

Psychopathology of Children with Alcohol Dependent Fathers

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SUMMARY

Objective: In this study, we aimed to search cognitive, behavioral and psychopathological differences between children of fathers with alcohol dependency and children of fathers without alcohol dependency.

Method: Forty-six children of 34 alcoholic fathers and 36 children of 34 non-alcoholic fathers, between the ages of 6 and 16 years were evaluated. Two groups were matched with each other on the basis of socioeconomic level of family, age and gender of children. All children were screened for psychiatric disorders according to DSM-IV criteria by using the Schedule for Affective Disorders and Schizophrenia for School Aged Children, Present and Lifetime Version (K-SADS-PL). The mothers and teachers completed the Child Behavior Checklist, Teacher Report Form and Conners Parents/Teachers Rating Scales. Furthermore, Wechsler Intelligence Scale for Children-Revised (WISC-R) and Bender Gestalt Visual Motor Coordination test were applied to all children. The mothers completed Symptom Checklist-90-Revised (SCL-90-R).

Results: The findings of this research indicated that children of alcoholic fathers had a higher incidence of psychopathology. Teacher Report Form and Conners Teachers Rating Scale scores were higher in research group. It was also found that mothers in research group had higher level of psychiatric symptoms in SCL-90-R.

Conclusion: Alcohol dependent patients are an easily available group for clinicians. It can be more realistic to treat alcohol dependency as a family disease because of associated psychiatric problems in children and mothers. In addition to alcohol dependent fathers, including mothers and children in the psychiatric assessment and treatment plans may become a preventive step for the child.

Key Words: Children of alcoholics, psychopathology and cognitive functions

INTRODUCTION

The children of alcohol-dependent parents are considered to be at high risk of also developing alcohol dependence, as it is a complex genetic disorder. It is thought that these children are at high risk not only for alcohol dependence but also for other psychopathologies. In many studies conducted to determine what psychopathologies occur in the children of alcohol-dependent parents, higher rates of externalizing disorders like attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), and conduct disorder (CD) have been found in the children of alcohol-dependent parents compared to control groups (Steinhausen et al., 1984; Aronson et al., 1985; Knop et al., 1985; Merikangas et al., 1985), while there are other studies that have detected internalizing disorders such as depression and anxiety (Goodwin, 1979; Moss and Billings, 1982; Rolf et al., 1988; Rubio-Stipec et al., 1991; Svanum and McAdoo, 1991).

In studies on alcohol dependence in parents and psychopathologies of childhood, owing to the presence of many genetic and environmental risk factors in alcohol dependence, it may not be suitable to relate the problems arising in children only to the alcohol dependence of the parents and postulate a causal relationship (Werst and Prinz, 1987). It is known that many stressors such as divorce, marital discord, inadequate social support and unemployment are seen more frequently in the families with an alcohol dependence problem (Schuckit and Chiles, 1978; Moos and Billings, 1982; Schulsinger et al., 1986; Glen and Parsons, 1989). Apart from these risk factors, which may be classified as environmental risk factors, com-

mon genetic risk factors for antisocial personality disorder, CD, ADHD, and alcohol dependence are mentioned (Sher et al., 1991, Pickens et al., 1995). In the studies performed to date, many risk factors such as the severity of alcohol dependence in parents, psychopathology in parents, disturbance of the family structure, the relationship of the child with the parent who is not alcohol dependent, predisposition to crime in parents, and accessibility of support sources of the family have been considered at varying levels (West and Prinz, 1987). The most important limitations of the studies on alcohol dependence in parents and psychopathologies of childhood are lack of multidimensional evaluation of the children, single-source information about the child, the fact that diagnosis is not made by investigators blinded to the situation of the child, and lack of matching between groups for factors such as integrity of the family, number of siblings, socioeconomic status, and psychological state of the mother. Moreover, there are a few studies, which emphasize cultural and racial differences. (Wall et al., 2000). Retesting the predispositions of the children with alcohol-dependent parents in different cultures is important for making generalization of the results possible. It may be assumed that many environmental risk factors such as levels of social support, acceptance level of marital conflicts by the spouses, family structure, and the number of children may vary due to cultural differences. If alcohol dependence in fathers is associated with a tendency to different symptomatology with children in different cultures, further characteristics determining the risk or resilience to alcohol dependence may be established. In the present study, the aim was to screen for childhood psychopathologies in the children of fathers with alcohol dependence, trying to overcome some of the limitations described above.

