

## Original Research Article

# Comparison of personality factors among alcoholics and non-alcoholics attending a tertiary care center in Puducherry

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## ABSTRACT

**Background:** Alcohol consumption is a addictive behavior, which eventually leads to personality disorder, stress. However, in recent times it was noted that duration of alcohol consumption is an important factor for the changes in personality profile. Hence this study was conducted to assess the personality disorders among the person who started consuming alcohol in the past 1-5 years with those of non-alcoholics.

**Methods:** This prospective cross sectional study was conducted to assess the personality profile among alcoholics and non-alcoholic individuals in the department of psychiatry in Sri Venkateshwara medical college hospital and research institute, Puducherry during the January 2019 to June 2019. A total of 80 participants with 40 alcohol consuming cases and 40 controls were included in this study. For assessing the personality disorder, 16 personality factor (PF) questionnaires were used.

**Results:** Personality profile like factor F which represents liveliness and Q4 which represents primary factor regarding tension were found to be greatly affected among cases who consume alcohol compared to non-alcoholic controls.

**Conclusions:** Significant changes noted in personality profile among cases who consume alcohol occurred within 1-5 years of starting alcohol consumption.

**Keywords:** 16 PF, Alcoholics, Personality, Non-alcoholics

## INTRODUCTION

Alcoholism is a relapsing, chronic brain disorder characterized by a strong desire for alcohol, a loss of control over alcohol intake and a negative emotional state during withdrawal.<sup>1</sup> Environmental and genetic factors interact and appear to play an equal role in the development of alcohol addiction.<sup>2</sup> Stress, mood disorders and anxiety can all increase a person's susceptibility to developing an alcohol addiction, which can lead to an alcohol use disorder (AUD).<sup>3</sup>

Alcoholism is a significant risk factor for personality disorders and stressful life events, which can lead to

depression and suicide.<sup>4</sup> As a result, the individual's personality is greatly influenced.<sup>5</sup> Drinking behavior is reinforced by its tension and fear-reduction properties, according to the self medication or tension reduction hypothesis.<sup>6</sup> The vulnerability model by Cooper et al was another theory that has attempted to explain the personality-alcohol connection.<sup>7</sup> Although empirical evidence suggested a link between personality changes and increased alcohol consumption, the overall effect was small and appeared to be influenced by other factors.<sup>8</sup> Also it was strongly believed that duration of alcohol consumption was an important factor for the changes in personality profile. Hence this study was conducted to assess the personality disorders among the person who

started consuming alcohol in the past 1-5 years with those of non-alcoholics.

### Objectives

The objective of this study was to compare the pattern of personality profile distribution among alcoholics at an earlier stage (1-5 years of alcohol consumption) and non-alcoholics.

### METHODS

This prospective cross-sectional study was conducted to assess the personality profile among alcoholics and non-alcoholic individuals in the department of psychiatry in Sri Venkateshwara medical college hospital and research institute, Puducherry, a tertiary care teaching hospital. Alcoholics who consumed alcohol for 1-5 years and attended the outpatient department of psychiatry during the January 2019 to June 2019 were included as cases and non-alcoholics who accompanied the cases who presented to psychiatry department were included as controls in the study. Cases with concomitant substance abuse other than alcohol were excluded from this study. A total of 80 participants with 40 alcohol consuming cases and 40 controls were included in this study.

After taking the written informed consent, both cases and controls were assessed for the demographic and clinical presentation by the principal investigator using a pre structured proforma. Following which the principal investigator assessed the detailed history of the participants and clinical examination (both general and systemic examination) was done, wherever needed. For assessing the personality disorder, 16 PF questionnaire was used in this study.<sup>9</sup> The data was entered in excel sheet and analyzed using SPSS (version 17). Descriptive statistics with mean, standard deviation and proportions

(%) were calculated for quantitative variables. To test the hypothesis Chi square test and independent sample t test were used.  $P < 0.05$  was considered as statistically significant.

### RESULTS

In this study 45% of the participants were in the age group of 31-40 years, followed by 27.5% participants in the age range of 41-50 years. In the age group of less than 30 years and 51-60 years 15% and 13.8% of the cases were recorded. The association between the age and the case group and control group was not statistically significant ( $p=0.8884$ ). Out of 7.5% of illiterate 5% of them were from cases and 2.5% of them were from controls. Most of the 42.5% of the study population have completed secondary school. Graduates were found to be 1.3% among cases and 2.5% of them were from controls. There was no statistical significant association between cases and controls for educational status; the p value was noted as 0.5076. In this study 50% of the participants were semi-skilled workers, 37.5% of the participants were skilled workers and 12.5% were unemployed but the association between occupation among cases and control group was statistically insignificant ( $p=0.3441$ ).

On comparing the proportion of cases with scores 1-4, cases falling in factor F of 16 PF personality score were recorded to be statistically significant with p value of 0.0263, which showed there was statistical difference between cases and controls for the factor F (liveliness) whereas other personality factors like A (warmth), B (reasoning), C (emotional stability), E (dominance), G (rule consciousness), H (social boldness), I (sensitivity), L (vigilance), M (abstractedness), N (privateness), O (apprehension), Q1 (openness to change), Q2 (self reliance), Q3 (perfectionism) and Q4 (tension) were found to be statistically insignificant.

