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Social, Emotional and Behavioral Functioning of Mainstream Secondary School Students with
low academic and language performance: Perspectives from Students, Teachers and Parents

Victoria L. Joffe and Emma Black

City University London, UK

Correspondence concerning this article should be addressed to Victoria Joffe, Division of
Language and Communication Science, City University London, Northampton Square, London,
EC1V 0HB, UK.

E-mail: v.joffe@city.ac.uk

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Abstract

Purpose: Adolescence is a time of transition when young people with language difficulties are at increased risk of experiencing social, emotional and behavioral difficulties (SEBD). Most studies of social, emotional and behavioral functioning (SEBF) in individuals with language difficulties focus on children with a clinical diagnosis of language impairment. This study explores SEBF in a non clinical group of 12-year old students with low language and educational performance from their own perspectives and those of their parents and teachers.

Method: The Strengths and Difficulties Questionnaire was given to 352 mainstream secondary school students underperforming academically and with poor language performance. Two hundred and twenty five of their parents and 230 of their teachers also completed the questionnaire.

Results: Students with low educational attainment and poor language showed significantly greater SEBD than a normative sample as reported by themselves, their parents and teachers. Significant differences were found across respondents with students identifying more overall difficulties than parents or teachers.

Conclusions: Secondary school students with low academic and language performance are more vulnerable to experiencing SEBD compared to typically developing peers. The extent of their difficulties varied depending on the informant, emphasizing the importance of gaining views from multiple perspectives.

Key Words: social, emotional and behavioral difficulties, adolescence, poor language performance, poor educational attainment, student, parent and teacher perspectives.

There is strong evidence for a relationship between language ability and social, emotional and behavioral functioning (SEBF) with an increased prevalence of social, emotional and behavioral difficulties (SEBD) reported in children with language impairments (Beitchman et al., 1996; Durkin & Conti-Ramsden, 2010; Fujiki, Brinton & Clarke, 2002) and an increased prevalence of language difficulties found in children identified as having social, emotional and behavioral difficulties (Clegg, Stackhouse, Finch, Murphy & Nicholls, 2009; Cohen, Davine, Horodezky, Lipsett & Isaacson, 1993; Ripley & Yuill, 2005). Most of this research is on children who have been clinically referred, either with language difficulties or with SEBD and are therefore at the more severe end of either continuum. The current study extends this work by investigating the SEBF of adolescents identified by their teachers as at risk academically and/or having poor language skills. The students had not previously been identified as having a language difficulty and were not receiving any additional learning support. This study explores their language abilities and their SEBF.

During adolescence, there is limited speech and language therapy and educational support for students with poor language performance, and language and communication difficulties may go undetected in the classroom (Bercow, 2008; Nippold, 2010a). Teaching and support staff receive little support or advice on meeting the needs of students with low language performance who are underperforming in the classroom (Dockrell & Lindsay, 2001), despite a growing awareness of their needs (Bercow, 2008, Nippold, 2010a; Snow & Powell, 2004). Teachers and speech and language therapists who must support these students need to know more about their language abilities, their social, emotional and behavioral functioning and the impact that any difficulties in these domains may have on their daily lives. This study provides new information

on the social, emotional and behavioral functioning of students in secondary schools with low academic and language performance.

Transition to Adolescence

Adolescence is a time of major transition which brings with it changes in biology, cognition and in social and emotional development (Blakemore, 2008, 2011; Moshman, 1999; Rosenblum, 1990). Transitions in education and to employment require new roles to be played, self perceptions change and dependence on peer relationships increases (Csikszentmihalyi, Larson & Prescott, 1977; Moshman, 1999). Psychiatric conditions and behavior problems including depression, suicide, eating disorders and alcohol and substance abuse are more prominent (Dahl, 2004; Spear, 2000). Dahl refers to a 'striking paradox' during adolescence with a substantial increase in physical and cognitive capacity together with a significant increase in emotional and behavioral difficulties (Dahl, 2004, p. 3). Thus this period is acknowledged as a potentially difficult time for *all* adolescents.

Language and Communication Difficulties in Adolescents

Prevalence rates for language and communication difficulties for this age group are less well researched than for younger children. The rates for 5-year olds range from 5% to 13% depending on the exclusion criteria used (Beitchman, Nair, Clegg & Patel, 1986; Tomblin et al., 1997). These difficulties can be long term and pervasive and continue into adolescence and adulthood (Clegg, Hollis, Mawhood & Rutter, 2005; Johnson, Beitchman & Brownlie, 2010; Snowling, Adams, Bishop & Stothard, 2001; Snowling, Bishop, Stothard, Chipchase & Kaplan, 2006). Some children, who manage in primary school, may only display their academic and language weaknesses when challenged by the more complex linguistic demands of the secondary curriculum (Nippold, 2004).

