The behaviour and self-esteem of children with Specific Speech and Language Difficulties

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Abstract

Background. Children with specific speech and language difficulties (SSLD) may have associated difficulties that impair their access to the curriculum, and their social relationships at home and in school.

Aims. (i) To identify the range of additional problems experienced by children with SSLD in different educational contexts; (ii) to consider the relationship between these problems and the child's current language status and (iii) to consider the child's self-esteem and the extent to which self-esteem is associated with the primary language problem or other associated difficulties.

Sample Sixty nine children (17 girls, 52 boys) aged 7-8 years (Year 3) who had been identified as having SSLD, 59 from two local education authorities and 10 from regional special schools for children with severe speech and language difficulties.

Method The children were assessed on a range of cognitive, language and educational measures; children and teachers completed a measure of the children's self esteem (Pictorial Scale of Perceived Competence and Social Acceptance); teachers and parents completed a behavioural questionnaire (Strengths and Difficulties Questionnaire (SDQ)); teachers also completed a further rating scale which included a behaviour subscale (Junior Rating Scale (JRS)).

Results. The children's behaviour was rated as significantly different from the norm on both the SDQ and JRS, with the parents more likely to rate the child as having problems, but also as having prosocial behaviour. Both teachers and parents tended to rate the boys as having more problems than girls on the SDQ, with significant differences for the parents' ratings occurring on the total score and the hyperactivity and conduct problems scales. The children had positive self perceptions, which were comparable to the standardisation sample, and generally significantly higher than those of the teachers. The language and educational attainment scores of the children in special and mainstream schools were generally not significantly different, but parents rated the latter group as having more behaviour difficulties. Multiple regression analyses identified language comprehension and reading comprehension as the only predictors of the parents' rating of behaviour (on the SDQ). No relationship was found with the teachers' ratings.

Conclusions. Behavioural difficulties, but not low self esteem, are common in children of 7-8 years with SSLD, but the differences in patterns of relationship between parents and teachers, and with respect to children attending mainstream and special schools, challenge simple interpretations of comorbidity.

INTRODUCTION

The development of language competency is arguably the cornerstone for a child's ability to access the curriculum and develop their social competence. Recently, there has been an increased interest in children who have delays in the acquisition of oral language skills. Language and communication difficulties occur for a variety of reasons including organic causes (such as hearing loss or other physical disabilities), early language experiences, or as part of a general difficulty in learning and cognitive functioning (Dockrell & Messer, 1999). There is also a large group of children who experience language difficulties in the absence of any of these causes. The children and their difficulties have been described in a variety of ways and different labels have been used to categorize the problems. The essential notion is that the child's language must be delayed from the norm or presents a different pattern from the norm, and that the language problems cannot be explained by other causal factors e.g. sensory or experiential (see Bishop, 1997 or Leonard, 1998 for reviews). In this paper we use the term children with Specific Speech and Language Difficulties (SSLD). This was the terminology used frequently in the educational context, emphasised 'difficulty' rather than 'impairment' and allowed participants to identify a range of children (in the first instance) with expressive, receptive and pragmatic oral language problems.

Although prevalence rates vary current estimates suggest that specific problems with speech and language are not rare. The most recent epidemiological study (Tomblin, Records, Buckwalter, Zhang, Smith, & O'Brien, 1997) determined the prevalence rate of specific speech and language difficulties to be 7.4% among five-year-olds[1]. A recent survey of 36 month-old children in Cambridgeshire reported that almost 7% had language difficulties (Burden, Stott, Forge, & Goodyer, 1996). A higher ratio of boys to girls is affected (Johnston, Stark, Mellits, & Tallal, 1981) and there is increasing concern to provide adequate descriptions of the children's skills. This need stems from both a theoretical motivation where examples of comorbidity are used to explain different developmental trajectories (Angold, Costello & Erkanli, 1999) and from a practical perspective to address the reality of meeting the children's special educational needs (Dockrell & Lindsay, 2000).

Much of the concern about these children has focused on the impact of oral language skills on later literacy (Beitchman, Wilson, Brownlie, Walters, & Lancee, 1996; Botting, Crutchley & Conti-Ramsden, 1998; Catts & Kahmi, 1999; Dockrell & Lindsay, 1998; Silva, McGee & Williams, 1987; Stothard, Snowling, Bishop, Chipchase & Kaplan, 1998). This link between oral language and literacy is, perhaps, unsurprising and to be expected. In contrast there has been less concern with the nature and extent of other difficulties that the children contend with. For example, there are frequent clinical reports of associated motoric and/or behaviour problems. among children with language delay (Baker & Cantwell, 1987; Beitchman, Wilson, Brownlie, Walters, Inglis, & Lancee, 1996; Silva, McGee, & Williams, 1985).