METHOD

Sample

The study group included a total of 46 children of 34 fathers with alcohol dependence (boys =56.5%, n=26; girls = 43.5%, n=20) and a control group comprised of 36 children of 34 fathers that have not been hospitalized and followed-up for psychiatric or chronic physical disorder (boys =44.4%, n=16; girls =55.6%, n=20). No statistically significant difference was present between the groups with regard to gender. Mean age of

children in both groups was 10.5 ± 2.5 years (age range: 6-16 years).

Fathers with alcohol dependence were recruited from the psychiatry clinics of four hospitals in Ankara (Ankara University Faculty of Medicine, Gazi University Faculty of Medicine, Hacettepe University Faculty of Medicine, and Social Security Institution Döşkapı Training and Investigation Hospital between May 2001 and January 2002. The inclusion criteria for the fathers were as follows: being diagnosed with alcohol dependence according to the diagnostic criteria of DSM-IV substance use disorders, being hospitalized in one of the above hospitals at least once for alcohol cessation treatment, having a child between the ages of 6-16 years, and accessibility of the information sources in the family for interview. Families with histories of chronic physical disease in the mother or the father requiring hospitalization, and relatives that have been diagnosed with schizophrenia or bipolar disorder were excluded from the study. Of the 50 families contacted, 7 declined to participate in the study, 6 families did not come to the interview appointment, and 3 families were excluded, as they did not meet study criteria. It has been established that in one father not included in the study, psychotic disorder was present, one father had a chronic physical disorder, and the mother of one child had died.

In the control group, age and gender of the children, occupational status and level of education of the parents, and family structure were matched with the study group. During this process, care was taken to include a control group family with similar characteristics to each family in the study group. After the study was announced, the families who referred to the out patient clinics of Children's Hospital of Hacettepe University Faculty of Medicine with a physical complaint and families of hospital staff that voluntarily consented to participate formed the control group. Exclusion criteria for the control group were hospitalization of a mother or father for a psychological or physical disorder in any hospital, and the presence of any alcohol use disorder in the father, according to the diagnostic criteria of DSM-IV. In both groups, parents and children were informed about the study and verbal informed consent was obtained.

Mean age of mothers and fathers were 36.6 ± 6.1 years and 41.1 ± 6.5 years, respectively. Overall length of education was 8.9 ± 3.7 years in moth-

Table 1. Frequency of DSM-IV Diagnoses in the Study and Control Groups.

Diagnosis	Study group n (%)	Control group n (%)	Statistics
No Diagnosis	23 (50.0)	26 (72.2)	$\chi^2=4.14$ $p<.05$
Diagnosed	23 (50.0)	10 (27.8)	
Anxiety Disorder	5 (10.9)	2 (5.6)	
Depressive Disorders	3 (6.5)	0 (0.0)	
Attention Deficit Hyperactivity Disorder	9 (19.6)	4 (11.2)	
Elimination Disorders	6 (13.0)	2 (5.6)	
Learning Disorder	3 (6.5)	1 (2.8)	
Tic Disorders	1 (2.2)	0 (0.0)	
Mental Retardation (subaverage)	3 (6.5)	1 (2.8)	

* $p<.05$

ers and 10.0 ± 3.2 years in fathers. The study and control groups included mostly nuclear families (97.1% and 85.3%, respectively). Mean number of children per family was 2.2 ± 0.9 . No statistically significant difference was found between the two groups in terms of the characteristics mentioned above.

