

RESEARCH

Alexithymia and emotional intelligence among people with cannabis dependence and healthy control: a comparative study

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Abstract

Background: Substance abuse is considered a major public health issue worldwide. It impairs familial, vocational, psychological, legal, social, or physical aspects of life. Low emotional intelligence (EI) is a significant predictor of drug related problems. Greater drug abuse has also been seen in those with high alexithymia, a condition that is strongly associated with low EI. However, there is a dearth of Indian literature on the same. This study was taken up to study these variables in persons with cannabis dependence.

Material and methods: Cross-sectional hospital based study; one hundred cannabis dependent patients, diagnosed as per the text revision of the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders, were selected by purposive sampling. One hundred healthy matched subjects constituted the control group. Assessment was done using the Mini International Neuropsychiatric Interview, General Health Questionnaire, Indian adaptation of Emotional Intelligence Scale, and Toronto Alexithymia Scale. The statistical analysis was carried out using the Statistical Product and Service Solutions (SPSS) Windows 16.0 software package. The analysis of the obtained data was done using various descriptive and inferential statistics.

Results: Significant differences were seen in alexithymia scores between the cannabis dependent group and normal control group. The cannabis dependent group scored significantly high on alexithymia in comparison with control group. Further, cannabis dependent group scored significantly low on score of EI than the normal control group. Relationship between alexithymia and EI was found to be negatively correlated.

Conclusion: Our study suggests an association among low EI, high alexithymia, and cannabis dependence, and the prevention and treatment of cannabis dependence should lay focus on these factors. Present findings are generating and passing out relevant knowledge, which would be helpful and beneficial in reducing cannabis consumption, its harmful health effects, as well as in developing new treatments for cannabis dependency.

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Introduction

Unhealthy lifestyles, such as substance abuse, are having an unprecedented impact on the health of the public.[1] It is one of the most challenging of existing health problems with far reaching medical, social, and economic consequences. According to the World Health Organization (WHO), substance abuse is “persistent or sporadic drug use inconsistent with or unrelated to acceptable medical practice”. [2] Independent studies have yielded leading conclusions that substance abuse is associated with different

kind of physical and mental conditions.[3] Recent epidemiological surveys have reported lifetime prevalence of any substance abuse or dependence between ten to 20% in the general population.[4,5] The problem of drug abuse is in existence in most of the societies; and impact of substance dependence is devastating irrespective of age, race, and gender. India with a population of over one billion people, have about three million estimated victims of different kinds of substance abuse, excluding alcohol dependents.[6] Substance dependence is showing a rising

trend all over the world, and these disorders are rapidly recognised throughout in India.[7,8]

Cannabis is the most widely abused illicit drug,[9] in spite of its adverse effects on social status, medical complications, and impaired health status and function. Cannabis is a generic term for preparations (e.g., marijuana, hashish, and hash oil) derived from the cannabis sativa plant. Cannabis may be smoked (in a joint or from a bong) or ingested (eaten). Existing studies have also shown that it has become more complex and alarming in the recent years;[10,11] moreover, it is difficult to treat subjects with cannabis dependence. The recent rise in the use of cannabis[10,11] may be attributed to patients' reluctance to elect treatment even after having awareness of consequences of taking substances; many of them don't opt for treatment.[12] Borgohain and Phookun[13] found 11% of their sample used cannabis, and the distribution of psychiatric comorbidity among the cannabis dependents were schizophrenia (45%), bipolar disorder (45%), and conduct disorder (nine per cent). As a general outlook, cannabis dependent patients are ambivalent over changing their consuming patterns, and sometimes feel not ready or able to change. In addition, dropout rates are high; the vast majority of clients do not achieve abstinence during treatment, and relapse is frequent.[14] A majority of such patients relapse within a year of starting treatment, with the first three months being the most vulnerable period.[15] That may be the reason for patients with substance use disorders recurrently presenting with a long history of frequent episodes of intoxication and withdrawal, interspersed with attempts to cease use of the substance.

