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School Phobia: A Therapeutic Trial with Clomipramine and Short-Term Outcome

T. BERNEY, I. KOLVIN, S. R. BHATE, R. F. GARSIDE, J. JEANS, B. KAY and L. SCARTH

Summary: A double-blind trial failed to demonstrate any significant short-term effects of clomipramine in doses recommended for use in general practice (in addition to the usual range of psychotherapeutic help) in the treatment of children with school refusal and neurotic disorder. Patterns of improvement were also studied for the sample as a whole irrespective of treatment. Neither age nor sex were significantly related to improvement, except on one behavioural measure where girls initially did better than boys. In addition, it was found that there was a rapid relief of depression but neurotic symptomatology tended to persist.

School phobia is a misnomer for a heterogeneous collection of disorders associated with a marked reluctance to attend school. The theories advanced to explain these disorders are to a large extent governed by the psychotherapeutic school to which the clinician belong. Those belonging to psychodynamic schools find dynamic explanations more acceptable (Johnson, 1957; Kahn and Nursten, 1962); behaviour therapists find learning theory explanations acceptable (Yates, 1970; Ross, 1972a, b) and biologically-oriented therapists explain the illness in terms of biological mechanisms (Campbell, 1955; Agras, 1969). As might be expected, treatment approaches vary; some use a behaviour modification approach, while others restrict themselves to a psychodynamic treatment strategy. Most authorities advocate an early return to school (Eisenberg, 1958; 1959), but others claim that such a strategy could hinder the adequate resolution of the underlying conflict. While some advise hospital admission for children with more severe disturbance, others only admit to hospital those whose disorder is intractable. Finally, there is the question of the value of drug treatment. Imipramine has been claimed to have different modes of action. Some clinicians consider that imipramine exerts an antidepressive effect in a disorder which is basically a depressive equivalent in childhood (Frommer, 1967), but others consider that the effect of this drug lies in reducing anxiety associated with separation from the parents, thus making the child more accessible to therapy and facilitating return to school (Gittelman-Klein and Klein, 1971).

Treatment today is based upon a psychosocial assessment which provides the basis of the diagnostic formulation. However, therapeutic approaches vary from one clinical department to another but, despite these differences, it has been claimed that the outcome is good.

The first aim of the present research was to study the short-term effects of an antidepressant drug, clomipramine, in addition to the usual psychotherapeutic measures, in the treatment of school refusal. However, patterns of outcome for different groups of children are equally important, and the second aim of the study was to discover if the sex and age of the children had an effect on the outcome. The third aim was to study the course and short-term outcome of the disorder in relation to customary methods of psychological treatment irrespective of drug treatment.

Method

The present study was a double-blind trial to compare clomipramine and a placebo in the treatment of school refusal. Patients were stratified for sex and randomly assigned to treatment. The trial lasted 12 weeks.

Subjects

For the purpose of this study school refusal was defined as the association of a neurotic disorder with a marked reluctance to attend school which had persisted for at least four weeks. Clear-cut cases of truancy, psychoses and children already taking anxiolytic or antidepressant drugs were excluded. Some degree of depression was common. We did not attempt to distinguish between the various underlying psycho-

pathologies as described by Hersov (1976) and Waldron (1976) and the group therefore includes children with school refusal, whether they had excessive separation anxiety, or more specific fears of school and school-related situations.

Of the 52 patients who were selected for the study, one developed schizophrenia; four patients were excluded because of failure to comply with medication or attendance at the clinic and a further patient was excluded because it had been necessary to break the code before the end of the trial. Of the remaining 46 patients 19 were on placebo and 27 on clomipramine, 19 were male and 27 female, and 18 were pre-adolescent (younger than 12 years) and 28 adolescent (12 years or older). Compliance was checked and encouraged by tablet counts together with reminders to the patients and their parents. Such checks led to the conclusion that the pills had been taken regularly.