The identification of associated or comorbid diagnosis supports practitioners' views

[1] In Tomblin's study children had normal non-verbal IQs, and scored at least 1.25 SDs below the mean on two or more of five composite language measures.

of the link between oral language problems and behavioural difficulties. Levy et al (1996) studied 1,938 families with children aged 4-12 years. They report that there was a strong relationship between attention deficit hyperactivity disorder (ADHD) and speech and reading problems. Beitchman, Wilson, Brownlie, Walters, Inglis, & Lancee (1996) report a study of 202 speech and language impaired and control children followed up from 5 to 12;5 years. Even though the speech and language difficulties improved in many of the sample, there was an increased rate of psychiatric disorder at 12;5 years in that group; this was more likely to co-occur with language than speech difficulties. Cohen, Barwick, Horodezky, Vallance, and Im, (1998) examined a clinic sample of 380 children aged 7 - 14 years referred for child psychiatric services with identified and unsuspected language impairments. They found that those children with language impairments tended to show greater deficits in social cognitive processing than those whose language was developing normally. Moreover, children previously identified as having language impairments were more likely to be diagnosed as having ADHD, and were rated by both parents and teachers as more socially withdrawn.

Children's difficulties can have broader implications. There is, for example, a reciprocal interaction between self perceptions and performance: a child experiencing success at school and in personal relationships is likely to be more motivated and successful, which in turn enhances the likelihood of maintaining or increasing self perceptions in the relevant domain (e.g. Burns, 1982; Blatchford, 1992). In contrast relatively negative self perceptions may result from less success in these areas, and lead to reduced motivation and further impaired performance (Chapman, 1988). Currently there is a dearth of studies which examine the self perceptions of children with speech and language difficulties. These children may be considered likely to have more negative self perceptions for three reasons: firstly, the effects of failure at school and associated negative feedback; secondly the stigmatising effects of being singled out and labelled; and thirdly effects specific to the nature of communication difficulties. Children with learning difficulties generally have been found to have lower academic self perceptions (Grolnick and Ryan, 1990; Montgomery, 1994; Renick & Harter, 1989). School placement is a relevant but confounding factor. Eshel, Katz, Gilat and Nagler (1994), for example, report that pupils aged between 9 and 12 years in special classes had higher self-perceived academic competence than a sample matched for academic ability in mainstream classes. However, this has not been replicated in other studies, for example, Leonardi (1993); and Begley (1999) found higher but non-significantly different self perceptions among pupils attending mainstream compared with special schools in a sample of 87 pupils aged 8-16 years with Downs Syndrome. Children's self perceptions are likely to be influenced not only by the objective reality of their academic performance but also by the behaviour of others on the basis of that performance. It is as yet unclear whether the children with SSLD have such negative views and if such views exist whether they are related to their language and communication difficulties or their school placements. In a small scale study of fourteen children with SSLD aged 8-14 years, McAndrew (1999) found no significant differences on two self esteem scales, the Peers-Harris Self Concept Scale and the Coopersmith Self Esteem Inventory, compared with standardisation samples.

In assessing children's emotional and behavioural status, therefore, it is necessary to

take into account the interaction of a number of factors, in particular: the nature of the child's specific strengths and weaknesses (within child); the influence of the environment in engendering, maintaining or altering emotional and behavioural difficulties (contextual); and the relationship with time (developmental) (Dockrell & McShane, 1993; Lindsay, 1995). With respect to the present study the former dimension includes not only the child's speech and language difficulties, but also their educational attainments and self-perceptions of their cognitive and physical competence, and peer and maternal acceptance, which research suggests are the main evaluative domains used by children (Harter & Pike, 1984). Context here primarily concerns the school and the home, including teachers' and parents' perceptions of behaviours in addition to the nature of each setting (e.g. mainstream or special school), its purpose, demands and ecological characteristics. A developmental perspective acknowledges that the nature of each of the first two sets of factors changes over time, and also that the nature of their interaction also changes.

Thus the present study aims (a) to identify the range of additional problems experienced by children with SSLD in different educational contexts (b) to consider the relationship between these problems and the child's current language status and (c) to consider the child's self-esteem and the extent to which self-esteem is associated with the primary language problem or other associated difficulties.

METHODS

Design:

Following a survey in the two LEAs where professionals identified children in Year 3 (7 to 8 year-olds) that they felt experienced a specific speech and language problem (Dockrell & Lindsay, 2000) a subsample of children were selected for individual assessment and interview. The aim was to establish a representative sample of the original professional referrals of children with language problems. Children with other complicating factors such as a diagnosis of autism were excluded from the study at this point.

Participants:

Seventeen girls and 52 boys were involved: 33 from LEA A, 26 children from LEA B, attending mainstream and special school provision in each LEA, and for comparative purposes 10 children attending residential schools for children with severe speech and communication disorders. At time of testing, the children had a mean age of 8:3 (range 7:6 - 8:10). Data were also collected from the teachers of all 69 children and the parents of 68 children. One parent declined to be interviewed.

Instruments:

The children were tested on a number of measures aimed to cover the range of socio-educational dimensions. The measures, presented in Table 1, are well standardised instruments commonly used with British children. Here we consider in more detail the measures used to tap social and behavioural factors.

