A Study of the Rate and Causes of Addiction Relapse Among Volunteer Addicts Seeking Help at the Center for the Prevention of Addiction Affiliated to the Welfare Organization, Ardabil Province, Iran

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Abstract: The study aimed at determining the extent of relapse of addiction among addicts self-introduced to the Center for Prevention of Addiction and delineating the social, familial and personality factors associated with the relapse. Out of the 3000 addicts referring to the center from 1997-2002, a sample of 200 subjects was randomly selected for study. The present relapse rate as evaluated by interview techniques stands at 62.7% 0 and when determined by morphine tests, at 72%. Factors contributing to this relapse include familial factors like conflicts with family members and neighbors, inadequate support from family and society and yielding to temptation when access to addictive substances is available. Furthermore, addiction relapse among addicts volunteering for help is associated with personality factors such as higher levels of anxiety and depression, self-control, lowered self-esteem and learned helplessness. Therefore, it is essential that helping addicts to drug withdrawal, the centers for the prevention of addiction consider their rehabilitation period serious and use various cognitive theory methods to treat depression and anxiety as well as group therapy sessions to improve addicts, self- control and assertiveness.

Key words: Addiction relapse, substance abuse, reversion to addiction

INTRODUCTION

Statistical reports have disclosed that addicts in Iran are legion. This underscores the necessity for urgent preventive and treatment methods entailing a multifaceted combat against the supply and demand of drugs (Majidpour and Kheirkhaah, 1999). To this end, in 1997 the Welfare Organization in Iran established centers in all provinces to offer services for the treatment of addicts who enlisted voluntarily to encourage them to discontinue addiction. Between 1997 and 2002, about 3000 addicts enlisted voluntarily at the Center for Prevention and Discontinuance of Addiction run by the Welfare Organization in Ardabil province and availed themselves of the therapeutic services offered. They were underwent drug withdrawal and rehabilitation periods. However, studies regarding the utility and efficacy of the activities of this center and the need for expansion of such services have yet to be undertaken. The main purpose of the present study has been to determine what percentage of clients approaching the center for addiction have been successful at discontinuing addiction and what factors serve to hinder discontinuance and maintain addiction. The results of a study conducted

by Majidpour and Kheirkhaah (1999) show that the prevalence of drug dependence in the province of Ardabil, is 4.3% and the addiction of these people is associated with variables like the curiosity motive, marital status, occupation, addicted relatives and peers and easy access to drugs (Narimani, 1997). In addition to the above factors, Concurrent depression and anxiety symptoms are among the most common problems reported by persons seeking treatment for substance use disorders (Hesselbrock, 1985; Ross, 1988, http://www. psychservices.psychiatryonline.org/cgi/ijlink?link Type= ABST&journalCode=archpsyc&resid=45/11/1023, Rounsaville et al., 1991). A number of studies have indicated that patients with concurrent psychiatric and substance use disorders have worse prognoses than those with no psychopathology, including a decreased rate of remission, an increased vulnerability to relapse and a need for more treatment services (Bobo et al., 1998; Greenfield et al., 1998; Hasin et al., 1996; Driessen, 2001). Initial studies conducted at the McGill University Health Center (MUHC) addictions unit found that patients with substance use disorders who had moderate to severe symptoms of depression at intake, as indicated by a score of more than 18 on the Beck Depression Inventory, had

a 20% higher rate of early dropout (within the first 60 days of treatment) (Gauthier et al., 1997). In a subsequent prospective study at the same unit (Charney, 2001, 1998; http://www.psychservices.psychiatryonline.org/cgi/ external ref?access num=11681761&link type=MED), patients with a current diagnosis of depression, as established by the Structured Clinical Interview for DSM-IV (SCID-IV), fared as well as the no depressed patients in terms of all outcome measures at 6 months (Charney et al., 2001). For a period of six months they followed up 80 people addicted to opium, heroin and other drugs and who underwent a detoxification period in hospital. A large percentage of their addicts resumed consumption of addictive substances immediately after the termination of treatment, with 81% reporting the use of drugs at least once during the first 6 months. In a majority of cases slippage and consumption of drugs occurred soon after discharge from hospital (Nikjoo, 1999). Results of a study by Narimani (1997) on addicts in the cities within the province of Ardabil show that out of 120 addicts, approximately 76 (63%) reverted to addiction.

