

## An Evaluation of Hospital In-patient Treatment in Adolescent School Phobia

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**SUMMARY** Thirty-two school-phobic youngsters of mean age 13 years were randomly allocated to two treatment groups after stratifying for sex. Length of in-patient management in a psychiatric hospital unit for young adolescents was evaluated. One group was admitted for three months and the other for six. Care was taken to ensure that cases had been fairly distributed between the groups by comparing them on a variety of clinical features. Follow-up assessments were carried out in a reliable fashion at six months, one year and two years after discharge. Outcome, overall, was similar to that found in a previous follow-up study for the same unit, in that symptoms of emotional disturbance and social impairment tended to persist in a considerable proportion of cases over the period of review. Length of stay in hospital did not affect outcome as far as the boys were concerned; the findings in relation to the girls was less certain and it seems likely that longer in-patient treatment improves outcome in school-phobic girls.

This paper is concerned with an evaluation of length of stay in hospital on the outcome of school phobia affecting children of secondary school age. Neurotic disturbances, including school phobia, which occur in early adolescence tend to persist and to cause severe problems of adjustment several years later (Warren, 1965; Waldron, 1976; Gersten *et al*, 1976). A previous follow-up study of 100 school-phobic youngsters treated at the adolescent unit used in the investigation described here showed that at least a third of them had neurotic difficulties and severe problems of adjustment up to four years after discharge (Berg *et al*, 1976).

Few attempts have been made to evaluate different methods of treatment in school phobia. In one investigation it was found that early return to school helped school-phobic children under the age of 11, but not those who were older (Rodriguez *et al*, 1959). In another the drug imipramine was shown to improve the short-term response to treatment in a small group of school-phobic youngsters (Gittleman-

Klein and Klein, 1973); and in a third study neither traditional psychotherapy nor the behaviour therapy technique of reciprocal inhibition influenced outcome (Miller *et al*, 1972).

It is difficult to evaluate different forms of treatment in an institutional setting such as an adolescent unit, because of the number of staff involved and the problem of securing the whole-hearted cooperation of all the people concerned (Clarke and Cornish, 1972). Success in carrying out an evaluative study is increased when the treatments involved are clearly very different. Random allocation of two periods of stay, one of about three months and one of about six months, appeared to meet this criterion. The expectation was that, assuming a youngster received treatment directed towards increasing self-confidence, reducing dependency on the family, improving the ability to socialize and overcoming phobic inhibitions, then the longer the stay in hospital the better the long-term progress would be.

*The sample*

Thirty-two children of secondary school age with school phobia severe enough to require admission to an adolescent unit were included in the study. The condition was diagnosed when there was: (1) severe difficulty attending school—often amounting to prolonged absence; (2) severe emotional upset shown by such symptoms as excessive fearfulness, undue tempers, misery, or complaints of feeling ill without obvious cause, on being faced with the prospect of going to school; (3) staying at home with the knowledge of the parents when they should be at school; and (4) absence of significant antisocial disorders such as stealing, lying, wandering, and destructiveness (Berg *et al.*, 1969). The children were allocated randomly to one of the two treatment groups by tossing a coin. The groups were stratified for sex.

*Treatment*

The adolescent unit has been described previously (Berg and Griffiths, 1970; Berg, 1970). Youngsters spend every weekend at home. There is a school on the premises. The main methods of treatment used are supportive psychotherapy, social skills training, and milieu therapy. A therapist works individually with each child and maintains contact following discharge. Family therapy is also employed.

*Collection of data*

*Before admission:* Clinical assessment was carried out by one of the writers (I.B.). An outline of the findings was incorporated in a letter to the referring doctor. These letters were subsequently rated by the other author (D.F.), who had no other knowledge of the children, to provide a check on the adequacy of the process of randomization in distributing cases of similar severity of disturbance to each group.

*In hospital:* The youngster was tested on the WISC and the Junior EPI. Mothers completed the EPI for themselves and the SADQ (Self Administered Dependency Questionnaire, Berg, 1974) for their child.