The average time that the children had been off school at the beginning of the study was six months but there were some children who, despite marked distress, continued to attend school because of considerable pressure from the family, their general practitioner, or professional workers associated with education. The number of exclusions as detailed above proved to be very few, and, therefore, we concluded that our criteria were more inclusive than exclusive.

Treatment

The dose was prescribed according to age and was increased over a few weeks until the dose for that age was achieved, i.e. 40 mg a day for 9 to 10 year olds; 50 mg a day for 11 year olds; 50 mg a day for 12 year olds and 75 mg a day for 13 and 14 year old children. As will be discussed later, the dose recommended by the manufacturers for use with adults in general practice is 50 to 75 mg a day and, furthermore, a number of general practice trials have reported 75 mg a day as being an effective dose (Gringras, 1973; McMillin, 1973). As reported by Saraf *et al* (1974), some side-effects occurred but were usually not severe; in the one instance when the code had to be broken on account of supposed side-effects the patient proved to be on the placebo.

Concurrent treatment was tailored to each patient and consisted of individual psychotherapy for the child and casework with parents. When there was severe anxiety, pressure to attend school was withdrawn but reintroduced as soon as the child and family were able to cope with it. In due course all children were encouraged to attend school either alone or escorted by a parent or a member of staff.

Data collection and rating scales

At the beginning of the study, baseline data were obtained, both by the psychiatrist in charge of the case as well as a second assessor, who separately and independently interviewed the patient and parents; thereafter, both doctors carried out independent brief assessments at monthly intervals over the following 12 weeks. The inter-rater reliabilities of these ratings were significant and are described later. As we later found that the follow-up ratings obtained by the psychiatrists responsible for the case were more complete, we decided to use these in our subsequent analyses. We considered this to be legitimate, both because the assessments were reliable and because the research was conducted blind.

On the basis of an interview with the parents, children were assessed on 14 items of behaviour, which were rated on 4-point scales, from absence of disorder to marked disorder. These items were subsequently summed to give global scores. From a psychiatric examination of the child, ratings were obtained from a similar set of 13 items (see Appendix). In addition, on the basis of information available from both the parents and the child, the psychiatrist made an overall clinical judgement on the following four dimensions:

i. *Overall severity of disorder:* This was rated on a 4-point scale from marked severity (4), through moderate (3) and dubious (2), to absence of disorder (1).

ii. *Depression:* This was defined as a sad, unhappy mood which was associated with at least one of the following: an appearance of being gloomy or tearful, a lack of his usual energy, a feeling of hopelessness or that life was not worth living. This state differed from the child's usual mood variations in severity, quality or duration. The severity of depression was rated as follows: 4: profound unhappiness as well as a serious degree of one of the other three symptoms (or a milder degree of all three); 3: a lesser degree of sadness and unhappiness and also one of the other symptoms; 2: an ill-sustained presence of one of the four main symptoms; 1: an absence of depressive symptoms.

iii. *Neurotic Dimension:* This was defined as behaviour which included such features as anxiety, sensitivity, obsessive-compulsive phenomena, phobias, somatic symptoms, hypochondriasis or hysterical symptoms. The severity was also rated on a 4-point scale, marked (4), moderate (3), doubtful (2) and absent (1).

iv. *Separation anxiety:* This was defined as anxiety manifesting as excessive feelings of fear (panic) in specific situations, such as actually separating from parents or leaving home unaccompanied. The severity was also rated on a 4-point scale from very severe (4), moderate (3), dubious (2) and absent (1).

v. *Ability to attend school:* This was one of the

14 items derived from interviewing the patents and because of its importance to the theme of this research we present the four points of the scale: 4: completely unable to attend school; 3: attends school on one or two occasions in the week, if escorted; 2: attends school reasonably frequently, but usually requires escorting; 1: able to attend school unescorted four or five times a week, though often under considerable pressure.

This scale is only a measure of actual arrival at school and does not take into consideration what happens subsequent to that.