Socioeconomic level

The criteria in determining the socioeconomic level of the family were translated and adapted from CASH (Comprehensive Assessment of Symptoms and History; Andreasen, 1987). In the determination of socioeconomic level of family, the status of the parent at higher level was taken into consideration. The families in both groups were matched for socioeconomic status as well. The majority of families in both groups included parents with university degrees who were professionally employed or working in a managerial capacity, as well as owners of small businesses, public servants or white-collar workers and high school graduates. Occupational status of the parents in both the study and control groups was found to be similar; the percentage of working mothers was 49% and 51%, respectively and the percentage of working

fathers was 85% and 88%, respectively.

Scales

Children were evaluated for psychiatric disease and problem behavior and mothers were evaluated for level of psychological distress with various scales.

Psychiatric problems in children

Psychopathological evaluation of the children was carried out using the Schedule for Affective Disorders and Schizophrenia for School Age Children - Present and Lifetime Version, Turkish adaptation (K-SADS) (Kaufman et al., 1997; Gökler et al., 2004) by investigators who are consultants in child psychiatry. K-SADS is a semi-structured interview form used for determining psychopathology in children and adolescents according to the diagnostic criteria of DSM-III-R (APA 1987) and DSM-IV (APA 1994).

K-SADS contains three parts of which the first is an unstructured initial interview; demographic information about the child, health status, present complaints, information regarding psychiatric treatment, together with status at school, hobbies, and relations with family and friends are collected.

Table 2. CBCL and TRF Scores of Study and Control Groups.

TRF CBCL Sub-tests	TRF CBCL		TRF CBCL	
	Control group mean $\pm$ sd	Study group mean $\pm$ sd	Control group mean $\pm$ sd	Study group mean $\pm$ sd
Withdrawn	59.1 $\pm$ 7.5	59.2 $\pm$ 9.9	60.1 $\pm$ 8.1	56.9 $\pm$ 8.7
Somatic complaints	59.0 $\pm$ 8.8	56.0 $\pm$ 7.4	55.1 $\pm$ 5.9**	51.1 $\pm$ 4.0
Anxious / Depressed	61.5 $\pm$ 8.0	60.1 $\pm$ 9.0	62.8 $\pm$ 7.6*	58.8 $\pm$ 6.4
Social problems	56.6 $\pm$ 7.3	55.0 $\pm$ 7.5	58.5 $\pm$ 8.4*	53.5 $\pm$ 5.8
Thought problems	58.4 $\pm$ 7.6	56.7 $\pm$ 7.1	57.2 $\pm$ 7.9*	52.7 $\pm$ 6.7
Attention problems	58.8 $\pm$ 7.8	58.8 $\pm$ 8.6	57.1 $\pm$ 7.8	54.0 $\pm$ 6.4
Delinquent problems	56.9 $\pm$ 7.3	54.3 $\pm$ 7.3	54.3 $\pm$ 5.6	54.2 $\pm$ 4.7
Aggressive behavior	57.1 $\pm$ 7.4	56.2 $\pm$ 8.3	56.7 $\pm$ 5.1	54.0 $\pm$ 4.9
Internalizing symptoms	61.9 $\pm$ 8.5	58.7 $\pm$ 10.6	61.6 $\pm$ 8.3*	57.4 $\pm$ 7.4
Externalizing symptoms	55.6 $\pm$ 9.1	53.1 $\pm$ 10.7	55.2 $\pm$ 7.2*	51.4 $\pm$ 7.3
Total problem	59.4 $\pm$ 8.4	56.6 $\pm$ 11.0	58.0 $\pm$ 8.7*	53.5 $\pm$ 7.4

