

## Socio-Emotional Factors in Alcohol Dependence

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### ABSTRACT

**Background:** Alcohol-dependent patients are traditionally believed to have insecure attachment styles, higher anger expression, and lower self-esteem. There is a need to study them together. **Aim:** To understand the relationships amongst various of the socio-emotional factors. **Materials and Methods:** Forty male patients with Alcohol dependence syndrome and 40 matched healthy controls (General Health Questionnaire-12 score <3) were compared on attachment styles (on Relationship Scale Questionnaire), anger domains (on State Trait Anger Expression Inventory), and self-esteem (on Rosenberg Self-esteem Scale). **Statistics and Analysis:** Comparison using independent samples t test and chi square test; correlation using Pearson's correlation coefficient. **Results:** Patients had significantly higher anger expression, 'anger in' and 'anger out,' and lower self-esteem than healthy controls. Severity of alcohol dependence had significant correlation with 'anger out,' and self-esteem had significant negative correlation with anger expression. **Conclusion:** The present study suggests that the socio-emotional factors studied are developmentally linked to each other.

**Key words:** Alcohol dependence, anger, attachment styles, self-esteem, socio-emotional

### INTRODUCTION

Social influence processes play an important role in the etiology and maintenance of problematic alcohol use.<sup>[1]</sup> Efforts to understand these processes in terms of adult attachment have demonstrated that several measures of drinking behavior are significantly associated with attachment.<sup>[2-5]</sup> McNally and colleagues (2003)<sup>[6]</sup> suggested that individuals with insecure attachment style tend to seek use of alcohol or illicit drugs, as a coping mechanism for emotional self-regulation. It is also proposed that development of these insecure attachment styles enhance attainment of anger and hostility as personality traits.<sup>[7]</sup>

Anger as trait or 'trait anger' is classified under anger experience along with state anger. Anger expression, which is further sub-divided into anger in and anger out and anger control are the other two broad categories of anger along with anger experience.<sup>[8]</sup> Trait anger is consistently found to be significantly higher in alcohol groups with problem drinking, but the relationship between state anger and problem drinking is not established with consistency.<sup>[9-10]</sup> These studies also indicate that problematic alcohol use is related consistently to significantly higher anger expression and significantly lower anger control. Furthermore, anger and aggression are closely related as anger serves as a catalyst of aggression under the influence of alcohol intoxication.<sup>[11]</sup> Bushman and Cooper (1990)<sup>[12]</sup> in their meta-analysis showed that problematic alcohol use actually causes aggressive behavior.

Another social influence process that plays an important role in problematic drinking is self-esteem. It is suggested that both low and high self-esteem might lead to aggression. There is a proposed continuous relationship between self-esteem and aggression; 'U'-shaped as well

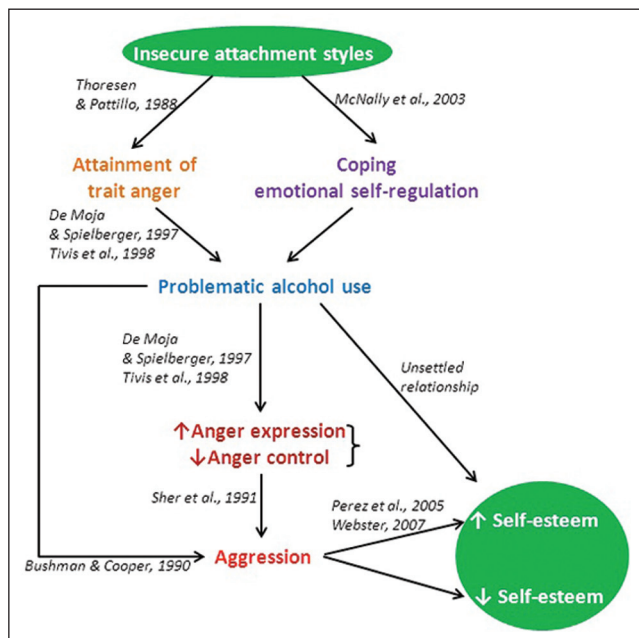
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<b>Website:</b> www.ijpm.info	<b>Quick Response Code</b> 
<b>DOI:</b> 10.4103/0253-7176.130978	

