“A Longitudinal Study to Assess High Risk Factors for Relapse and Outcome Parameters Among Currently Abstinent Patients Having Substance Use Disorders with and without Co-Morbid Psychiatric Illness”

Mrs Renju Sussan Baby

ABSTRACT

Background of the study: Substance use disorder is viewed as a chronic relapsing disorder which consists of remissions and relapses that negatively affects all spheres of life of the substance user. Despite the availability of various effective treatment strategies, the problem of relapse remains the major challenge to achieving sustained abstinence from substances. Long term use of substance may precipitate psychiatric symptoms especially when substance use disorder is associated with co-morbid psychiatric illness and significantly lowers their quality of life. The specific high risk factors of patients having substance use disorder which make them more prone for frequent relapse and their quality of life are explored in detail.

Aim of the study: To assess the high risk factors contributing to relapse and to assess the outcome parameters among patients having substance use disorder with and without co-morbid psychiatric illness followed up for one year post de-addiction treatment programme.

Materials and methods: Quantitative approach, prospective cohort design was used for the study. Patients on treatment for substance use disorders were the study population. Hundred SUD subjects with co-morbid psychiatric illness and hundred SUD subjects without co-morbid psychiatric illness admitted for 31 days inpatient de-addiction treatment in MMM de-addiction and research centre of MOSC Medical College Hospital, Kolenchery, Kerala during February to December 2014 were enrolled using total enumeration method and were followed up monthly up to twelve months post de-addiction treatment.

Tools and technique: Subject information sheet, SUD assessment proforma for follow-up, Addiction Severity Index (ASI), WHO Quality of Life (QOL) BREF scale, Relapse Precipitant Inventory (RPI) was used for collecting data. Validity and reliability of tools were established. All self-report tools were translated to Malayalam.
Ethical considerations: Ethical clearance was obtained from the Institutional Review Board (IRB) and Institutional Ethics Committee of MOSC Medical College and permission to conduct the study in hospital was obtained. Nod to use the tools was obtained from copyright authors. Informed written consent was taken prior to data collection from subjects and verbal consent was taken before data collection every month. Confidentiality and anonymity of the data was ensured.

Pilot study: A pilot study was conducted on 20 subjects and methodology was found feasible.

Data collection: All patients admitted for 31 days in-patient de-addiction treatment from February to December 2014 were assessed for their eligibility as per the inclusion and exclusion criteria and were enrolled as subjects and divided into two groups. In group I: SUD subjects with co-morbid psychiatric illness \((n_1=100)\) and group II: SUD subjects without co-morbid psychiatric illness \((n_2=100)\). Subjects were enrolled on the 29th day of admission, baseline data were collected using subject information sheet. The quality of life was assessed on the day of enrolment and again on third, sixth and twelfth month post de-addiction treatment using WHO QOL-BREF scale. Subjects were tracked on a monthly basis and data was collected either through face to face or telephonic interview or through outpatient record analysis to find out their de-addiction treatment outcome during the last week of every month. The SUD subjects who relapsed to their substance use were assessed for precipitants of relapse using RPI up to 12 months post de-addiction treatment.

Data analysis: Data was analysed using SPSS version 20 using appropriate descriptive and inferential statistical tests after assessing the normality of the data. Mean, Median, IQR, Standard deviation, frequency, percentage, Chi Square test, Mann Whitney U test, independent ‘t’ test, repeated measures ANOVA, binary logistic regression and linear regression were used to analyse the data. The level of significance was set as p<0.05.

Results: The demographic, clinical and substance use profile did not differ among the SUD subjects with and without co-morbid psychiatric illness except for religion, marital status, employment status, family history of psychiatric illness and suicide, level of motivation and periodic drinking pattern of alcohol use. Psychiatric co-morbidity was taken as per diagnosis written in case record by the treating psychiatrist. Most common co-morbid psychiatric illnesses diagnosed among subjects with substance use disorder were a) mood disorders such as bipolar mania (53%)
depressive disorder (22%) and b) delusional disorders (11%) respectively. Co-morbid medical illness was equally distributed in both the groups of subjects. The total Addiction Severity Index (ASI) score was significantly higher in the SUD subjects with co-morbid psychiatric illness. ASI psychiatric domain score was significantly higher in SUD subjects with co-morbid psychiatric illness than those SUD subjects without co-morbid psychiatric illness.

De-addiction treatment outcome at twelve months post de-addiction treatment revealed that, 48% subjects remained sober whereas 52% of the SUD subjects with co-morbid psychiatric illness relapsed to their substance use. Among the SUD subjects without co-morbid psychiatric illness, 63% of SUD subjects remained sober whereas 37% SUD subjects relapsed to their substance use at one year post de-addiction treatment. It was noticed that more number of SUD subjects without co-morbid illness had relapsed to their substance use before first six months post de-addiction treatment whereas more SUD subjects with co-morbid psychiatric illness relapsed to their substance use after five months post de-addiction treatment respectively.

