

## DEPENDENCE, LOCUS OF CONTROL, PARENTAL BONDING, AND PERSONALITY DISORDERS: A STUDY IN ALCOHOLICS AND CONTROLS

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**Abstract** — Personality traits, socio-cultural factors, and dysfunctional family systems are considered to be important in the aetiology and clinical development of alcoholism. Particularly, conflict and issues involving psychological (emotional) dependence have long been associated with alcohol addiction. The present work, part of a more extensive study to validate a new rating scale to measure emotional dependence, the Dependence Self-rating Scale (DSRS), assesses dependence, orientation of locus of control, parental bonding perceptions, and personality disorders (PDs) in alcoholic and non-alcoholic samples. The alcoholics showed a prevalence of PDs of 31.3%. The most frequent is the Schizoid PD (40%) followed by the Dependent PD (20%). Subjects with antisocial PD were not included in our selection criteria. The alcoholics scored higher on the DSRS than the controls, but this difference was not statistically significant. By making a comparison between subjects with and without PDs, the DSRS scores were significantly higher in alcoholics with PDs. No significant differences between alcoholics and non-alcoholics in the parental perceptions and locus of control were seen. These findings are sufficiently coherent to encourage further studies on psychological emotional dependence in alcoholics using the DSRS.

### INTRODUCTION

Decades of research have failed to detect a distinctive personality organization specifically related to alcohol dependence. However, the literature suggests that alcoholics have personality traits that differ from those of the general population.

Alcoholism is a heterogeneous disorder and has been shown to have extensive co-morbidity with personality disorders (PDs). The prevalence of PDs in alcoholics ranges between 11% and 78% (Movalli *et al.*, 1996). Antisocial personality disorder (ASPD) is a very common co-morbid psychopathology among alcoholics (Hesselbrock *et al.*, 1985; Rounsaville *et al.*, 1987; Morgenstern *et al.*, 1997), although there is a group of alcoholics who do not meet the criteria for this Axis II diagnosis (Helzer and Pryzbeck, 1988; Schuckit *et al.*, 1994). Several papers have reported a relative heterogeneity of Axis II diagnoses, confirming the complexity of the relationship between personality and alcoholism

(O'Boyle, 1993). Alcoholism is correlated with dependent personality traits; alcoholics are frequently described as being 'dependent', 'oral' individuals. They show these tendencies in their drinking behaviour, even though it is difficult to establish if this personality characteristic is a precursor, rather than a result, of excessive drinking (Loas and Guelfi, 1991; Bornstein, 1993). There is strong evidence that such emotional dependence plays an important role in therapy process and outcome; alcoholics with dependent personality traits show higher rates of treatment compliance than alcoholics with other PDs (Poldrugo and Forti, 1988; Bornstein, 1993).

In alcoholism research, many authors have evaluated the dynamics of locus of control (Rotter, 1966). A belief in internal control would be indicative of an individual who perceives events as being a consequence of his or her own behaviour. By contrast, externally-oriented individuals perceive events as not being contingent upon personal actions, but rather influenced by luck, chance or some other power. Research on locus of control orientation in alcoholics has yielded inconsistent results. Since alcoholics show emotionally

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dependent behaviour, they would have little belief in their ability to govern their own lives; they may also exhibit a more external locus of control. However, numerous studies have indicated that alcoholics have an internal control orientation (Costello and Wicoff, 1984; Natera *et al.*, 1988; Mills and Taricone, 1991).

Several authors have underlined the importance of parental rearing styles in the development of alcoholism. Some researchers (De Jong *et al.*, 1991; Vrsti and Eisemann, 1994), using the EMBU [the Swedish abbreviation of 'my memories of upbringing' (Perris *et al.*, 1980)], found that alcoholics, compared with a normal population, reported considerably higher scores on rejection and overprotection and considerably lower scores on emotional warmth for both parents. Other authors (Bernardi *et al.*, 1989), using the Parental Bonding Instrument (PBI) (Parker *et al.*, 1979) and comparing alcoholics with normal controls, found that alcoholics had higher maternal protection scores than controls.

The first stage in our study was to investigate the prevalence rates of PDs in alcoholics and non-alcoholics, and to determine which non-ASPDs were highly co-morbid in alcoholics. The second stage was to assess the level of psychological dependence, the orientation of locus of control, and the parental bonding perceptions in both groups.

## SUBJECTS AND METHODS

### *Subjects*

The alcoholic sample consisted of 33 in-patients seen at the Gastroenterology Department in Padova, (29 males, 4 females; mean age  $\pm$  SD = 48.8  $\pm$  8.7 years) with a primary diagnosis of alcohol dependence or abuse according to DSM-IV criteria (American Psychiatric Association, 1994). The exclusion criteria were a mental/organic disorder and a primary diagnosis of ASPD. The matched control sample consisted of 34 non-alcoholic in-patients seen at the Gastroenterology Department (30 males, 4 females; mean age  $\pm$  SD = 49.9  $\pm$  9.6 years), screened with the General Health Questionnaire (GHQ; Goldberg and Williams, 1988) to exclude any psychiatric illnesses. The subjects participated voluntarily and gave their informed consent before taking part in the study.