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as inverted 'U'-shaped statistical relationship between self-esteem and aggression is reported.<sup>[13-14]</sup> However, the relationship between problematic alcohol use and self-esteem, which is defined operationally as an evaluation of the self and includes how the person feels about him or her or a personal judgment of worthiness,<sup>[15]</sup> remains unsettled. Inverse associations,<sup>[16-18]</sup> direct and positive associations<sup>[19]</sup> as well as no associations<sup>[20-21]</sup> are reported between problem drinking and self-esteem.

This literature is summarized in a model [Figure 1]. According to this model, development of insecure attachment styles is associated with attainment of trait anger, which is a factor responsible for problematic drinking. Disturbances of anger expression and anger control mediate the relationship between problematic alcohol use and instabilities in self-esteem. Although tested separately, these variables have not been investigated together. Aim of our study was to investigate the relationship between attachment styles, anger, and self-esteem in patients with alcohol dependence. As insecure attachment styles and anger are significantly associated with problem drinking, we hypothesized that patients with alcohol dependence will have significantly higher scores on insecure attachment styles (Hypothesis 1) and anger expression (Hypothesis 2). As discussed earlier, the relationship between problematic alcohol use and self-esteem is not strong; we generated a null hypothesis that there will be no significant difference on self-esteem scores between the two groups (Hypothesis 3). Further, we hypothesized that there will be significant correlation between the all the three variables studied (Hypothesis 4).



**Figure 1:** Model showing the relationship between insecure attachment styles and self-esteem

## MATERIALS AND METHODS

This was an observational study conducted at Central Institute of Psychiatry, Ranchi, India. The study was approved by Ethics Committee of the Institute. Written informed consent was obtained from all the subjects.

### Subjects

#### Patients

Forty patients were recruited into the study by purposive sampling from the inpatients of De-addiction center of our Institute. The inclusion criteria were ICD-10 Diagnostic Criteria for Research<sup>[22]</sup> diagnosis of alcohol dependence syndrome, having successfully completed the detoxification phase of treatment, and aged between 18 and 50 years. The exclusion criteria were past neurological illness and presence of significant head injury, and presence of co-morbid/induced psychosis or any other psychiatric disorder. To avoid the influence of common co-morbid or induced psychiatric disorders like depression on the variables tested, these too were excluded.

#### Controls

Forty age-, sex-, and education-matched healthy individuals were recruited in the control group. These subjects, predominantly constituted by hospital staff and public in the immediate locality of the hospital, were administered general health questionnaire (GHQ)-12,<sup>[23]</sup> which warranted a score of below 3. Presence of substance use in any pattern, any neurological illness or significant head injury and psychiatric disorder were the exclusion criteria.

### Clinical assessments

Severity of dependence on alcohol was assessed with Severity of Alcohol Dependence Questionnaire (SADQ).<sup>[24]</sup> It has four sub-scales of physical symptoms, mood and state of mind, recent period of drinking, and period of off drinking followed by heavy drinking. Attachment styles were assessed with the use of Relationship Scale Questionnaire (RSQ)<sup>[25]</sup> - a 30-item, 5-point scale assessing 4 categories of attachment styles namely, secure, dismissing, preoccupied and fearful avoidant along with the dimensions of anxiety and avoidance. Anger was measured with State-Trait Anger Expression Inventory (STAXI),<sup>[26]</sup> which is a self-report inventory consisting of 44 items. Responses are coded on a 4-point scale. It measures state anger, trait anger, anger in, anger out, anger control, and anger expression. Self-esteem was measured on a 10-item, 4-point scale-The Rosenberg Self Esteem Scale.<sup>[27]</sup>

### Statistical analysis

The group differences among patients and controls were done using independent samples *t* test and Chi

square test for continuous and categorical variables, respectively. Pearson's correlation was computed to find correlation between severity of alcohol dependence, self-esteem, anger, and attachment styles among patients.