In general, the review of studies conducted in Iran and overseas show that relapse rates reported vary between 63 and 81%. Several studies of factors associated with addiction relapse have been carried out, where addicts who succeeded in discontinuing addiction were compared with those who failed to do so. The results of a study conducted by Gossop et al. (2002) show that many clients (60%) used heroin after treatment, with the first occasion of heroin use usually occurring very soon after leaving treatment: 40% remained abstinent from heroin. Analyses were conducted for three groups based upon heroin outcome status (abstinent, lapsed and relapsed). Clients who avoided a full relapse to heroin use (abstinent and lapse groups) consistently made more use of cognitive, avoidance and distraction coping strategies at follow-up than at intake. Treatment completion was related to better outcome. The lapse and relapse groups reported higher rates of use of illicit drugs other than heroin after treatment than the abstinent group. Even lack of awareness regarding coping skills and low social support are related to alcohol addiction relapse Walton et al. (2000). McMahon's study (2001) entitled Personality, Stress and Social Support as Predictors of Cocaine Use Relapse has shown that detached personality and high stress are both predictors of addiction and intensifies drug abuse. Besides, the quality of social support received and the extent of social network were both related to addiction relapse. A study aimed at determining the factors contributing to the relapse of addiction, by Sadeghieh (2000) on addicts voluntarily seeking help at the Center for Prevention of Addiction in Tehran, showed that the insistence of the family on

discontinuing addiction had made these addicts seek help. The presence of family problems and hopelessness regarding success at discontinuing addiction were among the factors that contributed to addiction relapse. Most adolescent addicts are driven by external pressure to seek help at treatment centers. Therefore, they lack the for behavioral change and addiction motivation discontinuation and fail to involve themselves with the treatment process. Lock of awareness of the negative consequences of substance abuse is related to reduce motivation for discontinuance while experiencing various negative consequences of substance abuse was among the important predictors of the motivation to discontinue addiction. Therefore, in therapeutic interventions, addicts should be made aware of the adverse consequences associated with substance abuse. So that their motivation to discontinue addiction may be raised and likelihood of relapse may be reduced. Similarly, a study by Narimani (1997) has revealed that the most influential factor in addiction relapse is having addicted friends (35%), followd by factors such as a contaminated environment (31%), lack of plans for occupation of addicts (22%), ill-treatment of addicts by family and society (17%), lack of attention to the psychological dependence of addicts and unfilled leisure time after discontinuation of addiction (13%). Based on studies regarding conditions associated with the relapse of addiction, it can be concluded that decreased self-concept and self-esteem, the intensity of learned helplessness, lack of effective methods to cope with difficulties that ensue after discontinuance of substance abuse, absence of cognitive control, negative mood states, situational factors and interpersonal conflicts in the family, presence of addicted friends, contaminated social environment, easy access to drugs, lack of programming for the occupation of addicts and failure to fill leisure time of addicts after drug discontinuance, inadequate attention to the psychological dependence of addicts on drugs and insufficient attention to the rehabilitation phase, are among factors involved in the relapse of addiction. Considering these findings, following questions and hypothesis arose:

- How much is the rate of addiction relapse among addicts self-introduced to the welfare organization of Ardabil province?
- Which social, familial, personal factors are related to addiction relapse of addicts referred to the center for the prevention of addiction affiliated to the welfare organization of Ardabil province?
- The mean scores of anxiety and depression among addicts with addiction relapse is higher than ones with no addiction relapse.
- From the addicts, point of view, which, factors are related to their addiction relapse?

MATERIALS AND METHODS

Subjects: The statistical population of the present study comprised the 3000 addicts who voluntarily registered with the Center for Prevention of Addiction affiliated to the Welfare Organization in the province of Ardabil during the years 1997-2002. Out of this statistical population, a sample of 200 subjects was randomly selected for study.

