

Role of rehabilitation centres in reducing drug abuse problem in a town of Eastern Nepal

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Abstract

Objectives: This paper focuses to describe the role and activities of Drug Rehabilitation Centres (DRCs) in reducing the drug-abuse problem in Dharan. It also offers suggestions for increasing the effectiveness of prevention programs.

Materials and methods: Records of three DRCs working in Dharan for the past 9 years were analyzed using appropriate statistical tools.

Results: The yearly clean rate is significantly higher in these centres. Harm reduction program was currently available only in one centre. Pharmacotherapy along with short-term rehabilitation was available at de-addiction unit of B. P. Koirala Institute of Health Sciences whereas long-term rehabilitation was at others centres.

Conclusion: Thus, there should be a strong coordination and network with each other to increase the effectiveness of the treatment program for drug abuse. The treatment centres should be increased in number as well as in quality. BPKIHS should take initiation to start long-term management with repeated booster programs.

Key words: Role, rehabilitation, drug abuse, BPKIHS, Dharan, Nepal.

The word 'drug' is defined as "any substance that, when taken into the living organism, may modify one or more of its functions" (WHO). "Drug abuse" is defined as self-administration of a drug for non-medical reasons in quantities and frequencies which may impair an individual ability to function effectively and which may result in social, physical, or emotional harm. (WHO)

Drug addiction or dependency, generally, is a habit on daily intake without which one can not stay comfortably and can not perform routine work; if stopped, produce withdrawal symptoms like shaking body, joint pain, itching in bones vomiting, diarrhoea etc.

Addiction to drugs is a disease that affects one's brain and behaviour. The drugs interfere with normal brain functioning and not only create powerful feelings of pleasure, but also have long-term effects on brain metabolism and activity. It is a serious, chronic, and relapsing health problem for any sex, age and background. However, it is a treatable disease. The addiction progresses through predictable stages. Those addicted to drugs suffer from a compulsive drug craving and usage; and generally cannot quit by themselves. Support and treatment are therefore necessary to end this compulsive behaviour. Drug Rehabilitation Centres (DRCs) play important role to make drug addict free of addiction.

Dharan is one of the most prevalent areas for drug dependence in Eastern Nepal. There were around 2153 drug abusers in Dharan in 1996 that increased gradually, peaked at 5000 in 2001 and then slow down to 3500 in 2004¹. Most of them were injecting drug users (IDUs). Injecting drug use is the strongest initial driver of HIV infection in Asia². Around 4% of the total HIV-infected people in India infected through injecting drug use³. In Nepal estimated HIV prevalence among IDUs is 38.4% and in Kathmandu it is 68%⁴. In Eastern Terai, 35% male IDUs were tested HIV positive⁵ in 2004. The sexual risk taking behaviours are common among drug abusers. They usually have multiple sex partners and a substantial number of them visit commercial sex workers. But they do not regularly use condoms⁶. Hence the situation is quite dreadful. In response to this, Harm Reduction (HR) program is implemented to Nepal.

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Needle-syringe program, drug substitution treatment, HIV/AIDS related treatment and information, education and communication are the components of HR program⁷. A study estimated that between 4,394 and 9,666 HIV infections could have been prevented in the United States between 1987 and 1995 if a national needle exchange program had been in place⁸. Therefore, drug rehabilitation program along with HR program should be considered for long-term reduction of the drug-abuse problem.

Drug rehabilitation is an umbrella term for process of medical and/or psychotherapeutic treatment, for dependency on psychoactive substances such as alcohol, prescription drug, and so-called street drugs such as cocaine, heroin or amphetamines. The obvious intent is to enable the patient to decrease their previous level of abuse, for the sake of avoiding its psychological, legal, social, and physical consequences in extreme abuse. In Dharan, there are only three DRCs actively serving for drug abusers - Kirat Yakthung Chumlung - Punar Jeevan Kendra (KYC-PJK), Dharan Youth Center (DYC) and B. P. Koirala Institute of Health Sciences De-Addiction Unit (BPKIHS-DAU). The activities of these centres in combating the drug-abuse problem and services provided by them are the major concerns in this study. KYC-PJK and DYC both are non-profitable and non-governmental organizations.