*After discharge:* Parents and child were interviewed together. Two social workers, experienced in rating symptoms and adjustment in school-phobic youngsters following hospital treatment, went to see them at home. Twenty-three families were reviewed within six months after discharge. Twenty-five were seen, some of them for the second time, about a year after leaving the unit. Eighteen were interviewed, in some cases for the second or third time, about two years after discharge. The standard form was the one that had been used in the previous follow-up of school-phobic adolescents (Berg *et al.*, 1976). Usually both social workers were present. One asked the questions

**Procedure**

and each made an independent rating of psychiatric symptoms and adjustment. A picture of the clinical state over the whole follow-up period was built up; any previous follow-up assessments were taken into consideration. The findings were expressed, as in the previous study, as the proportion of time ill (incapacitating symptoms with marked social impairment), slightly improved (marked symptoms with mild or moderate social impairment), much improved (mild or moderate symptoms with minimum social impairment), and well (absence of symptoms and normal social adjustment). This procedure was originally described by Kerr *et al.* (1972).

*Analysis of data*

Results were analysed on the Leeds University ICL 1906A computer, using a standard set of programs (Hamilton *et al.*, 1965). Three variables were obtained from the follow-up data, as previously described (Berg *et al.*, 1976). The first was *well* scores, the second was *well plus much improved* scores, and the third was *well plus much improved plus slightly improved* scores. Percentages of time spent in the clinical states corresponding to these variables were changed into integers on an eight-point scale. They were intercorrelated and a principal component factor analysis was carried out. The first component was a general factor accounting for 77 per cent of total variance; it was considered to be the best weighted combination of outcome ratings measuring improvement. The outcome of the two treatment groups was compared. Analyses of variance and multiple regressions were used.

*Reliability of follow-up assessments*

In 62 instances, independent assessments were made by the two raters. Reliability was estimated by the Kappa coefficient (Cohen, 1960; Hall, 1974; Maxwell, 1977). The overall value was .8. Individual Kappa values were: *well* .8, *much improved* .7, *slightly improved* .7, and *ill* .9.

**Results***Features of treatment groups (Table I)*

The clinical information gathered before admission was rated on a seven-point scale. Psychiatric symptoms, social isolation, lack of friends, duration of problems, and personality attributes were included in the assessment. An item was given a score of 1 if the child was thought to be functioning normally in that respect; otherwise, it was rated 0. The scores

TABLE I

Thirty-two school phobic adolescents admitted to hospital and allocated at random to two groups: (a) 3 months and (b) 6 months length of stay. Information available on admission: Ratings and clinical information, Age, IQ, Social class, Junior EPI, Mother's EPI, SADQ, actual and preference scores

School phobic adolescents admitted to hospital	Ratings of clinical information available on admission <sup>1</sup> (SD)	Age (yrs)	IQ <sup>2</sup> Full scale WISC	Social class <sup>2</sup> Registrar General	Junior EPI		Mother EPI			SADQ									
											Actual				Preference				
					N	E	L	N	E	L	Affection	Communication	Assistance <sup>3</sup>	Travel	Affection	Communication	Assistance <sup>3</sup>	Travel	
Long stay (6 mnths)	Boys n=8	3.9 (1.5)	12.6	118	2.7	13	14	3	10	9	2	6	3	7	10	6	8	4	8
	Girls n=8	4.1 (1.7)	12.7	102	3.5	18	10	4	15	10	3	6	6	4	11	7	9	3	8
Short stay (3 mnths)	Boys n=8	4.0 (1.4)	13.1	107	2.8	14	14	2	10	12	3	4	4	8	9	6	8	7	7
	Girls n=8	3.4 (0.9)	13.5	102	3.5	16	13	2	11	11	2	4	6	6	10	5	8	4	7

<sup>1</sup> 7 point scale. The higher the score the less disturbance.

<sup>2</sup> Significant differences between sexes. No significant differences between length of stay groups.