Instruments: Data was collected using interviews, questionnaires and tests. To tap attitudes of addicts toward factors that contribute to their relapse of addiction, a 19-item questionnaire with a 5-point scale was developed. The second questionnaire with 52 questions was developed to assess the individual, social and personality characteristics of subjects and their awareness of factors associated with the relapse of addiction. Furthermore, the 14-item hospital test of anxiety (7 items) and depression (7 items) developed by Sigmund and Smith in 1983 was also used. Test-retest reliability and internal consistency reported for these scales are 0.76 and 0.91, respectively (Narimani, 1998). A morphine test was carried out in order to verify the claims of those addicts who asserted in the interview that they had guit addiction. This was done by having a sample of their urine tested. All information was collected on an individual basis by trained interviewers at each subject's residence. The purpose and nature of the present study necessitated the use of a survey method in order to obtain information about the relapse of addiction. Since obtaining information about factors contributing to the relapse of addiction was another one of the aims of the study, an expose facto method was also used. That is, there were two comparable groups worthy of study in terms of individual, social and familial characteristics: One group that was successful at discontinuing addiction and remaining abstinent and the other group in which addiction relapse occurred.

RESULTS

The results of the present study indicate that subjects sought help at the Center for the Prevention of Addiction on an average 20 months after having become addicted, remained abstinent on average for 43 days, participated in 3 or 4 sessions of group therapy and 38.5% of them took part in group therapy sessions. A majority of the addicts, that is 61.5%, had been married at the time their addiction began and 38.5% had been single. However, at present 80% are married and 20% remain single. Sixty seven percent of the subjects were addicted

Table 1: The frequency distribution of volunteer addicts in terms of rate of discontinuance of addiction (addiction relapse) at the time of data collection

S.No.	Levels of variables	Frequency	(%)
1	Failed to discontinue	125	62.5
2	Discontinued	75	37.5
	Total	200	100.0

Table 2: Frequency distribution of subjects according to the results of the morphine test

Levels of variables	Frequency	(%)
Addicts who failed to discontinue	125	62.5
Addicts with negative morphine test results	56	28.0
Addicts with positive morphine test	19	19.5
Total	200	100.0

to opium, 19.5% to heroin and the rest to other addictive substances. Only 28% asserted having undergone the rehabilitation period during discontinuance of addiction and 72% claimed not to have done so.

Results displayed in Table 1 show that the present rates of discontinuance of addiction and no discontinuance of addiction (addiction relapse) are 37.5% and 62.5%, respectively.

As shown in Table 2, it can be observed that among 75 subjects (37.5%) who asserted during the interview that they had discontinued their addiction, in 19 subjects (9.5%) the morphine test proved to be positive and only in 28% morphine test results were found to be negative.

As can be seen from Table 3, although most subjects reported that all 18 factors contributed to addiction relapse, unemployment, lack of adequate planning for the occupation of addicts, presence of difficulties in life, lack of awareness regarding methods to cope with life's problems and lack of awareness of problem solving methods were reported as especially influential. A contaminated social environment, unfilled leisure time and lack of substitute activities ranked next. Absence of a rehabilitation stage after discontinuation and learned helplessness were also among factors reported by addicts as being involved in addiction relapse.

Results in Table 4 show that the mean scores of anxiety and depression among addicts who failed to discontinue, is higher significantly than those addicts who discontinued substance abuse (p<0.01).

Table 5 shows mean rankings in 2 groups of addicts (continued and discontinued) on several rank order variables. Among subjects who discontinued substance abuse, the extent of occupation in society after discontinuation of addiction and extent of family support, especially mental and concrete support, was significantly higher than those among addicts who failed to discontinue substance abuse. Even feelings of control over substance non-use in times of easy access to addictive substances or resistance to offers and insistence of friends to use addictive substances, feelings