KYC-PJK was established in 1996 with aim to provide treatment and rehabilitation facility for drug addicts and conducts awareness programs against drug abuse. It runs different programs, which were targeted, to ease drug abuses and prevent HIV/AIDS. It claims that it is the first DRC in Eastern Nepal. DYC was established in 2003. It was run by 30 ex-users. They were treated from the same KYC-PJK. With formal training and experiences, they had started treatment with only one drug abuser in a rented house. They were self-motivated to serve for addicts. They believed that an addict could understand the feeling of an addict. The centre was still run without any financial support from any other agency.

BPKIHS established under the act of 18 January 1993, is an autonomous health science university with a mandate to work towards developing a socially responsible and competent health work force⁹. BPKIHS, a tertiary care hospital, established the department of Psychiatry in 1995. There were a total of 22 beds in which 9 beds were allotted for BPKIHS-DAU. Senior and experience faculty members provided pharmacological therapy and short-term psychological therapy. Beside this,

Volunteer Counselling for Testing (VCT) was available for HIV along with Hepatitis 'B' and 'C'.

This study was focussed to describe the role and functions of these DRCs in reducing the drug-abuse problem in Dharan; offer suggestions for the effective prevention programs to be considered in the DRCs and provide recognition of these DRCs active in Dharan.

Materials and methods

Study type and study unit

This is a descriptive study. The number of patients treated in the three centres since their establishments were taken in the study. 'Abstinence' in this study is the former addict who had not abused any substance for at least one year.

Data-collection procedure

Data presented in the results are from secondary sources of information. They were collected from the records available in the three DRCs.

Data analysis

The condition of patients admitted for the treatment in the centres at discharge were recorded on MS Excel (6.0) and analyzed with SPSS (11.0). The primary analysis was performed calculating frequencies, percentages, and averages. Multiple bar and chart were used to present the data. A non-parametric- χ^2 test was used to identify the significance difference amongst variables¹⁰.

Consent

This study was approved by the Ethical Review Board of the Research Committee of BPKIHS, an authorized institution of the Nepal Health Research Council. The Board follows the National Ethical Guidelines for Health Research in Nepal. Before data collection, permission from the heads of the three DRCs was obtained.

Results

Within nine years of work, a total of 1318 patients had been rehabilitated with an average of 149 patients in each year by KYC-PJK. The average rate of abstinence during six years was 71.8%. The yearly abstinence rate is significantly higher in comparison with the others – relapse, slip, dropout and not known ($P < 0.00001$) (Table 1).

KYC-PJK was provided treatment for 30 clients per session at its own rehabilitation building. The treatment duration was at least for 90 days. Yoga meditation, therapeutic community, symptomatic treatment and narcotic anonymous techniques were

used to treat the clients. Beside rehabilitation, other major activities are shown in table 2. KYC-PJK also conducted harm reduction and right-based programs for the people living with HIV/AIDS in Dharan, Damak and Itahari Municipality. It was providing service for 1100 injecting drug users through Drop-in-Centres (DICs) and outreach clinics. The DICs were run with one CMA (or ANM) and two outreach workers in each. It provided free services like needle & syringe exchange, primary health care, counselling, community interaction, stakeholder meeting, behavior change education and referral services.

In DYC, there were 23 drug abusers under treatment at the time of visit. The three-year record shows that out of the total 76 clients, 59.2% had been successfully made abstinent and 14.5% were still in follow up. The abstinence rate is significantly higher ($\chi^2=11.43$, $df=1$, $P=0.0007$) in comparison to relapse rate (33.0%) (Fig 1). Other major activities of DYC are shown in table 3. Apart from that regular home visit for family counselling, visit of shooting place for motivation to the treatment, live concerts and classes for addicts in custody were conducted.

Of the total 2059 patients admitted in BPKIHS psychiatric ward during the past five years, 14.0% of them were in BPKIHS-DAU with substance dependence syndrome (Table 4). Among them, 51.9% were from Dharan. On an average yearly 14.0% of the patients admitted to psychiatric ward was in BPKIHS-DAU, among which around 94.2% were clean at discharge after treatment. However, there were 8.5% discharge cases that were readmitted due to relapse.