<sup>3</sup> Significant differences between length of stay groups and sexes.

on individual items were then added up. The higher the total score the less disturbed the child was considered to be. As far as the boys were concerned, analysis of variance showed that there was no difference between the long-stay (mean rating = 3.9) and short-stay (mean = 4.0,  $F = .1$ ,  $P > .05$ ) groups. There were slightly greater differences in the girls (long-stay mean 4.1, short-stay mean 3.4,  $F = 1.3$ ,  $P > .05$ ) but they were not statistically significant.

Comparisons between the two treatment groups showed no significant differences in age, IQ or social class (short-stay: mean IQ 104, age 13.4 years; long-stay: mean IQ 109, age 12.7 years). Scores on the Junior EPI did not show any significant differences. Nor were there any significant differences in the scores on the EPI completed by mothers or in actual scores on the SADQ. There was one significant difference in the preferred SADQ results, which concerned the factor termed assistance:

mothers of short-stay youngsters would have preferred their children to be more reliant on them (short-stay: mean preference score 5.2; long-stay: 3.2,  $P < .01$ ).

#### Change of outcome over time

The outcome of the entire group within six months after discharge and after one and two years is shown in Figure 1, which indicates a tendency for improvement to occur with time. About 20 per cent were ill more than half the time throughout the two year period.

Looking at eight families who had been interviewed three times during the follow-up period: at six months, a year and two years, changes in outcome were insignificant. Any changes were usually in the direction of improvement; in only two instances was there deterioration. All three ratings of outcome were identical over two years in two families. One category differed in three families and two categories in a further three families.

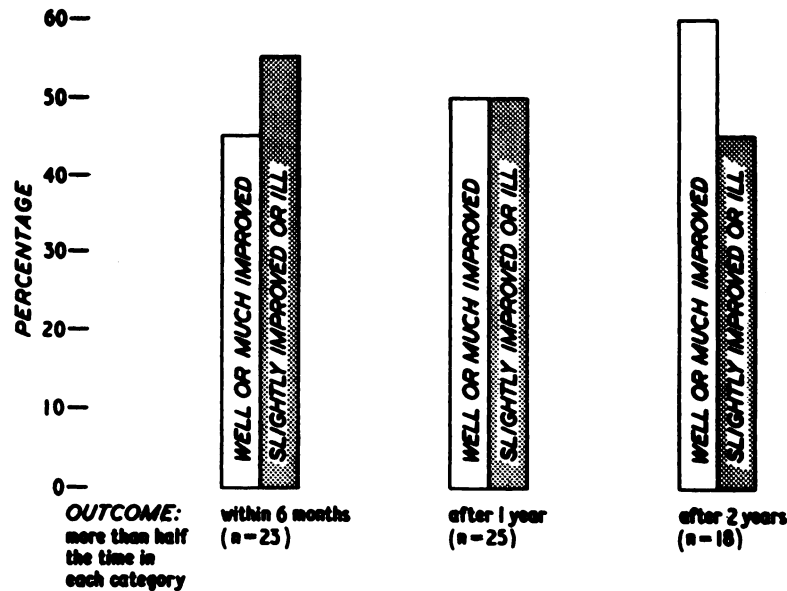


FIG 1.—Thirty-two school phobic adolescents admitted to hospital and allocated at random to two groups: (a) 3 months and (b) 6 months length of stay. Outcome within 6 months and after 1 and 2 years.

#### Clinical features and outcome

Outcome scores of the 32 school-phobic youngsters were correlated with age, social class, IQ, sex, Junior EPI scores, Mothers' EPI scores, SADQ *actual* and *preference* scores and number of weeks spent in the unit. Good adjustment on follow-up correlated  $+ .34$  with length of stay in the unit. This just failed to reach significance ( $P > .05$ ). Poor adjustment was significantly correlated with age ( $r = + .52$ ,  $P < .01$ ) and lower social class ( $r = + .44$ ,  $P < .05$ ). None of the other correlations were significant.

