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Relationship between Locus of Control and Abstinence among Persons Recovering from Alcohol and Drugs Addiction in Kirinyaga County, Kenya

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Abstract: The purpose of this paper is to demonstrate that locus of control has two different dimensions with twofold roles associated with abstinence among persons recovering from alcohol and drug addictions .The ultimate goal of drugs and alcohol abuse rehabilitation is to help persons suffering from addiction achieve a lasting abstinence. Drugs and alcohol abuse impairs an individual's ability to live a quality life and achieve personal development. Previous studies propose that persons with internal locus of control adhere to treatment programs and achieve abstinence. They are also capable of adjusting their lives to sustain abstinence and have low relapse rates. Using an Ex-Post Facto Correlation Research Design, multistage sampling technique was employed to obtain 141 respondents. Recovering Addicts Health Locus of Control Scale, Recovering Addicts Abstinence Indicator Scale and a focus group discussion guide were used to collect data. Data collected was descriptively analyzed using frequencies, percentages and mean. Pearson product moment correlation was computed to establish the relationship. ANOVA was used to establish differences between respondents with high internal locus of control and those with high levels of external locus of control.The findings indicate that there was a statistically significant negative relationship between external locus of control and abstinence $r(141) = -.231$, $p<0.05$**.** There was a statistically significant negative relationship between low level of internal locus of control and abstinence, $r(74) = -.255$, $p<0.05$. Period of abstinence increased with increasing internal locus of control ($M = 2.26$, $SD = 1.345$; $M = 2.43$, $SD = 1.67$).while those with low levels of internal locus of control took more alcohol after rehabilitation (1.93, 1 .04) than those with moderate internal locus of control (1.80, .44). It was concluded that internal and external locus of control is two different dimensions with dualistic control. The two dimensions of locus of control can be utilized to complement each other.
Keywords: Locus of control, abstinence, Rehabilitation, Support groups, Recovering, Drugs, Alcohol.

INTRODUCTION

The ultimate goal of drugs and alcohol abuse rehabilitation is to help the addicts achieve a lasting abstinence [1]. Drugs and alcohol abuse impairs an individual's ability to live a normal life and achieve personal development. According to Durrant and Thakker problems of alcohol and drug abuse are related to health, social, economic, public order and criminal justice.Studies show that drugs and alcohol abuse is one of the main cause of health problems and deaths accounting for 4% of all deaths in Europe according to European drug report in 2012 [2]. Tulu and Keskis [3] reported health consequences, anti-social behaviors and low academic achievements among university students in Ethiopia. In Kenya, a situational assessment carried out by NACADA in 2012 reported health impacts including loss of eye sight, deaths and mental disorders 12 months prior to the survey [4].

One of the key efforts toward achieving abstinence is through rehabilitation of the affected individuals. Rehabilitation is offered through inpatient and/or outpatient programs as well as after care support programs. Abstinence outcomes can be achieved by directing the programs towards issues that maintain drugs and alcohol use and provision of opportunities to learn alternative behaviors [5]. However, relapse rates after remission among recovering addicts continue to be high according to National Institute on Drug Abuse: NIDA, Kuria and Chepkwony, Chelule and Barmao [6-8]. Relapse results to deterioration of the rehabilitee's quality of life and continuous readmissions for rehabilitation. Locus of control is known to influence behavior change processes including addictive behaviors.

Locus of control is a perception held by an individual regarding what causes events in his or her life .It include beliefs about the extent to which an

individual has control over life events [9]. Locus of control perceptions is conceptualized as a continuum ranging from high levels of internal locus of control on one end and high levels of external locus of control on the other. Individuals with high internal locus of control consider the consequences to have been caused by their own behaviours while those with high external locus of control consider the consequences to have been caused by external factors such as fate, luck or powerful others [10]. They hence shift responsibility of the consequences to external factors aforementioned.

Persons with high internal locus of control are likely to believe that they are responsible for their addictive behaviour and the consequences that happen to them. They are likely to feel being in control of their drug and alcohol use and will be motivated to take action to change their current situation. Individuals with high external locus of control derive their reinforcement from external factors beyond their control. Studies in the literature have found that locus of control influence the direction of behaviour change in alcohol addiction rehabilitation. Murry, Malcarne and Goggin who used a Drinking Related Internal –External Locus of Control Scale (DRIE) demonstrated that alcoholics who were currently using alcohol expressed an orientation that was more external than alcoholics who were recovering. The latter had a more external orientation than non-alcoholics. They further observed that those who had expressed more external locus of control orientation had a propensity to drink and revert to drinking after a period of abstinence more frequently [11].

