



## **Management and Evaluation of Drug Addiction Treatment Program of MEWA Hospital in Mombasa: A Work-in-Progress Case Study**

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### **ABSTRACT**

This study is a Work-in-Progress (WIP) that will analyze the role of monitoring and evaluation on drug addiction treatment program at the Muslim Education Welfare Association (MEWA) Hospital in Mombasa County. The research aims at measuring the effectiveness of the monitoring and evaluation system in post treatment interventions at MEWA Hospital. The objectives of the study is to achieve the level of drug addiction by analyzing the effectiveness of the monitoring and evaluation system in provision of counselling, and treatment. The target population are patients who undergo treatment of drugs at the said hospital, the health providers, and the officials of monitoring and evaluation who are available at the time of research. This study will measure the correlation analysis in order to highlight the relationship between the success of the project and drug addiction monitoring, provision of post-treatment care and counselling services. The study will be beneficial to a number of stakeholders including MEWA hospital, the county government of Mombasa, researchers in the field, medical practitioners who deal with drug and substance abuse, drug addicts and their supportive relatives, and the community at large.

### **1. INTRODUCTION**

Identification of drug abuse by users, post-treatment and treatment outcome in M & E have always been an assessment method that is traditionally used in accountability and performance assessment of worldwide treatment of addiction (Dennis, 2013). All the addiction outcomes on the treatment and evaluation have led to patients contact to be more than one times following the social measurement of discharge of important behaviors like drug use return, crime and employment. As per the history, treatment of addiction has been evaluated and delivered under the format that is acute-care. Effects of treatment have been evaluated and the amounts provided every 6-12 months after acute- care is complete. The treatment expectation has endured reduced use of drugs, improvement in social function and personal health that is termed as 'recovery'. On the other hand, chronic illness treatment for example, hypertension, diabetes and asthma have always been provided for an indeterminate period

and evaluation of its impacts during the treatment courses (Dennis, 2013).

The question of how patients with substance abuse problems can achieve the desired effect of full recovery and a five-year stop is the most responsive to the evidence provided by the management of a care. These programs demonstrate long-term disposability and achieve high quality of life that can be beneficial to most patients regardless of the drug used. Recovery may actually be the result that you are expected to control and treat drug disorders. These programs require long-term effective management care to support and extend short treatment sessions. This observation of drug and drug disorders is well matched with a standard medical model for chronic diseases that can be managed by a variety of settings including primary care (Scott, 2012).

In Kenya, the policy on health is very clear as it provides direction which ensures that high standard of health is attained in a responsive way to meet the populations' needs (Rush, 2018). The policy normally referred to in Kenya is the Kenya Health Policy (2014-2030). To ensure

that the above standard is achieved, there are regular monitoring and evaluations in hospitals to check the progress and to look for what needs to be corrected where necessary (Dennis, 2013).

The drug addiction program in Muslim Education Welfare Association (MEWA) hospital is as a result of the increasing rate of addiction in Kenya. The hospital serves as a rehabilitation center for drug addicts; while the department provides programs that are aimed at changing their behavior. There is a need to determine the role of monitoring and evaluation in MEWA Hospital to evaluate the progress of the treatment process (Kemp, 2015). The hospital was established to help in provision of rehabilitation and detox services to drug users at an affordable rate. The treatment process is of great benefit to the local people since those who benefit the most are the ones from very humble backgrounds.

As of 2018, with the universal healthcare introduction in Kenya, substance disorders need to be added in all the insurances that relates to health that are sold by the National Hospital Insurance Fund (NHIF). This will increase addiction treatment cover and access for those individuals who previously were not able to afford the services. In addition to the increasing number of individuals who are eligible to cover for the treatment on addiction, there is a focus on the cost-saving strategies in the current fiscal climate.

The main aim of this research is to analyze the role played by Monitoring and Evaluation on drug addiction treatment program at MEWA Hospital using selected specific research objectives adopted in this research. These include:

- i. To determine the effectiveness of the monitoring and evaluation system in determining the level of drug addiction at MEWA Hospital.
- ii. To analyze the effectiveness of the monitoring and evaluation system in provision of counseling at MEWA Hospital.
- iii. To assess the effectiveness of the monitoring and evaluation system in Provision of treatment at MEWA Hospital.
- iv. To find out the effectiveness of the monitoring and evaluation system in Post treatment interventions at MEWA Hospital.