Thirty families were independently interviewed by two psychiatrists. The scales proved to have satisfactory reliability, as follows: i. 14 individual items obtained from interview with the parents—average correlation +.59; ii. global score of the above 14 items —correlation +.82; iii. 13 individual items based on interview with the child—average correlation +.67; iv. global score of the above 13 items—correlation +.88; v. clinical judgements of severity of disturbance on the four dimensions—average correlation +.79. All correlations are significant at the one in a hundred level.

As is usually found with rating scales, there is a lower average reliability for individual items in comparison with global scores which are based on the summation of such items. The agreement between clinicians on the four dimensions based on clinical judgement is higher than occurs with individual items and is therefore better than we had anticipated.

Background data

The 51 children were all between their 9th and 15th birthdays; of these, 61 per cent were 12 years and over, which was the arbitrary demarcation we adopted to signify the onset of adolescence. There was a slight preponderance of girls (57 per cent) and 35 per cent of the children were first-born, with a further 35 per cent being second-born. The distribution by occupational class of parents was similar to that of the local community, with 18 per cent of the sample falling into Classes I and II, 47 per cent in Class III and 35 per cent in Classes IV and V or unemployed.

Results

a. *Comparison of treatment groups*

We analysed our data in two ways. We first studied the shifts towards improvement that occurred within each group (drug or placebo); we then directly compared the improvement of these two groups using analysis of covariance (making allowance for any initial differences between groups).

i. *Within-group shifts* (Table I) In this part of the project we used a repeated measures design to study the changes (a) from baseline to eight weeks; (b) from baseline to 12 weeks, for each group with itself (but not for comparisons between groups). At eight weeks,

TABLE I

Significance of improvement of the various subgroups on the different clinical dimensions (using McNemar's test of correlated change)

Subjects	Overall severity	Severity of depression	Separation anxiety	Degree of neurotic disorder	Ability to attend school
	Change by 8 weeks (compared with baseline)				
Untreated controls (placebo)	(32) $\chi^2 = 4.2^*$	(26) χ^2 = NS	(37) $\chi^2 = 4^*$	(26) χ^2 = NS	(58) $\chi^2 = 9.1^{**}$
Treated subjects (clomipramine)	(27) $\chi^2 = 5.1^*$	(35) $\chi^2 = 5.8^*$	(38) $\chi^2 = 8.1^{**}$	(7) χ^2 = NS	(14) χ^2 = NS
	Change by 12 weeks (compared with baseline)				
Untreated controls (placebo)	(53) $\chi^2 = 8.1^{**}$	(32) $\chi^2 = 4.2^*$	(37) $\chi^2 = 4.0^*$	(47) $\chi^2 = 7.1^{**}$	(58) $\chi^2 = 9.1^{**}$
Treated subjects (clomipramine)	(50) $\chi^2 = 11.1^{**}$	(35) $\chi^2 = 7.1^{**}$	(58) $\chi^2 = 13.1^{**}$	(38) $\chi^2 = 5.1^*$	(42) $\chi^2 = 9.1^{**}$

* = Significant at the 5 per cent level.
** = Significant at the 1 per cent level.
The figures in brackets consist of the excess percentage of those getting better over those getting worse.

on three of the five scales studied, the group without medication showed a significant shift towards improvement. By 12 weeks the changes were significant on all scales (and highly so on three). The group with medication showed a broadly similar pattern and by 12 weeks there was a highly significant shift towards improvement on four of the five scales.

ii. *Between-Group Shifts* Using an analysis of covariance, we compared the improvement of the two groups (drug and placebo) on the two global scores described above. No significant differences were found. The question remained of whether there would be differences in shifts to improvement either on any of the individual items which contributed towards the global scores or in the case of the clinical scales. Again, there were no significant differences and the only relevant finding was that the group on clomipramine showed a slight trend to greater improvement at four weeks on the item of sad, depressed mood of the child but this trend disappeared by 12 weeks.