INSERT TABLE 1 ABOUT HERE

The Strengths and Difficulties Questionnaire (SDQ) is a revision and extension of the Rutter parent and teacher questionnaires developed by Goodman (Goodman, 1994; Goodman, 1997; Yude, Goodman & McConachie, 1998). The SDQ has the benefit of

positive, prosocial items. Goodman has produced evidence for the concurrent and predictive validity of the SDQ, as well as standardisation data indicating the cut-offs for each scale and the total difficulties score to indicate children as likely psychiatric 'cases'. These data (Goodman, 1997) are used in the present study. The SDQ was completed by the children's teachers and parents separately. The SDQ is designed for children and young people aged 4-16 and has five items for each dimension. Each item is marked 'not true', 'somewhat true' or 'certainly true'. Each of the five scales can therefore result in a score from 0 to 10. The scores for the first four scales can be summed to produce a total difficulties score (range 0-40); the prosocial scale provides a separate score relating to positive behaviour.

The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPCSA) (Harter & Pike, 1984) comprises four scales each with six items for the child version: cognitive competence, physical competence, peer acceptance and maternal acceptance. The version for 6/7-year-olds was used in the present research. It comprises separate booklets for boys and girls, with comparable activities but boy or girl figures respectively. The child chooses one of the two figures s/he considers s/he is most like in response to a verbal statement from the researcher, and then indicates whether they are like this child a lot or a little. Hence each of the 24 items has a possible range of 1-4 and each scale has a possible range of 6-24. The teachers version excludes the maternal acceptance scale but is otherwise identical. It is completed as a checklist of 4-point scales for each item. Hence it is possible to compare the child's and teacher's ratings of the child's perceptions of their competence and acceptance.

The Junior Rating Scale (Abraham & Lindsay, 1990) comprises 24 items, each of which is scored on a five point scale. It was developed as an upward version of the Infant Rating Scale (Lindsay, 1980, 1981), and designed for children of junior age from 7-11 years (Key Stage 2). It comprises five scales namely language/education, motor skills, behaviour, social integration and general development, derived from factor analyses, as well as a total score. All items are designed with the intention that about 1 to 2 % of children are rated at point 1, and about 15% at point 2. The JRS shows good test-retest reliability (Pearson correlation for total score 0.95, $p<0.001$: Abraham & Lindsay, 1990). The JRS was completed by the child's teacher.

Procedure:

The children were assessed individually on a range of language, educational and social/behavioural measures. Parents and teachers completed questionnaires and rating scales concerned with the children's development independently. Finally, individual interviews were held with parents, teachers, speech and language therapists and educational psychologists for each child. The adults were informed that all data would be treated as confidential but that the information would be used to inform practice in the LEAs and schools concerned, and be made available to a wider audience. All except one parent and all professionals agreed to take part. However, all parents agreed to their children being assessed and for the relevant professionals to be asked for information, in confidence. The children were informed that they were part of a piece of work designed to help children like themselves. The present paper presents the results from the assessments of the children's social and behavioural development.

RESULTS

1. Comparison with standardisation samples.

i*) Strengths and Difficulties Questionnaire*

Goodman's (1997) three-category system (Normal, Borderline and Abnormal) was used to categorise the data and the scores were compared with the proportions expected according to the standardisation (80:10:10). Results for the total difficulties indicate that almost a third of the children were rated as abnormal by teachers, and 36.7% by parents, compared with the expected 10%. Results for the subscales are presented In Table 2. The ratings by parents vary significantly from expectation for all scales except prosocial, whereas the teachers' ratings differed from expectation on all scales except the emotional symptoms and conduct problems.

INSERT TABLES 2 AND 3 ABOUT HERE

A further analysis explored the differences between the parents' and teachers' ratings of the children (Table 3). In three cases there were significant differences: conduct problems ($t=4.3$, df 57, $p<.001$), prosocial behaviour ($t=6.05$, df 54, $p<.001$) and total score ($t=2.41$, df 46, $p=.02$) The parents were more likely to rate the children as having difficulties on the conduct scale, where 36.4% of the parents rated the children as abnormal as opposed to 11.7% of the teachers, and also on the total difficulties score. However, the parents were also more likely than teachers to rate the children as having normal prosocial behaviour, a distribution that approximated to that expected from the standardisation. There were no significant differences between the parents' and teachers' ratings on the emotional symptoms, peer problems or hyperactivity scales; in the case of the hyperactivity scale about 44% of both parents and teachers rated children as having difficulties. These results indicate the importance of more analytical information available from the scales compared with the overall designation derived from the total difficulties score alone.

Further evidence on the differences between the parents and teachers in their perceptions of the children derives from an analysis of the interrelationships between the scales for each group. All scales correlated significantly with Total scores for both parents (range -.44 to .81) and teachers (range -.32 to .66). However, as shown in Table 4, in general the teachers' results produced lower correlation coefficients between scales hence more commonality existed in the parents' ratings.