Psychological therapy like yoga, exercises, counselling, behavioural motivation enhancement, life skill training, psycho and rehabilitation therapies for short-term treatment (2-3 weeks) were provided in BPKIHS-DAU. The patients were taught how to seek jobs, face with family problems, and face with community etc. Due to constrain of time, manpower, and bed facilities, long-term rehabilitation was not provided. After solving acute problem, the patients were advised to join other DRCs for the long-term management. (Fig 2)

In Pharmaco-therapy, acute problems were tackled by prescribing medicines like proxyvon, codeine, thioridazine, zolpidem, and benzodiazepine etc. For the relapse prevention, Naltrexone was prescribed.

Table 1: Status of clients under drug rehabilitation program at KYC-PJK (1996-2005)

Activities	Rehabilitation	Clean	Relapse	Drop-out/Slip/Not known
1996- 1997	130	NA	NA	NA
1997-1998	123	NA	NA	NA
1998-1999	124	NA	NA	NA
1999-2000	122	79 (64.7)*	17 (14.0)	26 (21.3)
2000-2001	124	96 (77.4)*	22 (18.0)	6 (4.8)
2001-2002	178	117 (65.7)*	34 (19.1)	27 (15.2)
2002-2003	149	98 (65.8)*	34 (22.8)	17 (11.4)
2003-2004	178	140 (78.6)*	33 (18.5)	5 (2.8)
2004-2005	190	150 (78.9)*	27 (14.0)	13 (6.8)
Total	1318	680 (72.3)*	167 (17.7)	94 (10.0)

* $P<0.00001$, NA – Not available, Figures in the parenthesis show percentages

Table 2: Major activities by KYC-PJK to control drug abuse in Dharan during 10 years (1996-2005)

Title	Times	Target group	Total Participants
School awareness: Drug Abuse & Drug Lead Harm	16	Students	500
Community awareness	57	Community people	1,140
TB/HIV program	5	Factory workers	450
Alcohol minimization awareness Program	11 districts	District committee members	220

Fig 1: Patients under drug rehabilitation treatment program at DYC during 3 years (n=76)

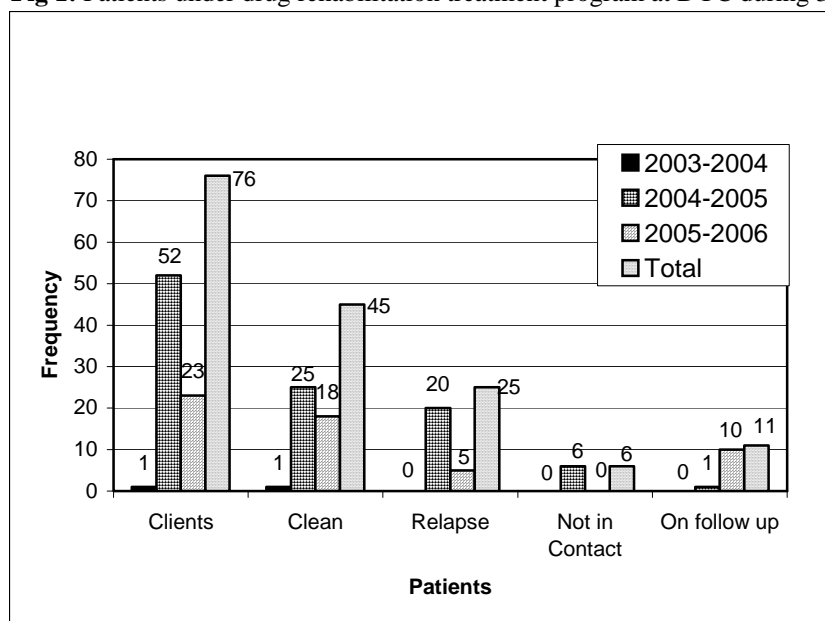


Table 3: Major activities by DYC to control drug abuse in Dharan (2003-2005)

