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School Characteristics Among Children of Alcoholic Parents

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Studies show that children of alcoholics constitute an at-risk population. Poor performance, skipping school days, and school drop out risk are the most common problems among children of alcoholic parents. The focus of the present study was to examine a variety of direct outcome variables measuring academic performance among a sample of 226 children, 108 of them from parents who misused alcohol in Cadiz (Spain). Parents were outpatients of a Health Service and received treatment for their drinking problem; 118 students were children of non-alcoholic parents attending the same schools as the children of alcoholic parents. Both groups were compared on the variables of age, sex, school grade, and social environment. The study identified five variables in which performance by children of alcoholic parents was poorer: Intelligence, repeating a grade, academic performance, skipping school days, and dropping out of school.

Poor school performance involves not achieving the minimum demands that the educational system proposes. These demands, though constant in the educational plans of the time, surface as a reality to which we should pay attention only when mandatory schooling is demanded, and it is observed that there are a large number of children who do not achieve the required minimum.

Analyzing the origin of the poor school performance, Monedero (1984) stated that causes can frequently be reduced to the presence of perturbations in affective-emotional adjustment. From a more specific perspective, Portellano (1989) considered learning problems as the result of the individual variables of the students with the implication of the environment, a disparity between the child's learning potential and his school performance. More recently, Kaplan, Sadock, & Grebb (1996) stated that psychosocial adjustment plays a significant role in school performance.

One of the first causes that often reverberate in poor school performance is conflict between parents (Seilhamer & Jacob, 1990). Teachers, very frequently observe that, when family conflicts occur, academic performance is lower and school motivation decreases (Baer, Novick, & Hummen-Schluger, 1995). Poor school performance among children of alcoholic parents also appears, even if the alcoholic does not recog-

nize his illness, does not receive or accept treatment, and has periods of sudden relapse (Sher, Walitzer, Wood, & Brent, 1991). Conflicts arise in the family that the child is not able to assimilate. These conflicts turn into emotional problems, and reduce the child's self-esteem. If these circumstances persist through sensitive development periods such as adolescence, poor school performance will probably increase (Wintraub, 1991; Havey & Dodd, 1995; Aragón, Bragado, & Carrasco, 1997). The study by Hyphantis, Koutras, Liakos, & Marselos (1991) with college students whose parents were alcoholics reported that students' academic performance throughout their university courses was significantly poorer among the students of alcoholic parents.

Gonzalez-Marin's (1988) study of children of alcoholic parents found a high incidence of school failure. Gender differences were analyzed, and males showed a lower school performance than females, although this difference in gender was not replicated in studies by other researchers. Sher, et al. (1991) analyzed a sample of 500 young men and women, all of them members of families in which at least one of the parents was alcoholic, and found no significant academic performance differences related to students' gender.

Confronted with these variable results, our main target was to evaluate different academic and social indicators of poor school performance in a group of children with actively alcoholic parents, and to compare these data with those of children of non-alcoholic families. Our study identifies four variables related to school adjustment: academic performance, repeating a grade, skipping school days, and dropping out of school. All these parameters together are identified as "school failure".

The determination of the influence that active parental alcoholism has on students' academic performance may help determine the risk factors faced in living with alcoholic parents. This knowledge could make treatment programs more efficient for this population at high risk for social malfunctioning and poor school performance.

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Method

Subjects

A sample of 226 children from the Cadiz (Spain) school district participated. The students were divided into two groups, a control group of 118 students and an experimental group of 108. The experimental group was made up of children of alcoholic parents coming from a Health Service Center in Cadiz (Spain), and included 55 males and 53 females, with an age range from 7 to 16 years. Alcoholism was diagnosed following the DSM-IV (APA, 1994) criteria. The control group was constituted of children of non-alcoholic parents, 53 males and 65 females, with an age range from 7 to 16 years. Students were selected from children attending either public or private schools at the same sites as the subjects in the experimental group. Both groups were balanced in the variables: age, gender, school grade, and social environment.

Materials

We administered the Specific Questionnaire of Social-Demographic and School Data (SQS validity and reliability by Casas, 1999), to the parents and teachers of both groups. The parents of the children in the control group also took the Spanish version of the Alcohol Use Disorders Identification Test (Martinez-Delgado, 1996).

All the children in both the control and experimental groups were given the Raven's Progressive Matrix Intelligence Test (Raven, Court & Raven, 1993). This test was used to filter students with percentiles lower than 25, because such low scores could account for poor school performance.