INSERT TABLE 4 ABOUT HERE

Gender

The pattern of scores is similar for parental and teacher ratings respectively, with the boys rated with higher scores, indicating their having more problems on all scales, except the Prosocial Behaviour scale where the girls were rated as having better behaviour. However, there were no significant differences between the ratings by teachers, while for parents there were significant differences for hyperactivity ($t=2.34$, df 63, $p=.023$), conduct problems ($t=2.12$, df 64, $p=.038$) and Total Score ($t=2.72$, df 58, $p=.009$)

There was general agreement between parents and teachers with respect to girls, with significant differences for only one item: *constantly fidgeting or squirming* ($t=2.78$, df 14 $p=.015$) where the teachers rated the girls as having more problems. With respect to the boys, however, there were greater variations in opinion with significant differences on 11 of the 25 items. Compared with the teachers there was an increased

likelihood that the parents would rate boys, more likely to *complain of headaches, stomach-aches or sickness* (t=2.38, df 42, p=.022), *to have temper tantrums or hot tempers* (t=5.92, df 42, p<.001), *to be bullied* (t=2.5, df 42, p=.016), to *get on better with adults than children* (t=2.08, df 42, p=.044), and not to be considered *obedient* (t=2.38, df 42, p=.022), whereas teachers were more likely to rate as untrue that boys *have at least one good friend* (t=2.02, df 41, p=.050), and were *generally liked by other children* (t=2.30, df 42, p=.027),

The parents also rated the boys more positively on four of the five items on the Prosocial Scale. Hence the parents were significantly more likely to consider it somewhat or certainly true that the boy *shares with other children* (t=2.15, df 40, p=.038), *was helpful if someone was hurt upset or feeling ill* (t=3.16 df 42, p=.003), *was kind to younger children* (t=3.11 df 41, p=.003), and *volunteers to help other children* (t=2.47 df 42, p=.018).

ii) Pictorial Scale of Perceived Competence and Social Acceptance (PSPCSA)

The children's perceptions of their competence and acceptance were rated by the teachers and by the children themselves using the PSPCSA. Owing to the distributions of scores not approximating a normal distribution, non-parametric tests have been used in the analyses of these data. As maternal acceptance was the only scale for which there was a significantly different mean score by gender, with girls scoring higher (Mann Whitney U Test z = 2.3, p<.022) the sample was treated as a whole. The mean scores are presented in Table 5. In all cases the children's scores were positive (scale mean = 2.5) whereas this was only the case for Peer Acceptance in the teachers' ratings. In the three cases where comparisons may be made (there is no teacher Maternal Acceptance scale) the children's ratings of their own self competence and acceptance were significantly higher those made by their teachers (Wilcoxon Matched Pairs Signed Ranks test p< .001).

INSERT TABLE 5 ABOUT HERE

There were no significant differences when the children's scores were compared with the standardisation sample (Harter & Pike, 1984). In both groups mean scores on cognitive competence (3.4 for the present sample, 3.5 for the standardisation) and physical competence (3.4 v 3.4) are comparable, although the standard deviations indicate greater spread in the present SSLD sample (.67 v .31; .59 v .40 respectively). A similar finding applies to peer acceptance (mean = 3.2, SD = .73 v mean = 3.1, SD = .55) and maternal acceptance (mean = 3.0, SD = .62 v mean = 2.8, SD = .56). Hence not only are the means similar, the relative size of means is consistent with higher scores on competence than social acceptance scales, but with a greater degree of spread for the present SSLD sample.

The ratings by the children and those by the teachers of the children's perceptions of their competence and acceptance, and the interrelationship of the ratings on each scale, are presented in Table 6. In the case of the children's self-ratings all correlations are significant, with five out of six being highly significant, ranging from r = 0.41, p<.001 for peer acceptance against maternal acceptance, to r = 0.62, p<.001 for peer acceptance compared with cognitive competence. However, the pattern of the

teachers' data indicates that only one of the three coefficients is significant, namely physical competence against peer acceptance (r= 0.52, p<.001). Finally, comparisons of the children's and teachers' perceptions indicate significant correlations for perception of cognitive competence (r = .33, p<.01), physical competence (r= .36, p<.005) but not peer acceptance (r = .10, n.s.).

INSERT TABLE 6 ABOUT HERE

Correlations between children's and teachers' ratings are similar for the original standardisation sample compared with this sample, with cognitive competence .33 (p<.05) in the SSLD sample compared with .37 (p<.001) in the standardisation; .36 (p<.01) v .30 (p<.005) for physical competence; and .10 (p<.10 (n.s.) v .06 (n.s.) for peer acceptance.

iii) Junior Rating Scale

The teachers' ratings of the children's behaviour on the individual items and subscale scores of the Behaviour and Social Integration scales of the Junior Rating Scale (JRS) were examined for gender differences using t-tests. As no significant differences were found (p>.05 in all cases) the data for the whole sample were compared with the standardisation sample (Abraham & Lindsay, 1990). The expected frequencies were between 1 and 4% for point 1 and 10-12% for point 2, except Attention and Distractibility where the expected frequency was 21%. Children's scores are presented in table 7; for all individual items the ratings for the SSLD sample deviated from the distributions expected on the basis of the standardisation. Children in the sample was characterised by lower scores than those expected from the standardisation, indicative of a greater likelihood of difficulties in the areas of behaviour and social integration.