Nippold estimates that at least 10% of adolescents have language difficulties which impair their abilities to express themselves (Nippold, 2010b), and a recent UK government report found that 8.4% of students in secondary mainstream schools have primary speech, language and communication difficulties (SLCD) that required specialist support (Department for Education, 2011a). This may be an underestimate given the reduced specialist support and limited awareness of SLCD in the secondary school context (Bercow, 2008; Cirrin and Gillam, 2008; Dockrell, Lindsay, Letchford & Mackie, 2006; Nippold, 2010a). Adolescents with SLCD are less well equipped to negotiate the challenges of adolescence and are at an increased risk of experiencing social, emotional and behavioral difficulties (SEBD).

Longitudinal studies of preschool children with language and communication difficulties reveal their persistent and long term nature and their impact on all aspects of development. These include literacy (Botting, Simkin & Conti-Ramsden, 2006; Catts, Fey, Tomblin & Zhang, 2002, Catts, Bridges, Little & Tomblin, 2008; Stothard, Snowling, Bishop, Chipchase & Kaplan, 1998), academic attainment (Conti-Ramsden, Durkin, Simkin & Knox, 2009; Knox, 2002; Snowling et al., 2001) and social, emotional and behavioral functioning (Beitchman et al., 1996; Botting & Conti-Ramsden, 2000; Clegg et al., 2005). All the studies cited above are of clinically referred participants with a confirmed diagnosis of SLCD. They include children with more severe language difficulties and other associated problems that motivate the referral (Beitchman & Brownlie, 2010). There is little if any information about the outcomes of students who underperform academically and/or show low language performance, but have not been clinically referred. To adequately support all students in the classroom, more information is needed on those who are underperforming but have thus far escaped clinical diagnosis.

The Relationship between SLCD and SEBD

There is increasing evidence that children with early SLCD are at risk for SEBD (Conti-Ramsden & Botting, 2008; Clegg et al., 2005; Lindsay, Dockrell & Strand, 2007; Snowling et al., 2006). Conversely, children with early psychiatric problems and SEBD are often found to have previously undetected language and communication difficulties (Benner, Nelson & Epstein, 2002; Clegg et al, 2009; Cohen et al, 1993; Cohen, Barwick, Horodezkey & Isaacson, 1996; Cohen; Barwick, Horodezky, Valance & Im, 1998; Mackie & Law, 2010; Ripley & Yuill, 2005). Most of these studies include participants with a clinical diagnosis of either SLCD or psychiatric problems; the former is usually specific language impairment (SLI) where the language difficulty occurs with age appropriate non-verbal abilities. Recent studies, of social, emotional and behavioral functioning in adolescents with SLI, report that they are at greater risk of SEBD than their typically developing peers. These include lower self esteem (Lindsay & Dockrell, 2000; Wadman, Durkin & Conti-Ramsden, 2008), poorer peer relations and emotional engagement (Conti-Ramsden & Botting, 2004; Durkin & Conti-Ramsden, 2007; Lindsay et al., 2007; Wadman, Durkin & Conti-Ramsden, 2011), inferior friendship quality (Durkin & Conti-Ramsden, 2007), higher rates of bullying (Knox & Conti-Ramsden, 2003; Savage, 2005), a higher incidence of attention disorders and hyperactivity (Beitchman et al., 1996), greater anxiety and depression (Beitchman et al., 2001; Conti-Ramsden & Botting, 2008), more substance abuse (Beitchman et al., 1999) and increased aggressive behavior (Brownlie et al., 2004).

This relationship between poor language performance and SEBD is not straightforward. Not all children and young people with SLCD have SEBD and they experience a range of life outcomes (Durkin & Conti-Ramsden, 2010; Law, 2011). In a study of friendships in 16-year old students with SLI, 60% reported having good quality friendships (Durkin & Conti-Ramsden, 2007). Furthermore, their problems rarely fall within the clinical range of the disorder (Botting

& Conti-Ramsden, 2000; Redmond & Rice, 1998; Wadman et al., 2008). Recent longitudinal studies of well-being and quality of life (Carroll & Dockrell, 2010; Dockrell, Lindsay, Palikara & Cullen, 2007; Palikara, Lindsay & Dockrell, 2009) report more positive long term outcomes than earlier studies (Clegg et al., 2005; Howlin, Mawhood & Rutter, 2000; Mawhood, Howlin & Rutter, 2000).