Silverman [12] associated high internal locus of control with sustained abstinence and prevention of relapse in United States. The internally controlled persons were capable of adjusting their lives to sustain abstinence. Internally oriented locus of control was also linked with higher abstinence and longer sobriety in San Francisco and Sacramento [13].

Most of the studies in the local literature have focused on factors that lead to addiction and only a few have focused on locus of control and rehabilitation outcomes particularly abstinence. Sereta, Amimo and Ouma correlated total abstinence with enduring constructive prognosis [14].

The study focused on the persons recovering from addiction attending support group meetings in Kirinyaga County. Kirinyaga County was selected as one of the counties that had high use of alcohol. According to NACADA, Kirinyaga County scored a high of 75.4% on alcohol use [15]. Rehabilitation centres were also set up to rehabilitate the victims in line with the The Kirinyaga County Alcoholic Drinks Control Bill, 2014 and more so following the presidential order on crackdown of illicit alcohol. Subsequently support groups were set up to follow up on the rehabilitation progress.

The study was thus carried out in this County to establish the relationship between locus of locus of control and abstinence achievements after rehabilitation in line with the goals of rehabilitation according to the Office of National Drug Control Policy (ONDCP). This is to achieve abstinence in relation to reduced frequency of relapse, reduced frequency of drug use during each episode of use and to eradicate drug use totally [16].

The study was guided by the following objectives:

- To determine the type of locus of control of recovering addicts attending support groups in Kirinyaga County.
- To find out the levels of abstinence outcomes namely: period of sobriety and amount of use after rehabilitation.
- To establish the relationship between locus of control and abstinence outcomes.
- To establish differences between respondent with high internal locus of control and those with high external locus of control on achievement of abstinence

The hypothesis derived from the objectives was:

H01: There is no significant relationship between locus of control and abstinence among persons recovering from alcohol addiction in Kirinyaga County.

RESEARCH METHODOLOGY

The study used an Ex-Post Facto Correlation Research Design to generate both quantitative and qualitative data**.** The study used multi-stage sampling technique, In the first stage, purposive sampling was used to select Kirinyaga County as one of the counties which had experienced serious impacts of alcohol use and subsequently establishment of community rehabilitation centres and support groups.

A formula by Kathuri and Pals [17] was used to get a sample size of eleven support groups.

$$n= \frac{\chi^2 NP(1-P)}{\sigma^2(N-1)+\chi^2 P(1-P)}$$

Where, n= required sample size
N= the given population size of potential adults (15 support groups and 439 members)

P= population proportion assumed to be 0.50
σ^2= degree of accuracy whose value is 0.05
χ^2= table value of chi-square for one degree of freedom which is 3.841 [17].

The eleven groups were randomly selected from a total of fifteen support groups. 141 of the respondents present at the time of study were purposively recruited to participate in the study.

Two types of research instruments, a questionnaire and a focus group discussion guide were utilized to collect data. The questionnaire comprised of Recovering Addicts Locus of Control Scale (RALCS) and Recovering Addicts Abstinence Indicator Scale (RAAIS). Recovering Addicts Locus of Control Scale (RALCS) was employed to assess the levels of internal and external locus of control among persons recovering from addiction. The scale was adapted from the Multidimensional Health Locus of Control Scale (MHLCS) Form C. Recovering Addicts Locus of Control Scale (RALCS) contained 18 belief statements about their addiction, 9 items represented external and the other 9 represented internal locus of control assessed in a six point likert scale.

The Recovering Addicts Abstinence Indicator Scale (RAAIS) was constructed based on the abstinence indicator scale according to The Office of National Drug Control Policy. It was used to measure abstinence through self-reports in terms of reduced time of relapse, rate of drug use, quantity of drug use in full amount and in every episode of use according to Respondents were required to indicate whether they had been able to abstain from alcohol or drugs since leaving rehabilitation and if so, for how long they had been able to abstain. For those who had instances of alcohol consumption, they were requested to indicate the number of times they had taken alcohol since leaving rehabilitation and the amount taken on daily basis before and after rehabilitation. Cronbach's Alpha Reliability Coefficient was applied to test reliability of the instrument. The reliability statistical result was 0.752.