INSERT TABLE 7 ABOUT HERE

2. ***Comparison by type of school***

There were very few significant differences between the scores of the children in the LEA special schools compared with those attending the two regional special schools; consequently the two samples are combined (n=22) to produce one special school group.

The results of children attending mainstream and special school provision (n = 47, 22 respectively) were compared on the behavioural measures. Analysis of the children's scores on the range of cognitive, language and attainment assessments indicated that the two groups were largely similar: the only significant differences between the mainstream and special school samples were found with the TROG standard score (t = 2.03, p<.05) and Bus Story sentence length (t = 2.67, p<.02), with special school children achieving higher scores on both measures.

i) Strengths and Difficulties Questionnaire

The parents rated the children in mainstream as having more problems on all relevant scales, although only total score (t= 2.32, df58, p=0.024), hyperactivity (t= 2.57, df63, p=0.013) and conduct problems (t=2.05, df64, p=0.044) were significantly different. For teachers, only emotional difficulties (t=2.25, df53, p=0.028) was significantly different, with children in special schools rated as having more problems.

ii) Pictorial Scale of Perceived Competence and Social Acceptance (PSPCSA)

Children in both mainstream and special schools rated themselves positively (above

the scale mean of 2.5) on all four scales (see Table 8). The teachers rated only the children's peer acceptance positively, for each sample, although physical competence was about the mean for each sample (2.40 mainstream, 2.52 special). Children in special schools rated their cognitive competence significantly higher than those attending mainstream (Mann Whitney U test: $z = 2.05$, $p<.04$), the only significant difference, and this was the only dimension for which teachers' ratings approached significance ($z = 1.84$, $p<.07$).

INSERT TABLE 8 ABOUT HERE

iii) Junior Rating Scale

The children in special schools were rated by their teachers as having fewer problems with respect to the Behaviour scale score, but this difference was not significant ($t = .33$, $p = .72$) The social interaction scores were almost identical.

3. The relationship between behaviour, language and educational attainments

Exploratory correlational analyses were conducted to examine the relationship between the range of emotional, behavioural, language, cognitive, and behavioural measures. Standardised scores were used where possible, but some tests provided only raw scores or percentiles which were used instead. The analyses were carried out on the total sample and on the mainstream sample only, to investigate whether the same pattern of results pertained to this latter group (the special school sample was too small to allow specific analysis). On the basis of these analyses exploratory multiple regression analyses were conducted followed by stepwise multiple regression to investigate the most appropriate predictive model. The SDQ total score was used as the dependent variable, with separate analyses for the language and attainment tests as predictors.

TABLE 9 ABOUT HERE

The Pearson correlation coefficients of language and attainment tests, together with BAS Matrices as an estimate of non-verbal ability, against behaviour as rated by the parents and teachers are presented in Table 9. Three of the four language tests and one of the three literacy tests were significantly correlated with the parent SDQ total score, with a similar pattern for both the total and mainstream samples. However, as the only significant correlation with the teachers' SDQ total score was Bus Story Information, multiple regression analyses were conducted on the total sample for the Parent SDQ only.

The four language scales and Matrices were entered into a multiple regression analysis, resulting in multiple $R = .48$, Adjusted $R^2 = .15$. Stepwise regression analysis produced a solution with just the TROG as a significant contributor variable ($R= .36$, Adjusted $R^2 = .13$). A further analysis using the attainment scales, except for the BAS Early Number which showed a small and non-significant correlation with the Parent SDQ, and Matrices produced $R = .42$, Adjusted $R^2 = .11$. Stepwise multiple regression analysis produced a single variable solution, with MIRA Comprehension ($R = .34$, Adjusted $R^2 = .10$)

DISCUSSION

The present study confirms previous reports that children with specific speech and language difficulties (SSLD) have an enhanced likelihood of associated emotional and behavioural difficulties. On both the Strengths and Difficulties Questionnaire (SDQ) and the Junior Rating Scale (JRS) the children were rated as having significantly more problems than the standardisation samples. For example, 36.7% of children were rated in the 'abnormal' category on the SDQ total score by their parents and 46.2 % rated their children in this category for peer problems. Teachers rated 30.2% as 'abnormal' on the SDQ total difficulties score, and typically rated 4 to 10 times more children than expected at the most extreme score on the JRS Behaviour and Social Interaction items. Both parents and teachers rated approximately 44% of children has having problems with hyperactivity (SDQ). While, gender differences are typically found in prevalence rates of emotional and behavioural problems, with boys causing more concern, in this sample there were systematic gender differences for the parents' ratings but not for the teachers' ratings. Differences were found on a number of dimensions that raise questions about the relationship between SSLD, the children's behaviour, and the setting in which they are assessed.