Finally there remains the question of whether clomipramine affected outcome in the smaller subgroup of children with initial high depression scores. Again there were no significant differences either in reduction of depression scores or in improvement in ability to attend school.

b. *Comparison of other sub-groups*

As there were no significant differences between the groups on the measures (global scores and clinical scales) at 4, 8 and 12 weeks, we examined the outcome according to sex and age of the child (adolescence versus pre-adolescence) for both groups combined.

i. *Within-group shifts* (See Table II) The Table provides a summary of the findings in terms of significant shifts at eight weeks and 12 weeks. It will be seen that at eight weeks the degree of improvement was smaller than at 12 weeks.

In the case of the pre-adolescent group, there was a significant shift towards improvement on only one scale at eight weeks but by 12 weeks only one of the five was not significant and furthermore, three were highly significant. In the adolescent group there were significant shifts by eight weeks on three of the five scales and by 12 weeks on all of the scales, four of which were highly significant. Thus short-term improvement occurred more rapidly in older children.

Boys show a significant shift towards improvement

TABLE II

Significance of improvement of the various subgroups on the different clinical dimensions (using McNemar's test of correlated change)

Subjects	Overall severity	Severity of depression	Separation anxiety	Degree of neurotic disorder	Ability to attend school
	Change by 8 weeks (compared with baseline)				
Pre-adolescents	(28) χ^2 = NS	(28) χ^2 = NS	(33) χ^2 = NS	(11) χ^2 = NS	(39) $\chi^2 = 5.1^*$
Adolescents	(30) $\chi^2 = 6.1^*$	(33) $\chi^2 = 7.1^{**}$	(41) $\chi^2 = 9.1^{**}$	(18) χ^2 = NS	(30) $\chi^2 = 4.1^*$
Boys	(26) χ^2 = NS	(32) χ^2 = NS	(42) $\chi^2 = 6.1^*$	(5) χ^2 = NS	(37) $\chi^2 = 5.1^*$
Girls	(31) $\chi^2 = 6.1^*$	(31) $\chi^2 = 4.9^*$	(35) $\chi^2 = 5.8^*$	(23) χ^2 = NS	(31) $\chi^2 = 4.1^*$
	Change by 12 weeks (compared with baseline)				
Pre-adolescents	(56) $\chi^2 = 8.1^{**}$	(28) $\chi^2 = 3.2$, NS	(50) $\chi^2 = 7.1^{**}$	(50) $\chi^2 = 5.7^*$	(56) $\chi^2 = 8.1^{**}$
Adolescents	(48) $\chi^2 = 11.1^{**}$	(37) $\chi^2 = 8.1^{**}$	(48) $\chi^2 = 9.6^{**}$	(37) $\chi^2 = 5.7^*$	(44) $\chi^2 = 10.1^{**}$
Boys	(53) $\chi^2 = 9.1^{**}$	(37) $\chi^2 = 5.1^*$	(37) $\chi^2 = 4.0^*$	(53) $\chi^2 = 7.8^{**}$	(47) $\chi^2 = 7.1^{**}$
Girls	(56) $\chi^2 = 11.1^{**}$	(31) $\chi^2 = 6.1^*$	(58) $\chi^2 = 13.1^{**}$	(35) $\chi^2 = 4.9^*$	(56) $\chi^2 = 11.1^{**}$

* = Significant at the 5 per cent level.
** = Significant at the 1 per cent level.
The figures in brackets consist of the excess percentage of those getting better over those getting worse.

on two of the scales by eight weeks but by 12 weeks on all of the scales whereas the girls show a significant shift on four of the five scales by eight weeks and all of the scales by 12 weeks. Thus short-term improvement occurs more rapidly in girls than boys.

ii. *Checking between-group shifts* (using analysis of covariance)