As well as standard social-demographic variables, the SQS registered some indicators that seemed to have a direct relation with school failure, such as: (a) The number of times a student repeated a grade, (b) The number of skipped school days, and (c) Academic performance.

The Alcohol Use Disorders Identification Test, was administered only to the parents of the children of non-alcoholic families (control group). This test has been shown to be valid in the detection of drinking problems, and was administrated to the control group in order to detect possible non-controlled alcoholic parents.

Procedure

In February 1998 we contacted all the out-patients of the Health Service that shared the criteria established for this investigation: (1) an alcohol abstinence period of less than two years, and (2) school children with ages between 7 and 16 years old. A group of alcoholic parents was thus selected. Their children constituted the experimental group. Afterwards, we established contact with the principals of the schools where those children were registered, and selected individuals for the control group from the same grades at random. Parents of the children in the control group were also informed about the study in which their children were going to take part, and were asked to collaborate by filling out the "Specific Questionnaire of Social-Demographic and School Data" and the "Alcohol Use Disorders Identification Test", allowing us to screen for possible non-controlled alcoholic parents in the control group. Test administration was done individually by properly trained professionals.

For this study, we have used the word "school failure" in the broad sense of the term, considering individuals to show school failure when they obtained scores higher than 25 on the Raven test, yet matched three variables: (1) repeating a grade, (2) obtaining an average grade lower than 5 points (under 50 percent of the academic performance required), and (3) being over 10 years of age.

Results

The general intelligence values in both groups are analogous. Figure 1 shows the distribution of the score percentiles of the children in the experimental and con-

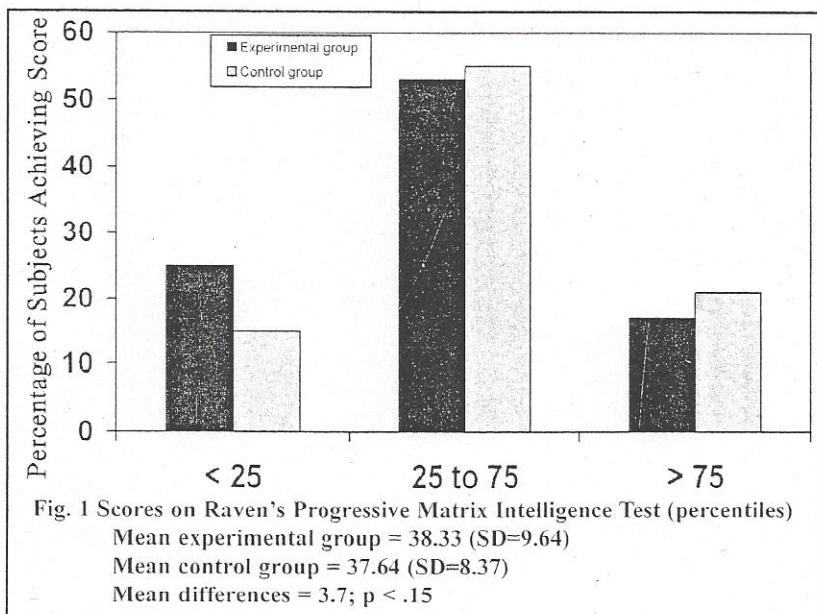


TABLE 1

FREQUENCIES AND PERCENTAGES OF SUBJECTS WITH SUCCESSFUL AND UNSUCCESSFUL ACADEMIC GRADES, WITH 1 OR 2 UNSUCCESSFUL ACADEMIC YEARS, AND SKIPPED SCHOOL DAYS FOR EXPERIMENTAL AND CONTROL GROUPS

	Experimental Group		Control Group	
	n	%	n	%
Unsuccessful grades	32	29.6 **	17	16.1
Successful grades	76	70.4	101	85.6 *
1 Unsuccessful academic year	26	24.1 **	17	14.4
2 Unsuccessful academic years	6	5.6	0	0.0 **
4-6 skipped days per month	7	6.5 (ns)	4	3.4
>7 skipped days per month	3	2.8	0	0.0 ***

* $\chi^2 = 5.48, p < .001$; ** $\chi^2 = 4.86, p < .003$; *** $\chi^2 = 2.39, p$ ns

trol groups on Raven's Progressive Matrix Intelligence Test. The mean for the experimental group was 38.33 (SD = 9.64), while the mean for the control group was 37.64 (SD = 8.37). Differences between groups were not significant (Mean differences = 3.7; $p < .15$).