There are also mixed findings from studies looking at the associations between language and communication ability and SEBD. Conti-Ramsden and Botting (2008) found no significant associations between language and non-verbal ability at 7 years and emotional health in a group of 16-year old adolescents with SLI. The only significant association found at 16 years was between receptive language and emotional functioning, although even this receptive measure was not found to significantly predict those with poor emotional health. Durkin and Conti-Ramsden (2007) looked at the predictors of quality of friendships in 16-year old adolescents with SLI. Though language ability, particularly receptive language, was associated with the quality of friendships, it was not a strong predictor. The strongest predictor of friendship was social, emotional and behavioral functioning (Durkin & Conti-Ramsden, 2007). These results suggest that early language ability may predict quality of friendships to some degree, but is only one part of the puzzle.

There are other conflicting findings in the research. Some studies of children and young people with SLCD report differences in social, emotional and behavioral functioning with gender (Baker & Cantwell, 1987; Lindsay & Dockrell, 2000; Tallal, Dukette & Curtiss, 1989); others find little association (Botting & Conti-Ramsden, 2000; Conti-Ramsden & Botting, 2008; Lindsay, Dockrell, Letchford & Mackie, 2002; Lindsay et al., 2007; Lindsay, Dockrell & Palikara, 2010). Some studies report a significant relationship between social and emotional

functioning and educational attainment (for example with self esteem – Lindsay et al., 2010) while others report no association (for example, with emotional health - Conti-Ramsden & Botting, 2008).

Many of the studies cited above obtained information from a single source, typically self rating scales or questionnaires to the students themselves (Botting & Conti-Ramsden, 2008; Durkin & Conti-Ramsden, 2007; Lindsay et al., 2010). Others take two perspectives; student and teacher (Lindsay et al., 2002), student and parent (Conti-Ramsden & Botting, 2008) or parent and teacher (Lindsay et al., 2007; Redmond & Rice, 1998; Sayal & Taylor, 2005). Lindsay and Dockrell (2000) looked at self esteem and behavior of 7-8 year old children with SLI collecting data from the children and their parents and teachers. No similar study exists for either clinically referred adolescents with SLCD or those with low language and/or educational attainment, despite the need to understand their views (Carroll & Dockrell, 2010; Dockrell et al., 2007; Joffe, Beverly & Scott, 2011; Palikara et al., 2009). Where multiple sources are used, differences in perceptions have been reported (Lindsay & Dockrell, 2000; Lindsay et al., 2002; Lindsay et al., 2007; Redmond & Rice, 1998; Sayal & Taylor, 2005). This is unsurprising in view of the subjective nature of the reports obtained. According to Redmond and Rice's (1998) 'Social Adaptation Model', the relationship between language and psychosocial mechanisms is mediated by how the child reacts to the perceptions of others and the demands of their communicative environment. Within this model, social, emotional and behavioral functioning will vary depending on multiple factors including the rater and context. In this study we adopt a triangulated approach by exploring the SEBF of secondary school students with low educational and language performance from their own perspective and from the perspectives of their teachers and parents.

The Current Study

The students in this study differ from those in previous studies. They are in mainstream schools, have not previously been identified as having SLCD and were receiving no specialist support when recruited for this study. They were in their first year of secondary school and were recruited by their weak performance on educational attainment tests and/or teachers' concerns regarding academic performance and language ability. This group, in transition from primary to secondary school have rarely been studied; previous research being either with younger children or with children close to the school leaving age.

Previous research has shown that clinical groups of children with SLI are vulnerable to SEBD. The move for inclusive education in the UK (Lindsay & Dockrell, 2002) and the limited specialist support for older children with SLCD (Bercow, 2008; Dockrell et al., 2006; Nippold, 2010a) may mean that there are many secondary school children with previously undetected language and communication difficulties. In this study we investigate the social, emotional and behavioral functioning (SEBF) of first year students in secondary schools with poor educational attainment and potential SLCD. The data for this paper is drawn from the first testing phase of a larger longitudinal intervention study (Joffe & Hulme, in preparation). Specific research questions are:

1. Do mainstream secondary school students with low language performance have social, emotional and behavioral problems compared to a typically developing cohort?
2. Are there differences in social, emotional and behavioral functioning as reported by students, parents and teachers?

3. Are there any significant relationships between SEBD and verbal and non-verbal ability, educational attainment, socio-economic status (SES) and gender?