The research instruments were directly administered to the respondents by the researcher and three research assistants. Interview method was applied to respondents who had literacy challenges. Focus group discussion Guide comprised of open ended questions. The discussion was led by the researcher assisted by the research assistants. Each group had eight members.

Data collected was cleaned, organized, coded and analysed using the statistical package for the Social Sciences (SPSS) software version 23. Descriptive statistics that is frequencies and percentages, mean scores and standard deviation were used to summarize and analyse data while Pearson's Product Moment Correlation Coefficient was utilized to establish relationships. T-test and One way Analysis of Variance (ANOVA) was used to establish differences in relationships.

To determine whether the respondents had an internal or external locus of control, cumulative scores were derived where the possible minimum score one could get was 18 and the maximum score one could get was 108. The scores were further divided into 2 main categories where scores ranging from 18-63 represented external locus of control and scores from 64-108 represented internal locus of control.

The scores were further subdivided into 3 levels for each type of locus of control, where scores falling from 18 to 27 represented high levels of external locus of control, 28-45 represented moderate levels of external locus of control and scores ranging from 46-63 represented low levels of external locus of control. For internal locus of control, scores ranging from 64-81 represented low level of internal locus of control, 82-99 represented moderate level of internal locus of control and scores from 100-108 represented high levels of external locus of control. The scores from Recovering Addicts Abstinence Scale RAAS were quantitatively analysed using frequencies and percentages. A paired sample t-test was conducted to find out whether there was a statistically significant difference between alcohol abuse before and after rehabilitation.

RESULTS AND DISCUSSIONS

The first objective was to establish the levels of internal and external locus of control. The findings are presented in the table 1, 2 and 3.

From Table-1, majority of the respondents in Kirinyaga (70.2%) had an internal locus of control. Descriptive results are presented in Table-2.

Table-1: Types of Locus of Control

County	Level	Frequency	Percent
Kirinyaga	External locus of control	42	29.8
	Internal locus of control	99	70.2
	Total	**141**	**100.0**

Table-2: Descriptive Statistics for Locus of Control

County		N	Minimum	Maximum	Mean	Std. Deviation
Kirinyaga	Locus of control	141	34	96	69.40	12.870
	Valid N (listwise)	141				

As shown in Table 2, the minimum score attained by respondents was 34, while the maximum score was 96. The mean score was 69.4(SD=12.87) indicating an internal level of locus of control. Since

Locus of control is conceptualized as a continuum. It was found necessary to study the various levels of internal and external locus of control. The results are as shown in the table below.

Table-3: Levels of External and Internal Locus of Control

County	Levels	Frequency	Percent
Kirinyaga	Moderate external	6	4.3
	High external	36	25.5
	Low internal	74	52.5
	Moderate internal	25	17.7
	Total	**141**	**100.0**

From Table-3, 52.5% of the respondents in Kirinyaga County had low internal locus of control, while 25.5% had a high level of external locus of control.

The study results from Tables-1, 2 and 3 indicate that majority of respondents involved in the study had higher levels of internal locus of control than external locus of control. This concur with previous studies which observed that majority of recovering persons had high levels of internal locus of control compared to those with high levels of external locus of control. Fernandes and Mokwena found that 24.5% (47 /192) and 75.5% (145/192) among nyaope users admitted to drug rehabilitation centres in South Africa had high external and high internal locus of control respectively [18].

The second objective focused on studying abstinence outcomes. Respondents were required to indicate whether they had been able to live without alcohol since they left rehabilitation centres. The findings are presented below.