The relapse rate according to the type of substance of use was a) primary alcohol users (65.7%, 39.17%), b) alcohol and tobacco (52.6%, 39.2%), c) cannabis and tobacco (45%) among SUD subjects with and without co-morbid psychiatric illness respectively. The relapse rates among SUD subjects with co-morbid psychiatric illness according to the type of co-morbid psychiatric illness were a) bipolar mania (61%), b) depressive disorder (38%), c) delusional disorder (33%), d) mental retardation (100%), e) panic anxiety disorder (67%), f) dissocial personality disorder (50%) and lastly g) schizophrenia (50%) at twelve months post de-addiction treatment respectively.

SUD subjects without co-morbid psychiatric illness had longer survival time / duration of abstinence compared to SUD subjects with co-morbid psychiatric illness (p= 0.002). Maximum duration of relapse as well as sobriety post de-addiction treatment among SUD subjects with and without co-morbid psychiatric illness were twelve months (365 days) and minimum duration of sobriety post de-addiction treatment was two days.

The relapse precipitants among SUD subjects with co-morbid psychiatric illness were external situation/ euphoric mood states and negative emotional states
where as lessened cognitive vigilance states and negative emotional states precipitated more relapse among SUD subjects without co-morbid psychiatric illness.

The high risk factors associated with relapse among SUD subjects with co-morbid psychiatric illness were a) marital status\( (p=0.04)\), b) age of the subjects\( (p=0.02)\), c) age of initiation of substance use\( (p=0.04)\), d) increased psychiatric symptom severity\( (p<0.001)\), e) follow-up noncompliance \( (p<0.001)\) and f) medication non-compliance \( (p<0.001)\). The high-risk factors for relapse among the SUD subjects without co-morbid psychiatric illness were a) employment status\( (p=0.01)\), b) increased alcohol severity score\( (p<0.001)\), c) stage of motivation\( (p=0.02)\), e) follow-up compliance\( (p<0.001)\) and f) medication non-compliance \( (p<0.001)\). Co-morbid psychiatric illness was found to be a predictor of relapse among SUD subjects. The variables that strongly predict relapse to substance use among SUD subjects with and without co-morbid psychiatric illness using binary logistic regression were 1) follow-up non-compliance, 2) medication non-compliance, 3) pre-contemplation stage of motivation during admission, 4) increased psychiatric symptom severity, 5) increased alcohol severity and 6) unmarried status respectively.

The mean QOL scores of subjects in domains of physical health, psychological, social relationship and environment were low and no statistical difference was found among the SUD subjects in both the group in terms of the domain wise QOL scores at baseline \( (p= 0.5, 0.8, 0.9, 0.2)\) respectively. The SUD subjects without co-morbid psychiatric illness had significantly higher mean scores of quality of life in all the four domains than those SUD subjects with co-morbid psychiatric illness at twelve months post de-addiction treatment respectively. The sober SUD subjects without co-morbid psychiatric illness had a higher quality of life in all four domains at three, six and twelve months post de-addiction treatment than SUD subjects with co-morbid psychiatric illness.

Significant predictors of quality of life of SUD subjects with and without co-morbid psychiatric illness in the four QOL domains were 1) age of the subjects, 2) ASI alcohol severity score, 3) medication compliance, 4) follow-up compliance, 5) relapse to substance use and 6) co-morbid medical illness respectively. No association was found between medical co-morbidity and de-addiction treatment outcome at three months, six months and twelve months post de-addiction treatment. Presence of co-morbid medical illness significantly lowers quality of life of SUD subjects in the
domain of physical health at three and six months and psychological domain at three months respectively. Cirrhosis of liver found to be an independent predictor of QOL in the domain of physical health among SUD subjects with and without co-morbid psychiatric illness.

**Conclusion:** Special attention needs to be given to the treatment of co-morbid conditions in-order to improve the outcome of de-addiction treatment of SUD patients. Aggressive interventional strategy should be initiated at the time of discharge from one month in-patient treatment programme which focuses on constant push for follow-up, motivating SUD subjects for regular participation in AA self-help groups, strengthening therapeutic alliance and enhancing family support to be formulated in an individualised basis with special focus to the management of co-morbid psychiatric illness. Ultimate aim of de-addiction treatment should focus on enhancement of quality of life of the SUD subjects focussing on complete recovery. Aggressive intervention during post de-addiction treatment was very effective in improving treatment outcome.

**Implications:** The study findings warrant aggressive interventional strategies that should be adopted by the health care team which target long term care and recovery. There is urgent need to develop policies and standard operating procedures to assess recovered SUD patients for the risk factors that make the SUD patients vulnerable to relapse and provide relapse prevention interventions post de-addiction treatment. There is an urgent need to organize training programme for nurses and nursing students in management of patients having substance use disorder with and without co-morbid psychiatric illness.

**Recommendations:** Multicentric studies are needed on larger sample from a variety of geographical areas on developing and testing interventional strategies especially community based interventions and nurse led telephonic counselling for preventing relapse among patients treated for SUD with and without co-morbid psychiatric illness. Long term follow-up studies could be initiated to evaluate the long term outcome of SUD patients with and without co-morbid psychiatric illness.

**Keywords:** Substance use disorder, Co-morbid psychiatric illness, Relapse, Quality of life, Risk factors and Relapse precipitants.