Table 3: Attitudes of volunteer addicts about factors contributing to relapse

			Not at all A little		Somewhat		A lot		Extremely		
S.No.	Factors contributing to addiction relapse	P	F	P	F	P	F	P	F	P	F
1	Contaminated social environment	1/5	3	2/5	5	13	26	30/5	61	52/5	105
2	Failure to fill leisure time	4	8	3/5	7	18/5	37	51	102	26/5	53
3	Absence of substitute activities	2	4	3	6	20	40	47	94	28	56
4	Non-commitment to religious activities	3/5	7	10	25	22/5	45	34/5	69	29/5	59
5	Absolutism among addicts	6/5	13	16/5	25	40/5	81	32/5	65	8	16
6	Learned helplessness	2	4	5	10	31/5	63	64	92	15/5	31
7	Absence of rehabilitation stage	2	4	3/5	7	9/5	43	49/5	99	23/5	47
8	Presence of rehabilitation	5/5	11	10	20	19/5	39	36	72	29	58
9	Presence of anxiety after discontinuance	7	14	5/5	11	29/5	59	38	76	20	40
10	Presence of anxiety after discontinuance	6/5	13	10/5	21	37/5	75	32	64	13/5	27
11	Presence of depression after discontinuance	7	14	8	16	22/5	45	40/5	81	22	44
12	Negative thoughts of inefficiency	5	10	9/5	19	27/5	55	24/5	85	15/5	31
13	Presence of life's difficulties	6	12	3/5	7	10/5	21	24/5	53	53/5	107
14	Lack of awareness regarding methods to cope										
	with life's problems	2/5	5	1/5	3	22	44	50/5	11	23/5	47
15	Unemployment and lack of planning for occupation	3/5	7	1/5	3	7/5	15	18/5	37	69	138
16	Ill-treatment by family and society	2/5	5	2/5	5	14/5	29	45/5	91	35	70
17	Presence of addicted friends and encouragement from	ı									
	them to use drugs	2	4	3/5	7	11/5	23	41/5	83	41/5	83
18	Accessibility to drugs	4/5	6	3	6	21	42	34	68	37/5	75

Table 4: A comparison of means of two groups of addicts (failed to discontinue) and abstinent (discontinued), on anxiety and depression

Variables	Levels of variables	Means	S.D.	t	р
Anxiety	Failed to discontinue	9.44	3.81	5.35	*<0.001
	Discontinued	6.5	3.86		
Depression	Failed to discontinue	9.1	3.06	9.5	*<0.001
	Discontinued	4.01	4.06		

Table 5: A comparison of mean ranks of two groups of addicts who failed to discontinue substance abuse on rank order variables using The Mann Whitney

U test

S. No.	Variables	Level of variables	Mean ranks	Sum of ranks	Z	Sig
1	Extent of acceptance in society after discontinuance	Continued	82.7	10092	-5.47	*<0.001
		Discontinued	127.3	9808		
2	Extent of positive attitudes	Continued	82.3	9785	-6.24	*<0.001
		Discontinued	131.3	10114		
3	Importance attached to children and family	Continued	79.8	9742	-6.47	*<0.001
		Discontinued	131.9	10157		
4	Extent of support from family	Continued	89.2	10885	-3.47	*<0.001
		Discontinued	117.07	9014.5		
5	Extent of persuasion and temptation from friends	Continued	113.8	13889	-4.37	*<0.001
	towards addiction after discontinuance	Discontinued	78.06	6011		
6	Extent of adequate mental and objective support from	Continued	83	10131	-5.5	*<0.001
	family and society	Discontinued	126.8	9768		
7	Amount of temptation experienced when friends use	Continued	123.75	10598	-7.6	*<0.001
	addictive substances	Discontinued	62.3	4802		
8	Extent of feelings of sorrow and tension	Continued	119	14529	-5.7	*<0.001
		Discontinued	69.7	5370		
9	Extent of conflict with family members	Continued	118.05	14402	-5.7	*<0.001
		Discontinued	71.4	5498		
10	Extent of conflicts with people around	Continued	114.2	13939	-4.56	*<0.001
		Discontinued	77.4	5960		
11	Extent of suffering from stresses	Continued	111.03	13546	-3.5	*<0.001
		Discontinued	82.52	6354		
12	Extent of feelings of control over non-use in conditions	Continued	91.88	11209	-2.6	*<0.001
	of substance availability	Discontinued	112.87	8691		
13	Extent of inclination to substance use when exposed to places,	Continued	125.09	15261	-8.04	*<0.001
	times and people previously associated with substance abuse	Discontinued	60.24	4638		
14	Extent of feelings of worth	Continued	75.4	9207	-7.7	*<0.001
		Discontinued	138.8	10692		
15	Extent of assertion	Continued	88.7	10827	-3.6	*<0.001
		Discontinued	117.8	9074		
16	Extent of resistance to offers and insistence of friends to	Continued	73.15	8924	-8.5	*<0.001
	substance abuse	Discontinued	142.5	10976		
17	Extent of fear of disgrace during substance abuse	Continued	87.1	10632	-4.2	*<0.001
		Discontinued	120.3	9286		

