ORIGINAL ARTICLE

Stress, Anxiety and Depression as a Predictor in Relapse of Drug Dependence

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[1,3]Conception, planning of research and writing of manuscript, Discussion
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ABSTRACT

Objective: To evaluate the association of stress, anxiety and depression with relapse of drug dependence.

Study Design: Cross Sectional Comparative

Place and Duration: Study was conducted in Armed Forces Institute of Mental Health and various Rehabilitation/Drug Detoxification centers of Rawalpindi from Feb 2016 to June 2016.

Methodology: One hundred patients were selected for the study from Armed Forces Institute of Mental Health and various Rehabilitation centers. Relevant information was recorded from the patients with objectives of the study.

Results: The mean age of the sample was 26.5 years with range of 18-35 year. In this sample there were 60 (60%) married, 74 (74%) employed 26 (26%) from lower income class, 52 (52%) from middle class, and 22 (22%) from upper income class. Educational background showed that 24 (24%) were educated up to middle and 30 (30%) were having higher education. In the study sample 60 (60%) having a first relapse and 40 (40%) were having second relapse. According to the results, it was found that on average, participants experienced greater stress (27.95±4.92 vs 25.03±3.52, P-value < 0.05) and anxiety (26.95 ± 5.19 vs 23.50 ± 4.58, P-value < 0.05) on second relapse as compared with first relapse. While there was no significant difference in scores of depression on first and second relapse (27.65±5.82 vs 25.73±3.71, P-value > 0.05).

Conclusion: This study reveals that there is a significant relationship between relapse and suffering from stress, anxiety and depression. Stress is the most significant predictor that leads towards relapse of drug dependence. Early detection and treatment of psychiatric morbidity can improve relapse or drug dependence and quality of life.

Key words: Stress, Anxiety, Depression, Relapse, Drug dependence

Introduction

Drug dependence is considered as persistent condition involving continuous and repetitive drug temptations or cravings leading towards negative end result. Most of the theories state that risk of relapse in drug addicts cannot be ignored as stress is the predictor of relapse in drug addicts.[1] Relapse is viewed as a serious and persistent problem which leads an individual towards initiation of drugs. In the initial phase drugs reinforce positive behavior by making euphoric mood and mental wellbeing. Persistent administration of drugs changes Central Nervous System which leads towards dysphoric mood, drug dependence and relapse. When an individual is exposed to stressful stimuli the craving starts and ultimately an individual administer drugs.[2]

World Health Organization and American Psychiatric Association used the term substance dependence instead of drug addiction. Environmental stimuli also urge a conditional response in the absence of drug. An individual's personality trait and psychiatric disorder are contributing factors of dependence and relapse. Psychiatric disorders like schizophrenia, attention deficit hyperactivity disorder, bipolar disorder and depression leads

towards increased risk of drug dependence.[3] Addiction is considered as amplification of deregulation of brain reward system that lead towards uncontrollable drugs temptation.[4]

Short term usage of Heroin/Morphine leads towards euphoric mood and calmness however persistent administration leads towards dependence and lethal respiratory depression. It is also well-known in systematic literature review that long term administration not only impairs mental wellbeing but also leads towards damage of psychomotor and cognitive activity, psychosis and panic attacks.[5] Over dosage of cannabis is high in schizophrenic patients. While long term administration of Cocaine also leads towards impatience, aggressiveness, suspiciousness and paranoid like psychosis. Even after long term treatment and drug detoxification, the relapse risk is common.[6]

Social factors play an important role and have positive impact on health and livelihood. In drug addicts the inability to tolerate or tackle with stress leads them towards relapse and dependence[6] but alcoholics having psychosocial support during drug detoxification treatment have an increased level of self-esteem and mental wellbeing. The view that stress increase risk of relapse and dependence is not new as many theories supported this notion that stress has an important impact on health and lead towards dependence and relapse. Several laboratory studies on animal also showed that stressful exposure lead towards drug relapse.[7] Opioid is highly addictive as well as its long administration is a serious relapsing disorder. An increased level of improvement can be seen in people who have psychosocial support during drug detoxification treatment.[8]

