to door campaigning so as to reach as much population as possible. Additionally, community teams were also sent to neighboring villages/areas to identify as much patients as possible and to motivate them to get de-addicted. Back there in the program office decisions regarding the arrangements for additional manpower for the camp, diet for the inpatients, their bedding and security arrangements for camp, etc. were made in consultation with the NGO.

Implementation of the Camp

The camp was planned as a 15-day event with both inpatient and outpatient services. The scope of paper limits us to inpatients only. The patients were admitted for first five days only. They were kept voluntarily in the camp for a period of 10 days. Before admission patients were frisked for any substance of abuse and examined for any serious life-threatening medical condition which was ruled out. The treating team in camp consisted of a resident doctor and a psychiatric staff nurse round the clock daily. Daily scheduled visits from a qualified psychiatrist were made for psycho-therapeutic inputs. In addition, community social worker and a clinical psychologist were available for 8 hours in morning for providing psycho-educational and other psychological therapies. The staff was told in detail about the purpose and working of the camp. They were trained extensively one-month prior to the camp for application of the scales. Inter-rater reliability amongst raters was checked periodically. Thus, the treatment consisted of both pharmacological and non-pharmacological modalities. Pharmacological therapy comprised of detoxification regimen i.e., tapentadol and clonidine for opioid dependence; benzodiazepines and vitamins for alcohol dependence; and nicotine chewing gums for nicotine dependence. In addition, symptomatic treatment for restlessness, insomnia, vomiting, diarrhea, bodyaches etc. was also provided. All the medicines were provided free of cost to the patient. Routine urine and blood chemistry of all the patients were also carried out at admission and on as needed basis. Non pharmacological therapies included psychotherapeutic strategies like psychoeducation, motivation enhancement, coping strategies, relapse prevention etc. and various other recreational, meditational and religious activities like indoor and outdoor games, sessions with representatives from religious organizations, religious songs etc. Psychoeducation of family members of patients was also carried out.

At the time of admission patients were assessed on their motivation to stop the use of the substance and the severity of their addiction using readiness to change questionnaire (RCQ) and addiction severity index (ASI) respectively. The RCQ is a 12-item instrument for measuring the "stage of change" reached or motivation to quit a substance by an excessive drinker of alcohol or drug user. It is based on the stages of change model developed by Prochaska and Di Clementel which describes the stages through which a person moves in an attempt to resolve an addictive problem [12]. It has got good reliability and validity for assessing the motivation of an individual to quit the use of the substance [13]. The ASI was developed in 1980 by A. Thomas McLellan and collaborators from the University of Pennsylvania's Center for the Studies of Addiction. The ASI is an assessment instrument designed to be administered as a semi-structured interview in one hour or less to patients who present for substance abuse treatment. The instrument gathers information about seven areas of a patient's life: medical, employment/support, drug and alcohol use, legal, family history, family/social relationships, and psychiatric problems. Within each of the problem areas, the ASI provides both a 10-point, interviewer-determined severity rating of lifetime problems as well as a multi-item composite score (computer-calculated) that indicates the severity of the problems in the past thirty days. The ASI has shown excellent reliability and validity across a range of types of patients and treatment settings [14]. A semi-structured performa was prepared to note socio-demographic characteristics of the patients. Patients were discharged from the camp on 10th day of admission after a booster psychotherapeutic session.

Follow-up Services

After culmination of the camp follow up services were

scheduled at the same venue. The community team visited the place of camp for 4 consecutive days after the camp and weekly thereafter for 5 weeks. Again, both pharmacological and non-pharmacological de-addiction services were provided to patients with focus shifting from detoxification to maintenance, anti-craving and antagonist therapies. Psychotherapeutic sessions for relapse prevention were also provided to the patients. A final follow up visit on camp site was done 3 months after the termination of the camp to find out the abstinence rate in those admitted for deaddiction. In this visit readiness to change questionnaire (RCQ) and addiction severity index (ASI) were applied for a second time on those who have again started with substance use.

The study scrutinized the abstinence rates after admission to a community de-addiction camp after three months follow up. Socio-demographic profiles, addiction severity at admission and motivation at admission of those who remained abstinent and those who relapsed were compared. Those who reverted to substance use after 3 months were assessed on ASI and RCQ once again and compared with their respective scores on admission.

Statistical Analysis

Independent samples T-test was carried out to find the significance of difference among means of continuous variables when the number of groups was below 3, else analysis of variance (ANOVA) was carried out. Chi-square test was carried out to find the differences in frequencies of discrete variables. The p-value of <0.05 was considered as significant.