A comparison of the improvement was undertaken between the sexes and between the two age groups. There were no significant differences on any of the 27 individual items studied. However, on the global scores resulting from the summation of the 13 individual items derived from interviewing the child, a number of trends were evident: adolescents tended to improve more rapidly than pre-adolescents and girls more rapidly than boys. These differences were found at four and eight weeks after the start of the trial but had disappeared by the time of the 12-week interviews. The *only* significant difference is in the case of girls who showed a greater improvement at eight weeks ($F = 7.7$, $P < .01$) but by 12 weeks the boys had almost caught up. The same trends, though less pronounced, were found in the analysis of the global score obtained from interviewing the parents: there was a more rapid initial improvement by girls, but by 12 weeks the boys have caught up.

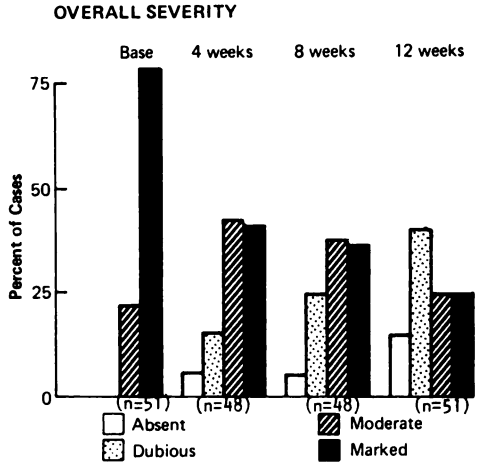
c. *Patterns of improvement for the total group*

As there was only one significant difference between the three sets of sub-groups studied, we decided to study the patterns of improvement for the sample as a whole. The findings are presented in percentages in histogram form at the baseline, four weeks, eight weeks and 12 weeks. We confined this analysis to data from clinical ratings made by the psychiatrist. On this occasion we included all cases on which there was full data including those in which there was lack of compliance. (Further details available from I.K.).

i. *Clinical assessment of overall severity* (Fig 1)

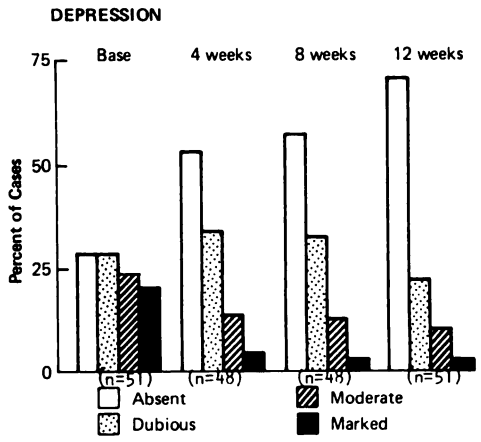
The Figure demonstrates change in severity of all the cases included in the study. It is notable that all the cases fell into the moderate to marked categories and indeed, three-quarters were rated as being of marked severity. This gave rise to the question of whether we were dealing with a selected group of more severe cases directed to the University Department because of their gravity or intractability. Selectivity is likely to have played a part in cases coming from beyond our own catchment area but we tried to minimize this by drawing on a full range of cases both from the University Hospital and from the local child guidance clinics.

There is an obvious rapid improvement and at the



Percentages have been rounded off
Rated clinically on a four-point scale
Presented as percentages in histogram form

FIG 1



Percentages have been rounded off
Rated clinically on a four-point scale
Presented as percentages in histogram form

FIG 2

end of three months the numbers in the moderate or marked degree category have been reduced by half, with the highest percentage of cases collecting in the dubious category.

ii. *Depression dimension* (Fig 2)

Some 44 per cent of the cases were initially rated as having a moderate or marked degree of depression but

this dramatically falls so that, after 12 weeks, only 11 per cent had a significant degree of depression.