One of the indicators of school failure was the number of school grades repeated, as shown in Table 1. Children of alcoholic parents show a higher rate of repeating grades at school (29.6 percent) than control group children of the same age and same environment (14.4 percent). There are significant differences between the two groups: $\chi^2 = 5.48; p < .001$. Experimental group children, those with alcoholic parents, are more likely to repeat grades. In our work, we have not found any child in the control group who has repeated the same course twice, yet 5.6 percent of the children in the experimental group have done so ($\chi^2 = 4.86; p < .003$).

Skipped school days, i. e., the days children fail to attend school without a justified excuse, may also be considered an indirect measure of a child's motivation for learning. Table 2 shows the distribution of skipped school days for the experimental and control groups. Differences between groups were not statistically significant ($\chi^2 = 2.39; n.s.$).

Data related to academic performance were obtained for the students' academic years of 1997-1998 and 1998-1999. The average of the academic grades has been calculated according to a standard scale from 0 to 10 in linear values. The mean grade (Mean = 6.40) of the students of non-alcoholic parents is 0.75 points above the average grade

of children of alcoholic parents (Mean = 5.65). Results indicate statistically significant differences between the two groups ($\chi^2 = 12.2; p < .001$).

Finally, there are results related to school failure indicators for both groups. As shown above, school failure is attributed to those students who meet three criteria: (1) having repeated a grade, (2) obtaining an average grade lower than 5 points (under 50 percent of the academic performance required), and (3) being over 10 years of age. Table 2 shows frequencies and percentages of students who fail at school. The school failure rate is 22.22 percent for the experimental group and 9.32 percent for the control group. Group differences are statistically significant: $\chi^2 = 6.49, (p < .01; Odds Ratio = 2.83; p < .05)$. These

values indicate that it is nearly three times more likely that a child of alcoholic parents will show school failure than a child from a non-alcoholic family.

Discussion

This study confirmed the findings of other studies showing that parental alcoholism constitutes a risk for their children for poor academic performance (Chandy, Harris, Blum & Resnick, 1993a, 1993b). Children at risk scored significantly lower on all school performance measures than children in a control group. The key factors that significantly differentiated the experimental and control groups were number of school grades repeated, academic performance, and skipped school days.

However, the intelligence test score distributions are similar for children of alcoholic and non-alcoholic

TABLE 2

PERCENTAGES, MEANS, AND STANDARD DEVIATION OF ACHIEVEMENT, UNDER-ACHIEVEMENT AND SCHOOL FAILURE FOR EXPERIMENTAL AND CONTROL GROUPS

	Achievement		Under-achievement		Mean	SD
	n	%	n	%		
Experimental Group	75	79.4	33	30.6	5.65 *	1.40
Control Group	101	85.6	17	14.4	6.40	1.50

School Failure					
Experimental Group	24	11	13.80 *	1.63	
Control Group	11	9.32	14.45	1.36	

(* $\chi^2 = 12.22; p < .001$; ** $\chi^2 = 6.49; p < .01$)

parents, using the Raven's Progressive Matrix Intelligence Test. This children's intelligence test was used to exclude students with low IQ scores, because low IQ scores could account for poor school performance. While the mean IQ score differences between the experimental and control groups weren't statistically significant, the results agree with other research reports showing a tendency for children of alcoholic parents to get lower scores on IQ tests (Bennett, Wolin, & Reiss, 1988; Tarter, Jacob, & Laird, 1993; Aragon, et al. 1997).

Thirty-two children (29.6 percent of the experimental group) of alcoholic parents repeated a grade, compared to just 17 children (14.4 percent of the control group) with nonalcoholic parents. 5.6 percent of the experimental group repeated two or more grades. There were no children of the control group (non-alcoholic parents) who repeated two or more grades. The possibility of students repeating a grade several times was not considered in previous research (Varon, 1993), although it is an important factor in predicting school failure.

When academic performance was assessed, significant differences between the experimental and control groups were found. Children of alcoholic parents' mean academic performance score was .75 points lower than that of children of nonalcoholic parents on a scale of 0 to 10. These scores again indicate poorer school performance among children of actively alcoholic parents. These results match the results of Perez & Vicente (1992); Chica (1993), and Lopez (1993).