### *Instruments*

The following four instruments were administered:

- (1) The Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II, 2.0; First *et al.*, 1994). This is a semi-structured interview of 117 items for the diagnosis of DSM-IV PDs.
- (2) The Dependence Self-rating Scale (DSRS, Borgherini *et al.*, 1995), a new 48-item self-report questionnaire to measure psychological (emotional) dependence, developed by our research group, selecting items from various existing dependent scales. The instrument assesses the main components of dependence taken from the literature (Birtchnell, 1988, 1991), namely poorly established identity, lack of competence and confidence, need for closeness and approval, tendency to be influenced, need for protection and care, and fear of rejection. DSRS is an objective dependence measure that requires subjects to respond to direct questions regarding dependent thought, feelings and behaviours. Ratings are generated on a four-point Likert-style scale. Two previous studies (Borgherini *et al.*, 1995; Marchiori *et al.*, 1997) indicate that the DSRS has a good internal consistency.
- (3) The Parental Bonding Instrument (PBI, Parker *et al.*, 1979), a self-administered 50-item questionnaire (25 for each parent), which measures subjectively perceived parental characteristics during the first 16 years of life. Two scales, 'care' and 'protection', are derived for each parent. Care is characterized on the one hand by affection and warmth, and on the other by rejection, indifference, and coldness. Protection involves parental control, overprotection, and intrusion on the one hand, and promotion of independence on the other. Ratings are generated on a four-point Likert-style scale.
- (4) The Internal-External Locus of Control Scale (LCS; Rotter, 1966), a self-administered 29-item questionnaire which assesses the amount of perceived control an individual has over circumstances influencing their life. The LCS contains six filler items and is keyed in such a way that high scores indicate greater external control orientation.

### *Statistical analysis*

Data were analysed statistically using the SPSS software. The statistical significance of socio-demographic variables between the two samples was evaluated using the  $\chi^2$ -test and one-way analysis of variance (ANOVA). The evaluation of statistical significance of the difference between

average scores of the two samples was performed by means of ANOVA with the computation of the *F* coefficient.

## RESULTS

The demographic data for the samples are given in Table 1. The only significant differences were found in the level of education ( $P < 0.05$ ) and the employment status ( $P < 0.01$ ). Alcoholics showed a significantly lower level of education, and the most frequent employment of alcoholics was as manual workers (42.4%), whereas for non-alcoholics it was as clerks (32.4%).

The alcoholics showed a PD prevalence of 31.1%. The most frequent PD was the Schizoid PD (40%) followed by the Dependent PD (20%). In the non-alcoholic sample, the prevalence rate of PDs was 20.6% and the most frequent was the Obsessive-Compulsive PD. Moreover, alcoholics showed a higher co-morbidity among PDs than did the controls.

The scores from questionnaires administered to both groups are given in Table 2. No significant differences between alcoholics and non-alcoholics in the parental perceptions and locus of control

Table 2. Test scores for the locus of control and parental bonding instruments in alcoholics and controls

Instrument	Alcoholics ( <i>n</i> = 33)	Non-alcoholics ( <i>n</i> = 34)
DSRS	51.5 ± 15.8	46.5 ± 11.0
LCS	10.5 ± 3.7	11.4 ± 3.1
PBI-MC	26.5 ± 8.5	28.0 ± 6.6
PBI-MP	11.3 ± 5.9	14.1 ± 6.0
PBI-PC	21.8 ± 9.9	23.9 ± 7.7
PBI-PP	12.3 ± 6.7	14.6 ± 5.5

Score values are means ± SD. DSRS, Dependence Self-rating Scale; LCS, locus of control score; PBI, parental bonding instrument; MC, maternal care; MP, maternal protection; PC, paternal care; PP, paternal protection.

were seen. However, on the LCS, alcoholics showed a more internal locus of control than did non-alcoholics; on the PBI, alcoholics had lower scores on maternal and paternal care than did non-alcoholics. The DSRS scores were higher in alcoholics than in controls, but the difference did not reach statistical significance.

When subjects with and without PDs were compared (Table 3), the DSRS scores were significantly higher ( $P < 0.0001$ ) in alcoholics with PDs, compared to alcoholics without PDs.

Table 1. Socio-demographic characteristics of the alcoholic and control groups

Parameter	Alcoholics	Non-alcoholics
Total ( <i>n</i> )	33	34
Males ( <i>n</i> )	29	30
Females ( <i>n</i> )	4	4
Age (years: mean ± SD)	48.8 ± 8.7	49.9 ± 9.6
Education:		
Primary school (%)	54.4	17.6
Middle school (%)	24.2	29.4
Secondary school (%)	6.1	23.5
Professional school (%)	12.1	14.7
University (%)	3.0	14.7
Employment:		
Employed (%)	78.7	73.5
Housewife (%)	6.1	5.9
Unemployed (%)	6.1	5.9
Retired (%)	9.1	14.7

## DISCUSSION

In this sample, alcoholics had a statistically lower level of education than non-alcoholics and also had a different employment profile. However, previous studies using DSRS, PBI, and LCS did not reveal any influence on scores of education or employment status (Rotter, 1966; Parker *et al.*, 1979; Borgherini *et al.*, 1995).