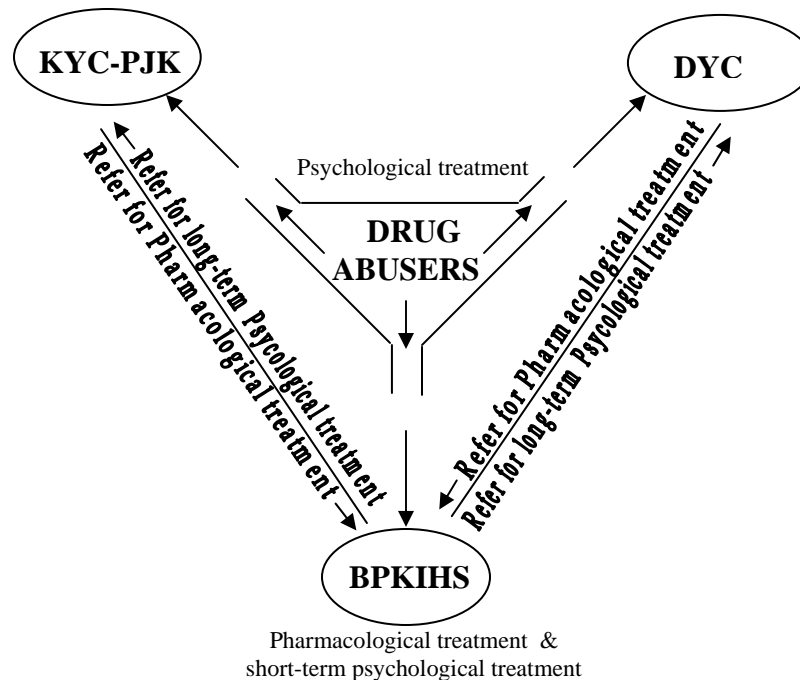
SN	Title	Times	Target	No. of participants
1	School Awareness: Drug Abuse & Drug Led Harm	3	Students	290
2	Sportsmanship Awareness: Physical & mental harms from drug abuse.	4	Players	105
3	Community Awareness	3	Community people	316
4	Awareness through Rally Program by former addicts	2	Community people	570

Table 4: Drug treatment and rehabilitation at de-addiction unit, BPKIHS (1995-2005)

Year	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	Total
Total Patients in Psychiatric Ward	458	412	394	399	396	2059
Admitted in de-addiction unit	68 (14.8)	39 (9.5)	61 (15.5)	63 (15.8)	58 (14.6)	289 (14.0)
Clean discharge	61 (89.7)	38 (97.4)	57 (93.4)	58 (92.1)	57 (98.3)	271 (93.8)
LAMA	4 (5.9)	1 (2.6)	3 (4.9)	1 (1.6)	1 (1.7)	10 (3.5)
Refer to Other Ward	3 (4.4)	0 (0.0)	1 (1.6)	4 (6.3)	0 (0.0)	8 (2.8)
Readmitted due to relapse	2 (3.3)	2 (5.3)	11 (19.3)	8 (13.8)	0 (0.0)	23 (8.5)

* Figure in parenthesis shows percentages

Fig 2: Major partners working for reducing drug abuse problems at Dharan



Discussion

The result of this study shows that the role of DRCs working in Dharan against drug abuse problem is significantly effective to make addict abstinent. The success rates in these centres seem significantly higher. However, there is not a rigorous mechanism to ascertain the patients' activities after clean discharge. Recovery is an ongoing process. Drug rehabilitation treatment should include a quality continuing care program that supports and monitors recovery. Also, it should not forget to consider the cases of relapsed, dropout and slipped. So the treatment policy in DRCs should go along with the group in an organized manner. Health promotion education and environment supports are necessary simultaneously. Family based prevention programs should enhance family bonding and relationships and include parenting skills, practice in developing, discussing, and enforcing family policies on substance abuse; and training in drug education and information¹⁶. In developing countries like Nepal, there are hardly any DRCs, so the choice is limited. Thus, this study suggests in increasing drug treatment facilities and improving quality of services.