The paper is a work in progress and is organized as follows. The next section provides the literature review followed by the conceptual framework of the study. Section 4 will discuss the research methodology to be deployed. Finally, a conclusion and ways forward are presented.

## 2. LITERATURE REVIEW

### A. Need for Monitoring and Evaluation (M&E) during Drug Addiction Treatment

The importance of design evaluation has been pointed out by the matters from drug treatment free setting on drug abuse and an evaluation of the past. Williamson (2013) concludes ample evidence which indicates that during the treatment programs on drug abuse, there is a share that is very substantial especially of the drug users which indicates a lot of improvement in most areas. The research asserted that the issues affected most people does not imply that changes occurred, but rather the changes extent that can be credited to treatment and maintenance process. Also, M & E plays a significant role as an attribute to the effectiveness of the process of drug treatment.

According to Gfroerer (2012), over 230,000 of admission to about 30 programs for treatment indicates an existence of evidences from the study which shows that substance abuse disorder will result to outcomes that are better off if combined with appropriate monitoring activities. However, most treatment approaches that are used frequently for maintenance are used continually despite the fact that research lacks inadequate evidence on effectiveness and efficiency, or have never underwent evaluation process (Caspar, 2012). There are also analyses that are very rare on the issue of cost effectiveness. Reformation of activities on health care and structures in various countries is on the way, this means the resources available for disorders treatment that are drug abuse-linked, shows that M & E are now prominently as compared to the previous ones. According to (Caspar, 2012), for a person to remain in the treatment, their influences will involve the individual needs interaction, social pressure, motivational factors that are accompanied with the attributes of treatment like practices and policies, therapeutic relations, services accessible and the satisfaction of patients.

### B. Monitoring & Evaluation Success Indicators

The commonly used way in approaching the dimension of the overall performance in treatment and maintenance of drugs is by referring to the 4 performance indicators, especially the output, input, effect, and result indicators (Caulkins, 2016). Bimer & Witt (2010), noted that improvement in treatment counseling structure and efficiency during the maintenance process have an advantage in the rise of the level of retention and the rate of participation.

Baker et al. (2014) concluded that the output signs that are appropriate will include the facts that are of

concern on the number of patients who attended the program and the measures that will be provided, including community members who will be supported during the program.

The results indicators capture the beneficiaries' traits typically reached in the programs course and that facilitates the improvement and evaluation of the reduction of drug abuse in which the program focuses on. The existence of the affected population categories needs variety of inputs for treatment during program maintenance that includes human beings who are prone to using the over-the-counter drugs, drug abuse that is problematic to its use, those leaving the program before treatment is complete, those who are mentally challenged, among others. The suitable outcome signs also look at the extent in which every patient participates with the emerging challenges especially during the activities (Fendrich, 2014).

#### *C. Effectiveness of Monitoring and Evaluation in determining the level of drug addiction*

Monitoring and Evaluation plays a critical role in determining addiction level of drugs in MEWA and other parts of the country. The use of data that provides nonresponse imputations or weights can be used in estimation of population parameters (Horowitz, 2013). This is used in M & E since it shows the drug level; whether high or low. There has been development by econometric and statistical literature on the tools that can be used in dealing with selective sampling. There are many approaches that deal with the same, for example, the assumption free approach by (Horowitz, 2013). In this approach, there is a weighting procedure that is based on assumption of the random missing of data as observed. The above data can be used very well in M & E processes in determining the drug addiction level in MEWA Hospital.

Effectiveness of M & E is measured using the imputation strategy that is regression-based. The strategy helps in coming up with an estimate of values for the components missing in the score (Budrey et al. 2011). In M & E, multivariate model of regression is used in predicting the respondents' scores in coming up with coefficients that can be used to input the scores (Budrey et al. 2011). This approach gives a very clear response of non-responses that acts as a function that brings about the differences in scores. With regular monitoring and general evaluation of drug addiction in MEWA hospital, the effectiveness of its roles can be determined through the use of imputation strategy and the multivariate model of regression.

In order to determine the effectiveness of M & E to the level of drug addiction, it is important to look into the ways that can be used to minimize the nonresponse and trying to improve the response level (Horowitz, 2013). To minimize nonresponse, it is important to bear in mind that the extent in which a higher level of response is achieved and pursued is based on time constraints, the budget, and the risk and quality of data that needs to be used (Horowitz, 2013).