Despite new insights of associated factors of cannabis abuse and availability of advanced therapeutic approaches for substance abuse, elevated prevalence of relapse and treatment resistance are challenging aspects and need to be urgently addressed. There is need for regular research in order to assess the underline factors that are associated with cannabis dependence, to enable the formulation of management strategies. According to various psychological models, the inner experiences and psychological structures (personality style and psychopathological conditions) of the individual play a significant role in the development of addictive behaviour.[16] The same is true when the sociocultural and political factors closely linked to addiction are considered.[16] One of the personality traits, i.e., alexithymia, is a potential risk and sustaining factor for substance use disorders.[17] In addition, it has often been deemed immutable, and alexithymic people are poor candidates for insight oriented therapies.[18] Also, treatment of these patients is reported to be difficult due to lack of emotional awareness and externalised style of living, in which behaviour was guided by rules and regulations rather than feelings.[19] Research on substance use disorders has

recently taken great interest in the role of stable personality constructs in the pathogenesis of addictive disorders. Emotional intelligence (EI) is a variable theoretically linked to alexithymia. Recent research showed moderate correlation in the overall relationship between ability measure of EI and alexithymia.[20] World literature seems to found these constructs (alexithymia and EI) predate the onset of cannabis use.

Alexithymia: Alexithymia means “no words for feeling”; it is, by definition, considered a stable personality trait.[21] It consists of four features: difficulty in identifying feelings and distinguishing between emotions and bodily feelings, difficulty in describing feelings verbally to others, reduction or absence of imaginative ability, and external, operative cognitive style.[22,23] The prevalence of alexithymia in working age populations has been shown to be about nine to 17% for men and five to ten per cent for women.[24,25] Studies also suggest relatively high prevalence rates of alexithymia in men with genetically high-risk for substance abuse.[26] In previous studies, alexithymia had negative relation with the maintenance of abstinence,[27] and was associated with poor outcomes in substance abuse inpatients.[17]

Emotional intelligence: Peter Salovey and John Mayer first coined the term EI in 1990,[28] and defined as the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action.[29] Various authors have theorised that high EI would lead to greater feelings of emotional well-being.[30] Riley and Schutte[31] concluded that low EI was a significant predictor of drug related problems. They also stated that poor coping predicted drug related problem. Similarly, Trinidad and Johnson[32] found that adolescents with lower EI used more alcohol and tobacco. As far as coping style is concerned, research examining EI suggests that individuals who report low EI tend to use emotion-focused and avoidance coping styles, and that individuals who report high EI may use adaptive coping strategies to alleviate distress.[33]

The recent years have seen a rise in the use of cannabis that have made it explicitly clear that drug abuse is spreading in such a way that substantial measures need to be taken to prevent the present situation from further worsening.[10,11] It is important to recognise the associated risk factors for cannabis not solely to understand but rather to plan or providing psychological interventions in the presence of risk factors to lead impacts and reducing the vulnerabilities, promoting emotional resiliency and empowerment in the context of indirect impacts. Presence of high number of psychological factors indicates need for the exploration of other possible associated factors involved, which are not well researched yet in Indian setting, such as

EI and alexithymia. Researchers have conducted study having following objectives: (i) to assess the differences between scores of alexithymia and EI in person with cannabis dependence and healthy controls, and (ii) to assess relationship among EI and alexithymia in the groups.

Methodology

Sample

The sample consisted of 200 man participants who were selected at random from North India. Out of these, 100 were patients with a diagnosis of cannabis dependence, and the remaining 100 were matched healthy controls. Cannabis dependent cases were no more than 60 years of age, and were taken up after they had undergone detoxification. The study group was matched to the control group by age, sex, and place of living.

Tools

Case history proforma: This was developed to obtain information on demographic, clinical, personal, and family details.

General Health Questionnaire (GHQ-28): GHQ-28 is a self-administered tool that contains 28 items.[34] As a measure of general health, it has four subscales: somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression. The test-retest reliability, some eight months apart, was found to be as high as +0.90. The studies show that the values for specificity of the GHQ-28 range from 74 to 93%.

Self-report questionnaire derived from the Mini International Neuropsychiatric Interview (MINI): Symptoms of cannabis dependence, according to the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria,[35] were assessed using a self-report questionnaire derived from MINI.[36] It has also been earlier used in Indian setting.[37] This questionnaire was composed of seven items corresponding to DSM-IV criteria for substance dependence. Items were scored on a dichotomous scale with a yes/no answer. The total score of the questionnaire indicates the number of criteria met by the subject. Consistent with DSM-IV, subjects received a diagnosis of cannabis dependence if they met three or more of the seven DSM-IV criteria.