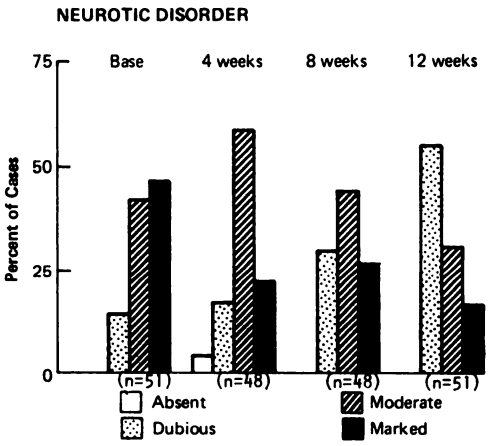
iii. *Neurotic dimension* (Fig 3)

Some 87 per cent of these cases fall into the marked and moderate categories at baseline. This reduces only gradually so that, by 12 weeks, 47 per cent of cases fall into these categories. Again, we have evidence of the intransigence of this type of disturbance but perhaps the most important finding is that, by 12 weeks, all of the cases studied still showed evidence of neurotic behaviour. Some may interpret these findings as suggesting that, while the symptomatology has receded, there has been insufficient resolution of the underlying problems and conflicts. Furthermore, the above findings suggest that, while there is a spontaneous, rapid improvement of depression and anxiety, other manifestations of neurosis are more intransigent phenomena.

iv. *Separation anxiety* (Fig 4)

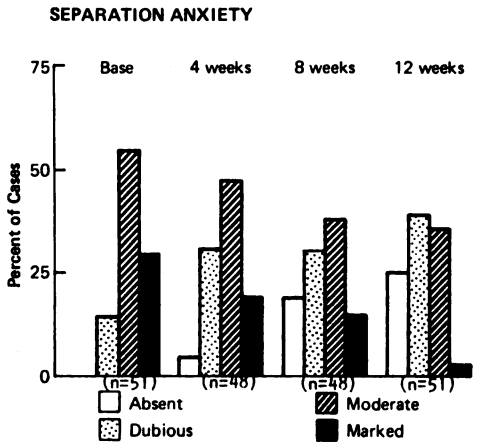
Initially, 87 per cent of the cases fall into the marked to moderate category of anxiety at separating from their parents or leaving home. This is a higher proportion than is usually described in the literature. This may reflect either the severity of the disorders we were managing or the definition of this scale. However, only 30 per cent were rated as having marked anxiety at baseline, which is closer to the percentage described in the literature. Twelve weeks later, only 2 per cent fall into the marked category and only 37 per cent into the combined marked and moderate categories. About a quarter of the cases are rated as being apparently free of such anxiety by the end of the study.

We also looked at the individual items from the interview with the parents which assessed the child's ability to attend school (Fig 5). Here the picture over the 12 weeks is that of a distorted 'U'; with the arms of the 'U' having a reciprocal relationship to one another. This suggests that the children either fell into a can-get-to-school category or into a cannot-get-there category. As expected, there is a shift from the



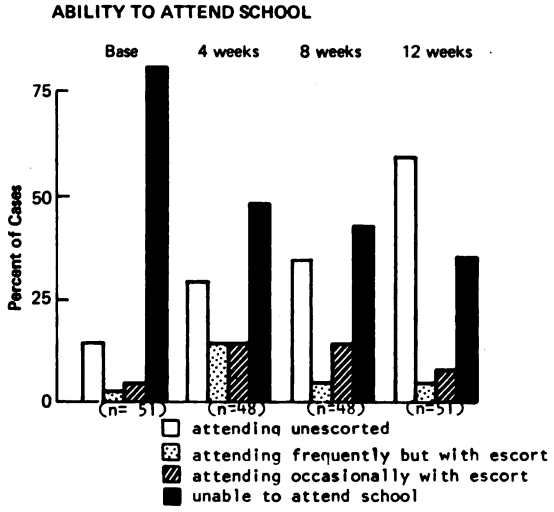
Rated clinically on a four-point scale
Presented as rounded-off percentages in histogram form

FIG 3



Rated clinically on a four-point scale
Presented as rounded-off percentages in histogram form

FIG 4



Rated on a four-point scale and based in the parental assessment
Presented as rounded-off percentages in histogram form

FIG 5

latter to the former over the three months of the study but, at the end, more than one-third of the children still have serious difficulties in attending school.

