

Educational Attainment in Adolescent School Phobia

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Summary

The educational attainment of 100 school-phobic youngsters was compared to that of 100 other psychiatric patients, using the reading quotient as the main measure. Age and IQ were allowed for. RQs were, on average, higher in the school phobic group than in the other subjects, except in a small number of younger children of high IQ. Additional comparisons with another group of psychiatric patients and with the general population, using regression equations, failed to provide any evidence of poor educational attainment in school phobia.

The investigation reported in this paper was concerned with the educational ability of the first hundred school phobic youngsters admitted to High Lands, a psychiatric in-patient unit for emotionally disturbed adolescents. The diagnostic criteria used and some clinical features of this group were described previously, and it was shown that these school phobic youngsters were unusually dependent (Berg, Nichols and Pritchard, 1969; Berg and McGuire, 1971) and over-protected by their mothers (Berg and McGuire, 1974) compared to a control group from the general population. Differences of this sort have been widely accepted (Kahn and Nursten, 1962) as an adequate explanation for the occurrence of school phobia, despite the fact that dependency diminishes with increasing age and the finding that school phobia is most likely to develop in early adolescence (Leventhal and Sills, 1964).

One obvious explanation for the high incidence of school phobia about the time of starting secondary education is to relate it to increasing demands of school, notably greater academic pressure. In the general population, low educational attainment appears to result in dislike of school, and in the case of older children to poor attendance as well (Mitchell and Shepherd, 1967). It is also interesting that most difficulties of normal children adjusting to primary school diminish with increasing age, whereas problems connected with school work become more frequent in older boys and girls (Moore, 1966).

So far, however, there is very little direct evidence that educational difficulties are at all common in school phobia (Hersov, 1960), although some youngsters with this condition undoubtedly have problems with school work (Klein, 1945; Green, 1959; Hersov, 1972). Nevertheless, there are indications that such difficulties may not be as uncommon as previously supposed. Thus, in one study (Chazan, 1962) it was found that half of those school-phobic children who were supposed to be attending schools other than grammar schools, had serious educational problems. Also, it is worth noting in this connection that in the treatment of school phobia affecting young teenagers it is often necessary to arrange for a change of school to a less pressurized educational setting (Berg, 1970; Capes, Gould and Townsend, 1971). There is thus an obvious need to look at educational attainment in studying school phobia occurring in early adolescence (Eysenck and Rachman, 1965).

PROCEDURE

A hundred consecutive school-phobic admissions and a hundred consecutive non-school-phobic admissions were investigated. The youngsters were tested routinely by the Unit psychologist within a few weeks of coming in to hospital. The Wechsler Intelligence Scale for Children (WISC), the Schonell Graded Word Reading Test (GWRT) were administered. The Unit teacher was asked, after about two

months' classroom observation, to say whether a severe educational problem appeared to exist.

The data were punched on cards for analysis on the Leeds 1906A I.C.L. computer, using a standard set of programs (Hamilton, McGuire and Goodman, 1965). A series of one-way analyses of variance were used.

RESULTS

The hundred school phobic youngsters had a mean full-scale IQ of 106 (S.D. = 14), mean performance IQ of 106 (S.D. = 16), mean verbal IQ of 106 (S.D. = 14) and mean reading quotient of 100 (S.D. = 12).

Preliminary analyses of variance revealed IQ and RQ differences of significance between grammar and secondary modern school subjects and between older and younger age groups. A two-way analysis of variance between mean RQs for three levels of IQ, comparing school phobics and controls, was therefore carried out separately for older and younger children (Table I). It will be seen that school phobics have higher RQs on average than other subjects

except for younger children of above average intelligence; differences in this group did not reach statistical significance when tested separately.

A multiple regression technique was also used to examine these relationships. Verbal, performance and full scale IQ, sex, type of school and existence of an educational problem as judged by the Unit teacher were used as predictor variables in calculating a multiple regression, with RQ as the external criterion. A second multiple regression was calculated, including school phobia as an additional predictor variable. These two analyses were then compared, using residual variance remaining after that accounted for by the regression had been subtracted from the total.* No significant difference was found indicating that

* The statistic used, reduction in sum of squares due to using an additional predictor variable, expressed as a proportion of the larger mean residual sum of squares per degree of freedom, was suggested by Mr. Paul Nicholson, Department of Computer Studies, University of Leeds. It was compared to the F distribution.

TABLE I
Comparisons of mean RQ between school phobic and non school phobic youngsters for three full scale IQ levels

	Older group (after 13th birthday) n = 100			Younger group (up to age 13) n = 100		
	School phobic cases	Other cases	Significance	School phobic cases	Other cases	Significance
IQ (WISC full scale)	Reading quotients (F.S. IQ)			Reading quotients (F.S. IQ)		
	n = 12	n = 13		n = 6	n = 10	
Up to 90	82.1 (85.1)	81.5 (84.0)	RQ: IQ level: P < .001	84.7 (86.5)	77.3 (84.3)	RQ: IQ level: P < .001
			S.P./Other case: P < .05			S.P./Other case: N.S.
	n = 22	n = 21	Interaction: N.S.	n = 19	n = 29	Interaction: P < .05
90-110	96.0 (101.2)	92.1 (97.0)		102.0 (100.1)	93.7 (101.1)	
			(F.S. IQ: IQ level: P < .001			(F.S. IQ: IQ level: P < .001
	n = 24	n = 8	S.P./Other case: N.S.	n = 17	n = 19	S.P./Other case: N.S.
Above 110	106.3 (121.2)	100.6 (123.2)	Interaction: N.S.)	108.9 (117.4)	114.8 (122.4)	Interaction: N.S.)

whether or not a youngster was school phobic did not appear to affect the RQ.

