Family Environment and Impulsivity Behaviour: A Comparative Study of Substance Abusers and Non-abusers

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Abstract

Substance addiction has become a threat to all societies, attracted the attention of people from different sections of society. The study aims to investigate the family environment and impulsivity relation to substance abuse by comparing substance abusers and non-abusers among students by using (i) The Drug Abuse Screening Test (DAST, 1982), (ii) The Family Environment Scale (FES) is used to measure the social-environmental characteristics of the family (Moos & Moos, 1994), and (iii) The Barratt Impulsiveness Scale (BIS-11; Patton et al., 1995). Sample age ranged between 13 to 19 years of age, students. The results highlighted the significant difference between substance abusers and non-abusers on family environment and impulsivity behaviour, which can be interpreted as the need for attention to pay on family environment and impulsivity behaviour which are a link to substance abuse; and the importance of family and personality for framing prevention and intervention strategy to combat substance abuse.

Keywords: Substance, Abuser, Impulsivity, Family, Environment.

Introduction

The use and abuse of substances had been causing an array of problems for society and the individual involving in such activities. In India, Alcohol is the most commonly abused substance followed by Cannabis, Opioids and other, Sedatives inhalants like alcohol and Opioids are more used among the adult population whereas cheaper substances are more common in children and adolescents (National Survey on Extent and Pattern of Substance Use in India, 2019). Indulging in substance abuse is higher at a younger age compared to adults, more common among males in the Northeastern part of India (Yadav, 2016). Apart from tobacco and alcohol use, injecting drug use is the most frequent substance used in

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Mizoram (Social Welfare Department, 2017). Although psychoactive substances are also frequently used for entertainment purposes in the modern world as they have played a crucial role in religious practices and medicinal purposes since ancient times (Shultes, 1976; Goodman et al, 1995; Blainey, 2015). Adolescent drug use has been the focus in studies due to the use of the drug interferes with normal cognitive, emotional and social development" (Guo et al., 2002). Substances used including smoking tobacco and marijuana during adolescence to avoidance ofschool that hampered academic performance with lower educational attainment.

Onset early of tobacco (UNODC, 2018) and alcohol use leads to a high consumption rate in adult life compared to later onset.Several substance abusers lived in family settings (Wynne et al., 1996; Ralte, 2017), but estimated that it might be more common among homeless youth (Martijn & Sharpe, 2006). Among many factors of substance abuse, family relationships and parental substance use in adolescents' are accepted as contributing to substance use either directly or as a mediating factor (Baer et al, 1987; Wills & Yaeger, 2003), also counted family economic support effect as one variable (Clark, 2001); holistic approach of substance abuse involving a constellation of behaviour and environment of the individual (Sutherland & Shepherd, 2002) will be beneficial for better understanding of substance abuse.

Family is the basic foundation for physiological and psychological development with legal ties between the members (Ninaniya et al, 2019). Family cohesiveness and peer encouragement related to the onset and development of substance use including- alcohol, cigarette, and marijuana use (Duncan et al, 1995); degrees of commitment and support among family members lowering drug use (Kothari et al, 2010) whereas weaker bonds and ties linked to more dependent on substances (Jedrzejczak, 2005; Marchi et al, 2017). Family systems theory (Cox & Paley, 1997; Minuchin, 1988) says the family operates as a whole, which cannot be captured by the simple sum or extension of individuals' and dyads' characteristics. Family cohesiveness represents the sense of togetherness and closeness, and the central dimensions of family functioning (Bloom, 1985; Olson et al., 1979). Impulsivity is associated with unplanned risky behaviours, making up the mind quickly (Eysenck, 1993), taking action with less thought and inadequate attention (Dickman, 1990; 1993).

Self-concept may be defined as thinking and feeling about oneself (Glenn et al., 2001), parenting style (Chang, 2014) and positive parenting style are related to self-concept in adolescents (Calafat et al., 2014), self-control imposed greater risks for misuses of substances (Ford & Blumenstein, 2012). Taking leads from the available literature, the present study aims to study the Family Environment and Impulsivity Behaviour, and their correlation to substance use.

Objectives of the Study
Numerous researchers find a diverse effect of self-control on the behaviour of which the association between self-control and substance use is of great concern. The direct and indirect impact of self-control consequence and family cohesiveness on substance use may be

of great assistance to parents, field workers and government agencies. To have a greater understanding of these relationships the current study formulates the following objectives and hypotheses.

    a) To examine the differences in family cohesion and self-control between substance users and substance non-users.
    b) To examine the relationship between family cohesion and self-control.

Hypotheses
    i) There will be significant gender differences between substance users and substance non-users on family cohesion**.**
    ii) There will be significant gender differences between substance users and substance non-users on self-control**.**
    iii) There will be a significant positive relationship between family cohesion and self-control among substance users.

Methodology and Procedure
Sample: 200 Mizo Male adolescents were selected from the target population consistingof Male adolescent substance users and substance non-user with an equal number of 100 urbanand 100 rural areas of Mizoram; with ages ranging from 13-19 years. Multi-stage random sampling was employed; 100 Mizo male Adolescent Substance users were identified using DAST-10, out of which 50 samples come from urban areas and another 50 from rural areas.

