Behavior at School and Social Maladjustment

REFERENCE: Osuna, E. and Luna, A., "Behavior at School and Social Maladjustment," Journal of Forensic Sciences. JFSCA, Vol. 34, No. 5, Sept. 1989, pp. 1228-1234.

ABSTRACT: School maladjustment is one of the first symptoms to appear in response to alterations in the child's development and maturation. The aim of this paper is to study school maladjustment in minors confined in juvenile court center and its associations with sociofamiliar, psychobiographical, and social maladjustment variables among others, given the fact that school is one of the earliest agents of socialization. The results point to the influence of family conflict on the subject's behavior in association with the anxiety trait and extroversion. We believe that an accurate diagnosis of school maladjustment is essential as it is in this setting where the treatment of social maladjustment can be initiated with a minimum of delay.

KEYWORDS: psychiatry, jurisprudence, children, school, human behavior, school maladjustment, social maladjustment

School maladjustment is one of the first symptoms in which changes in the child's development and maturation are reflected. School is one of the earliest and most effective agents of socialization where behavioral patterns which permit the individual to accept social norms and group integration are acquired. In this context, conflict at school may be the first indication of future social maladjustment. Ouston [1] points out the importance of the child's behavior at school as perceived by his or her teachers and as a factor predictive of his or her future social adjustment.

Roff and Wirt [2] noted a statistically significant relationship between aggressive behavior towards peers during childhood and the development of criminal behavior in adolescence, while Elliot et al. [3] demonstrated the role of friends and companions in the origin of criminal behavior.

The aim of this article is to study school maladjustment in minors confined in juvenile court center and its possible associations with sociofamiliar, psychobiographical, and social maladjustment and other variables.

Material and Methods

A total of 94 adolescents (45 males and 49 females) from 4 centers of the juvenile court of Granada (Spain), ranging in age from 12 to 18 years inclusive (average age 14.40, years old, standard deviation [SD] 1.63), were studied. These 94 adolescents represent all the minors in this age group confined by the juvenile court at the time of the study.

Each of the subjects was subjected individually to a clinical psychological examination as well as psychometric and psychobiographical studies. Information was obtained regarding school background, history of maladjusted behavior, and drug use patterns. Subsequently, a

Received for publication 8 July 1988; revised manuscript received 5 Nov. 1988; accepted 7 Dec. 1988. 'Assistant professor of legal medicine and full professor of legal medicine, respectively, Department of Legal Medicine, University of Murcia, Espinardo (Murcia), Spain. series of clinical-psychological tests were carried out including: the Eysenck Personality Inventory (EPI) [4] which evaluates two dimensions of personality, neuroticism and extroversion, and also includes a sincerity scale; the State Trait Inventory (STAI) [5]; the Toulouse-Piéron's Attention-Perception Test [6]; the Gibson's Test [7]; and the Cattell and Cattell Tests [8].

The Toulouse-Piéron Attention-Perception Test was provided by TEA Ediciones S.A. (Madrid, Spain). Described in 1911 by Toulouse and Piéron in their studies on experimental psychology [6], it consists of 1600 small pictures arranged in 40 rows. One fourth of the pictures (10 in each row) are identical to each of the models shown at the top of the page. The subject's task is to mark in 10 min all those pictures that are the same as the model indicated by the tester. The test is of use in assessing resistence to fatigue, speed and persistence of perception, and concentration.

Gibson's Test belongs to the group of psychomotor instruments designed to evaluate speed, precision, and other general features of muscular expression in response to a controlled stimulus. First used in 1964 [9], the test material consists of a 235-cm-long spiral maze formed by thick black lines. The route contains obstacles at various points formed of small circles. The variables are counted as the number of errors made and the time needed to complete the test [7].

Following this, two tutors in daily contact with these adolescents were asked to assess different areas of behavior (impulsiveness, peer sociability, conflict, and overall behavior) in each subject.

A total of 88 variables were analyzed in categories for statistical analysis. The following programs from the BMDP (biomedical computer programs), developed at the University of Los Angeles (California) in 1964, were used: simple frequency distribution, multivariate analysis, discriminant analysis, and association between variables. Association was considered to be significant when $P \le 0.05$.