The HR program along with drug rehabilitation run by KYC-PJK can be taken up positive, as the immediate strategy should be to halt the rate of spread of HIV transmission rather than to control the

problem of drug abuse. The HR also aims to prevent hepatitis and other blood-borne infections; reduce the risk of overdose and other drug-related fatalities; and lessen the negative effects drug use may have on individuals and communities, including poverty and crime. It's basic goals are: - to encourage the drug user to stop using and injecting illicit drugs; and to ensure that the drug user does not share any of their injecting equipment, especially needles and syringes, with any other person; but if share does occur, to ensure that the injecting equipment is disinfected between each use¹². Injecting drug abuse is a potential gateway to HIV infection. WHO (2004) considers drug users (especially IDUs) are the largest sufferers and transmitters of HIV/AIDS¹³. The first HIV infection case appeared among IDUs^{14,15}. If we think about long-term reduction of the drug-abuse problems along with HR, it should run parallel with programs aiming at demanding reduction¹⁶. BPKIHS-DAU and DYC should be encouraged to start HR program also.

Drug abuse has also a great economic impact on society. It creates economic burden for the family as well as for the nation. The amount of money drug abusers spent per year (\$701-1,135 per person) is much higher than the per capita income (\$380 in 2001)¹⁷ in Bangladesh. For every dollar spent on drug

abuse treatment saves \$4 to \$10^{18,19}. So, government should pay attention to control this problem. In fact all concerned including families should be cautious about the children's behaviours in time. Only long-term rehabilitation is available in KYC-PJK and DYC whereas in BPKIHS-DAU short-term rehabilitation and medical treatment were available. All the centres are complimentary to each other. But, lack of coordination was observed. So, there should be a strong network and coordination in between them. Moreover, they should be responsible to intervene through proper action before the problem does become irrepressible. Today's efforts should be committed to protect future generations from the devastating psychological, social and physical consequences that arise from drug abuse and drug dependency.

Although, the long-term goal is to enable the patient to achieve lasting abstinence, the immediate purposes of drug addiction treatment should be reduction of the medical and social complication of drug abuse and improve the patients' ability to function. In the KYC-PJK and DYC, patients were participated in 12-tradition and 12-step self-help groups, such as narcotics anonymous for the treatment. The ex-users had regular assembly at the four schools of Dharan at different fixed dates for the ex-users. Encouragement for long-term abstinence was provided in the meeting by rewarding gifts. The record of BPKIHS-DAU shows most of the patients were alcohol dependents. The alcohol dependency is quite common among hill native ethnic group and majority of people in Dharan belongs to this group²⁰. Basically, the abstinence rate at BPKIHS-DAU could not be trace so far as around 48% patients were from outside of Dharan as a result of which regular follow up at BPKIHS-DAU may not have been possible. So, it may be consider as a limitation.

The methadone therapy is said to be more effective for the harm reduction in regards to transmission of HIV/AIDS. At proper dosing, it controls the need for heroin. However, DYC run by former addicts was against the methadone therapy as they felt that it is actually harder to quit methadone than heroin itself. They also added that the oral dosage of methadone couldn't fulfil their desire for the sickness of needle. It is recommended that the staff of DYC should be trained more and provided financial support to run the centre with more facilities. Unlike most medical and mental disorders, drug addiction has a strong component, if the pleasure associated with drug taking did not create so many social, financial, criminal and medical problems; it is hard to imagine people seek treatment at all. Thus while drug addict

want to stop, in reality he is just willing to stop the problems associated with drug use not stop taking drugs. So, while treating them, this motivation in the character of disorder should not be forgotten by any DRCs.

Conclusion

The DRCs working in Dharan should have strong coordination and network in relation to treatment program for drug abuse. The problem never comes down until the effective prevention programs and accessible drug treatment, and enforceable drug interdiction policies are linked to make management cost effective. Support for substance abuse education, prevention and treatment must come from all sides including families, community groups, schools, policymakers, and health professionals.

The drug rehabilitation programs should be long-term with repeated interventions i.e. booster programs to reinforce the original prevention goals. Especially, BPKIHS should take initiation on long-term treatment because it is a tertiary care hospital with aim to improve health status of people of eastern Nepal and senior psychiatric doctors are available here.

The treatment centres should be increased in number as well as in quality. It is necessary to keep sending message the media that it is better to not start at all than to enter rehabilitation if addiction occurs.

Training of Trainers is urgently necessary for the trainers working in the DRCs of Dharan. There is a strong need to expand the scope of research to improve the effectiveness of treatment in the future and to provide evidence to policymakers that sufferers are eagerly awaiting treatment now. The DRCs of Dharan should be supported and promoted by the government and non-government organizations.

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