#### Differences in outcome between treatment groups (Table II)

Boys and girls were looked at separately, since a preliminary analysis showed a tendency for sex and stay to interact. No significant difference emerged between short-stay and long-stay boys. Mean outcome score for short-stay boys was 47.2 and for long-stay boys 48.7. The outcome factor scores were all expressed in T score form, i.e. with an overall mean value of 50 and standard deviation of 10. The smaller the score the better the outcome. Short-stay and

long-stay girls showed much larger differences. Mean outcome scores for the short-stay girls was 57.5 and for the long-stay girls 47.2. This difference did not reach statistical significance,\*  $F = 3.9$ ,  $df 1/15$ ,  $P > .05$ . Seven of the 8 short-stay girls had one- or two-year follow-up assessments compared to 5 of the 8 long-stay girls. However, comparison of outcome at six months in the two groups showed a similar ten-point mean difference in the same direction.

#### Comments and Conclusions

The finding that the outcome in the 32 cases of school phobia over the two-year period of follow-up was very similar to that of the 100 cases previously reviewed confirms the view that symptoms of emotional disturbance and social impairment tend to persist when school phobia affects adolescents (Berg *et al.*, 1976). A well-known follow-up study of childhood beha-

\* It could be argued that a one-tailed test would be more appropriate here, since it was predicted at the outset that a better outcome would result from a longer period of hospital treatment. In that case, the result would, in fact, be significant ( $P < .05$ ). However, the writers prefer to err on the side of caution.

TABLE II  
*Thirty-two school phobic adolescents admitted to hospital and allocated at random to two groups: (a) 3 months and (b) 6 months length of stay. Outcome of boys and girls*

School phobic adolescents admitted to hospital	Youngsters rated well or much improved—over 50% of 1 year follow-up period <sup>1</sup>	Mean outcome score <sup>2</sup>
Long stay (6 months)	Boys n=8 5	48.7
	Girls n=8 5	47.2
Short stay (3 months)	Boys n=8 5	47.2
	Girls n=8 2	57.5

<sup>1</sup> Those of school age in these categories were attending school regularly.

<sup>2</sup> In T score form. The higher the score the worse the outcome.

viour disorders suggests that, whereas conduct disturbances characterized by antisocial behaviour tend to persist into later life, neurotic disorders do not (Robins, 1966). It has been pointed out, however, that the children reviewed in that paper who had neurotic difficulties were generally younger than those with conduct problems, over half of whom were aged 14 or older; only a quarter of the neurotic youngsters had reached this age. In another very well-designed longitudinal study, young people between the ages of 14 and 16 suffering from both kinds of disorder were followed up five years later. It was found that neurotic and conduct disturbances showed an equal degree of stability over the period of review (Gersten *et al.*, 1976). The fact that older youngsters had a poorer outcome in the investigation reported here is in accordance with the second follow-up study.

The reliability of the follow-up assessments was quite satisfactory.

Comparisons between the long-stay and short-stay cases showed that as far as boys were concerned length of stay in hospital did not influence subsequent outcome. This was

an unequivocal finding. In regard to the girls the position is more difficult to evaluate. It is apparent from the results that the girls who stayed in hospital for only three months tended to be more disturbed on follow-up than those who remained there for six months. A possible explanation is that the short-stay girls were somewhat more disturbed than the long-stay girls when they were first admitted; this could have come about purely by chance. But there was no definite evidence that the short-stay group was in fact more disordered before admission. The two treatment groups were not significantly different on a number of variables. Nevertheless, there were suggestions from the clinical information available at the time of admission that the short-stay girls did tend to be marginally more disturbed. On the other hand, the length of the follow-up period was a little longer in the short-stay cases, a difference between the two groups which would have the opposite effect, reducing differences in outcome. This is because improvement tends to occur with time (Berg *et al.*, 1976 and Figure 1). The long-stay cases would probably have been found to be a little less disturbed if they had been followed-up after exactly the same time interval as the short-stay cases. Taking all these factors into consideration, it does seem likely that a longer length of in-patient treatment improves the outcome of school-phobic girls. If substantiated, this finding is important since girls are at greater risk for neurotic problems in general, and agoraphobia in particular, in later life (Rutter, 1972; Berg *et al.*, 1974). Any treatment which may effectively reduce the likelihood of these problems continuing into adult life is of obvious importance.

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