There were differences between the ratings of the teachers and those of the parents. Parents perceived more problems than did teachers but were also more likely to rate their children as having prosocial behaviour. They were also more likely to rate boys as having emotional and behavioural difficulties, and their ratings showed higher levels of inter-correlation than did those of teachers. Such variations in ratings are not unusual (e.g. Rutter et al, 1970). Hundert et al (1997) found significant differences between parents' and teachers' ratings of pre-school children with severe difficulties, although not for children with mild/moderate difficulties or typical development. There are several possible reasons for the differences found here. Firstly, the parents had known their children since birth and their ratings of behaviour are likely to be influenced by this long-term perspective, whereas teachers would typically have known the child well for a matter of months. Secondly, the child may behave differently in school compared with home. Parents typically observe their children in home and community settings, whereas teachers only see them in school. Hence the contextual aspects of the behavioural assessment are quite different. For example, a parent may judge problems with peers on the basis of their child having few friends, or not being invited to others' houses. They also typically see the child alone, in small groups or dyads, in social settings where they can observe the impact of communication problems on social interaction. Teachers, especially in mainstream classes, are less able to observe close interactions very often. Hence, in addition to the effect of context the parents may be in a better position to offer a finer differentiation of their children's behaviour. Thirdly, teachers and parents may make differential use of relativistic and absolutist judgements: although the parent has fewer comparators against which to judge their child's behaviour they have access to a wider range of situations where the child's problems may be evident.

Children in mainstream were more likely to be rated as having hyperactivity and conduct problems on the SDQ by both parents and teachers, but differences were significant for parents only. Parents also rated mainstream children as having significantly higher SDQ total scores, while teachers were more likely to rate special

school children as having emotional symptoms, the only significant difference. These results are difficult to interpret. Integrated students with mild academic difficulties have been found to be rejected and isolated by their regular class peers (Fox, 1989; Gottlieb, Semmel & Veldman, 1978). Moreover, interviews with the teachers highlighted a range of problems experienced in meeting the children's needs, particularly in mainstream (Dockrell & Lindsay, submitted). The higher likelihood of hyperactivity and conduct problems among children in mainstream may reflect their difficulties in coping with the demands of such settings. However, the parents' ratings reflect the children's home behaviour.

The levels of attainment and language of the mainstream and special groups were generally not significantly different, although the special school children had significantly higher scores on the TROG and Bus Story sentence length. Also, those children who were designated as 'cases' on the SDQ on the basis of parental ratings, i.e they equalled or exceeded the cut-off on the total difficulties score, consistently had significantly lower mean scores on the language and attainment tests, whereas no such relationship held for the teacher ratings. Hence the parents appear to be rating children with greater levels of language difficulties as more likely also to have emotional and behavioural difficulties, but this degree of co-morbidity is not revealed by the teacher ratings. Thus, while these differing views reflect the children's behaviours in different settings and the perceptions of these behaviours there are indicative data that the parents may be identifying additional problems for these children. The fact that the identification of problems is tied in with comprehension measures (rather than expressive measures) is of particular significance. It is well documented that the degree to which language problems are accompanied by comprehension problems influences long-term outcome on language measures (see Bishop, 1997 for a review). The data from the parents extend this analyse, indicating that the child's level of comprehension difficulties (either in terms of language per se or literacy) is associated with emotional and behavioural problems.

The children's self esteem, as measured by the Pictorial Scale of Perceived Competence and Social Acceptance was comparable to the standardisation sample, indicating that the children had a generally positive view of their competence and social acceptance, although their teachers' ratings were less positive. The children's ratings also showed high levels of inter-correlation suggesting a relative lack of differentiation of the dimensions. This finding is similar to that of Harter and Pike (1984) which indicated that although children in the pre-school and early primary years are able to judge themselves across several dimensions these tend not to be differentiated; for example, factor analyses indicate that cognitive and physical competence items combine, indicating a lack of distinctiveness between children's perceptions of competence in these two domains (Harter, 1989).

However, the data from the children's self-concepts rating are perplexing. While there is more variation in the sample than in similar typically developing groups, as indicated by the standard deviations, the current results suggest that the children generally see themselves in a positive light and the high correlations between the scores simply reflects high overall ratings. There are a number of limitations with the current data that suggest that such a conclusion would be premature. Firstly, even with the pictorial representations the language level of the majority of the children may not

have been sufficient to deal with the complexity of the associated statements. Thus, children may have chosen on the basis of the pictures rather than the pictures and the statements. Secondly, these data contrast with descriptions provided by parents of the children's comments about themselves (Dockrell, Lindsay & Galpert, 1999). Finally both the length of the Harter and the lack of opportunity to clarify responses may limit the validity of the results (Marsh, Craven & Debus, 1991). Although these results are similar to those reported by McAndrew (1999) there may be methodological reasons why the 8-year-olds in the current study report such high levels of self- esteem. However, if we return to the factors that led us to investigate self-esteem in this population, namely the effects of failure at school and associated negative feedback, the stigmatising effects of being singled out and labelled, and the effects of the specific nature of communication difficulties then alternative developmental possibilities need to be considered. It may be, for example, that the children are too young to be aware of being singled out as different; school failure may not be as evident in the early primary years, or alternatively the very nature of the children's problems may prevent an analysis of the social nuances that identify them as different. To disentangle these alternatives longitudinal studies with appropriate assessment tools are required.