To determine the level of drug addiction in MEWA hospital, M & E is used to provide accountability and transparency, and a standard set that can be used to compare the countries and areas with time (Budrey et al. 2011). In order to determine if the progress has been adequately achieved, it is necessary to set targets that are realistic. World Health Organization (WHO) has developed monitoring indicators for drug policies. There are four indicators that are used to determine the level of drug addictions; process indicators, background information, outcome and structural indicators.

#### *D. Effectiveness of Monitoring and Evaluation system in provision of counseling*

Counseling is a very critical element to reduce the level of drug use and addiction. The perspective of counselors in evaluation of outcomes of treatment of drugs is a strong alternative in evaluation of instruments that are mostly used in programming that is psychosocial (Johnson, 2012). M & E is very important in provision of counseling in hospitals. The drug use has been a major concern in the world and therefore, provision of counseling services on the same has been developed. The best way to ensure its effectiveness is by the use of M & E tool. Although it may seem to place the profession of counseling in a position that is ideal in dealing with treatment of drugs, the concerns have been restrained fiscally to evaluation (Johnson, 2012).

Counseling of drugs can be done by asking them to indicate the drugs they have been using and for how long have they used for the past few years. Longitudinal patterns of using illicit drugs are dependent on the data used by the respondents (Fendrich, 2014). It depends on the reliability of data and confidence based on the long term past experiences. Monitoring of substance use and disorders is a key element in drug addiction counseling. In planning for counseling, there is a need for opportunities that will show up during the monitoring and evaluation process (Fendrich, 2014).

Drug addiction is mostly caused by environmental and genetic conditions. The genetic make-up of a person can make them vulnerable to drug addiction (Horowitz, 2013). The events that happen in one's life are also the causes of addiction, for example stress, trauma or even being

exposed to substance use at an early age which affects one's vulnerability. Addictions will in turn result to mental or even physical side effects. Counseling and therapy are therefore very important to these particular groups of people. Therapy helps in preparing an individual to recover from treatment (Fendrich, 2014). Continued therapy is a form of monitoring and is very essential especially for those recovering from treatment or rehabilitation process from drug abuse, as they may need counseling on the recovery process and procedures.

### 3. CONCEPTUAL FRAMEWORK

A conceptual framework is primarily an inter-connected mechanism of thought about how certain events work or are related to each other.

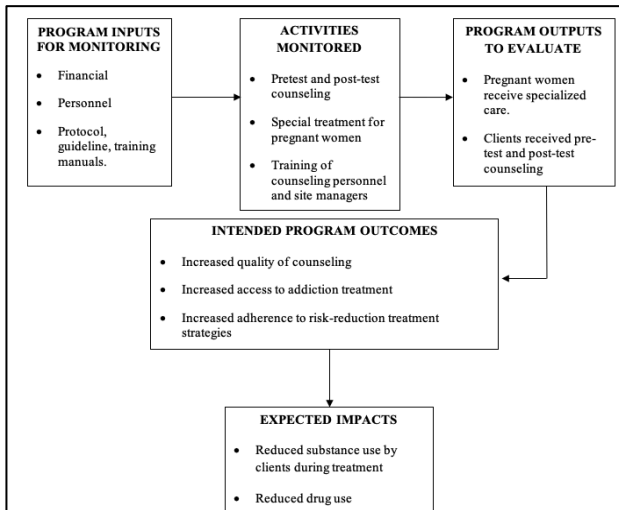


Fig 1. Conceptual Framework

In order to adopt the existing M & E intervention, there is a need to include natural counseling provision of contents to the users of drugs especially when working together with patients so as to adapt to suitable contents that are beneficial to their own realities. The counselors, managers or facilitators need to be trained and their assistance should portray caring and supportive attitudes. Treatment and maintenance inputs need to be combined the interventions for monitoring that exists so that it helps in discovering peer network aspects which have good influence and not bad influence.