Parental alcoholism is an important predictor of poor academic performance by children. It also predicts an earlier risk of dropping out of school and a shorter school career (Chandy, et al., 1993a). Other authors suggest that rather than directly lowering academic performance, parental alcoholism is primarily a risk factor in poor behavioral adjustment (Garcia-Prieto, Bobes, Bousono, Cervera, & Lemos, 1986; Murphy, O'Farrell, Floyd, & Connors, 1991).

School failure parameters are very different depending on the educational context. Considering the social context where this work was carried out, academic performance, skipping school days and number of school courses repeated are all significant predictors of the children's school adjustment. Some of these factors are higher in children of alcoholic parents (see Tables 1 and 2). However, more research is necessary in order to better understand the predictors of low school performance and to evaluate their prevalence in this population. Such research expresses a "vision of school as a dynamic force in enhancing the life changes

of school-age children whose personal circumstances may increase their risk for school drop out or low achievement, in an era that increasingly demands higher education and specialized skills" (Chandy et al., 1993a, p. 517).

References

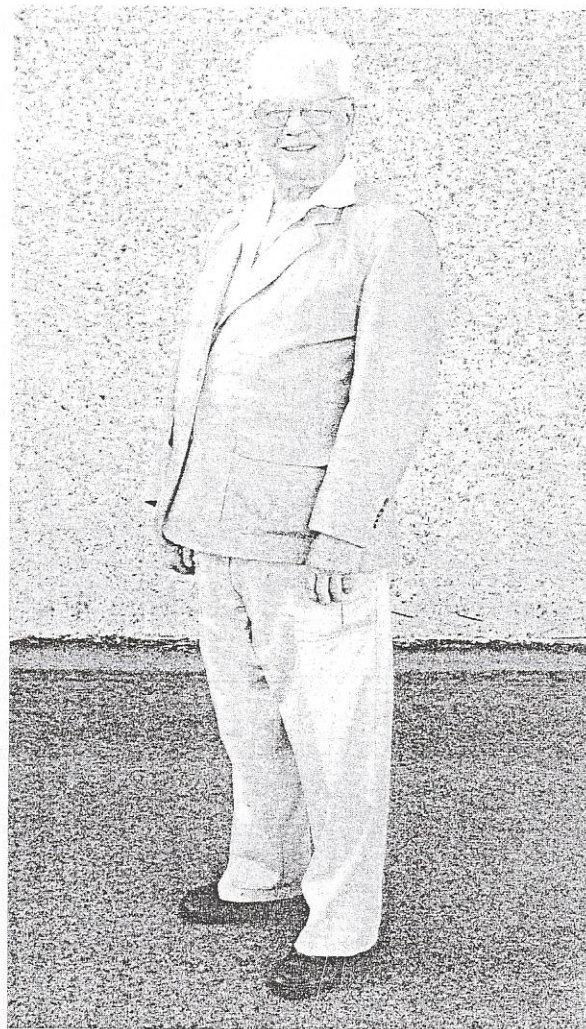
- AMERICAN PSYCHIATRIC ASSOCIATION (1994) Diagnostic and Statistical Manual of Mental Disorders: DSM-IV. Washington D.C.: American Psychiatric Association.
- ARAGON, N., BRAGADO, M. C., & CARRASCO, I. (1997) Alcoholismo parental y psicopatología infanto-juvenil [Alcoholic parents and children's psychopathology]. *Adicciones*, 2, 255-277.
- BAER, J. S., NOVICK, N. J., & HUMMEN-SCHLUGER, A. O. (1995) Task persistence after school consumption among children of alcoholics. *Alcoholism Clinical and Experimental Research*, 19 (4), 955-960.
- BENNETT, L. A., WOLIN, S. J., & REISS, D. (1988) Cognitive, behavioral, and emotional problems among school-age children of alcoholic parents. *American Journal of Psychiatry*, 145, 185-190.
- CASAS, M. J. (1999) *Ansiedad y rendimiento académico en hijos de enfermos alcohólicos: evaluación e intervención* [Anxiety and academic performance in children of alcoholics: Assessment and intervention program]. Unpublished doctoral dissertation, Univer. of Cadiz.
- CHANDY, J. M., HARRIS, L., BLUM, R.W., & RESNICK, M. D. (1993a) Children of alcohol misuse and school performance outcomes. *Children and Youth Services Review*, 15, 507-519.
- CHANDY, J.M., HARRIS, L., BLUM, R.W., & RESNICK, M.D. (1993b) Alcohol misuse of parents and eating disorders of children. *The International Journal of Addictions*, 28, 134-145.
- CHICA, J. (1993) Anomalías de la personalidad del niño determinadas por el alcoholismo paterno [Abnormal personality of children of alcoholic parents]. *Revista del Departamento de Psiquiatría*, 10, 191-292.
- GARCIA-PRIETO, A., BOBES, J., BOUSONO, M., CERVERA, S., & LEMOS, S. (1986) Psicopatología infanto-juvenil en hijos de alcohólicos [Child and adolescence psychopathology of children of alcoholic parents]. *Revista del Departamento de Psiquiatría*, 13(5), 239-247.
- GONZALEZ-MARIN, E. (1988) Repercusión psicopatológica del alcoholismo paterno en los hijos [Psychopathology consequences of parental alcoholism on children]. *Drogodependencia*, 13, 307-312.
- HAVEY, J. M., & DODD, D. K. (1995) Children of alcoholics, negative life events, and early experimentation with drugs. *Journal of School Psychology*, 33(4), 305-317.
- HYPHANTIS, T., KOUTRAS, V., LIAKOS, A., & MARSELOS, M. (1991) Alcohol and drug use, family situation and

