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Internalizing and Externalizing Disorders in Alcohol Dependence Syndrome and Clinical Correlates

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DESCRIPTION

Alcohol is a psychoactive substance with properties known to cause dependence. A cluster of physiological, behavioural, and cognitive manifestations where the use of alcohol takes a much higher priority for an individual is characteristic of dependence. Although, not everyone consuming alcohol is predisposed to developing a dependence, it poses a significant problem to both the health care and the society due to the much larger number of people consuming it.[1]The various neurobiological/ psychodynamic mechanisms provide us with a useful means of primordial strategies to overcome the pathway to dependence. Thus, the morbid consequences of alcohol addiction/ dependence can be prevented.

Externalizing simply refers to the manifestation of one's expressions outwardly and an inability to inhibit socially undesirable or restricted actions. Externalizing disorder is considered to be one of the important factors for developing substance used.Externalization is purported to be mediated by the neurotransmitter dopamine(DA) which is also responsible for the reward pathway(mesolimbic pathway)of alcohol addiction. Studies have also reported that persons with parental history of alcohol use disorders demonstrate higher externalization than individuals without such a history [2]

It is also reported that the externalization/internalization might represent mediation of intergenerational transmission of alcoholism.Externalization correlates with several other clinical indices of alcohol dependence syndrome such as the age of onset and severity of alcohol abuse6,7,8. Also, they tend to have high relapse rates9.

Internalizing symptoms are more inwardly experienced. Symptoms include a state of being anxious or afraid, worrying about the future, feeling self-conscious, being nervous, or feeling sad. Internalization may sometimes precede and contribute to the development of alcohol-use disorders. Specific treatment improves the treatment outcome of these patients 10. Accordingly, treatment for persons with alcohol Use Disorders may need to include interventions designed to addressed.[3]

The lack of data from the south Indian population in the domains of internalizing/externalizing with respect to the alcohol dependence and the clinical parameters has necessitated this study. The objective is to assess the prevalence of internalizing and externalizing traits in alcohol dependence syndrome and to assess the sociodemographic and clinical parameters of these patients in alcohol dependence syndrome. [4]

METHODOLOGY:

It is a retrospective cross-sectional study. It was conducted by reviewing the case records in the department of psychiatry, chettinad Hospital and Research Institute between the period 2013-2017.Data was extracted from the records by a trained psychiatry resident who is aware of the confidentiality and process of data maintenance in the department. The study was conducted after getting the approval of the Institute Ethics Committee.

PARTICIPANT RECORDS:

All the files between the five-year period were retrieved from the department registry. This amounted to 5300 case sheets which were screened for cases of alcohol dependence syndrome which was based on ICD-F10.20 diagnostic criteria. 425 case files bearing the age group 18-59 years were assessed.[5]

The details on the sociodemography on the basis of a semi-structured proforma was retrieved from the case sheets. The age of the patient at the time of presentation, their sex, educational status, occupation, marital status and the socioeconomic status were charted.

The details about the personality of the subjects was transcribed based on the facets of the externalizing or internalizing spectrum which was already mentioned on the files.[6]

The age of onset of use was grouped as less than 18years, 19 to 25years and greater than 25years. The age of onset of dependence was grouped as less than 25years (early onset) or greater than 25years (late onset).The duration of dependence was grouped as less than three years, three to five years, six to ten years and greater than ten years. As for the quantity of alcohol consumed in Units the data was categorized as less than

12 units, 12-24 units and>24 units. The duration of maximum abstinence was noted down and then grouped as: nil,0.1-0.5,0.5 to 1month,1 to 6month,6 to 12months, greater than 12months.The number of relapses in the subjects was grouped as less than three, three or more relapses.[7]

The details about medical complications due to alcohol use, use of other substances, family history of alcohol dependence were also noted. The information regarding the treatment undertaken such as medications taken for anti-craving and the other psychiatric medications, number of follow up (none,one to five,greater than five), duration of treatment taken and compliance whether present or absent were also noted.

STATISTICAL METHODS

Pearson's Chi-Square test was applied to compare the possible outcomes between the Internalizing and externalizing groups alone. P-value of less than 0.05 was considered statistically significant. The comparison groups containing variables less than five in number, Fisher's exact test was applied. Incomplete case records were excluded from the study.[8]

RESULTS:

The predominant age of presentation in this study was between 31-45 years accounting to about 53.86%(230)of the study subjects. The urban population accounted for 51.24% (207), with skilled laborers being 45.91% (185).The upper lower class was found to be the major socioeconomic group with alcohol dependence accounting to 53.58% (217). Majority of the subjects had high school education amounting to 40.85%(163). [9]

Internalizing traits was found in 36%(153)of the population, while 33%(141)had externalizing traits.31%(131)had neither of the traits.

Table 1: Correlation Among Personality Model and the Clinical Parameters of Alcohol Dependence Syndrome

PARAMETERS	PERSONALITY MODEL		TOTAL	P-VALUE
	EXTERNALIZING	INTERNALIZING		
Age of onset of use(years)				
< or = 18	61(43.6%)	18(11.8%)	79(27.1%)	<0.001
Age of onset of dependence (years)				
<25	123(87.9%)	23(15%)	146(49.8%)	<0.001
>25	17(12.1%)	130(85%)	147(50.2)	
Duration of Dependence (years)				
<3	27(19.3%)	33(21.6%)	60(20.5%)	0.345
3 to 5	21(15%)	34(22.2%)	55(18.8%)	
6 to 10	42(30%)	40(26.1%)	82(28%)	
>10	50(35.7%)	46(30.1%)	96(32.8%)	
Quantity of alcohol Consumption in Units				
<12	63(46%)	88(57.9%)	151(52.2%)	0.027
12-24	66(48.2%)	50(32.9%)	116(40.1%)	
>24	8(5.8%)	14(9.2%)	22(7.6%)	