The interventions should allow the users of drugs to set their own aims and objectives plus the factors to success representing the attainment of objectives that are planned. This framework represents the relationship that is hypothesized between the interventions of monitoring that are designed with the use of the outcomes intended and the philosophies that are illustrated in order to understand the patient's use of drugs. Group counseling exploration helps in building the family monitoring that is not adequate and

which offsets the negative influences which in turn results to increase in the number of substance and drug users who are represented in the systems for treatment and removal of negative perception. Engaging counselors who are care oriented will lead to adequate counseling provision of service that are meant to bring about the positive outcome, and thus reducing the abuse of drugs during the treatment maintenance. The emotional health that is resultant and program support extension by counselors is likely to bring about reduction in incidences that are related to drugs and will also reinforce the continuity of programs for counseling the abuse of drugs amongst the patients. This will enhance more internalization and greater receptivity of abuse of drugs counseling and interventions. Theoretically, interventions impact encourages safe substance Abuse exit and lowers the use of drugs during the treatment maintenance program thus leaving the patients more inspired and proficient in achieving the objectives of their life.

### 4. RESEARCH METHODOLOGY

The purpose of our study is to provide the overall methodological outline that we are going to apply in our research. This study will use a multidisciplinary approach in which quantitative data collection techniques will be used and present complete data. Quantitative research techniques will be used to collect mathematical data and apply mathematical findings to arrive at logical conclusions.

The questionnaire is organized into four main categories namely personal and demographic information, the age of the respondent, information on drug monitoring and analysis, and will address all four objectives in depth. This is presented in detail in the Appendix. They will be designed to communicate answers related to monitoring and analyzing the drug treatment program in MEWA hospital. A 5-point Likert scale will be used, ranging from very poor or completely disagree on one spectrum to excellent or strongly agree on the other side of the spectrum.

#### A. Study Location

The research will be carried out in Mombasa County and our target area of study will be MEWA hospital. The county has an approximate population of about 1,254,000 as of 2019 as stated in the Kenya Population and Housing Census 2019. This location is very suitable for our research since drug abuse in the coastal parts of Kenya is a major problem with a bigger percentage compared to other regions, with the biggest percentage being youth. In Mombasa County, alcohol abuse, drug incidences, and also the anti-social behaviors related to drugs has been on the rise for the past several years. These numbers are projected to rise further if not corrected. Thus, it has become an area of big concern especially to the NGOs,

County government, teachers, other agencies and parents. The National Authority for the Campaign Against Alcohol and Drug Abuse (NACADA) statistics shows that, those who use opium are approximately 200,000 in this county, with a higher percentage of about 40% being the youth from the age of 15 – 35 years. Adults' use of drugs in Mombasa is also prevalent.

### B. Target Population

In this study, the target population will be patients who are under the treatment of drugs at MEWA Hospital, M & E officials and the health providers of the hospital. The target respondents for this study will be set at 200 as indicated in Table 1 below.

Table 1: Target Population

AREA	TARGET	%
PATIENTS UNDER TREATMENT	180	86.6
M&E OFFICIALS	20	13.4
TOTAL	200	100

### C. Data Analysis to be Deployed

When data collection is complete, the researcher will evaluate the completeness and continuity of the data collection tool. Details will be categorized according to general signs and symbols. To simplify the statistical analysis process, the data analyzed will be analyzed by plotting the respondents' answers according to the research questions and objectives, summarizing the total amount on the alcohol scale to represent the variables of study and interpretation methods. It will be done. It will be presented using such a simple interface including normal tables, percentages, pie charts, and line charts. Most of the data collected will be analyzed using the transcriptional analysis and the sample analysis of the sample using SPSS. The model for controlling the effectiveness of the drug and drug screening program will take the following approach provided in equations below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + ei \quad (1)$$

$$EI = \beta_0 + \beta_1 DA + \beta_2 CA + \beta_3 TA + \beta_4 PA + ei \quad (2)$$

Where:

$Y$  is the monitoring and evaluation of recovery of drug addicts who are under maintenance treatment which was analyzed using the correlation coefficient ( $r$ ) and coefficient of determination ( $R^2$ )

$\beta_0$  is a constant/ intercept point of the regression line and the y axis

$X_1$  is the Drug Addiction (DA)

$X_2$  is the Counseling Activities (CA)

$X_3$  is the Treatment Activities (TA)

$X_4$  is the Post Treatment Outcomes (PA)

$ei$  (Expected Impacts) is the random error term accounting for all other variables that are not captured in the model.

Other data will be analyzed through descriptive and inferential statistics.

The selected computational model will consider the extent to which the independent variables selected affect the dependent variable (expected outcome of the drug and drug addiction screening) and will measure the effectiveness of each variable in this study.