Results

The analysis of the sociofamiliar variables in our sample showed our subjects to be minors from poor families with an average of 5.26 ± 0.26 children (those with more than seven children predominated at 35.2%) and beset by serious family problems. Of the adolescents interviewed, 37.2% had a background of parental separation and 86.2% mentioned family conflicts, the most frequent being physical abuse. Of the subjects, 12.8% had never met their father.

Regarding history of social maladjustment, 41.5% of these adolescents had been brought before the juvenile court on a previous occasion. The most frequent offenses leading to conviction and confinement are shown in Table 1. Patterns of drug use are shown in Table 2.

The majority of the parents of the subjects in our samples did not complete primary school and 30.9% of the fathers and 42.6% of the mothers were illiterate. Of the adolescents studied, 70.2% showed academic underachievement, 33.0% blaming this on lack of interest, 27.7% on intellectual difficulty, and 8.5% on family conflicts. Of the adolescents, 35.4% had an Intelligence Quotient (I.Q.) of less than 80. Table 3 shows the statistically significant relationships between variables related with school maladjustment. Of these adolescents, 43.6% had a history of problematic behavior in school.

In the discriminant analysis we chose school conflict as the variable that separated subjects into two groups: A was effective, B was noneffective. The variables marking the greatest contribution to the discriminant functions were: overall behavior, drug use by siblings, and previous criminal record in the juvenile court. Results of the discriminant analysis and the jackknifed classification are summarized in Tables 4 and 5, respectively.

A statistically significant association was found between low level of academic performance and a previous juvenile court record (P < 0.01). In Table 6, significant associations

 ${\bf TABLE~1--Reason~for~confinement.}$

	n	%
Drug traffic	1	1.1
Crimes against property	25	26.6
Crimes against persons	2	2.1
Crimes against sexual freedom	1	1.1
Running away from home	10	10.6
Confinements for familiar conflictivity	55	58.5

TABLE 2—Percentages of drug consumption patterns.

	Nonconsumption	Occasional Consumption	Frequent Consumption	Very Frequent Consumption
Beer	37.2	41.5	17.0	4.3
Tobacco	48.9	29.8	16.0	5.3
Cocktails	60.6	23.4	11.7	4.3
Spirits	70.2	25.5	2.1	2.1
Wine	74.5	21.3	2.1	2.1
Cannabis	80.9	9.6	5.3	4.3
Sedatives, hypnotics	88.3	5.3	5.3	1.1
Amphetamines	92.6	7.4	0.0	0.0
Opiates	95.7	4.3	0.0	0.0
Cocaine	96.8	2.1	1.1	0.0
Hallucinogens	100.0	0.0	0.0	0.0

TABLE 3—Relationship between school maladjustment and other variables.

Association	χ ²	df	Probability
Conflictive behavior at school—previous record in the juvenile court Conflictive behavior at school—reason for confinement Conflictive behavior at school—number of arrests Conflictive behavior at school—drug use by siblings Conflictive behavior at school—conflicts with authority ^a Conflictive behavior at school—impulsiveness ^a	30.06	1	<0.001
	34.48	3	<0.001
	42.56	4	<0.001
	26.03	6	<0.001
	17.18	3	<0.001
	9.65	3	<0.025

[&]quot;Assessment of the tutors.

TABLE 4—Summary of the discriminant analysis "school conflict."

Step	Variable Entered	Removed	F Value to Enter or Remove	U Statistic	Approximate F Statistic	Degrees of Freedom
1	Var. 584		43.26	0.6802	43.26	1, 92
2	Var. 49b		13.71	0.5911	31.47	2, 91
3	Var. 29°		4.94	0.5263	20.02	3, 90

Previous record in the juvenile court.

^bDrug use by siblings.

Overall behavior (assessment of the tutors).

Group	Damas	Number of Cases Classified into Grou		
	Percent Correct	Yes	No	
Yes	78.0	32	9	
No	77.4	12	41	
Total	77.7	44	50	

TABLE 5—Summary of the jackknifed classification "school conflict."

TABLE 6—Relationship between both school and social maladjustment and drug abuse.