Table-5: Rate of Abstinence from Alcohol and Drugs

County	Abstinence	Frequency	Percent
Kirinyaga	Yes	111	78.7
	No	30	21.3
	Total	**141**	**100.0**

As shown in table 5, 78.7% of the respondents had been able to abstain from alcohol since rehabilitation. This contradicts previous findings which cites high rates of relapse after rehabilitation. This could be attributed to the fact that majority started attending support groups immediately. They transitioned to the outside world with the same support system which may have helped in dealing with initial temptations. According to Sereta, Amimo and Ouma the period of time directly following rehabilitation treatment is the most fragile time for recovering addicts because it's full of temptations and triggers that threaten sobriety [19]. The study further sought to establish how long the respondents had been able to sustain abstinence. Table -6 presents the findings

Table-6: Distribution of Respondents by period of Abstinence

County	Period	Frequency	Percent
Kirinyaga	Not applicable	21	14.9
	0-6 months	24	17.0
	7-12 months	18	12.8
	1-3 years	58	41.1
	3-6 years	8	5.7
	Above 6 years	12	8.5
	Total	**141**	**100.0**

As shown in Table-6, 41.1% of the respondents in Kirinyaga County had abstained from alcohol for a period of 1 to 3 years, while 17% had abstained for about 6 months. This implies that majority joined rehabilitation after the president's order on crackdown of illicit brew in 2015. Further study was done to determine alcohol use after rehabilitation. Table-7 presents the findings.

Table-7: Frequency of Alcohol use after Rehabilitation

County	Frequency	Frequency	Percent
Kirinyaga	None	60	42.6
	Once	24	17.0
	Twice	17	12.1
	Thrice	16	11.3
	More than 4 times	24	17.0

From Table-7, 17% Respondents indicated having taken alcohol once and more than 4 times respectively while 42.5% indicated they had not taken alcohol at all since rehabilitation. This indicates that abstinence rates were high though a substantial number were engaging in binge drinking every day increasing the risk of relapse. To get more information on alcohol use and risk of relapse a further study was done to compare alcohol use before and after rehabilitation. Table-8 presents the findings.

Table-8: Comparison Alcohol Use Before after Rehabilitation 4 for female and 5 for males

County	Gender		Before Rehabilitation Frequency	Percent	After Rehabilitation Frequency	Percent
Kirinyaga	Male	No response	17	21.0	42	51.9
		1 day	0	0.0	4	4.9
		2 days	9	11.1	10	12.3
		3 days	12	14.8	6	7.4
		4 days	8	9.9	5	6.2
		5 days	5	6.2	5	6.2
		6 days	3	3.7	1	1.2
		Every day	27	33.3	8	9.9
		Total	81	100.0	81	100.0
	Female	No response	11	18.6	43	72.9
		1 day	0	0.0	3	5.1
		2 days	4	6.8	6	10.2
		3 days	9	15.3	3	5.1
		4 days	8	13.6	0	0.0
		5 days	3	5.1	2	3.4
		6 days	1	1.7	1	1.7
		Every day	23	39.0	1	1.7
		Total	59	100.0	59	100.0

From table 8, 33.3% of male respondents from Kirinyaga County indicated taking five or more drinks every day before rehabilitation and only 9.9% took the same amount every day. On the other hand 39% of females took four or more drinks each day before rehabilitation and only 1.7% took the same amount every day. This indicates that females were able to abstain more than males after rehabilitation. Previous studies by Green, Polen, Lynch, Dickinson and Bennet in U.S.A found that women who completed treatment were 9 times as likely to be abstinent at 7-month follow up than women who did not complete while men who completed were 3 times more likely to be abstinent than other men who did not complete [20]. A T-Test was carried out to establish if the difference in the amount consumed before rehabilitation and after rehabilitation was significant. The results were presented in Table-9.

Table-9: Paired Samples Descriptive Statistics on Differences between alcohol g use before and after Rehabilitation

County			Mean	N	Std. Deviation	Std. Error Mean
Kirinyaga	Pair 1	Alcohol use before rehabilitation-	4.72	141	2.176	.183
		Alcohol use after rehabilitation	1.11	141	1.274	.107

Table-9 indicate that participants took more alcohol before rehabilitation (M = 4.72, SD = 2.176) as opposed to alcohol consumed after rehabilitation (M = 1.11, SD = 1.274)

Table-10: Paired Sample T-Test Result

					95% Confidence Interval of the Difference			
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	T	Df	Sig. (2-tailed)
Kiriny aga	Before rehabilitatio n-After Rehabilitati on	3.610	2.308	.194	3.226	3.994	18.575	140	.000

Table-10 show that there was a statistically significant mean decrease on alcohol use. (3.61, 95% CI [3.226, 3.994], t (140) = 18.575, $p < .005$, $d = 1.56$.)