*p<.05, **p <.01

A diagnosis-oriented screening interview, which is the second part, evaluates about 200 specific symptoms and behaviors. In order to evaluate each symptom, certain screening questions and criteria for evaluation have been presented. If positive symptoms are found during the screening interview, extra scoring is made in five diagnostic areas in order to corroborate the diagnosis; affective disorders, psychotic disorders, anxiety disorders, behavioral disorders, and substance abuse and other disorders (enuresis, encopresis, anorexia nervosa, bulimia, transient tic disorders, Tourette disorder, chronic motor or vocal tic disorder, alcohol abuse, substance abuse, post traumatic stress disorder, and adjustment disorder). Each additional symptom list includes screening questions and criteria for determining present and previous episodes of the disorder. For each diagnosis, DSM-III-R (APA1987) and DSM-IV (APA 1994) diagnostic criteria have been given. The third part, the Children's Global Assessment Scale of K-SADS, is designed to determine the present functional level of the child (Kaufman et al., 1997). In the present study, information about the children was obtained from the mothers.

Evaluation of behavior

To screen for the symptoms of Disruptive Behavior and Attention Deficit Disorders, the Conners Parents Rating Scale (CPRS: Conners, 1973;

Dereboy et al., 1998) and Teachers Rating Scale (CTRS: Conners, 1969; Şener et al., 1995; Dereboy et al., 1997) were used. In both scales, questions are answered using four-option Likert-scale items. High scores obtained with the scales indicate the intensity of the symptoms specific to disruptive behavior disorder. In addition, to evaluate problem behavior, mothers and teachers were administered the Child Behavior Checklist (CBCL; Achenbach and Edelbrock, 1983; Erol et al., 1998) and Teacher Report Form (TRF: Erol et al., 1998). These scales are employed so as to evaluate problem behavior of the children and adolescents based on information obtained from parents and teachers. Both contain the same subtests scored with three-option Likert-scale items that evaluate 118 problem behaviors, and they are scored in a similar way. From these scales, two different symptom scores are obtained, internalizing and externalizing scores for each subtest, which are considered separately for different age groups.

The Wechsler Intelligence Scale for Children-Revised (WISC-R) was used to evaluate the children's cognitive functioning. This test is divided into a verbal part (Information, Similarities, Arithmetic, Comprehension, Digit Span, and Vocabulary) and a performance part (Picture Completion, Picture Arrangement, Block Design, Object Assembly, Coding, and Mazes), each of which contains six subtests.

Psychiatric symptom level of the mothers

To determine psychiatric symptom levels in the mothers, the Symptom Checklist (SCL; Derogatis et al., 1976; Gškler, 1978) was used. The SCL is a 90-item self-report symptom inventory. It is a measure of current psychological symptom status and there are three global indices; the Global Severity Index (GSI), The Positive Symptom Distress Index, (PSDI), and the Positive Symptom Total (PST). The GSI is the average rating given to all 90 items. The PST is the number of symptom complaints, and the PSDI is the average rating given to those symptom complaints.

PROCEDURE

Comparative cross sectional analysis of the evaluations of the psychological state of the children by clinicians, parents, and teachers was performed. In the investigation, all family members that could serve as sources of information were informed about the aim of the study, the use of its data, and procedures to be carried out during the evaluation process. After consent was given, they were invited to Hacettepe University Faculty of Medicine Child and Adolescent Psychiatry Department by appointment. Using a form prepared by the investigators, demographic information, developmental history, and the background and characteristics of the alcohol use of the fathers was gathered in relation to the diagnostic criteria of DSM-IV (APA1994) for substance abuse disorders. While interviewing the parents, an experienced psychologist administered the WISC-R scale to the children. When the children were being interviewed, the mothers completed the SCL, CBCL, and CPRS scales. One mother in the study group and 3 mothers in the control group did not bring the SCL back.. Upon the approval of the families, the TRF and CTRS were mailed to the teachers or given to them by the families. Thirty-six teacher forms in the study group (78.3%) and 23 in the control group (64.9%) were returned. Due to the problems in making the appointments, 2 children in the study group (4.3%) and 1 child in the control group (2.8%) was not administered WISC-R. Evaluation of each child was completed in approximately 2.5 hours.