Heroin administration is the most commonly use opioid; and the alternates are Morphine, Methadone, Buprenorphine, Codeine, and Methadone. According to a study conducted in England approximately 100,000 to 200,000 people were drug addicts and 75000 to 150,000 were opioid users in 1990 and 1996 respectively. The people between 15 to 44 years of age were dependent on opioid in 2000.[9] Most literature on drug addiction have identified stress as an important factor independence and relapse as drug dependence involves behavioral, psychological, physiological and cognitive sensations allowing an individual to have prolonged temptations and cravings rather than any other thing.[10] Many studies revealed that depression also lead towards drug dependence and relapse and relationship between relapse and stress has also been highlighted.[11]

Methodology

In this cross sectional comparative study participants were selected from Armed Forces Institute of Mental Health and from various Drug Detoxification Centers /Rehabilitation Centers from Rawalpindi from February 2016 to Jun 2016. Those participants were included in the study, who were having first or Second relapse (drug dependence). A total of 100 participants fulfilling the inclusion criteria were enrolled in the study by non-probability purposive sampling technique. Approval from Institutional ethical committee was taken prior to start the study. All the participants were briefed about the study and informed written consent was taken from the all the participants.

All literate males were included in the study that were having first or second relapse with age range between 18 to 35 years. Minors, poly drug users and participants having any other psychiatric illness were not included in the study. Demographic Information Questionnaire was used to record information regarding age, education, socio economic status, marital status, occupation (employed or unemployed), type of drug and episode of relapse, living in joint family or nuclear family.

DASS Depression, Anxiety, Stress Scale was used in the study. This scale was developed by Lovibond and Lovibond (1995) and consist of 42-item designed to measure three inter-related negative emotional states of depression, anxiety and tension/stress. It is a self-report inventory. Several studies showed good psychometric properties of DASS in adults having depression, anxiety, and stress problems. Studies also demonstrated excellent internal consistency of the DASS. The cut off the value of DASS scoring is 9 for Depression, 7 for Anxiety and 14 for Stress.

Data was entered and analyzed using SPSS version 20. Mean and SD was used to describe quantitative data and frequency and percentages for qualitative data. Independent sample t-test was used to compare anxiety, depression and stress scores between first and second relapses. P-value <0.05 was considered as significant.

Results

The mean age of the sample was 26.5 years with range of 18-35 year. Out of the total participants (n=100) 60 (60%) were married and 40 (40%) were unmarried, 26 (26%) were unemployed and 74 (74%) were employed. Social status revealed 26 (26%) from lower class, 52 (52%) from middle class, and 22 (22%) from upper-income class. Educational background showed that 24 (24%) were educated up to middle, 46 (46%) were matriculate, and 30 (30%) were having higher education. Out of 100, 48 (48%) were having nuclear family system and 52 (52%) were having joint family system. In the study sample 60 (60%) having first relapse and 40 (40%) were having second relapse. Forty six (46%) of them have dependence on cannabis and 54 (54%) have dependence on

opiates. Depression Anxiety Stress Scale was established and found reliable in the current study. The Cronbach's alpha reliability for the overall scale and its sub scales was found excellent. The comparison of stress, anxiety and depression was done between participants having first relapse and second relapse. According to the results it was found that on average, participants experienced greater stress on second relapse (M=27.95, SD= 4.92) than to participants having first relapse (M=25.03, SD= 3.52). This difference was statistically significant as (P-value < 0.05). The comparison on the basis of anxiety showed that on average participants experienced greater anxiety on second relapse (M=26.95, SD= 5.19) as compared to participants having first relapse (M=23.50, SD= 4.58). This difference was statistically significant at 5% level of significance. While according to the results the participants experienced greater depression on second relapse (M=27.65, SD= 5.82) than to participants having first relapse (M=25.73, SD= 3.71). But this difference was statistically not significant at 5% level of significance.