The findings from both descriptive statistics and T-test in tables 6, 7, and 8 indicate a reduction in consumption of alcohol after rehabilitation. This in line with the goal of rehabilitation which is to stop drug abuse and an indicator of treatment success. This was also reported by Greenfield and Burqdorf in United States though he used a different research method. Using follow up interviews after discharge from treatment and in three studies they found high treatment success in terms of abstinence ranging from 68%-71% among women [21]. From the findings, instances of drugs and alcohol were also evident. This implies that although alcohol addiction can be treated, the reality is that relapse and/or lapse is a likely occurrence. Fernandes and Mokwena states that this is due to the chronic nature of drugs and alcohol addiction [18]. The implication to the rehabilitators is that persons recovering from drugs and alcohol addiction are at risk of relapse however this can be an opportunity to learn valuable lessons and skills to resist future temptations.

Objective three aimed at establishing if there was a relationship between locus of control and abstinence. Table-11 presents the significant correlational results.

Table-11: Relationship between External Locus of Control and abstinence

County			Abstinence	Adherence	Quality of life
Kirinyaga	External locus of control	Pearson Correlation	-.231**	.009	-.023
		Sig. (2-tailed)	.006	.916	.785
		N	141	141	141

As shown in table 11 there was a statistically significant negative relationship between external locus of control and abstinence, r (141) = -.231, p<0.05. This implies that recovering persons who had high levels of external locus of control had lower abstinence rates and vice versa. A further study was carried out on the levels of internal and external locus of control and results are as shown below.

Table-12: Relationship between Levels of Locus of Control and abstinence

County			**Abstinence**
Kirinyaga	Moderate external	Pearson Correlation	.064
		Sig. (2-tailed)	.904
		N	6
	High external	Pearson Correlation	-.018
		Sig. (2-tailed)	.915
		N	36
	Low internal	Pearson Correlation	-.255*
		Sig. (2-tailed)	.028
		N	74
	Moderate internal	Pearson Correlation	-.037
		Sig. (2-tailed)	.860
		N	25

From Table-12, there was a statistically significant negative relationship between low level of internal locus of control and abstinence, r (74) =.-255, p<0.05.This indicate that the higher the level of internal locus of control the lower the levels of abstinence. Based on the results of Table-10 and 11, the null hypothesis that there is no significant relationship between locus of control and abstinence among persons recovering from alcohol addiction was rejected and the alternate accepted. The study further studied differences in abstinence among recovering persons with internal and external locus of control. This was guided by the following hypothesis

$H0^2$ There is no significant difference in abstinence among persons with internal locus of control and those with external locus of control.

To test this hypothesis, a one way analysis of variance was conducted the findings are shown in the subsequent tables.

Table-13: Descriptive Data on difference between internal and external locus of control and Abstinence

County		Locus of Control	Mean	Std. Deviation	N
Kirinyaga	Abstinence	External locus of control	6.48	2.587	42
		Internal locus of control	5.96	2.080	99
		Total	6.11	2.246	141

Results from Table-13 show that, respondents with high external locus of control scored higher (M = 6.48, SD = 2.587) than the respondents with high internal locus of control (M = 5.96, SD = 2.080). Differences in period of abstinence among persons with internal and those with external are described below

Table-14: Descriptive Results on the differences in period of abstinence after rehabilitation

County		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Kirinyaga	External locus of control	42	2.43	1.670	.258	1.91	2.95	0	5
	Internal locus of control	99	2.26	1.345	.135	1.99	2.53	0	5
	Total	141	2.31	1.445	.122	2.07	2.55	0	5

Table-14 showed that period of abstinence scores increased from those with internal locus of control (M = 2.26, SD = 1.345), to external locus of control (M = 2.43, SD = 1.67). Differences in the period of abstinence between various levels of internal and external locus of control were also studied. The results are presented in the table below

Table-15: One-Way ANOVA Descriptive Statistics

County		N	Mean	Std. Deviation	Minimum	Maximum
Kirinyaga	Moderate external	6	4.00	1.265	2	5
	High external	36	2.17	1.595	0	5
	Low internal	74	2.19	1.331	0	5
	Moderate internal	25	2.48	1.388	0	5
	Total	141	2.31	1.445	0	5