Statistical analysis

The analysis of the data was carried out with the Statistical Program for Social Sciences (SPSS)

version 10.0. In the analysis, categorical data were statistically analyzed with chi-square and Fischer's exact tests. In the evaluation of the continuous data, t test (the significance of the difference between two means) was used, when the assumptions of the parametric test were met. In the evaluation of the difference between groups, t test was used for GSI, PSDI, and PST mean scores of the mothers and WISC-R, CPRS, CTRS, CBCL, and TRF mean scores of the children. Chi-square test was performed for the distribution of DSM-IV diagnoses of the children. All analyses were two-ended and $p < 0.05$ was considered statistically significant.

RESULTS

Psychiatric symptom level of the mothers

Mean scores of the GSI, PSDI, and PST were found to be significantly higher in the mothers of the study group (1.1 ± 0.6 , 50.8 ± 20.6 , 1.9 ± 0.5 , respectively) as compared to the mothers in the control group (0.5 ± 0.4 , 29.3 ± 17.1 , 1.4 ± 0.4 , respectively) ($t = -4.893$, $t = -4.529$, $I = -3.471$, $p < 0.01$). It was observed that there were two mothers each in the study and control groups who were previously treated for psychiatric symptoms. It had been learned that these mothers underwent treatment for the diagnoses of depression and/or anxiety disorder and were still being treated.

Psychiatric problems in children

It has been established that according to the criteria of DSM-IV (APA 1994), that more children in the study group had diagnoses than the children in the control group (Table 1).

The rate of previous referral to a child or adolescent psychiatry clinic was found to be 2.2% ($n=1$) in the study group and 5.6% ($n=2$) in the control group. DSM-IV (APA 1994) diagnosis distributions in both groups are illustrated in Table 1. As 7 children in the study group were diagnosed with more than one disorder, rates have been given cumulatively.

The distribution of anxiety disorders were as follows: in the study group, 4 children (8.8%) were diagnosed with a simple phobia and 1 child (2.2%) with separation anxiety disorder; in the control group, 1 child (2.8%) was diagnosed with general anxiety disorder and 1 child (2.8%) with simple phobia.

Five children in the study group (10.9%) had the

combined subtype of ADHD and 4 children had the predominantly inattentive type, while in the control group, 4 children had the predominantly inattentive type (11.2%).

Three children in the study group had enuresis (6.5%) and 3 had encopresis (6.5%), while 2 children in the control group had enuresis (5.6%).

Seven children (15.2%) in the study group had additional diagnoses, whereas in the control group no additional diagnosis was observed. In the study group, one child (2.2%) diagnosed with ADHD, combined type, had the additional diagnosis of encopresis; one child (2.2%) tic disorder and one child (2.2%) mental retardation. One child (2.2%) in the study group diagnosed with ADHD, predominantly inattentive type, also had encopresis and another child (2.2%) had learning disorder. In one child (2.2%) diagnosed with learning disorder, the additional diagnosis was enuresis and in the other child (2.2%) diagnosed with encopresis, the additional diagnosis was simple phobia.

Results of Behavior Evaluation

No statistically significant difference was found between the CBCL scores of the children in the study and control groups. In the study group, scores from sub-measurements such as somatic complaints ($t = -3.034$; $p < 0.1$), anxiety/depression ($t = -2.076$; $p < .05$), social problems ($t = 2.530$; $p < .05$), thought problems ($t = 2.364$; $p < .05$), internalizing ($t = 2.156$; $p < .059$), externalizing ($t = -2.010$; $p < .05$), and total problem scores ($t = 2.033$; $p < .05$) were found to be significantly higher than those of the control group. Significant differences were not seen in the other sub-measurements (Table 2).