Table 5: Continue

S. No.	Variables	Level of variables	Mean ranks	Sum of ranks	Z	Sig
18	Extent of commitment to religious matters	Continued	93.06	11424	-2.04	*0.04
		Discontinued	110.08	8476		
19	State of helplessness	Continued	103.7	12656	-1.23	0.21
		Discontinued	94.08	7244		
20	Presence of bodily pains	Continued	105.9	12925	-1.90	*0.05
		Discontinued	90.05	6975		
21	Presence of insomnia after discontinuing	Continued	105.9	12875	-1.77	0.074
		Discontinued	91.23	7024		
22	Awareness of methods to cope and deal with life's problems	Continued	90.19	6945	-2.07	*0.038
		Discontinued	106.06	12939		
23	Unemployment and lack of adequate planning for occupation	Continued	106.06	12939	-2.28	*0.022
		Discontinued	904	6960		

Table 6: Relationship between predictive variables and the criterion variable (discontinuance of addiction and failure to do so) using the statistical K² test

S.No.	Predictive variables	\mathbb{K}^2	р
1	Marital status at the beginning of addiction	11	0.02
2	Marital status at present time	10.4	*0.03
3	Kind of addictive substance	21	*O
4	Failure to complete therapy for addiction discontinuance	16.5	*0.002
5	Failure to undergo rehabilitation period	41	*O
6	Non-participation in group therapy	35	*0.10
7	Easy access to addictive substances	19	*0.01
8	Bodily problems after discontinuance	15.5	*O
9	Spouse satisfaction and adaptability	9.7	*0.04
10	Belief and confidence in discontinuance	13.5	*0
11	Acceptance of responsibility for becoming addicted	12.8	*0.01
12	Spouse pressure	13.7	*0.02
13	Encouragement of friends to use addictive substances	25.7	*0.01
14	Manner of substance abuse	2	0.12
15	High motivation for discontinuance	22.5	*0.10
16	Role of destiny (locus of control)	14.8	*0

Table 7: A comparison of means among three groups of addicts (continued, discontinued with negative morphine tests, discontinued with positive morphine tests) on anxiety and depression using single factor. Analysis of Variance (ANOVA)

Variables	Source	Sum of squares	df	Mean of squares	F	р
Anxiety	Between groups	601.68	2	300.8	22.56	*<0.001
	Within groups	2626.53	197	13.33		
	Sum	3228.22	199			
Depression	Between groups	1353.74	2	676.87	59.29	*<0.001
	Within groups	2248.8	197	11.41		
	Sum	3602.59	199			

of worth, assertiveness and commitment to religious matters were significantly higher among addicts who succeeded in discontinuing substance abuse than among addicts who relapsed to addiction. In addition, yielding to persuasion from friends towards addiction, feelings of sorrow, feelings of tension, conflicts with family members and others, stress and bodily pains after drug discontinuance, lack of awareness of methods to cope with life's difficulties, unemployment and lack of adequate planning for occupation were considerably higher among subjects who relapsed to addiction compared with those who succeeded in discontinuing substance abuse.

Table 6 shows several variables predictive of addiction relapse and indicates that at the time of beginning addiction, more people were unmarried than married, while relapse occurred more in married than in unmarried subjects. Relapse rates were higher among those addicted to opium. Relapse was also higher among those who failed to undergo rehabilitation, complete

treatment, or participate in group therapy than in those who had done so. Easy access to addictive substances, presence of bodily problems after discontinuance and encouragement from friends to use addictive substances were higher among addicts who showed relapse than among those who succeeded in discontinuing substance abuse. Moreover, variables like spouse satisfaction and adaptability, belief and confidence in discontinuance of substance abuse, increased motivation for discontinuance of addiction, acceptance of responsibility for becoming addicted and internal locus of control were significantly associated with discontinuance of addiction.

As noted in Table 7, there are significant differences among subjects who failed to discontinue, subjects who discontinued but proved positive on morphine tests and subjects who discontinued and had negative morphine test results, on variables like anxiety (F=22.56. $_{
m df}$ (2, 197), p<0.001) and depression (F=59.29 $_{
m df}$ (2, 197), p<0.001).