Association	χ^2	df	Probability	
Conflictive behavior at school—consumption of beer	14.58	3	< 0.01	
Conflictive behavior at school—consumption of spirits	6.93	1	< 0.01	
Conflictive behavior at school—consumption of cocktails	19.48	3	< 0.001	
Conflictive behavior at school—consumption of Cannabis	19.45	3	< 0.001	
Conflictive behavior at school—consumption of opiates	5.40	1	< 0.025	
Conflictive behavior at school—consumption of sedatives	16.09	1	< 0.001	
Previous record in the juvenile court—consumption of Cannabis	31.38	1	< 0.001	
Previous record in the juvenile court—consumption of opiates			$< 0.05^a$	
Previous record in the juvenile court—consumption of sedatives			$< 0.001^a$	
Number of arrests—consumption of spirits	14.02	2	< 0.001	
Number of arrests—consumption of cocktails	17.09	2	< 0.001	
Number of arrests—consumption of Cannabis	32.78	1	< 0.001	
Number of arrests—consumption of opiates			$< 0.05^a$	
Number of arrests—consumption of sedatives			< 0.001a	

[&]quot;In these cases statistical association was tested by the Fisher test.

are shown between both school and social maladjustment and drug abuse. The statistically significant associations between the different variables relating to the subject's behavior and sociofamiliar variables are shown in Table 7. Subjects from families with problems showed a higher incidence of conflict and disciplinary problems.

Discriminant analysis was also performed with rebellion against authority in the center of confinement as the "grouping" variable. The groups established were designated A, highly rebellious and rebellious and B, respectful and highly respectful. The variables that best allowed us to classify the subjects are shown in Table 8. This discriminant analysis illustrates the importance of family conflict in relation to the subject's behavior, which was furthermore associated with two variables obtained in the psychometric study: the anxiety trait and extroversion. A comparison of mean percentiles of the anxiety trait in the rebellious/highly rebellious and respectful/highly respectful groups showed the two to differ significantly, the former reaching a number of 71 while the anxiety percentile in the latter group was 57.05.

The appearance of the extroversion factor measured by the Eysenck Personality Inventory as a classifying variable, along with the statistically significant difference between the two groups in the score obtained in the neuroticism scale, confirm to a certain extent in the relationship between various dimensions of personality and the subject's behavior. Higher levels of neuroticism were found in the group of rebellious or very rebellious adolescents.

<i>X</i> ²	df	Probability	
8.21	1	< 0.01	
27.67	9	< 0.01	
8.06	2	< 0.025	
10.18	2	< 0.01	
24.18	12	< 0.025	
	8.21 27.67 8.06 10.18	8.21 1 27.67 9 8.06 2 10.18 2	

5.77

1

< 0.025

TABLE 7—Relationship between subject's behavior (assessment of the tutors) and sociofamiliar variables.

TABLE 8-Summary of the discriminant analysis "rebellion against authority."

Step	Variable Entered	Removed	F Value to Enter or Remove	U Statistic	Approximate F Statistic	Degrees of Freedom
1	Var. 62"		24.84	0.7874	24.84	1, 92
2	Var. 47 ^b		12.86	0.6898	20.45	2, 91
3	Var. 9 ^c		5.01	0.6534	15.91	3, 90
4	Var. 6 ^d	• • •	4.65	0.6209	13.58	4, 89

[&]quot;Expulsion from school.

Overall behavior-mental illness of the father

Discussion

We believe school success or failure can reflect the adolescent's capacity to adapt to certain norms as well as expressing the ability to solve problems. Many problems may arise as concurrent factors in or determinants of low academic performance. If all that was needed was a simplistic analysis, it would be tempting to lump all these factors together in a pat synthesis of the problem confronting us. This, although it might make sense in certain cases, presents objective risks if applied globally to the entire group. Hence any analysis of the present results should be approached with considerable prudence and precision.

We have already pointed out the importance of the child's behavior in school as a prognostic indicator. West and Farrington [10] showed that 38% of the children who misbehave in school at the age of ten subsequently display criminal behavior compared with 4% of children not considered by their teachers to pose behavior-related problems, who eventually commit criminal acts.