## RESULTS

### Socio-demographic and clinical profile

Sample characteristics have been summarized in Table 1. All the participants were males; mean age of subjects in the patient group was  $38.20 \pm 7.74$  years and in the control group was  $36.88 \pm 7.37$  years. The two groups were comparable in terms of socio-demographic characteristics, except family type, occupation, and income. Significantly higher number of normal controls were employed and belonged to a nuclear family as compared to patients ( $P = .025$  and  $.013$ , respectively). Individuals belonging to lower income category were significantly higher in the patient group than in the normal group ( $P = .006$ ). The mean dependence severity in patient group on SAD-Q was  $22.05 \pm 11.91$ . The total duration of alcohol intake was  $15.60 \pm 7.59$  years and that of dependence was  $5.80 \pm 3.81$  years in the patient group.

### Attachment styles, anger domains, and self-esteem

Table 2 shows comparison of attachment styles, anger, and self-esteem variables between patient and control groups. No significant difference was found between the two groups on any of the attachment styles. Anger expression ( $P < .01$ ), anger in ( $P < .01$ ), and anger out ( $P < .05$ ) were significantly higher in the patients group. Total Self-esteem scores were significantly lower in the alcohol-dependent i.e. total patients group than the control group ( $P < .01$ ).

Pearson correlation showed that severity of alcohol dependence is significantly positively correlated ( $r = .316$ ;  $P < .05$ ) with anger out, and self-esteem had significant negative correlation ( $r = -.465$ ;  $P < .01$ ) with overall anger expression.

## DISCUSSION

### Demographic profile

Our study sample showed that subjects recruited in control group differed significantly from patient group in terms of family type, income, and occupation. CIP is a tertiary center, which receives mostly moderate to severe cases of alcohol dependence. Higher severity of dependence might explain significantly lesser income and occupation status. Hospital staff mainly formed the control group. Appointed as staff in the institute are people from various other states in the country who live in nuclear families. Method of recruitment of sample could explain the significant difference in the family type.

**Table 1: Socio-demographic characteristics of the sample**

Variables	Group	Group		$\chi^2$	df	p
		Patients	Controls			
		N (%) / Mean $\pm$ SD	N (%) / Mean $\pm$ SD			
Education	Low	22 (55.0%)	13 (32.5%)	4.50	2	0.105
	Middle	14 (35.0%)	23 (57.5%)			
	High	4 (10.0%)	4 (10.0%)			
Family type	Nuclear	13 (32.5%)	23 (57.5%)	5.05	1	0.025*
	Joint	27 (67.5%)	17 (42.5%)			
Occupation	Employed	34 (85.0%)	40 (100%)	6.49	1	0.013*
	Unemployed	6 (15.0%)	0 (0%)			
Income	Low	23 (57.5%)	9 (22.5%)	10.25	2	0.006**
	Medium	11 (27.5%)	21 (52.5%)			
	High	6 (15.0%)	10 (25.0%)			
Religion	Hindu	29 (72.5%)	33 (82.5%)	2.73	2	0.256
	Non-Hindu	11 (27.5%)	6 (15.0%)			
Residence	Rural	8 (20.0%)	9 (22.5%)	0.07	1	0.500
	Urban	32 (80.0%)	31 (77.5%)			

\* $P < .05$ , \*\* $P < .01$

**Table 2: Comparison between alcohol-dependent patients and normal controls on various dimensions of attachment styles, anger, and self-esteem variables**