This study has provided evidence for high levels of emotional and behavioural difficulties in a sample of children with SSLD. Yude, Goodman & McConachie (1998) report a similar, but less marked finding for children with hemiplegia. In their study the children had more peer relationship problems than controls, but not an increased prevalence of behavioural problems. This raises a number of issues. Firstly, what is the nature of the relationship between the difficulties? Is it the case that for children with SSLD language is the primary problem, with behavioural difficulties secondary? This might be the case if these children became frustrated, for example, leading to impaired concentration and peer relationships, or if their reduced comprehension leads to mismatches in communication exchanges. The fact that both oral comprehension measures and reading comprehension measures predict SDQ scores would support this analysis. Alternatively the different characteristics may be relatively independent, at least at an early stage, but interact, and may lead to a cumulative and aggregated impairment. Moreover, further specification is required of the ways in which the degree of the children's difficulties with their peers is related to their communication problems, and of how these factors might differ compared with other children with disabilities.

The data presented here challenge simplistic descriptions of co-morbidity. Although there was strong evidence for co-morbidity of language and emotional and behavioural difficulties, the influence of other factors is indicated. These include the different perspectives of teachers and parents, which relate not only to the immediate context but also the long term experience of the child; the type of school; and the nature and degree of language difficulty. Indeed the results suggest a complex interaction of these factors whose predictive power will be explored when these children are followed up as they move from primary to secondary schools.

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TABLE 1: Measures used to assess the children

DIMENSION	TEST	Authors
Language Skills	Test of Reception of Grammar (TROG)	Bishop (1989)
	British Picture Vocabulary Scale (BPVS)	Dunn et al, (1997)
	Naming Vocabulary (BAS II)	Elliot, Smith & McCulloch, 1997
	The Bus Story: length and information	Renfrew (1977)
	Phonological Assessment Battery (PhAB),	Fredrickson, Frith and Reason (1997)
Non-Verbal skills	Matrices (BAS II)	Elliot, Smith & McCulloch, 1997
Attainments	Early number skills (BAS II)	Elliot, Smith & McCulloch, 1997
	Spelling (BAS II)	Elliot, Smith & McCulloch, 1997
	Macmillan Individual Reading Analysis (MIRA) - Accuracy and comprehension	Vincent and de la Mare, (1990)
Social and Behavioural Development	The Strengths and Difficulties Questionnaire (SDQ).	Goodman, 1994
	The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPCSA)	Harter and Pike (1984)
	The Junior Rating Scale (JRS)	Abraham and Lindsay, (1990)

Table 2: Strengths and Difficulties Questionnaire: Percentage of children per category for the total sample

	Normal	Borderline	Abnormal	Comparison with normative sample	N[2]
Parents completed					
Emotional symptoms	63.1	4.6	32.3	X^2=56.32***	65
Conduct problems	47.0	16.7	36.4	X^2=87.80***	66
Hyperactivity	43.1	12.3	44.6	X^2=137.27***	65
Peer problems	40.0	13.8	46.2	X^2=152.48***	65
Prosocial	84.4	4.7	10.9	X^2=3.31	64
Total difficulties	41.7	21.6	36.7	X^2=103.08***	60
	Normal	Borderline	Abnormal	Comparison with normative sample	N
Teacher completed					
Emotional symptoms	72.7	18.2	9.1	X^2=7.435	55
Conduct problems	75	13.3	11.7	X^2=1.69	60
Hyperactivity	41.4	13.8	44.8	X^2=141.16***	58
Peer problems	61.0	11.9	27.1	X^2=31.12***	59
Prosocial	52.5	8.5	39.0	X^2=93.78***	59
Total difficulties	41.5	28.3	30.2	X^2=92.82***	53

***p<.001 for df3

[2] Respondents did not always fill in every item of the questionnaire. Where items were missing scale scores were not computed

Table 3: Comparison of Teacher and Parent ratings on SDQ for the total sample

		PARENT		TEACHERS			
	N of pairs	Mean	SD	Mean	SD	t	p
Emotional symptoms	52	3.02	2.24	2.88	2.21	.34	.74
Conduct problems	58	2.66	2.10	1.53	1.55	4.30	.001
Hyperactivity	54	5.89	2.62	5.67	2.84	.57	.57
Peer problems	56	3.16	1.96	2.77	2.11	1.22	.23
Prosocial	55	7.67	1.94	5.47	2.60	6.05	.001
Total difficulties	47	14.66	5.87	12.72	5.44	2.41	.020