The CTRS mean score of the study group (16.1 ± 12.6) was found to be significantly higher than that of the control group (8.4 ± 8.3) ($t = -2.607$; $p < .05$). No statistically significant difference was found between the study and control groups with respect to mean CPRS and its sub-measurement scores.

Cognitive Functioning

The WISC-R verbal part (97.9 ± 16.9 ; 103.9 ± 15.3 study and control groups respectively), performance part (95.9 ± 16.1 ; 102.2 ± 15.5 study and control groups respectively), and overall score (96.8 ± 16.4 ; 103.5 ± 15.6 study and control groups respectively) were not significantly differ-

ent between the two groups). Additionally, scores for the WISC-R subtests, were not statistically different between two groups, except Object Assembly (8.6 ± 2.9 ; 10.1 ± 2.7 study and control groups respectively) ($t = 2.322$; $p < .05$).

DISCUSSION

This was a cross sectional study in which children whose fathers had undergone treatment, at least once, due to alcohol dependence and those whose fathers had never been admitted to a hospital for any psychological indications were compared in terms of behavioral and cognitive functioning, as well as psychopathology.

The most important finding was that the children of alcohol-dependent fathers were diagnosed more frequently than the children in the control group (Table 1). Although many disorders, such as anxiety disorder, depressive disorders, hyperactivity disorder, elimination disorders, learning disorders, tic disorders, and mental retardation occurred in these children, ADHD occurred more frequently in the study group than both the control group and the prevalence in the community which is 6-9% (Biedermann et al., 1990; Ersan et al., 2004). Likewise, in other studies, the children of alcoholic parents were found to have higher rates of ADHD, ODD, and CD than control groups (Steinhausen et al., 1984; Merikangas et al., 1985; Knop et al., 1985; Goodwin, 1985).

Another dimension of our findings is related to the causes of alcohol dependence. Among the risk factors in childhood for future alcohol dependence, diagnosis of ADHD is preponderant. Milberger et al. (1997) in their 4-year follow-up study found that ADHD is a risk factor for early onset psychoactive substance use. Reinherz et al. (2000) established, with a 16-year follow-up study, that risk factors for early adulthood alcohol dependence are a large family, low socioeconomic status, hyperactivity, attention problems, and aggression. In some studies, the presence of common precursors in antisocial personality disorder, CD, ADHD, and alcohol abuse has been mentioned (Sher et al., 1991; Pickens et al., 1995). It is thought that high rate of ADHD diagnosis in children of the study group may be accounted for by high rate of comorbidity in case of alcohol dependence of parents. Although the familial clustering of ADHD in the study group is not known, it has been reported that, ADHD, antisocial disorders, affective disorder

ders, anxiety disorders, and alcohol use disorders occur at high rates in the relatives of children diagnosed with ADHD (Biedermann et al., 1990; Kılıç and Şener, 2005). Moreover, in children with ADHD, the risk of developing psychoactive substance use disorders as a result of the disease is high (Biedermann et al., 1990), and in a study of a young male alcohol-dependent cohort, ADHD was prevalent (Wood et al., 1983). These studies support a relationship between ADHD and alcohol use disorders. In a Turkish study, ADHD was prevalent in the children of alcohol-dependent parents, while in the parents of these children, ADHD symptoms occurred at high rates (Kaynak, 2001). The relationship between alcohol dependence and ADHD may be interpreted as the coexistence of a disease with another in addition to the continuation of a disease in the form of another disease. In order to be able to establish a causal relationship between ADHD and alcohol dependence, studies analyzing specific environmental factors are required.

In the present study, high rates of ODD and CD were not found, unlike in the literature. There are many studies relating the dominance of disruptive behavioral disorders in the children of alcohol-dependent parents to the presence of antisocial characteristics in the father (Kuperman et al., 1999; Poon et al., 2000).