Variables	Groups	Groups		t	P
		Patients	Controls		
		N = 40 Mean $\pm$ SD	N = 40 Mean $\pm$ SD		
Attachment styles	Secure	11.55 $\pm$ 3.98	11.18 $\pm$ 2.68	0.49	0.623
	Fearful	9.92 $\pm$ 3.54	9.42 $\pm$ 3.09	0.67	0.503
	Preoccupied	10.10 $\pm$ 3.10	9.88 $\pm$ 2.45	0.36	0.720
	Dismissing	14.98 $\pm$ 4.43	16.08 $\pm$ 2.85	-1.32	0.191
	Avoidant	18.90 $\pm$ 4.89	18.52 $\pm$ 4.27	0.36	0.761
	Anxiety	9.80 $\pm$ 4.07	9.35 $\pm$ 3.30	0.54	0.589
	State anger	10.78 $\pm$ 2.40	10.95 $\pm$ 2.08	-0.35	0.729
	Trait anger	20.80 $\pm$ 6.09	19.80 $\pm$ 5.58	0.76	0.447
	Angry temperament	7.05 $\pm$ 2.99	7.15 $\pm$ 2.54	-0.16	0.873
	Anger	Angry reaction	9.88 $\pm$ 3.63	9.05 $\pm$ 3.45	1.04
Anger in		18.75 $\pm$ 5.71	14.92 $\pm$ 3.44	3.63	0.001**
Anger out		16.58 $\pm$ 5.24	13.80 $\pm$ 4.05	2.65	0.010*
Anger control		21.68 $\pm$ 5.51	23.70 $\pm$ 5.05	-1.71	0.091
Anger expression		27.85 $\pm$ 9.92	21.20 $\pm$ 8.33	3.24	0.002**
Self esteem	18.90 $\pm$ 4.74	21.90 $\pm$ 4.22	-2.98	0.004**	

\* $P < .05$ , \*\* $P < .01$

### Hypothesis 1

Our results showed that the two groups did not significantly differ from each other on attachment styles. Hence, this hypothesis was rejected. Nuclear families from India suffer from a higher psychological distress;<sup>[28]</sup> psychosocial distress on the other hand is positively associated with insecure attachment styles.<sup>[29]</sup> As discussed in the previous subsection, control group had significantly higher number of subjects belonging to nuclear families. Alcohol consumption in dependence pattern and nuclear family type might have influenced attachment styles of patient and control groups,

respectively; and rejection of hypothesis 1 might be attributed to this.

### Hypothesis 2

Anger expression, anger in, and anger out were significantly higher in the patients group. Hence, hypothesis 2 was accepted. This supports the earlier studies,<sup>[9]</sup> which too showed similar results on the expression domain of the anger. The present study found that neither of the other domains of anger i.e. state and trait anger showed significant differences between the study groups. This suggests that alcohol do not seem to have significant effect on the anger experience domain of anger. State anger in earlier studies too showed inconsistent results.<sup>[9,10]</sup>

### Hypothesis 3

There are two coping mechanisms classically mentioned, emotion-focused coping and the problem-focused coping. As the desire to reduce the effects of stressful situations increases, those with weak egos are forced to use emotion-focused coping, and the universal pattern for such mechanism is use of substances especially, drinking alcohol.<sup>[27]</sup> Weak ego here can be assumed as low self-esteem. Our study showed that patients scored significantly low on self-esteem. Problem behavior theory<sup>[30]</sup> and self-derogation theory<sup>[31-34]</sup> primarily support a developmental linkage between alcohol and self-esteem. We generated a null hypothesis that there will be no significant difference on self-esteem scores between the two groups based on inconsistent findings in this regard. Our study findings accepted this hypothesis as significantly lower self-esteem scores were found in patient group than the controls. Bowlby (1973)<sup>[35]</sup> proposed that early attachment styles influence the style of adulthood self-esteem in normal individuals too. As our study sample did not differ on attachment styles, subjects in control group too were supposed to have a lower self-esteem that was similar to self-esteem level of patients. Our finding suggests that alcohol consumption in dependence pattern in addition to insecure attachment styles (both at developmental level) would lead to greater degrees of low esteem than insecure attachment alone.