Table 8: Results of LSD test for comparison of means on anxiety and depression

	Anxiety	Depression	Depression				
Groups	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	
Continued	-	3.93	1.69	-	5.8	3.31	
		*0	0.06		*0	*O	
Discontinued with negative morphine test results	-	-	-2.23			-2.5	
			*0.02	-	_	*0.005	
Discontinued with positive morphine test results	-	-	-	-	_	-	

Results of LSD test show that on each of the variables of anxiety and depression, significant differences are present among groups 1 and 2, 1 and 3 and 2 and 3. It means that the rate of depression among group 1 is higher than groups 2 and 3. However, anxiety of group 1 is higher than group 2. also the mean scores of anxiety and depression among group 3 is higher than group 2.

DISCUSSION

One of the basic questions of the present study was what percentage of addicts succeeds in discontinuing addiction after voluntarily seeking help at the Center for Prevention and Discontinuance of Addiction. Results of the present study reveal that of those addicts seeking treatment at the Center for Discontinuation of Addiction, 37.5% succeeded in discontinuing addiction while 62.5% failed to do so. These results are congruent with results obtained in a study by Narimani (1997) in which a relapse rate of 63% was reported. In order to maintain internal consistency of results and obtain a true relapse rate among clients seeking help at the Center for addicts volunteering to discontinue addiction, instead of relying solely on the interview as a tool for measuring the dependent variable, the morphine test was also used to determine the rate of addiction discontinuance. Among the 200 addicts 75 (37.5%) claimed to have discontinued addiction. Urine samples were taken from thee subjects under controlled conditions and a morphine test was performed. It was seen that out of the 75 subjects only 56 had negative morphine test results and 19 had positive morphine results. By taking into account this number and adding it to the 125 subjects who failed to discontinue substance abuse, the rate of addiction discontinuance fell to 28% against a relapse rate which went up to 72%. This finding is in line with previous findings and it can be said that compared with some studies (for e.g. Rassoul, 1998 reported a relapse rate of 81%) these findings are promising and motivating for the concerned authorities. One of the main questions of the study was what factors are associated with addiction relapse. Results of the present study show that all three clusters of factors, social, familial and psychological are influential in

addiction relapse. A contaminated social environment, presence of unemployment, lack of adequate planning for occupation, ill treatment from family and society, access to addictive substances, unfiled leisure time, lack of alternative substitute activities, presence of difficulties in life and presence of addicted friends, are among the social and familial factors that encourage a person to use addictive substances. Apart from these factors, certain psychological factors were also found to be influential in addiction relapse. Among such factors are anxiety and depression. These findings are in harmony with those obtained in Paul Lindsey's study where negative mood was considered as a factor associated with addiction relapse (Larson et al., 2001). The findings are also in line with those obtained (Waltan et al., 2000). Lack of awareness of methods to cope with life's problems and lack of commitment to religious affairs are among the individual factors associated with addiction relapse so that results of a study (Waltan et al., 2000) are indicative of the fact that alcohol addiction relapse is associated with lack of awareness of coping skills and with low social support. Apart from psychological factors, the absence of a rehabilitation period and the presence of bodily pains after substance discontinuance were also involved in addiction relapse. These factors are likely to be related to the failure to break the psychological dependence of addicts on addictive substances since the substance withdrawal stage leads to physical dependence and the rehabilitation period is followed by the elimination of psychological dependence and both stages complement each other in the treatment of addicts. Finding from studies by Narimani (2001) show that the use of cognitive behavioral therapy in the rehabilitation phase brings down the rate of relapse and facilitates discontinuance.

In view of the fact that results of the present study point to high levels of anxiety and depression among addicts voluntarily seeking help to discontinue addiction, it is suggested that, in order to improve clients' skills of assertion and self efficacy, all therapists at the Center for the Prevention of Addiction and all those embarking on the treatment of addicts utilize tactics of cognitive therapy in the rehabilitation period and involve addicts in sessions of group therapy. In addition, it is proposed that along with detoxification and rehabilitation, steps be

taken to eliminate clients' bodily problems, to teach them coping methods to deal with life's problems, to help the family be accepting of addicts and provide them with mental and concrete support. Community authorities should pay consideration to the occupation of addicts so that the social conditions conducive to addiction relapse are not established. Among the limitations faced during the study is difficulty in gaining access to addicts who had relocated at the time of data collection. Another limitation of the present study was difficulty in establishing rapport with the addicts.

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