From Table-15, moderate external locus of control had a higher mean score (M = 4, SD = 1.265) indicating that those with an average level of external locus of control were likely to abstain for more days than those with low levels of internal or lower levels of external locus of control. This is contrary to the previous literature [22]. Murray, Malcarne and Goggin in a study carried out in United States of America among recovering addicts, observed that high levels of internal control beliefs were associated with a longer period of abstinence than high levels of external control beliefs [23]. More positive outcomes on periods of abstinence can be attributed to strong support from the significant others as indicated during the focus group discussions**.** Pastors in charge of the churches, counsellors and County officers from NACADA and the Department of Social Services in Kirinyaga County were described as the people who had played a great role in their recovery process during the rehabilitation and after rehabilitation through the support groups.

It was also noted that those with moderate internal locus of scored more than those with low internal locus of control. The implication is that positive abstinence outcomes in terms of periods of abstinence increase with increasing levels of internal locus of control. The implication is that both dimensions of locus of control can be utilized to complement each other. High external locus of control can be used to complement high internal locus of control.

Soravia, Schläfli, Stutz, Rösner, and Moggi observed that patients with high internal locus of control and high frequency of control by staff demonstrated the least alcohol use during treatment [24]. Differences in alcohol use among those with

various levels internal and external locus of control was also studied as described in Table-13

Table-16: One Way ANOVA Descriptive Results on differences in alcohol use after rehabilitation

County		N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Kirinyaga	Moderate external	6	2.50	2.739	1.118	0	5
	High external	36	2.25	1.795	.299	0	5
	Low internal	74	1.93	2.002	.233	0	5
	Moderate internal	25	1.80	1.958	.392	0	5
	Total	141	2.01	1.964	.165	0	5

From Table-13 moderate external locus of control had a higher mean score in Kirinyaga County (M = 2.5, SD = 2.739). This indicates that respondents who had moderate external locus of control were more likely to take alcohol after rehabilitation. Respondents with low levels of internal scored higher than those with moderate levels. This implies that as the internal locus of control increases the chances of using alcohol after rehabilitation decreases. The findings concur with previous studies such as those done in United States of America by Silverman who associated high internal locus of control with maintained high levels of sobriety [12, 25].

CONCLUSIONS

From the findings of the study the following conclusions are reached:

There was a difference between alcohol use before and after rehabilitation. This was reflected in the reduction in alcohol use after rehabilitation in terms of amount consumed and the length of sobriety period.

A relationship exists between Locus of control and abstinence. Recovering persons with high levels of external locus of control are less likely to have positive abstinence outcomes. On the differences abstinence levels increased from those with high internal to those with high external locus of control. Moderate external locus of control was correlated with more abstinence compared with other levels of both dimensions. On alcohol use those with moderate internal locus of control used more than those with low internal locus of control. The period of abstinence increased from internal to external with those with moderate external scoring more.

The increase in the period of abstinence associated with high levels of external locus of control could be attributed to a strong support system. Positive perceptions about the people who motivate persons to join rehabilitation programs and support groups play an important role in the duration of abstinence

The implication is that influence of both dimensions control differ depending on the specific aspects of abstinence.Internal and external locus of control can be said to be two different dimensions with dualistic control and distinctive responsibilities.Both dimensions of locus of control can be utilized to complement each other. The rehabilitees need to assume the primary responsibility as the key actors in the rehabilitation process while others including counsellors, medical professional, family members and friends offer only a supporting role.

RECOMMENDATIONS

The research findings led to the following recommendations:

Policy makers need to design assessment tools for personality and perceptions of locus of control in relation to drugs and alcohol addiction and recovery. The assessment tools can be used together with other assessment tools by rehabilitators in the rehabilitation centres and support groups.

There is need to assess for locus of control on admission to rehabilitation centres to determine the factors that influence achievement of abstinence. Assessment should continue throughout the treatment stages to determine the progress and effectiveness of the programs. A change in locus of control is also an indicator of the effectiveness of the program.

The managers in the rehabilitation centres and support groups need to direct specific interventions towards modifying and reinforcing the locus of control factors for individual clients, that contribute to high abstinence levels in terms of period of abstinence ,frequency of lapse and amount of use during the lapse instances. The interventions need to be client specific.

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