Discussion

On the basis of the above findings, we can conclude that clomipramine, in doses used in general practice, appears to make no substantial difference to outcome. Our findings also provide no support for the belief that clomipramine reduces separation anxiety and neurotic behaviour or that it is specific for depression. In addition, age makes no difference to outcome and the only significant sex difference is that at eight weeks girls do better than boys when rated on a global score of improvement. In addition, there are some short-term trends for adolescents to do better than pre-adolescents but by 12 weeks both the boys and the pre-adolescents have caught up.

We had chosen clomipramine because it was reported to have both anxiolytic and antiphobic properties (Murphy, 1973) in addition to its anti-depressive effect. This wide range of effects was particularly relevant to school refusal as, both from the literature and clinical experience, there is evidence of symptoms extending beyond anxiety and fears to depression. The literature suggests that antidepressants are effective in the school refusal syndrome, though, to our knowledge, there has only been one controlled trial (Gittelman-Klein and Klein, 1971; 1973) in which it was reported that six weeks of imipramine therapy in high dosage significantly reduced separation anxiety and thereby increased the chances of school attendance. On the other hand, in dosage levels recommended for and used in clinical practice. we have not been able to demonstrate that clomipramine is effective.

We need to examine the possible reasons for the apparent ineffectiveness of clomipramine. The most important is the dosage level used. The manufacturers recommend rather higher dose levels (by 50–100 per cent) for imipramine (Tofranil) than for clomipramine (Anafranil) (Data Sheets Compendium, 1979), the dose of clomipramine recommended for children and early adolescents being 25 to 50 mg daily and for severely depressed adults 75 mg or higher daily. Hence, the dose levels of clomipramine used in our trial are consistent with those recommended for the severely depressed adult patient in general practice. Although higher dosage regimens have been suggested for obsessional states and have been used in certain clinical trials a high frequency of side effects, particularly postural hypotension has been reported and it has been concluded that clomipramine should not be used as a drug of first choice (Harding, 1973). This may be one of the reasons for the lower dosage recommended for general practice. On the other hand, it is interesting to note that a low dosage of clomipramine (10 mg tds) has been reported as being as effective as a higher dosage (25 mg tds) and to be well tolerated (Gringras, 1973).

Although direct comparison is difficult, we estimate that the dose level of 100 to 200 mg of imipramine a day used for 6 to 14 year olds by Gittelman-Klein and Klein is higher than the dosage of clomipramine that we have used. They assert that no response to imipramine occurs until a higher dose than that recommended by the manufacturers for use with children and adolescents in general practice (Data Sheets Compendium, 1979) is attained. It could therefore be argued that our negative findings are consistent with the above assertion. On the other hand, their work has not been replicated and even if their assertion was true there remain questions about the propriety of using such levels for children without sufficiently strong clinical justification, many of whom are treated on an outpatient basis. Further, the doses used in our trial were within the therapeutic range in which therapeutic effect is reported in adults. All we can conclude is that, even at the highest adult dosage recommended by the manufacturers, clomipramine adds little to the treatment of children and young adolescents when used in addition to psychotherapy.

A second possible explanation for the negative result is non-compliance. However, this is unlikely in view of the checks undertaken which were identical for both the placebo and control groups. Third, there is the question of whether the amount and nature of psychotherapeutic treatment differed for the drug and the placebo groups. Again, this is unlikely as every possible precaution was taken to ensure blindness at the start and to maintain this over the course of the study. An indirect check is available from the assessments of the independent observer at the final follow-up where inter-rater reliabilities of +.88 for the parent interview global scale and +.89 for the child interview global score were obtained. Finally, there is the question of selective dropout, but the dropout rate was too low for this to have substantially affected the results (one control case reported major side effects).