**Table 1: Background characteristics of study population.**

Parameters	Cases	Controls	Total	P value
	N (%)	N (%)	N (%)	
<b>Age group (in years)</b>				
≤30	7 (8.8)	5 (6.2)	12 (15)	0.8884
31-40	18 (22.5)	17 (21.3)	36 (45)	
41-50	10 (12.5)	12 (15)	22 (27.5)	
51-60	5 (6.3)	6 (7.5)	11 (13.8)	
<b>Educational qualification</b>				
Illiterate	4 (5)	2 (2.5)	6 (7.5)	0.5076
Primary school	13 (16.3)	8 (10)	21 (26.3)	
Secondary school	16 (20)	18 (22.5)	34 (42.5)	
Higher secondary school	6 (7.5)	10 (12.5)	16 (20)	
Graduates	1 (1.3)	2 (2.5)	3 (3.75)	
<b>Occupation</b>				
Unemployed	7 (8.8)	3 (3.75)	10 (12.5)	0.3441
Semi-skilled	20 (25)	20 (25)	40 (50)	
Skilled	13 (16.3)	17 (21.25)	30 (37.5)	

**Table 2: Comparison of 16 PF personality score of 1-4 among cases and controls.**

16 PF profile	Cases		Controls		P value
	Frequency	Percentage	Frequency	Percentage	
A	15	37.5	12	30	0.4809
B	15	37.5	10	25	0.2307
C	13	32.5	11	27.5	0.6278
E	5	12.5	2	5	0.2382
F	7	17.5	1	2.5	0.0263*
G	9	22.5	6	15	0.3931
H	6	15	4	10	0.5017
I	2	5	0	0	0.1547
L	4	10	1	2.5	0.1685
M	8	20	10	25	0.5946
N	9	22.5	8	20	0.7859
O	4	10	6	15	0.5017
Q1	2	5	03	7.5	0.6462
Q2	3	7.5	2	5	0.6462
Q3	20	50	14	35	0.1775
Q4	3	7.5	5	12.5	0.4589

\*Significant.

**Table 3: Comparison of 16 PF personality score of 7-10 among cases and controls.**

16 PF profile	Cases		Controls		P value
	Frequency	Percentage	Frequency	Percentage	
A	5	12.5	7	17.5	0.5337
B	5	12.5	4	10	0.7251
C	0	0	0	0	-
E	5	12.5	8	20	0.3663
F	7	17.5	1	2.5	0.0263*
G	3	7.5	4	10	0.3079
H	7	17.5	4	10	0.3331
I	2	5	4	10	0.3989
L	9	22.5	6	15	0.3931
M	3	7.5	1	2.5	0.3079
N	4	10	8	20	0.2133
O	1	2.5	0	0	0.3173
Q1	7	17.5	8	20	0.7759
Q2	6	15	4	10	0.5017
Q3	3	7.5	5	12.5	0.4589
Q4	18	45	7	17.5	0.0084*

\*Significant.

Likewise on comparing the proportion of cases with scores between 7-10, there was statistically significant difference noted among cases and controls in 16 PF profile for F factor (liveliness) and Q4 primary factor regarding tension as shown in the table. However, there was no statistical significant difference noted A, B, C, E, G, H, I, L, M, N, O, Q1 and Q3.

## DISCUSSION

Despite wide variation in Minnesota multiphasic personality inventory (MMPI) profiles, the male patients

shared a number of personality traits. Primary elevations on the F-scale (poor ego strength) and the psychopathic deviate scale reflected common characteristics. Consistently high scores on these two scales were obtained almost without exception. In terms of the male group as a whole, these findings suggested that male alcoholic patients have a low level of frustration tolerance and have difficulty coping with stress, particularly in marital and work relationships. Despite his strong feelings of alienation from his family and community, he was socially adept, gregarious and talkative. Finally, the male patient had a high level of energy but poor impulse control.

Individual personality patterns differed greatly from these general characteristics. Four distinct personality types were identified based on a differential analysis of MMPI profiles.<sup>10</sup>

The four groups and criteria for inclusion were passive-aggressive-primary elevation on the psychopathic deviate (Pd), mania (Ma) and social extroversion (Si) scales; depressive-compulsive-primary elevation on the depression (D), psychasthenia (Pt) and social introversion (Si) scales; schizoid-prepsychotiprimary elevation on the schizophrenia (Sc) and F-scale; passive-dependent-primary elevation on the hypochondriasis (Hs) and hysteria (Hy) scales.<sup>10</sup>

Life events tended to have a greater impact on men's excessive alcohol consumption as previously observed.<sup>11,12</sup> This finding could be explained in part by sex differences in alcohol consumption and the impact of life events on intake; other possibilities included different support seeking and coping styles, stigmatisation and societal norms.<sup>12,13</sup> When examining overall differences, it was discovered that excessive alcohol consumption had a significant impact on certain personality profile factors years later, while others appeared to have only a short-term or no effect at all. The latter may be due to adaptation, which meant that people adjusted to life changes relatively quickly because they found explanations for unpleasant events and become accustomed to pleasant ones.<sup>14-16</sup> This could explain some observed trends in the years following certain personality changes, implying that heavy alcohol consumption levels eventually returned to pre-event levels.

Limitation of this study was that it was conducted in the outpatient department of psychiatry where cases always presented with one or the other complaints however if the same study was conducted as a population based study among the non-complaint cases (cases without any complaints), the picture of personality disorder may vary.

## CONCLUSION

Our findings suggest that personality profile like factor F which represents liveliness and Q4 which represents primary factor regarding tension were found to be greatly affected among cases who consume alcohol compared to non-alcoholic controls. Most notably these significant changes among cases who consume alcohol occurred within 1-5 years of starting alcohol consumption.

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