There are also studies attributing the frequent occurrence of CD in the children of alcohol-dependent parents to environmental factors such as low socioeconomic level, a breaking up of the nuclear family group, and unemployment of parents (Hill and Muka, 1996). In the present study, CD may not have been detected because the families included were relatively functional. Since the families in this study with alcohol-dependent fathers were mostly nuclear families of a relatively good socioeconomic-sociocultural level, the results of studies of families from different socioeconomic and functional levels may be different.

Another finding of the study is that the spouses of the fathers with alcohol dependence had higher scores on the GSI, PSDI, and PST than the mothers in the control group. Tubman (1993) found high rates of depression, disturbing life events, and low social support in the spouses of the fathers with alcohol dependence. It was noted that the referral rate of the mothers for psychiatric help was the same in the study and control groups, which suggests that the mothers in the study group did

not seek psychiatric help even though they experienced more problems. In addition, the rate of referral for the problems of their children was the same in both groups as well, indicating that the families of alcohol-dependent fathers underestimated, minimized, or ignored their children's psychological problems. The constant presence of problems related to alcohol dependence of the father may have resulted in the mothers becoming accustomed to this situation and hopeless about any help they may get for their children's problems. In many studies it has been stated that among the factors influencing the problems of children, the problems of mothers turned out to have as much importance as the alcohol dependence of the father (Werner, 1986; Drake and Vaillant, 1988; Tubman, 1993).

It has been stressed in some studies that support given by the mother decreases the effects of alcohol on the family and has a favorable effect on the resilience of the children (Werner and Johnson, 2004). It is thought that in families with alcohol dependence, evaluation of the psychiatric status of the mothers and the consideration of alcohol dependence as a family problem may be important for the psychological development of the children.

No difference between the CBCL scores of the study and control groups was observed in the present study. Similarly, Schuckit et al. (2000) matched the variables of antisocial disorder and socioeconomic status, revealing that there was no significant relationship between family history of alcohol dependence and problem behavior scores on the CBCL. Teacher evaluations of the children in our study group had higher scores for problem behavior than did the control group. Although there are few studies in the literature on teacher evaluations, there are studies that report high rates of behavioral problems in the children of fathers with alcohol dependence (Knop et al., 1985; Morey, 1999). The difference between the evaluations of parents and teachers obtained in the present study may be related to the higher rate of psychiatric problems experienced by the wives of the fathers with alcohol dependence, in addition to differences of the environment in which each child was evaluated. Additional studies of school-based evaluations of children with alcohol dependent parents and preventive measures are warranted.

The methodologically sound aspects of the present study were: the matching of the children in both groups for SED (acronym means what?),

age, and gender; multi dimensionality of the evaluations; the inclusion of teachers evaluations of the children; the comprehensive nature of our evaluations, which included additional scales such as WISC-R; we had mothers screened for psychiatric symptoms, whereas in many other studies, the psychological status of mothers had not been controlled for. However, the following are limitations of the present study: the inclusion of only children of healthy parents in the control group; evaluating just the children of fathers undergoing alcohol dependence treatment; lack of adjustment for attendant psychopathologies with a structured interview with the parents. Therefore, it is impossible to interpret these findings as the specific effects of alcohol dependence in fathers on children. It may be possible that alcohol dependence may imply more than one risk factor for children of alcohol-dependent fathers and that these factors may be influential at different rates, hence more than

one outcome is possible.. Alcohol-dependent patients hospitalized in alcohol clinics are an easily accessible group for physicians. Evaluation of the psychological status of mothers in these families with alcohol-dependent fathers may be considered a prophylactic step taken for the benefit of the children.

It is our conclusion that future studies need to include similarly dysfunctional children in control groups in order to determine environmental factors, use non-clinical populations in determining the severity and type of alcohol dependence, attempt to determine the attendant psychopathologies in parents, and long-term follow-up in which alcohol dependence typology is differentiated, which will, in turn, contribute greatly to the body of knowledge and understanding of the effects of alcohol-dependent parents on their children.

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