One of the disorders most frequently related to behavioral problems during childhood and adolescence is the hyperactivity syndrome [11-17]. Although these disorders have been described under a myriad of different names, the American Psychiatric Association [18] at present classifies them all under the heading of "attention deficit disorder." The proportion of individuals showing criminal behavior in a large group of adolescents with attention deficit disorders has been placed at up to 58% [19]. August et al. [14] found a wide range of disorders in the sample used by Satterfield et al. [19], including learning difficulties, social maladjustment, and neurological disorders. We agree with August et al. [14] and August and Holmes [20] in that the symptoms accompanying the hyperactivity syndrome in childhood cannot be considered predictive of a subsequent psychiatric disorder or maladjusted behavior. Other factors in these subjects, such as low I.Q., learning disorder, or behavioral problems, may have a greater influence on maladjustment. We consider maladjusted behav-

^bDrug use by father.

Anxiety trait (measured by the STAI).

dExtroversion (measured by the EPI).

ior to reflect aggressive and asocial behavior rather than as a component of inattention and hyperactivity. Sénécal et al. [21] in their study of 28 state schools in France found a very high correlation (P < 0.001) between difficulties at school and motility and behavioral disorders. The importance of the sociofamiliar background in which the child grows up stood out as an etiological factor in school maladjustment.

Conclusion

School together with the family, is one of the child's earliest agents of socialization [22]. Difficulties in adapting to certain norms and the nonacceptance of the dynamics imposed by a group may be the expression of an inability to take on responsibilities and to respond to demands that require flexibility and personal harmony. It is in the behavior of the minor in which the conflicts present during upbringing may be most clearly reflected. Those places where the young person is obliged to spend most of his/her time are precisely those places where difficulties in social adjustment can be expected to come to light at an early age.

In the present study a relationship was noted between the personality factors measured by the Eysenck Personality Inventory and the subject's conflict in the place of confinement. Rushton and Chrisjon [23] found a statistically significant association between misbehavior in the child and the adolescent, as assessed by their teachers, and the extroversion factor. Other authors have reported statistically significant correlations between extroversion and neuroticism and various forms of antisocial behavior [24-26].

We believe that an accurate diagnosis of school maladjustment is essential, the role of the teaching staff being ideally to detect these problems and channel them towards the people and institutions capable of dealing with them. This would require appropriate training of teaching personnel to prepare them to identify these problems effectively. It should be emphasized that it is in school where problems of social maladjustment may first become noticeable at a time when treatment can be initiated with a minimum of delay.

Acknowledgments

The authors thank the Spanish Ministry of Education and Science for partially funding this study through Grant Plan de Formacion de Personal Investigador, and Ms. Karen Shashok for translating the original manuscript into English.

References

- [1] Ouston, J., "Delinquency, Family Background and Educational Attainment," British Journal of Criminology, Vol. 24, No. 1, 1984, pp. 2-26.
- [2] Roff, J. D. and Wirt, R. D., "The Specificity of Childhood Problem Behavior for Adolescent and Young Adult Maladjustment," *Journal of Clinical Psychology*. Vol. 41, No. 4, 1985, pp. 564-571.
- [3] Elliot, D. S., Ageton, S. S., and Canter, R. J., "An Integrated Theoretical Perspective on Delinquent Behavior," *Journal of Research in Crime and Delinquency*. Vol. 16, No. 1, 1979, pp. 3-27.
- [4] Eysenck, H. J. and Eysenck, S. B. G., Eysenck Personality Inventory. Hodder and Stoughton Educational, London, 1964.
- [5] Spielberger, C. D., Gorsuch, R. L., and Lushene, R. E., STAI. Manual for the State-Trait Anxiety Inventory (Self Evaluation Questionniare), Consulting Psychologists Press, Inc., Palo Alto, CA, 1970.
- [6] Toulouse, E. and Piéron, H., Techniques de Psychologie Experimental, Les Editions du Centre de Psychologie Appliquee, Paris, 1911.
- [7] Gibson, H. B., Manual of the Spiral Maze. Hodder and Stoughton, Kent, U.K., 1965.
- [8] Cattell, R. B. and Cattell, A. K. S., Measuring Intelligence with the Culture Fair Tests, Institute for Personality and Ability Testing, Champaign, IL, 1973.
- [9] Gibson, H. B., "The Spiral Maze; A Psychomotor Test with Implications for the Study of Delinquency," British Journal of Psychology. Vol. 54, No. 2, 1964, pp. 219-225.
- [10] West, D. F. and Farrington, D. P., Who Becomes Delinquent?, Heinemann Educational Books, London, 1973.