Table I: The reliability of Depression Anxiety Stress Scale

Scale	No. of Items	Alpha
Depression	14	0.715
Anxiety	14	0.785
Stress	14	0.673

Table II: Frequencies and percentages of demographic characteristics of the participants (n=100)

Variables	*Categories*	*Frequency*	*Percentage*	*Cumulative Percentage*
Age	18-23	26	26.0	26.0
	24-29	38	38.0	64.0
	30-35	36	36.0	100.0
	Total	100.0	100.0	
Education	Middle	24	24.0	24.0
	Matric	46	46.0	46.0
	Higher	30	30.0	100.0
	Total	100.0	100.0	
Occupation	Unemployed	26	26.0	26.0
	Employed	74	74.0	100.0
	Total	100.0	100.0	
Marital Status	Unmarried	40	40.0	40.0
	Married	60	60.0	100.0
	Total	100.0	100.0	
Family System	Nuclear	48	48.0	48.0
	Joint	52	52.0	100.0
	Total	100.0	100.0	
Socioeconomic Status	Lower class	26	26.0	26.0
	Middle class	52	52.0	78.0
	Upper class	22	22.0	100.0
	Total	100.0	100.0	
Relapse	First	60	60.0	60.0
	Second	40	40.0	100.0
	Total	100.0	100.0	
TOD	Cannabis	46	46.0	46.0
	Opioid	54	54.0	10
	Total	100.0	100.0	

Table III: Comparison of DASS for stress, anxiety and depression between first and second relapse

First Relapse		*Second Relapse*		*t-statistic*	*p-value*
Mean	*SD*	*Mean*	*SD*		
DASS for Stress					
25.03	3.52	27.95	4.92	-3.24	0.002
DASS for Anxiety					
23.5	4.58	26.95	5.19	-3.49	0.001
DASS score for Depression					
25.73	3.71	27.65	5.82	-1.84	0.7

Discussion

Results of the current study revealed that more than half of the sample population had all the three psychiatric disorders namely stress, anxiety and depression that lead an individual towards initiation of drug.[3] The present study suggests that stress is predominantly present in cases of drug dependence.[7] Individuals who are unable to cope with stress ultimately suffer from relapse and drug dependence.[6]

Psychiatric Problems (depression, anxiety and stress) and drug dependence is common, chronic and recurring effecting more than half of the sample population. Stress increases the susceptibility of drug abuse.[3, 8] Relapse is a major characteristic of drug dependence and remains the major cause in treating drug dependence.[9] The findings of the current study revealed that there exist a significant difference between stress, anxiety, depression and relapse in drug dependence the results are in line with the previous researches.[10,11]

Initially the basis for relapse and drug dependence comes from clinical observations, surveys and epidemiological studies. A study conducted in Australian population aged (18years and over)analyzed and revealed the fact that depression, anxiety, stress are associated with an increased risk of relapse and drug dependence. It revealed significant relationship between drug dependence and relapse.[10, 12] The present study revealed the fact that opioid dependence is highly addictive and leads towards relapse.[8, 13] The study also revealed that the prevalence of drug dependence or relapse (age range 18-35) is very common and a large proportion of males are suffering from it.[14] The findings of current study are consistent with previous research as stress and depression are the most common

predictors that lead an individual towards drug dependence or relapse.[12,14] In their most recent forms and psychiatric problems are considered chronic and recurring even though the individual received treatment the problems may came back or relapse occurs.[10, 15]

It is commonly perceived that participants having dependence have got strong association with stressors and psychiatric morbidity is commonly seen in participants of drug dependence and relapse.[16, 17] Emotional disturbances are commonly seen in participants having drug dependence and relapse .Among the three negative emotional states stress is the most frequent.[18] It also revealed the fact that more than half of the sample population had all the three psychiatric disorders (stress, anxiety and depression) and are contributing factors of relapse and drug dependence.[19, 20] Evaluation of cases of drug dependence and relapse will be helpful in the management of these cases.

Conclusion

This study reveals that there is significant relationship between relapse and suffering from stress, anxiety and depression. Stress is the most significant predictor that leads towards relapse of drug dependence. Early detection and treatment of psychiatric morbidity can improve relapse or drug dependence and quality of life.

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