Table 4: SDQ Intercorrelation of SDQ Scales for the total sample

Parents

	Conduct	Emotional	Hyperactivity	Peer	Pro-social
Emotional	0.44***				
Hyperactivity	0.47***	0.40***			
Peer problems	0.35*	0.59***	0.21		
Prosocial	-0.38***	-0.29**	-0.17	-0.50***	
Total	0.60***	0.81***	0.72***	0.68***	-0.44***

N = 58 – 65

Teachers

	Conduct	Emotional	Hyperactivity	Peer	Pro-social
Emotional	0.07				
Hyperactivity	0.28*	0.08			
Peer problems	0.24	-0.31*	0.09		
Prosocial	-0.50***	-0.19*	-0.37**	-0.19	
Total	0.52***	0.59***	0.66***	0.65***	-0.32*

N=53-58

*** p.<.001

** p.<.01

* p.<.05

Table 5: Children's and Teachers' ratings on the Pictorial Scale of Perceived Competence and Social Acceptance

	Children's		Teachers'			
	Mean	SD	Mean	SD	z	P<
Cognitive competence	3.35	0.67	1.76	0.70	6.561	.001
Physical competence	3.43	0.59	2.45	0.93	3.599	.001
Peer acceptance	3.21	0.73	2.66	0.88	5.645	.001
Maternal acceptance	3.03	0.62	-	-	-	-
N	66		60			

TABLE 6 : Correlation of the Teachers' and Children's ratings Pictorial Scale of Perceived Competence and Social Acceptance (Spearman's rho)

	CCT	PCT	PAT	CCC	PCC	PAC
Cognitive competence – teachers (CCT)						
Physical competence – teachers (PCT)	0.20					
Peer acceptance - teachers (PAT)	0.21	0.52***				
Cognitive competence – child (CCC)	0.33*	0.17	0.13			
Physical competence – child (PCC)	0.07	0.36**	0.19	0.58**		
Peer acceptance - child (PAC)	0.07	0.28*	0.10	0.62**	0.60***	
Maternal acceptance – child (MAC)	0.01	-0.08	0.01	0.52**	0.29*	0.41***

n = 57 - 66

* p <.05

** p <.01

*** p <.001

Table 7: Distribution of percentile scores on the Behaviour and Social Integration scales of the Junior Rating Scale and comparison with the standardisation sample.

ITEM	Rating						
	1	2	3	4	5	$\chi 2$	P< df=4
Approach to learning	7	21	52	12	9	57.58	.001
Attitude to teacher	7	5	19	41	28	38.16	.001
Attention & distractibility	17	50	21	7	5	109.30	.001
Temperament	3	31	19	35	12	55.49	.001
Participation in class activity	10	22	35	22	10	111.23	.001
Relationship with peers	9	29	36	19	7	60.79	.001

N =- 58

TABLE 8: Children's and Teachers' ratings on the Pictorial Scale of Perceived Competence and Social Acceptance for mainstream and special school samples

Children:

	Mainstream		Special			
	Mean	SD	Mean	SD	z	p=
Cognitive competence	3.21	0.73	3.61	0.43	2.05	0.04
Physical competence	3.41	0.57	3.46	0.64	0.56	0.58
Peer acceptance	3.20	0.72	3.23	0.76	0.19	0.85
Maternal acceptance	2.93	0.63	3.23	0.56	1.7	0.09
N	44		22			

Teachers:

	Mainstream		Special			
	Mean	SD	Mean	SD	z	p=
Cognitive Competence	1.65	0.69	1.93	0.69	1.84	0.07
Physical Competence	2.40	0.99	2.52	0.83	0.57	0.57
Peer Acceptance	2.63	0.94	2.71	0.79	0.10	0.92
N	38		22			

Table 9 Correlation of parental and teacher ratings of behaviour problems (SDQ) by language and attainment scores for the total sample and mainstream sample separately

	Parents				teachers			
	Total		Mainstream		Total		Mainstream	
	r	p=	r	p=	r	p=	r	p=
Language:								
TROG	-0.32	0.014	-0.19	.ns	0.12	ns	0 .13	ns
BPVS	-0.09	ns	-0.06	ns	-0.27	ns	-0.24	ns
Bus story: length	-0.15	ns	-0.33	0.044	0.07	ns	-0.40	0.025
Bus story: information	-0.31	0.018	-0.43	0.007	-0.47	0.001	-0.56	0.001
Attainment:								
MIRA Accuracy	-0.16	ns	-0.17	ns	-0.16	ns	-0.16	ns
MIRA Comprehension	-0.34	0.008	-0.39	0.015	-0.24	ns	-0.20	ns
BAS Spelling	-0.21	ns	-0.25	ns	-0.28	ns	-0.33	ns
BAS Early number	-0.06	ns	0.00	ns	-0.21	ns	-0.25	ns
BAS Matrices	-0.08	ns	-0.10	ns	-0.15	ns	-0.20	ns
N =	56-59		38		50-52		32	

two tailed test of significance

BEHAVErev3 20.7.00,