Emotional Intelligence Scale (EIS): To assess EI, EIS[38] was used. It consists of 40 items, out of which 20 items are positive and other 20 items are negative. Items are to be answered on a five point scale ranging from never true to always true, with a possible range of scores from 40 to 200. A high score indicates high EI. The test-retest reliability was 0.94 (alpha coefficient 0.87), and the correlation ($r=0.75$) between Indian version of the scale and

Schutte *et al.*'s EIS[39] indicate the validity of this scale.[38]

Toronto Alexithymia Scale (TAS-20): The TAS-20 is a 20 item self-report instrument that assesses alexithymia.[40] It has a three-factor structure that is theoretically consistent with the alexithymia construct. The three factors comprise three subscales. The reliability and validity of the TAS-20 has been supported by factor analysis, good internal consistency, and high test-retest correlations over a three-week period, consistent with the trait perspective of alexithymia. This scale has demonstrated excellent psychometric properties.[41]

Procedure

Protocol of the study was presented to and approved by research committee of the Institute of Human Behaviour and Allied Sciences (University of Delhi) for MPhil (Clinical Psychology) dissertation. For dissertation purpose, sample size was 20 cannabis dependents (Khoj: de-addiction centre, Rohtak) and 20 healthy controls; but authors further continued it beyond dissertation, and 80 cannabis dependents (from Bathla Psychiatric Hospital, Karnal, Haryana) and 80 healthy controls were added between the periods of December 2008 to January 2010. So, total hundred patients with diagnoses of cannabis dependence, as per DSM-IV criteria and fulfilling the inclusion and exclusion criteria and giving written consent, were taken for the study. After establishing rapport, a clinical interview was held and informed consent was taken. The personal data sheet was filled and EIS, TAS-20, and MINI were administered. Similarly, GHQ-28 and all the above-mentioned scales, except MINI, were administered on the matched control group.

Data analysis: Data was analysed using the Statistical Product and Service Solutions (SPSS) (version 16.0) statistical programme. Student's t-test was used to obtain the p value. $P<0.05$ was considered to indicate statistical significance. To find out the relationship between the two variables, Pearson's product moment correlation was calculated.

Result

Subjects' general characteristics: The mean age of the cannabis dependents was 36.29 years. As for academic qualification, 54 were high school, 27 secondary school, and 19 college graduates and above. As for occupation, 43 were unemployed, 16 office workers, and 41 in private job or business. Among the subjects, 69 were living with the spouse, and 31 were not for the reason of divorce, separation, bereavement, no marriage, etc.

The scores of the cannabis dependence group on TAS-20 are high, and scores on EIS are low, as compared to that

Table 1. Mean and standard deviation of emotional intelligence (EI) and alexithymia (ALX) between groups

	Groups	N	Mean	SD	Df	Mean Difference	t-value	p-value
EI	Healthy controls	100	123.20	23.93	198	6.54000	1.964	.05 (S)
	Cannabis dependents	100	116.66	23.15				
ALX	Healthy controls	100	41.16	18.67	198	-5.01000	-2.009	.04 (S)
	Cannabis dependents	100	46.17	16.52				

Table 2. Summary of the correlation between emotional intelligence (EI) and alexithymia (ALX)

		EI	ALX
EI	Pearson correlation	1	-.570*
	Sig. (2-tailed)		.000
	N	200	200
ALX	Pearson correlation	-.570*	1
	Sig. (2-tailed)	.000	
	N	200	200

*Correlation is significant at the 0.01 level (2-tailed)

of control (Table 1). In addition, there is a negative correlation between EI and alexithymia (Table 2).

Discussion

The present study has been specially planned to investigate the differences between scores of alexithymia and EI in persons with cannabis dependence and that of healthy controls. The present results showed that cannabis dependents had a low EI and high alexithymia than nondependent individuals. Another aim of this study was to assess the relationship between EI and alexithymia in the groups. The findings of this study have revealed that there are considerable negative correlations between EI and alexithymia. As per present findings, cannabis consumption was most strongly related to the high alexithymia score and low EI score; this can be interpreted in terms of individuals, who are able to accurately identify their own and other's emotions as well as manage their emotions, do not engage in substance abuse. In contrast, individuals who are not skilled at regulating their emotions depend on cannabis.