- school performance in adolescent children of alcoholics. *The International Journal of Social Psychiatry*, 37(1), 35-42.
- KAPLAN, I. H., SADOCK, B. J., & GREBB, J. A. (1996) *Synopsis of Psychiatry*. Baltimore, MD: Williams & Wilkins.
- LOPEZ, A. I. (1993) Trastornos en hijos de alcoholicos. Revision bibliografica. [Psychopathology of children of alcoholic parents: A review]. Madrid, Spain: Drug Addiction Helping Foundation.
- MARTINEZ-DELGADO, M. (1996) *Validacion de los cuestionarios breves AUDIT, CAGE, y CIBA, para la deteccion precoz del sindrome de dependencia de alcohol en atencion primaria* [AUDIT, CAGE & CIBA validity: tests for alcohol misuse assessment in a public health service]. Unpublished doctoral dissertation. Univer. of Cadiz.
- MONEDERO, C. (1984) *Dificultades de aprendizaje escolar. Una perspectiva neuropsicologica* [Learning disabilities: A neuropsychological perspective]. Madrid, Spain: Piramide.
- MURPHY, R. T., O'FARRELL, T. J., FLOYD, F. J., & CONNORS, G. J. (1991) School adjustment of children of alcoholic fathers: comparison to normal controls. *Addictive Behaviors*, 16, 275-287.
- PEREZ, B. S., & VICENTE, M. P. (1992) Trastornos Psicopatologicos en hijos de alcoholicos. [Psychopathology in children of alcoholic parents]. Tenth National Conference of Drugs & Alcohol Sociology. Alicante, Spain. Pp. 80-82. Book of Abstract.
- PORTELLANO, J. A. (1989) *Fracaso escolar*. [School failure]. Madrid, Spain: CEPE.
- RAVEN, J. C., COURT, J. H., & RAVEN, J. (1993) *Raven manual: progressive matrices*. Oxford, UK: Psychologist Press.
- SEILHAMER, R. A., & JACOB, T. (1990) Family factors and adjustment of children of alcoholics. In M. WINDLE & J. S. SEARLES (Eds.), *Children of Alcoholics: critical perspectives*. New York: Grune & Stratton. Pp. 168-186.
- SHER, K. J., WALITZER, K. S., WOOD, P. K., & BRENT, E. E. (1991) Characteristics of children of alcoholics. *Journal of Abnormal Psychology*, 100 (4), 427-448.
- TARTER, R., JACOB, T., & LAIRD S. B. (1993) Learning and memory capacity of sons of alcoholic men. *The American Journal of Addictions*, 2(3), 232-235.
- VARON, A. (1993) Repercusiones a nivel escolar en hijos de enfermos alcoholicos en activo. [Academic consequences for children of alcoholics]. Fourth National Conference of Alcohol Addictions. Torremolinos, Spain. Pp. 36-39. Book of Abstract.
- WINTRAUB, S. A. (1991) Children and adolescents at risk for substance abuse and psychopathology. *The International Journal of the Addictions*, 25(4), 185-190.

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