- [11] Offord, D. R., Sullivan, K., Allen, N., and Abrams, N., "Delinquency and Hyperactivity," Journal of Nervous and Mental Disease, Vol. 167, No. 12, 1979, pp. 734-741.
- [12] Prinz, R. J., Connor, P. A., and Wilson, C. C., "Hyperactivity and Aggressive Behaviors in Child-hood: Intertwined Dimensions," *Journal of Abnormal Child Psychology*, Vol. 9, No. 2, 1981, pp. 191-202.
- [13] Milich, R., Loney, J., and Landau, S., "The Independent Dimensions of Hyperactivity and Aggression: A Validation with Playroom Observation Data," Journal of Abnormal Psychology, Vol. 91, No. 2, 1982, pp. 183-198.
- [14] August, G. J., Stewart, M. A., and Holmes, C. S., "A Four Year Follow-up of Hyperactivity Boys with and without Conduct Disorder," *British Journal of Psychiatry*. Vol. 143, No. 2, 1983, pp. 192-198.
- [15] Stewart, M. A. and Behar, D., "Subtypes of Aggressive Conduct Disorder," Acta Psychiatrica Scandinavica, Vol. 68, No. 3, 1983, pp. 178-185.
- [16] Hechtman, L., Weiss, G., and Perlman, T., "Hyperactives as Young Adults. Past and Current Substances Abuse and Antisocial Behavior," American Journal of Orthopsychiatry, Vol. 54, No. 3, 1984, pp. 415-425.
- [17] Campbell, S. B., "Hyperactivity in Preschoolers: Correlates and Prognostic Implications," Clinical Psychology Review, Vol. 5, 1985, pp. 405-428.
- [18] Diagnostic and Statistical Manual of Mental Disorders (third edition revised), American Psychiatric Association, Washington, DC, 1987.
- [19] Satterfield, J. H., Hoppee, C. M., and Schell, A. M., "A Prospective Study of Delinquency in 110 Adolescent Boys with Attention Deficit Disorder and 88 Normal Adolescent Boys," *American Journal of Psychiatry*. Vol. 139, No. 6, June 1982, pp. 795-798.
- [20] August, G. J. and Holmes, C. S., "Behavior and Academic Achievement in Hyperactive Subgroups and Learning-Disabled Boys. A Six-Year Follow-Up," American Journal of Diseases of Children, Vol. 138, No. 11, Nov. 1984, pp. 1025-1029.
- [21] Sénécal, J., Roussey, M., Letort, F., Delahaye, M., and Subileau, B., "Les Causes d'Inadaptation Scolaire chez l'Enfant," Archives Françaises de Pediatrie, Vol. 44, 1987, pp. 523-530.
- [22] Szabo, D., "Comment Devient on Criminel," Revue Internationale de Criminologie et de Police Technique, Vol. 5, No. 1, 1977, pp. 11-16.
- [23] Rushton, J. P. and Chrisjohn, R., "Extraversion, Neuroticism, Psychoticism and Self-reported Delinquency," *Persons Individual Differences* Vol. 21, pp. 11-20.
- [24] Spatz Widom, C., Katkin, F. S., Stewart, A. J., and Fondacaro, M., "Multivariate Analysis of Personality and Motivation in Female Delinquents," *Journal of Research in Crime and Delinquency*, Vol. 20, No. 2, July 1983, pp. 277-290.
- [25] Furnham, A., "Personality, Social Skills, Anomie and Delinquency: A Self-Report Study of a Group of Normal Non-Delinquent Adolescents," *Journal of Child Psychology and Psychiatry*, Vol. 25, No. 3, 1984, pp. 409-420.
- [26] Hundleby, J. D., "Personality and the Prediction of Delinquency and Drug Use," British Journal of Criminology, Vol. 26, No. 2, 1986, pp. 129-146.

Address requests for reprints or additional information to Dr. Eduardo Osuna
Departamento de Medicina Legal
Facultad de Medicina
Universidad de Murcia
30100 Espinardo (Murcia), Spain