Design: To answer the research problems, a between-group design was employed consisting of a Substance user and substance non-user group with equal respondents.

Tools:
    1) *Barratt Impulsiveness Scale – 11*: The BIS-11 (Patton et al, 1995) is a questionnaire designed to assess the personality/ behavioural construct of impulsiveness and the most widely used instrument for the assessment of impulsiveness. The BIS-11 factor structure includes 30 items to yield six first-order factors, the present study employed only the self-control sub-scales. Higher scores indicate the individual is becoming more and more impulsive as the score increases. Internal consistency was 0.793 and test-retest reliability was 0.80 (Orozco-Cabal et al., 2010).
    2) *The Family Environment Scale* (FES): Family Environment Scale developed by Bhatia and Chadha (2005) adapted from the family environment scale by Moos & Moos (1974) was used to measure the social-environmental characteristics of the family. The FES has 8 dimensions; the study used only Cohesion *to measure the family* environment. The reliability coefficient of the entire scale was estimated by using the Spearman-Brown Prophecy formula and the Reliability Coefficient of the FES was 0.95 (Sarma & Talukdar, 2016).

Procedure: Socio-demographic profiles along with a consent form were prepared to include important demographics in the study and to dismiss legal issues as the target population was adolescents. Necessary permission from the authorities and consent from the samples and guardians was taken before the conduct of the tests with clear instruction about the

purpose of the study and instruction as per the manual of the tests. The Barratt Impulsiveness Scale and Family Environment Scale (FES) were made available for each sample. Several hindrances arise during data acquisition as some respondents were uneasy in revealing the state of their substance use.

Results

The raw data were screened for an incompletion, outlier possibilities, checking for its reliability issue among the target population and for the satisfaction of parametric assumptions. The tools for measuring Cohesion (α =.82) and Self-Control (α =.61) were found to be reliable tools for measuring the said variables. The data satisfy the assumption of normality and homogeneity of variance across the dichotomous group.

The mean score on Cohesion was 50.12 and 53.83 for substance users and substance non-users respectively while the mean score on SC was 12.56 and 14.92 for substance users and substance non-users. Family cohesion and commitment among members was higher among non-users. Non-users compared to substance users also scored better on self-control. The mean difference in the comparison groups was detected using an Independent sample t-test and was found that a significant difference between substance users and non-users on family Cohesion (t=-2.50; p < .05; Cohen's *d*=.45) and Self-control (t=-1.12; p<.05; Cohen's *d*=.75) which supports the two Hypothesis 1 and 2. The findings were supported by several other studies which converge to differences between substance users on Cohesion (Kothari et al, 2010) and Self-control (Ford & Blumenstein, 2012).

Table: Self-Control (SC) (Impulsivity) and Cohesiveness (Family Environment).

Table Showing Mean, SD, SEM, Normality, Reliability, Homogeneity, t-test, ANOVA, and Correlations								
	Substance Abusers		Non Abusers		Total Samples		Reliability coefficient (α)	
Stats	Family, Environment (Cohesion)	Impulsivity (self Control)	Family, Environment (Cohesion)	Impulsivity (self Control)	Family, Environment (Cohesion)	Impulsivity (self Control)	Family environment (Cohesion)	Impulsivity (Self-control)
Mean	50.12	12.56	53.83	14.92	51.88	14.69	.82	.61
SD	8.52	2.79	7.12	3.09	8.08	3.12		
t=test	t-test between substance users and non-users on Family, Environment (cohesiveness) ist=-2.50* Cohen's *d*=0.45			t-test between substance users and non-users on Impulsivity (self-control) ist=-1.12* Cohen's *d*= .75				
Correlation between Family, Environment (cohesiveness) and Impulsivity (Self Control): *r* = .37*								
*=significant at.01 levels (2 tails) **=significant at.05 levels (2 tails)								

A significant positive relationship was observed between the two dependent measures (*r*= .37; p<.05; *r*² =.13) among substance users. We can reject the null hypothesis that no correlation existed between the two measures among substance users. Therefore we can say

that the relationship being a medium effect and unidirectional suggests increasing cohesion may result in some effect on self-control increment and vice versa though almost negligible for practical sense because commonality was only 13%.

Conclusion

Substance users compared to non-users had a significant difference in their mean scores on both behavioural measures. Adolescents who indulge in substance use come from a family environment where commitment and cohesion among family members are weak. Substance users also show significant weakness in self-control and may choose immediate rewards and goals over long-term goals. The effect size was quite high indicating substance users may mostly be weak on controlling one's emotions and urges. Relationship between family cohesion and self-control although significant is not strong with negligible practicality among the substance users population.

Limitations

The study could not include family demographics such as family type, size and socio-economic status that could affect. Social factors such as peer pressure, parental support and many other psychological factors could not be included within the model due to time constraints and economical issues.

Significance of the Study

The study highlights the importance of self-control and family environment- Cohesion on adolescent's involvement in substance use. It also clearly highlights the amount of impact that self-control imposed on substance use. Personnel involved in implementing intervention strategies should focus on training regarding improving one's self-control. It would also be essential to include family counselling within the intervention plan.

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