According to this finding, it can be posited that as EI scores increase, stress symptoms will decrease. There are several studies in support of this finding.[42] Furthermore,

there is a significant amount of evidence suggesting an association between alexithymia and substance abusers.[43] Approximately half of the patients with substance use disorders are suggested to be alexithymic.[17,44,45] Researchers considered alexithymia as a negative prognostic factor for maintaining abstinence.[46] Our results are consistent with those of studies reporting high alexithymia score in people with substance abuse. Researchers claim that there is a moderate correlation between EI and alexithymia.[20] In our study too, a negative correlation was found between EI and alexithymia, which is in

agreement with other studies reported.[39] Hence, findings of the present study revealed that those individuals who suffer from alexithymia should also have low EI and vice versa. Present findings go with the view that alexithymia constituted a negative mirror image of the concept of EI.[47]

These findings can be explained by two basic ways: (1) low EI and high alexithymia contribute to initiate the unhealthy lifestyle behaviours, such as cannabis consumption, because of lack of social support and poor interpersonal relationship; (2) they directly promote the substance consumption because of poor coping strategies to reduce stress of daily life.

EI is the recognition capacity, application, understanding, and management of the emotions.[48] The basic principles of EI are identifying, managing, understanding, and regulating emotions;[30] whereas alexithymia is a disturbance of the experience and expression of emotions, resulting in flattened or highly restrained affect and lack of awareness of emotions.[49] Emotionally intelligent persons can cope more successfully with stress.[50] Individuals, who are able to accurately identify their own and other's emotions, manage their emotions, and also are able to empathise with others, have more emotional and social adjustment in their expressive behaviour.[51] Present findings also support the view that somehow some of these people are probably lacking in these skills and to cope up with these lacunae, they take the help of substance.[37] High EI appears to be an important predictor of better coping strategies,[52] and good interpersonal relations.[53] So, present findings are in agreement with other researchers who believe that individuals with higher EI are more satisfied in their life, and they perceive better problem solving and coping ability.[54] Some earlier studies have also suggested that alexithymia is associated with poorer treatment outcome;[19] this is particularly true in cases of substance dependents.[17]

The possible mechanism about how absence of social support and poor interpersonal relationships may adversely increase the substance use can be understood in light of existing literature. People with alexithymia have difficulties in emotionalising, fantasising, verbalising, identifying, and analysing emotions. Hence, these “people do not receive the necessary supports; they may eventually turn to substance use in order to compensate for their deficits and shortcomings”.[55] As high score of alexithymia in previous studies attributed to poor interpersonal relationships/poor social support that is reported to be highly prevalent in alexithymics. As an inference due to their lacking social skills, alexithymic individuals are susceptible to feel uncomfortable in social situations and thus, may use substance as a coping mechanism.[56] Researchers have suggested that alexithymic individuals use substance to improve interpersonal functioning.[57] As per experts, alexithymic finds it difficult to build and maintain close relationships with others, and to appropriately utilise social supports in order to protect themselves from the potentially pathological influences of stressful events.[58] In addition, according to Melin *et al.*,[59] interpersonal relationships are difficult to deal with for individuals with alexithymia because of lacking emotional comprehension and expression. Therefore, alexithymia might be associated with reduced social support.[58] The absence of social support and poor interpersonal relationships may “result in an inability to form effective coping and adaptive behaviour”.[43] As general agreement, an emotionally healthy individual is able to recognise and express his emotional state, and has coping abilities. Whereas, alexithymic in contrast,[60] has a limited ability to cope adaptively with stressful situations and tends to have unhealthy behaviours, such as drug use.[61] In addition, the ineffective coping exacerbates the problems, and eventually snowballs into full relapse or maintain the substance abusing behaviour.[43] Some researchers have proposed that alexithymic individuals use substance as a coping mechanism for stress.[57]

Conclusion

The problem of drug abuse is in existence in most of the societies; India is also not an exception. Knowledge of factors influencing the initiation, continuation and cessation of the use of cannabis in a particular culture is crucial for the prevention of drug use among dependents. Many people from the same culture do not indulge in substance abuse, indicating that the psychological factors play an important role in initiating and maintaining substance abuse problem. Low EI and high alexithymia should be taken in to account when treatment of cannabis dependence is being planned. Having indicators that alexithymia and EI affect the treatment outcome, it seems equally important to consider these variables in order to achieve better compliance in the

treatment. To effectively combat and deal with the effects of substance dependence, something that is crucial, measures must be taken to deal with alexithymia and enhance EI.

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