Multiple regression equations for predicting reading age from age and verbal IQ based on a group of children referred to the Maudsley Hospital (Fransella and Gerver, 1966) were also used. Only two youngsters out of the school phobic group had significantly depressed actual reading ages ($P < 0.05$).

The regression equations based on children from the general population, to predict reading scores, given by Yule, Rutter, Berger and Thompson (1974) could only be applied to some cases, since only equations for 10- and 14-year-olds were available. Also, their Neale reading test scores had to be converted into equivalent Schonell scores. None of the grammar school group had actual reading ages below predicted ages ($n = 10$), and only a third of the secondary modern school group (5 out of 15) had lower actual than estimated reading ages.

DISCUSSION

The full-scale IQ distribution (mean 106, standard deviation 14) of the hundred school-phobic youngsters was virtually the same as that found in Hersov's (1960) comparable study of 50 cases and in Chazan's (1962) investigation of 33 school-phobic children. The grammar school phobics (mean full scale IQ 117) were similar to the grammar school group reported by Chazan (1962), with a mean full scale IQ of 121, in their lack of educational problems. The secondary school phobics with a mean full-scale IQ of 100 were also similar to Chazan's secondary modern school group in that about half of both series had educational problems judged by the teacher.

The tests that we used all covered the age groups of the youngsters studied adequately, so that there were no problems due to ceiling effects.

The fact that after allowing for age and IQ there was either no difference between the mean RQs of school phobics and other psychiatric cases, or else higher mean RQs in the school phobics suggests that poor educational attainment is not an important factor in the causation of school phobia.

The comparison between school phobics and

youngsters from the general population—having regard to the general limitations of using regression techniques (Hope, 1968), and the particular snags connected with the available equations (Yule, Rutter, Berger and Thompson, 1974) which have already been referred to—also failed to provide any evidence that poor educational attainment is a feature of school phobic youngsters.

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REFERENCES

- BERG, I. (1970) A follow-up study of school phobic adolescents admitted to an in-patient unit. *Journal of Child Psychology and Psychiatry*, **11**, 37-47.
- & MCGUIRE, R. (1971) Are school-phobic adolescents overdependent? *British Journal of Psychiatry*, **119**, 167-8.
- (1974) Are mothers of school-phobic adolescents overprotective? *British Journal of Psychiatry*, **124**, 10-13.
- NICHOLS, K. & PRITCHARD, C. (1969) School phobia—its classification and relationship to dependency. *Journal of Child Psychology and Psychiatry*, **10**, 123-41.
- CAPESE, M., GOULD, E. & TOWNSEND, M. (1971) *Stress in Youth*. London.
- CHAZAN, M. (1962) School phobia. *British Journal of Educational Psychology*, **32**, 201-17.
- EYSENCK, H. J. & RACHMAN, S. J. (1965) The application of learning theory to child psychiatry. In *Modern Perspectives in Child Psychiatry* (ed. Howells, J.). Edinburgh.
- FRANSELLA, F. & GERVER, D. (1966) Multiple regression equations for predicting reading age from chronological age and W.I.S.C. verbal I.Q. *British Journal of Educational Psychology*, **35**, 86-9.
- GREEN, J. L. (1959) In *Truancy or School Phobia?* London: National Association for Mental Health.
- HAMILTON, M., MCGUIRE, R. & GOODMAN, M. J. (1965) The P.L.U.S. system of programmes: an integrated system of computer programmes for biological data. *British Journal of Mathematical and Statistical Psychology*, **18**, 265-6.
- HERSOV, L. (1960) Refusal to go to school. *Journal of Child Psychology and Psychiatry*, **1**, 137-45.
- (1972) School refusal. *British Medical Journal*, **iii**, 102-104.
- HOPE, K. (1968) *Methods of Multivariate Analysis*. London.
- KAHN, J. H. & NURSTEN, J. P. (1962) School refusal: a comprehensive view of school phobia and other failures of school attendance. *American Journal of Orthopsychiatry*, **32**, 707-18.

- KLEIN, E. (1945) The reluctance to go to school. *Psycho-analytical Study of the Child*, 1, 263-79.
- LEVENTHAL, T. & SILLS, M. (1964) Self image in school phobia. *American Journal of Orthopsychiatry*, 34, 685-95.
- MITCHELL, S. & SHEPHERD, M. (1967) The child who dislikes going to school. *British Journal of Educational Psychology*, 37, 32-40.
- MOORE, T. (1966) Difficulties of the ordinary child in adjusting to primary school. *Journal of Child Psychology and Psychiatry*, 7, 17-38.
- YULE, W., RUTTER, M., BERGER, M. & THOMPSON, J. (1974) Over- and under-achievement in reading: distribution in the general population. *British Journal of Educational Psychology*, 44, 1-12.

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