Results

A total of 25 patients were admitted in the camp in these 3 days. Of these 25 patients 3 patients were discharged for disciplinary reasons and 1 left the camp against medical advice, thus a total of 21 patients completed the de-addiction treatment for at least 10 days as inpatient in the camp. Amongst these 21 patients, 17 patients were admitted for alcohol use disorder and 4 patients admitted for opioid use disorders (drugs). In the four patients admitted for opioid use disorder three were using poppy straw and one was chasing heroin. (figure 1) Socio-demographic characteristics of those admitted to the de-addiction camp is shown in Table 1. Of these 21 patients who completed the de-addiction treatment and qualified for the study, 16 remained abstinent from alcohol or drugs three months (hereafter abstinent) after the termination of camp whereas 5 relapsed back to the same substance (hereafter relapsed). (figure 1) A comparison of the socio-demographic features of the abstinent and relapsed is shown in Table 1. As can be observed from the table, half of those between 21 to 40 years of age relapsed after three months. Three out of five of those who were not married relapsed. Many of those (4 out of 10) who were un-employed took to substance abuse again after three months. Both the patients who were educated up to primary standard only relapsed. A majority of those who relapsed had income less than 10000 rupees per month. About 80 % of those relapsed were from nuclear family.

ASI score of those admitted is presented in table 2. As can be seen, addiction severity was more in the age group of 21-40 years, in those who were single, those who were un-employed, those with income less than 10000 rupees per month and those who were from nuclear family. ASI and RCQ score of those abstinent and relapsed (at admission) is compared in table 3. The mean ASI score in those admitted was 2.431 for alcohol and 0.313 for drugs (opioids). As can be seen ASI score at admission in those who remained abstinent was less as compared to those who relapsed. RCQ score at admission was also better (contemplation and action) in those who remained abstinent as compared to those who relapsed. As can be seen from the table, both the patient who were admitted at pre-contemplation stage in the camp relapsed after three months. Table 4 shows the comparative ASI score of those relapsed; at admission and three months after admission. As can be seen addiction severity decreased in all the subsets.

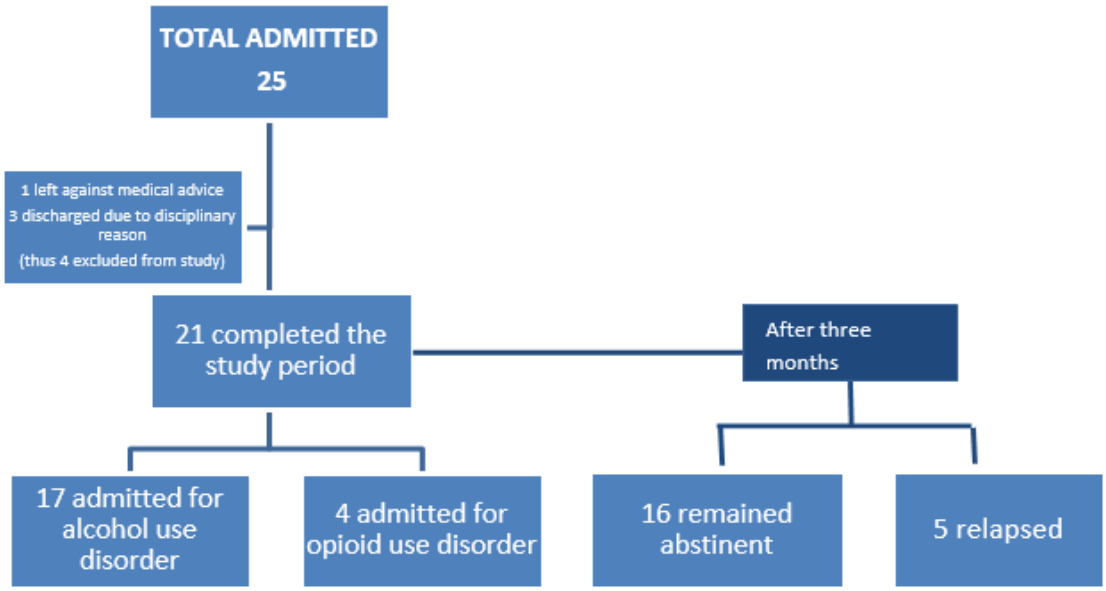

Fig 1: Algorithm of the admitted patients

Table 1: Socio-Demographic profile of the admitted patients and those who remained abstinent and relapsed after three months.