### Hypothesis 4

Correlational analysis showed that severity of alcohol dependence was significantly correlated with anger out and, self-esteem had significant negative correlation with anger expression; correlation between self-esteem and alcohol dependence severity was not significant. Hence, hypothesis 4 is partially accepted. These findings support the literature available as well suggests that the relationship between self-esteem and alcohol dependence severity is indeed unsettled.

## CONCLUSIONS

As discussed here, a developmental linkage exists between attachment styles and anger,<sup>[7]</sup> and problematic alcohol use and self-esteem.<sup>[30-34]</sup> On the other hand, most of the anger domains and problematic alcohol use are consistently associated.<sup>[9-10]</sup> Although our study could not establish the relationship between attachment and anger, it supports the existing literature in terms of the link between problematic alcohol use i.e. alcohol dependence, anger, and self-esteem. Through this study we suggest that all these variables might be linked to each other developmentally.

### Limitations and future directions

Limited sample size and inclusion only male subjects limit the generalizability of the findings. It is suggested that future work in this regard should include larger sample size and subjects of both genders. The model suggested in this paper can hence be investigated using a meditational analysis. It would more reliably investigate the proposed hypotheses. To study the developmental link between the studied variables more empirically, long-term prospective studies are required.

## REFERENCES

1. Wood MD, Read JP, Palfai TP, Stevenson JF. Social influence processes and college student drinking: The mediational role of alcohol outcome expectancies. *J Stud Alcohol* 2001;62:32-43.
2. Brennan KA, Shaver PR. Dimensions of adult attachment, affect regulation, and romantic relationship functioning. *Pers Soc Psychol Bull* 1995;21:267-83.
3. Burge D, Hammen C, Davila J, Daley SE, Paley B, Lindberg N, *et al.* The relationship between attachment cognitions and psychological adjustment in late adolescent women. *Dev Psychopathol* 1997;9:151-67.
4. Cooper ML, Shaver PR, Collins NL. Attachment styles, emotion regulation, and adjustment in adolescence. *J Pers Soc Psychol* 1998;74:1380-97.
5. Ognibene TC, Collins NL. Adult attachment styles, perceived social support and coping strategies. *J Soc Pers Rel* 1998;15:323-45.
6. McNally AM, Palfai TP, Levine RV, Moore BM. Attachment dimensions and drinking-related problems among young adults: The mediational role of coping motives. *Addict Behav* 2003;28:1115-27.
7. Thoresen CE, Pattillo JR. Exploring the type A behavior pattern in children and adolescents. In: Houston BK, Snyder CR, editors. *Type A Behavior Pattern: Research, Theory, and Intervention*. New York: Wiley; 1988. p. 98-145.
8. Spielberger CD, Reheiser EC, Sydeman SJ. Measuring the experience, expression and control of anger. *Issues Compr Psychiatr Nurs* 1995;18:207-32.
9. DeMojá CA, Spielberger CD. Anger and drug addiction. *Psychol Rep* 1997;81:152-4.
10. Tivis LJ, Parsons OA, Nixon SJ. Anger in an inpatient treatment sample of chronic alcoholics. *Alcohol Clin Exp Res* 1998;22:902-7.
11. Sher KJ, Walitzer KS, Wood PK, Brent EE. Characteristics of children of alcoholics: Putative risk factors, substance