Although there has been a steady stream of optimistic accounts of the outcome of school refusal (Davidson, 1960; Hersov, 1960; Baker, 1978), there are studies which suggest that this condition may be more intractable than has been thought previously (Berg *et al*, 1975; Berg and Fielding, 1978; Waldron, 1976). Our findings of a substantial persistence of neurotic behaviour, including separation anxiety, is in line with the latter view and suggests that, even in some of those children who managed to attend school there may have been insufficient resolution of the

underlying problems and conflicts. At the same time, there has been a rapid reduction in depressive symptomatology, which may lead to a decision to discharge the child from treatment. This may be premature in view of the residual neurotic disturbance. This theme has been taken up by other workers (Waldron, 1976; Berg and Fielding, 1978). In this respect, the findings of different rates of improvement on different dimensions is of crucial importance. Evidence of depressive symptomatology, taken alone, gives a false picture of improvement, and the neurotic dimension alone gives a more pessimistic impression. The dimension of overall severity shows a surge of improvement in the first four weeks which appears to recur in the last four weeks. In fact, an analysis of the previous two dimensions suggests that the pattern is determined by the rapid reduction in depressive symptomatology in the first four weeks and a comparatively rapid reduction in neurotic symptomatology in the last four weeks.

Some commentary is necessary on the various ascertainment criteria and behavioural measures that we have studied. We initially defined school refusal as a marked reluctance to attend school, associated with a neurotic disorder. When we rated children for separation anxiety, we found it was moderate to marked in a high proportion (87 per cent) and in no case was it absent. The rate of separation anxiety in various studies of children who are school refusers differs considerably: Eisenberg (1958) reports separation anxiety as a universal phenomenon; Waldron *et al* (1975) report that two-thirds of their cases, with an average age of 9 years, showed separation anxiety: while Smith (1970) reported it in a third of his cases. A study of Eisenberg's sample of pre-school and elementary school children suggests that separation anxiety may be an age-related phenomenon, and this is supported by Smith's findings. However, in their study of children aged 6 to 14 years Gittleman-Klein and Klein (1971; 1973) found that most of them showed separation anxiety, and felt it to be fundamental to school refusal. Finally, Hersov (1960) described it in only 34 per cent of his cases, who were of a wider age range.

Some 44 per cent of our cases were classified as suffering from a significant degree of depression. This is similar to the rate reported in other studies (Davidson, 1960; Gittelman-Klein and Klein, 1971), but falls short of the figure of 56 per cent given by Waldron *et al* (1975). This aspect of the study will be the subject of a later paper.

Finally, although cases showing truancy were specifically excluded, those children showing other manifestations of conduct disorder were not excluded. It is, therefore, interesting to note that antisocial symptoms, such as lying, stealing and wandering, were rare. If there were a spectrum of disorders covering school refusal and truancy, then one would have to anticipate that cases of school refusal would show at least some antisocial symptoms. For instance, Tennent (1969) has demonstrated neurotic symptomatology in a population of truants referred by the courts to a remand centre, and his work supports the concept of a spectrum of disorders whereas ours does not.

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Appendix

As described in the method section, on the basis of interview with parents, children were assessed on the following 14 items of behaviour. On the basis of a psychiatric examination of the child ratings were obtained on the first 13 items.

1. Sad depressed mood;
2. Life is not worth living;
3. Bouts of weeping;
4. Irritability;
5. Panic attacks;
6. Initial insomnia;
7. Night wakening;
8. Early morning wakening;
9. A poor appetite;
10. Nausea, vomiting;
11. Abdominal pains or headaches;
12. An inability to go shopping unaccompanied;
13. An inability to attend school unaccompanied;
14. Outbursts of aggression confined to the home.

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