## 5. CONCLUSION AND FUTURE WORK

The focus of this study is on the broad analysis on the standard that are currently used in determining the drug use disorder interventions for treatment and its effectiveness in MEWA Hospital. The currently used standards that are applied at the hospital focuses mainly on the patients' outcomes that are substance specific and are used while the patients are still undergoing treatment, or in the short term for those that are in the discharge. The paper's contribution are twofold. Firstly, literature review of the subject is provided and geared toward the current situation present in MEWA hospital. Secondly, a conceptual framework and methodology is devised and presented to provide the stepping stone and set the ball rolling for the near future application and completion of this research.

In future, we plan to carry out the study and conclude on the propositions set forth. The study can also be expanded to include other hospitals in the region in order to enrich the data collected.

## REFERENCES

- [1] Baker A, Kochan N, and Dixon J (2014). A controlled trial of a brief intervention for methadone blockade among untreated drug users. *Substance abuse treatment*. 6: 559-5570.
- [2] Bimer, P & Witt, M. (2010). Estimated estimates of involvement in follow-up reports on drug use and performance in the National Household Survey on Drug Abuse. *Official Mathematics Journal*.
- [3] Bryan, A. & Bell, E. (2007) "Business Research Methods", 2nd ed. Oxford University Press.
- [4] Casper, R. (2012). Estimation of drug use ratings: Methodological studies. Washington, DC: U.S. Department of Health and Human Services
- [5] Caulkins, J. (2016). A cost-benefit analysis for the use of illicit drugs and addiction, Carnegie Mellon University, Pittsburgh.
- [6] Chaloupka, F (2011). The need for cocaine and marijuana in adolescence. Cambridge: National Bureau of Economics.
- [7] Charles, B (2013). Effective Database Integration Models and Cross-Hope Prospects - An Integration of Drug Prevention Data Integration. Unpublished paper presented at a meeting of the Committee on Policy and Data and Research on Illegal Drugs, Washington, DC.
- [8] Crane, B, Rivolo, R & Comfort, G (2014) Dynamic Evaluation of Counterdrug Intervention Function. IDA Paper P-3219. Alexandria, VA: Center for Defense Analysis.

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- [9] Dennis, M. (2013) Recovery Testing for Recovery Management (RMC) in People with Chronic High Use Disorders. Evaluation and program planning.
- [10] Fendrich, M. (2014) Lifetime drug use decreased over time: an investigation with alternative support. *Public Opinion Quarterly* 58 (1): 96–123.
- [11] Garnick, D. (2017) Proposal for Washington Circle Action Measures for Community Drug Abuse Programs. *Drug Abuse Use Journal*.
- [12] Gfroerer, J. (2012) The increase in adolescent substance use: the effect of method differences between two world experiments. *Drug and Alcohol Dependence* 47: 1930.
- [13] Higgins, S., Badney, A. And Bickel W. (2011) Discovering cocaine inhibition in behavior. *American Journal of Psychiatry*.
- [14] Horowitz, J (2013) Evaluation of outcomes and non-referenced registrations: identification and measurement using instruments and simulations. *Economic Journal* 84: 37-558.
- [15] Johnson, p. (2012). The severity of drug use reports in a high-risk community sample: comparing cocaine and heroin survey reports with hair testing. *American Journal of Epidemiology* 149 (10): 955-962.
- [16] Johnson, L. (2013). Results of the National Drug Use Survey to Monitor Future Studies, 1975- 1997, Vol. I. Rockville, MD: National Center for Substance Abuse.
- [17] Joshi, V. (2011) Predicting cocaine discontinuation after concomitant treatment and repeated treatment for the first time. *American Journal of Public Health.*; 89: 666-671 HOU D, Bailey SL, Ouellette LJ. Elimination of injection drug use and changes in injection frequency: a Chicago needle test study. *Addictive*.
- [18] Kemp, J (2015). Re-evaluation of addiction treatment studies: from rehabilitation to simultaneous rehabilitation monitoring. *Drugs*, 100, 447-458.
- [19] Magura, s. (2009) Stability of methadone clients' drug use. *International Journal of Addiction* 22 (8): 727-749.
- [20] Kings, C. D., Stein, C. & Ma Fat, D. (2012), Global Burden of Disease 2000: Version 2, Methods and Results, World Health Organization, Geneva.
- [21] McCambridge, J. and Strand, J. (2012). Effectiveness of one-time motivational discussions to reduce substance use and perceptions of drug-related risk and harm among young people: Results from a multi-site multicenter trial. *Addiction* (99). Pp 39-52
- [22] McClellan, A., Chalk, M. And Bartlett, J. (2017). Outcomes, performance and quality - what's the difference? *Journal of Substance abuse Treatment*. (32) pp. 331-340
- [23] Melburg, H. (2010), 'Conceptual problems and the study of the cost of alcohol and drug residency', *Nordic Studies on Alcohol and D drug* 27 (4), pp. 287-303.