- use and abuse, and psychopathology. *J Abnorm Psychol* 1991;100:427-48.
12. Bushman BJ, Cooper HM. Effects of alcohol on human aggression: An integrative research review. *Psychol Bull* 1990;107:341-54.
  13. Perez M, Vohs KD, Joiner TE. Discrepancies between self- and other-esteem as correlates of aggression. *J Soc Clin Psychol* 2005;24:607-20.
  14. Webster GD. Is the relationship between self-esteem and physical aggression necessarily U-shaped? *J Res Personal* 2007;41:977-82.
  15. Beane JA, Lipka RP. *Self concept, self esteem and curriculum*. New York: Teachers College Press; 1986.
  16. DeHart T, Tennen H, Armeli S, Todd M, Affleck G. Drinking to regulate negative romantic relationship interaction: The moderating role of self-esteem. *J Exp Soc Psychol* 2008;44:527-38.
  17. Lewisa MA, Phillippi J, Neighbors C. Morally Based Self-Esteem, drinking motives, and alcohol use among college students. *Psychol Addict Behav* 2007;21:398-403.
  18. Stein JA, Leslie MB, Nyamathi A. Relative contributions of parent substance use and childhood maltreatment to chronic homelessness, depression, and substance abuse problems among homeless women: Mediating roles of self-esteem and abuse in adulthood. *Child Abuse Negl* 2002;26:1011-27.
  19. Gerrard M, Gibbons FX, Reis-Bergan M, Russell DW. Self-esteem, self-serving cognitions, and health risk behavior. *J Pers* 2000;68:1177-201.
  20. Baumeister RF, Campbell JD, Krueger JI, Vohs KD. Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychol Sci Publ Inter* 2003;4:1-44.
  21. Luhtanen RK, Crocker J. Alcohol use in college students: Effects of level of self-esteem, narcissism, and contingencies of self-worth. *Psychol Addict Behav* 2005;19:99-103.
  22. World Health Organization. *The ICD-10 classification of mental and behavioral disorders: Diagnostic criteria for research*. Geneva: World Health Organization; 1992.
  23. Goldberg DP, William P. A user guide to general health questionnaire. Windsor: NFER Nelson; 1998.
  24. Stockwell T, Murphy D, Hodgson R. The severity of alcohol dependence questionnaire: Its use, reliability and validity. *Br J Addict* 1983;78:145-55.
  25. Griffin D, Bartholomew K. Models of the self and other: Fundamental dimensions underlying measures of adult attachment. *J Pers Soc Psychol* 1994;67:430-45.
  26. Spilberger CD. *State Trait Anger Expression Inventory: Professional Manual*. Florida: Psychological Assessment Resources; 1988.
  27. Rosenberg M. *Society and the Adolescent Self image*. New Jersey: Princeton University Press; 1965.
  28. Pattanayak B, Panda M, Mohanty S. Impact of family structure and gender bias on stress and coping styles. An empirical study. *Soc Sci Int* 1997;13:42-50.
  29. Mallinckrodt B, Wei M. Attachment, social competencies, social support, and psychological distress. *J Couns Psychol* 2005;52:358-67.
  30. Jessor R, Jessor SL. *Principles of psychology*. New York: Dower; 1977.
  31. Kandel DB. Drug and drinking behavior among youth. *Ann Rev Sociol* 1980;6:235-85.
  32. Kaplan HB. *Self attitudes and deviant behavior*. California: Goodyear; 1975.
  33. Kaplan HB, Martin SS, Robbins C. Application of a general theory of deviant behavior: Self-derogation and adolescent drug use. *J Health Soc Behav* 1982;23:274-94.
  34. Kaplan HB, Martin SS, Robbins C. Pathways to adolescent drug use: Self derogation, peer influence, weakening of social controls, and early substance use. *J Health Soc Behav* 1984;25:270-89.
  35. Bowlby J. *Attachment and loss- Separation, anxiety and anger*. New York: Basic Books; 1973.

**How to cite this article:** Tikka DL, Ram D, Dubey I, Tikka SK. Socio-emotional factors in alcohol dependence. *Indian J Psychol Med* 2014;36:153-7.

**Source of Support:** Nil, **Conflict of Interest:** None.

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