Sociodemographic Features	Total Admitted	Abstinent (after 3 months follow-up)	Relapsed (after 3 months follow-up)	P Value
Age				
Below 20	2	2	0	0.151
21 to 40	6	3	3	
41 to 60	13	11	2	
Marital Status				
Single	5	2	3	0.072
Married	15	13	2	
Divorced	1	1	0	
Occupation				
Skilled/ semi- skilled job	2	2	0	0.184
Agriculture business	9	8	1	
Unemployed	10	6	4	
Education				
Primary	2	0	2	0.583
Middle	4	4	0	
Matric	6	6	0	
Inter/ diploma	7	5	2	
Graduate	2	1	1	
Monthly Income				
0 to 10,000	7	3	4	0.047*
10,00 to 20,000	11	10	1	
20,000 and above	3	3	0	
Religion				
Hinduism	11	10	1	0.125
Sikhism	10	6	4	
Family Type				
Nuclear	8	4	4	0.047*
Joint/ extended	13	12	1	
Total	21	16	5	

Table 2: ASI scores of the admitted patients.

Asi Score	Alcohol ASI			Drugs ASI		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation
Age below20	2	1.7940	.27577	-	-	-
21-40	6	2.8508	.47635	1	0.199	
41-60	9	2.2930	.49371	3	0.351	
Marital						
Single	5	2.5014	.70756	3	2.5153	.50592
Married	11	2.4375	.54743	1	2.2130	.54369
Divorced	1	2.0110	.44201	-	-	-
Occupation						
agriculture/business	8	2.2765	.55587	1	2.2130	-
un-employed	9	2.5687	.57842	3	2.5153	.50592
Education						
Illiterate	2	2.0925	.65832			
Primary	2	2.3850	1.11157	1	1.9810	
Middle	5	2.3314	.61997			
Matric	5	2.5752	.44256			
Inter/diploma	3	2.6140	.60156	1	2.9870	
Graduate	-	-	-	2	2.3955	.25809
Monthly Income						
0-10k	6	2.7490	.45864	1	2.2130	.
10-20k	8	2.2596	.51719	3	2.5153	.50592
Above 20k	3	2.2530	.81858			
Religion						
Hindu	9	2.5550	.55583	1	2.9870	.
Sikh	8	2.2919	.58995	3	2.2573	.30096
Family type						
joint/extended	11	2.4057	.56592	1	2.2130	.
nuclear	6	2.4778	.62900	3	2.5153	.50592

Table 3: Comparative table of ASI and RCQ score at admission of those who relapsed and remained abstinent.

	Total admitted	Abstinent	Relapsed
ASI Mean			
Alcohol	2.431	2.288	2.896
Drugs	0.313	0.286	0.199
RCQ			
Pre-Contemplation	2	0	2
Contemplation	11	8	3
Action	8	8	0
Total	21	16	5

Table 4: Comparison of ASI score of those relapsed; at admission and after three months.

	ASI score (at the time of admission)	ASI score (after 3 months)	P value
Age			
21 to 40	2.973	2.515	
41 to 60	1.432	1.189	
Marital Status			
Single	2.973	2.515	0.763
Married	1.432	1.189	
Occupation			
Agriculture/ business	2.664	2.213	
Unemployed	2.279	1.928	
Education			
Primary	1.379	1.073	
Inter/ diploma	2.918	2.6	0.615
Graduate	3.189	2.578	
Monthly Income			
0 to 10k	2.279	1.928	
10k to 20k	2.664	2.213	
Religion			
Hinduism	3.172	2.987	0.744
Sikhism	2.153	1.734	
Family Type			
Nuclear	2.279	1.928	0.236
Joint/ extended	2.664	2.213	
Mean of whole group	2.356	1.985	

Discussion

Community treatment of drug addiction is a decentralized approach with less emphasis on isolation in de-addiction centers. Additionally, it is an inclusive approach with the patient staying and getting detoxified in the local community. One benefit of the approach is that, being in the community, patient is still exposed to some of the cues associated with the drug craving. This may help the patient to stay in remission once he is detoxified. The need of the study was being felt since long as the psychiatric OPDs in the Jammu region were constantly being flooded with the patients having substance abuse problem. This recent surge in addiction especially of harder substances like heroin is contributed largely due to geo-political reasons.

Of the 25 patients admitted in the community camp, 4 patients (16%) dropped out prematurely due to non-compliance and disciplinary reason. Even still, this is a significant retention rate as hospital dropout rates for de-addiction treatment far exceed this [15, 16]. Similar dropout rate of 16.3% in a community de-addiction camp was also observer by Raj L *et al*. [8] There can be various reasons for dropout like craving for substance, unacceptable withdrawals, patient issues with the residential settings, patient issue with treatment protocol, lack of engaging activities at the treatment facility, homesickness and negative emotions [17]. Three out of four patients who dropped out were of opioid use disorder. Reasons given by them were severe unacceptable withdrawals and lack of infrastructure at camp.