APPENDIX

QUESTIONNAIRE

**Section A: Demographic information**

1. Gender  
Male [ ] Female [ ]
2. Age Bracket  
Below 30 years old [ ] 31 to 49 years old [ ]  
50 years old and above [ ]
3. What is your highest level of educational?  
Primary [ ] Secondary education [ ]  
Diploma [ ] Undergraduate Degree [ ]  
Postgraduate Degree [ ]

**Section B: Level of Drug Addiction**

Using a scale of 1-5, Please tick (☐) all as appropriate. **1.** Very high extent. **2.** High extent. **3.** Moderately high extent **4.** Low extent. **5.** Very low extent.

4. What is the effectiveness of the monitoring and evaluation system in determining the level of drug addiction at MEWA Hospital?

Statement	1	2	3	4	5
Managers at MEWA hospitals have knowledge of the program and the skills that tend to monitor addiction					
Action is put forward that classifies the characteristics of the treatment method used to have an effect on the number of successful patients					
Monitoring addiction has lowered levels of substance abuse					
Monitoring managers have resources to achieve program success					

**Section C: provision of Counseling**

Using a scale of 1-5, Please tick (☐) all as appropriate. **1.** Very high extent. **2.** High extent. **3.** Moderately high extent **4.** Low extent. **5.** Very low extent.

5. What is the effectiveness of the monitoring and evaluation system in provision of counseling at MEWA Hospital?

Statement	1	2	3	4	5
The hospital monitors the symptoms of drug addict patients, the counseling services they receive, and the process counselors who comply with and within those services.					
All requirements are provided, including additional					

counseling for the family level as well as the individual level					
The consultation process should provide a clear and adequate provision for monitoring and evaluation incidents					
Evaluation requires opportunities to appear during a program or remedy exercise to plan the monitoring and evaluation process of counseling. The flow chart has logical models and process precious gears to realize such situations.					

**Section D: Provision of Treatment**

Using a scale of 1-5, Please tick (√) all as appropriate. **1.** Very high extent. **2.** High extent. **3.** Moderately high extent **4.** Low extent. **5.** Very low extent.

6. What is the effectiveness of the monitoring and evaluation system in Provision of treatment at MEWA Hospital?

Statement	1	2	3	4	5
Completion of a medical management program should be evaluated by recognizing its potential to reduce healing length (control drug use and prevent associated impairment) and improve physical and psychological fitness, well-being, social functioning, and reintegration.					
Treatment should include sustained recuperation and prevent relapse					
There should be structured tools that evaluate the extent of the functioning of an addiction treatment program such as the Addiction Severity Index that can be used to evaluate fitness and progress in certain dimensions of functioning.					
Understanding on project planner and their impact of treatment timelines					
Treatment methods appropriate to patients are specified.					

**Section E: Post treatment interventions**

Using a scale of 1-5, Please tick (☐) all as appropriate. **1.** Very high extent. **2.** High extent. **3.** Moderately high extent **4.** Low extent. **5.** Very low extent.

7. What is the effectiveness of the monitoring and evaluation system in Post treatment interventions at MEWA Hospital?

Statement	1	2	3	4	5
Reduction in terms of quantity and / or amount of drug use during remedial treatment					
There is a positive relationship with program monitoring between participation and adjustment development					
Follow-up activities on recovering/recovered addicts by the hospital staff are made					

#### Section F: Project Impact

Using a scale of 1-5, Please tick () all as appropriate. **1.** Very high extent. **2.** High extent. **3.** Moderately high extent **4.** Low extent **5.** Very low extent.

8. To what extent do the below factors indicate that a given project has been successfully implemented?

Statement	1	2	3	4	5
Reduced substance use by clients during and after treatment					
Cost-effectiveness of the budget of the project					
Improved counseling and treatment					
User satisfaction					
Achievement of objectives					