The alcoholics showed a prevalence of PDs of 31.1%, in accordance with the prevalence rates described in the literature (Movalli *et al.*, 1996). Since the exclusion criterion was a principal diagnosis of ASPD, in our alcoholic sample the most frequently diagnosed PDs were Schizoid PD and Dependent PD, as has also been reported by other authors (Nace *et al.*, 1991; Bianchi *et al.*, 1995). Careful assessment of non-ASPDs may be helpful in identifying differential patterns of treatment response and in improving therapeutic programmes.

Table 3. Test scores for the locus of control and parental bonding instruments in alcoholics and controls with and without personality disorder (PD)

Instrument	Alcoholics		Non-alcoholics	
	With PD	Without PD	With PD	Without PD
DSRS	66.6 ± 16.3*	44.8 ± 10.8	40.5 ± 1.4	48.6 ± 8.8
LCS	10.6 ± 4.6	10.4 ± 3.4	12.5 ± 2.6	11.1 ± 3.4
PBI-MC	21.4 ± 9.6	28.6 ± 7.2	28.1 ± 6.0	27.0 ± 7.3
PBI-MP	10.2 ± 6.5	12.2 ± 5.5	11.8 ± 2.9	14.7 ± 6.3
PBI-PC	19.8 ± 8.0	23.2 ± 10.1	26.5 ± 6.1	22.7 ± 8.4
PBI-PP	13.2 ± 5.2	11.6 ± 7.1	13.8 ± 4.6	15.0 ± 5.3

Values are means ± SD. \* $P < 0.001$ ; abbreviations are as Table 2.

Moreover, our results indicating a high comorbidity of PDs in alcoholics support previous studies that found an extensive overlap among PDs in alcoholics. For example, Morgenstern *et al.* (1997) found that most alcoholics who met criteria for one PD had a least two PD diagnoses.

As regards psychological dependence, although the DSRS was higher in alcoholics than in controls, this difference was not statistically significant. A previous study using the DSRS (Marchiori *et al.*, 1997) found that a sample of alcoholics from Alcoholics Anonymous, compared with a control group, reported a significantly higher 'dependence' level. Even some other studies conducted using objective 'dependence' measures have shown different and slightly inconsistent results. Mills and Taricone (1991), assessing 'dependence' in alcoholics and controls with the Interpersonal Dependency Inventory (IDI; Hirschfeld *et al.*, 1977), did not find any significant differences. By contrast, Loas *et al.* (1994), using the same IDI to assess dependence in alcoholics and controls, found that alcoholics scored higher than controls.

Since in the present study both alcoholics and non-alcoholics were in-patients, they may have perceived themselves as emotionally dependent, because of their particular life conditions. It is possible in fact that they may have expressed their 'dependence' needs more clearly than if they were healthy, and this may explain why the DSRS scores were similar in the two groups.

The DSRS scores were highly influenced by the presence of PDs: alcoholics with PDs scored

significantly higher ( $P < 0.001$ ) on the DSRS than alcoholics without PDs.

The prevalence rate of 31.1% of Dependent PDs supports the hypothesis that 'dependence' is a characteristic of personality function and interpersonal relations in alcoholics, particularly in alcoholics with PDs (Goldstein *et al.*, 1968; Mills and Taricone, 1991; Mills, 1995). Some authors (Poldrugo and Forti, 1988) compared treatment compliance rates among alcoholics with different PD diagnoses. Dependent PD patients showed significantly higher rates of treatment compliance than did alcoholics affected by other PDs. Therefore, the evaluation of the 'dependence'-treatment compliance relationship has important practical, as well as theoretical, significance (Bornstein, 1993).

The present results did not show any significant differences between the two groups in test scores for locus of control; nevertheless, the alcoholics scored more on internal control than the non-alcoholics. Indeed, some authors have reported a shift toward the internal locus of control orientation during the course of treatment; therapy should increase the tendency for alcoholics to assume responsibility for their own lives (O'Leary *et al.*, 1976; Canton *et al.*, 1988; Mills and Taricone, 1991).

Alcoholics had lower scores on maternal and paternal care, than non-alcoholics, for parental bonding perceptions, but this difference was not statistically significant. A previous study reported similar results (Marchiori *et al.*, 1997).

Because of the marked differences between alcoholics with different PDs, a uniform approach to alcoholism treatment may be adequate. Careful

clinical assessment of personality traits and PDs may be helpful in identifying different psychological profiles and treatment needs among alcoholics. Finally, the DSRS could provide an objective 'dependence' measure to study the influence of this variable on treatment compliance and outcome.

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