Three out of six patients in the age group of 21-40 years relapsed after three months of treatment on community camp. Predominantly, this age has stronger peer bonding, high risk-taking behavior and less subtleness in behavior. All these factors can jeopardize a person's recovery from addiction. Mainly due to above factors, this age group had highest addiction severity with ASI score of 2.8508. It was observed that a majority of those who relapse were unmarried (3 out of 5). Marriage provides a protection from relapse to substance abuse. This could be due to family responsibilities of married person, partner supervision and easy dissipation of stressful life events in a married person. Patients who were single also had high addiction severity with a score of 2.5014 for alcohol and 2.5153 for opioids. A majority of those who relapsed were unemployed. Un-employment is a significant risk factor for substance abuse. Factors like stress arising out of un-employment, boredom, deviant peer group in absence of work and lack of occupational responsibility could lead to increased relapses after successful de-addiction treatment. Employment can also act as a buffer against more severe drug abuse. Thus,

ASI score of those employed was less than those of unemployed (2.5687 vs 2.2765). Of the two patients educated up to or below primary standard, who completed the treatment, both relapsed after three months. Education is a known protective factor for substance abuse. Educated person is better appraised with the ill effects of drugs. In addition, pre-occupation with the studies would mean the individual has lesser propensities to deviate towards substance abuse. Plus, there is increased likely hood of an educated person of getting a skilled or semiskilled job which itself serves as a protective factor. Studies have shown that lesser educated patients are more likely to get trapped in the web of substance abuse [18]. Patients with income less than 10,000 relapsed four times more and also had more addiction severity at baseline. Less income could have meant meagre sources, resources or opportunities for employment. It could also have resulted as severe addiction would have meant that the patient is spending more time around addiction related activities like procuring, using and under intoxication of the substance. 50 percent of patients from nuclear family relapsed whereas only 8.33 percent from Joint family relapsed. Similarly, addiction severity was also observed to be slightly more in patients from nuclear family. It has been seen that psychological burden is easily dissipated in a joint family. Also, moral training, elder interaction and supervision is better in joint family than a nuclear family. Thus, such patients have a lower chance of getting into drug addiction and, if addicted, have a better family support which helps them in maintaining remission and achieving recovery.

A significant observation in our study was that the patients who relapsed had higher addiction severity and a poor motivation at admission as compared to those who remained abstinent. Both the patients admitted at pre-contemplation level relapsed within three months. Studies have shown that high ASI at baseline predicts poor treatment outcome [19, 20]. The figure should be considered modest as the four patients who were not considered for the study as they terminated or were discharged before they could qualify for study period had worse RCQ scores. An optimistic connection was detected in our study. When addiction severity was re-measured in those who have relapsed three months after the culmination of the community de-addiction camp, it was positively seen that addiction severity across all the socio-demographic subgroups and overall was observed to be reduced. It is a well-known fact that substance abuse is a brain disease and a chronic, relapsing and remitting illness. So, relapses are considered as a rule. But, it can be said without hesitation that community camps do lower the addiction severity in those who have relapsed after a significant period.

Limitations of the study

Even though the study was first of its kind in comparing the addiction severity and motivation in and after a community camp, but still it was restricted on a few fronts. Firstly, the length of admission for de-addiction at the community camp was brief. This was as a result of community setting, financial and logistical reasons. Research has shown that minimum stay period for de-addiction and rehabilitation should be between 3-6 months [21]. Secondly, the psychiatric morbidity in the admitted patients was not taken into account in evaluating the relapse rate. Third, the sample size of 21 patients was a bit smaller. Fourth, patients with harder substances like heroin, cocaine etc. were under-represented in our study. And Lastly, the ASI itself has its limitations as it gives a composite score and doesn't measure drug use intensity.

Conclusion

Thus, overall it can be said beyond doubt that community camps can help in bridging the gaps in the areas where de-addiction centers are located far off. Community de-addiction camps have a lesser dropout rate as compared to hospital setting. Despite the fact that relapses are unavoidable after de-addiction treatment, still, addiction severity and motivation of those who relapsed was better on follow up after a de-addiction camp. And more importantly community camps tackle the de-addiction as a community problem per se. It conforms to the concept of community health care where services to the community are provided at its doorstep and according to its needs. More importantly for us as researchers, it demonstrates the feasibility and effectiveness of a community deaddiction camp, the "camp approach".

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