Duration of maximum abstinence(months)				
Nil	61(45.5%)	71(47.7%)	132(46.6%)	0.973
0.1-0.5 Month	14(10.4%)	18(12.1%)	32(11.3%)	
0.5-1 Month	12(9%)	15(10.1%)	27(9.5%)	
1-6 Months	32(23.9%)	31(20.8%)	63(22.3%)	
6-12 Months	5(3.7%)	5(3.4%)	10(3.5%)	
>12 Months	10(7.5%)	9(6%)	19(6.7%)	
Compliance				
Present	40(69%)	46(79.3%)	86(74.1%)	0.203
Absent	18(31%)	12(20.7%)	30(25.9%)	
Number of relapses				
None	13(18.31%)	7(9.21%)	20(13.61%)	0.127
<3	36(50.7%)	50(65.79%)	86(58.5%)	
3 or more	22(30.99%)	19(25%)	41(27.89%)	

Externalizer had started using alcohol as early as 18years of age or lesser with the data being statistically significant. Also, the onset of dependence was found to have occurred earlier ie less than 25years of age in subjects with externalizing traits which was also statistically significant.

The compliance was better in internalizers although this couldn't be highlighted statistically. Externalizers were found to have 3 or more relapses(30.99%)more frequently than the internalizers(25%).

Table 2: Quantity of alcohol consumption and the age of onset of use.

	Quantity of Alcohol Consumed			Total	P value
	<12 units	12-24 units	>24units		
AGE OF ONSET OF USE					
<=18 years	30(19.9%)	37(31.9%)	9(40.9%)	76(26.3%)	0.023
19-25 years	62(41.1%)	51(44%)	6(27.3%)	119(41.2%)	
>25 years	59(39.1%)	28(24.1%)	7(31.8%)	94(32.5%)	

Later the onset of use(>25yrs of age),lesser the quantity of alcohol consumption ie 39.1% of the subjects consumed less than 12units/day.

Table 3: Type Of Withdrawal And Clinical Parameters Of Alcohol Dependence

	TYPE OF WITHDRAWAL		TOTAL	P VALUE
	COMPLICATED	SIMPLE		

Age of onset of use(years)				
<=18 years	27(42.86%)	53(22.94%)	80(27.21%)	0.006
19-25 years	22(34.92%)	98(42.42%)	120(40.82%)	
>25 years	14(22.22%)	80(34.63%)	94(31.97%)	
Age of onset of dependence(years)				
Quantity of alcohol consumed				
<12 units	28(18.5%)	123(81.5%)		0.252
12-24units	31(26.7%)	85(73.3%)		
>24units	4(18.2%)	18(81.8%)		
Number of follow ups				
1-5 times	25(39.7%)	73(31.6%)	98(33.3%)	0.096
>5 times	7(11.1%)	13(5.6%)	20(6.8%)	
None	31(49.2%)	145(62.8%)	176(59.9%)	
Compliance				
Present	27(81.8%)	59(71.1%)	86(74.1%)	0.234
Absent	6(18.2%)	24(28.9%)	30(25.9%)	

Subjects with earlier age of onset of use and onset of dependence were found to have complicated withdrawal more often than those who started late. In contrast to the earlier studies, simple withdrawal was associated with higher units of alcohol consumption.

DISCUSSION:

In this study, the relationship between the substance use behavior and the internalizing/externalizing traits of the subjects was studied.A sample of 425 case records were extensively reviewed.The externalizing traits account for early onset of use and early onset of dependence which is similar to the findings in the earlier studies.

This could be due to the fact that the sensation seeking characteristic of the externalizers may have resulted in the earlier onset of use.The impulsivity and immediate gratification tendencies in the externalizers may have manifested in the dependence towards alcohol.

Individuals with externalizing traits have a higher quantity of alcohol consumption which is in accordance with the previous studies.In contrast to an earlier study,more internalizers displayed shorter periods of abstinence as compared to externalizers.

This may be due to the fact that among internalizers,a significant proportion had comorbid depression and thereby a low level of motivation to quit alcohol.However,more frequency of relapse was observed in Externalizers,this could be attributed to the trait impulsivity in externalizers. This study yielded better compliance rates in internalizers which is in stark contrast to the earlier studies.

In this study, later the onset of use, lesser the quantity of alcohol consumption, whereas earlier onset of use, greater quantity of alcohol consumption which is in line with previous studies.Subjects with earlier age of onset of use and onset of dependence were found to have complicated withdrawal more often than those who started late which is similar to the findings of the previous studies.

In contrast to the earlier studies, Simple withdrawal was associated with higher units of alcohol consumption and there was no association found between the family history of alcohol use and the externalization as in the case of earlier studies

Findings of this study may have important preventive intervention implications in subjects displaying externalizing/internalizing traits.

The earlier onset of use and dependence in externalizers paired with greater quantity of alcohol consumption should be borne in mind while formulating the treatment plan for their effective management.

Strengths of the study:Precise definitions prior to extraction of the data helped in achieving exhaustive data collection such as information on the follow up, maximum period of abstinence, compliance, etc.A large sample of subjects were covered in the study.

This study is limited by its design being a retrospective study where the data collection was based on case record review. A prospective longitudinal study with similar objectives would yield better generalizability.

CONCLUSION:

This study revealed high prevalence of internalizing(36%)and externalizing(33%) traits among the cases of alcohol dependence syndrome.

The externalizers were found to have an earlier onset of use and an earlier onset of dependence which shall possibly account for the prolonged burden on the health care and the society in addition to the individual.

Pharmacological and psycho-social interventions for managing these traits can help in overcoming the burden of alcohol dependence and improve the treatment outcomes.[10]

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