Method

Participants

Subject selection criteria. There were two stages in the selection of participants. First, teachers were asked to identify year 7 secondary school students with average-to-low average (a score of level 4a-4c) or below average (a score of \leq level 3) scores in their key stage 2 (year 6) English national standard assessment test. In the UK, primary education incorporates years 1-6, corresponding to ages 5-10 years, and secondary education, years 7-13, corresponding to ages 11-17 years. Participants were recruited in their first year of secondary school. This is equivalent to the sixth grade in the USA. All state schools across the UK follow the National Curriculum which is a set framework of subjects and stages to ensure teaching is consistent across schools (Department for Education, 2011b). There are four key stages (KS) across the curriculum, 2 in primary (KS1 and KS2) and 2 in secondary (KS3 and KS4). At the end of key stage 2, the final year of primary (year 6), all children undertake national standard assessment tests (SATS) in English, Maths and Science to assess progress.¹ At key stage 2, a score of 5 signifies above average, 4, average and 3 or lower, below average. Within these levels, there are subcategories: level 4a = high average, 4b = mid average, 4c = low average. Students who obtained a score of 4 or lower in the English standard assessment were referred. The English test involves three components: reading, writing and spelling.

Teachers were also encouraged to refer any other students who were underperforming academically in the classroom or appeared to have low language performance. They were asked to focus specifically on the student's academic performance and progress in the classroom.

Students with global learning difficulties, hearing loss, autism or with other known neurological or physical impairments were excluded.

Participants who met these criteria and who gave informed consent had their language ability tested. A range of language measures were used to assess receptive and expressive abilities as well as understanding of figurative language, an important linguistic skill for the secondary school student (Nippold, 2007). Measures included: a) the British Picture Vocabulary Scale (Second Edition) (BPVS - Dunn, Dunn, Whetton & Burley 1997), b) the Expressive Vocabulary (EV) subtest of the Test of Word Knowledge (TOWK - Secord & Wiig, 1992), c) the Formulated Sentences (FS) and d) Recalling Sentences (RS) subtests of the Clinical Evaluation of Language Fundamentals (CELF-4 - Semel, Wiig & Secord, 2004) and e) the Multiple Contexts (MC) and f) Figurative Usage (FU) subtests of the TOWK. Performance IQ was also measured using the Weschler Intelligence Scale for Children III (WISC III) (Weschler, 1991). The test results were used in the second stage of selection. Students who scored ≤ 1 standard deviation (SD) below the mean on 2 or more of the language tests/subtests, or ≤ 1.5 SD from the mean on any 1 language test/subtest were selected for further study. These students were selected as they had been found to have language difficulties.

Description of participants. A total of 352 year 7 students [aged 12;08 years (SD = 4 months)] from 21 mainstream secondary schools across 2 outer London boroughs in the UK met the criteria. There were 222 males and 130 females. Of the group, 34% scored level 4c (low average), 7% scored level 4a-b (high to mid average) and 56% scored level 3 or below (below average) in year 6 in their KS2 English standard assessment test (data unavailable for remaining 3% of the group). A measure of socio-economic status was taken using maternal educational level. Maternal education for the majority of the group (55%) was 'school or college level'

qualifications. Thirteen percent had mothers with ‘no formal’ qualifications and 11% had mothers with ‘university level’ qualifications. Only 3.4% of this cohort had a Statement of special educational needs, a legal requirement in the UK for additional specialist support for students with special needs, and none were currently being seen by the local speech and language therapy teams.

Table 1 gives the language and non-verbal performance of the participants. Z scores are given, in addition to means and standard deviations, to facilitate comparisons across tests. Participants scored within the average range (within 1SD of the mean) on receptive vocabulary (BPVS) and were more than one SD below the mean on expression of single words (TOWK-EV), the understanding of multiple meanings (TOWK-MC) and figurative language (TOWK-FU) and the formulation and repetition of sentences (CELF-FS; CELF-RS). Performance IQ of the group was within the average range (see table 1).

Self reports on the social, emotional and behavioral functioning of the students were available for 344 students, parent-reports, for 224 of the students and for teacher-reports, 229 of the students.

INSERT TABLE 1 ABOUT HERE

Materials

The Strengths and Difficulties Questionnaire (SDQ), a standardized assessment of psychiatric difficulties, was used to explore social, emotional and behavioral functioning (Goodman, 1997; 1999; 2005). It is reported to have adequate predictive validity (Lindsay & Dockrell, 2000) and correlates highly with the Child Behavior Checklist (Achenbach, 1991). It is quick to administer (5-10 five minutes) and has three versions: student, parent and teacher. It may be used with 4 to 16 year olds and is one of the few measures with norms for adolescents

(see www.sdqinfo.org). The normative data were collected from a representative British sample and included 10,438 individuals aged between 5 and 15. Complete SDQ information was obtained from 10,298 parents (99% of sample), 8,208 teachers (79% of sample) and 4,228 11-15 year olds (93% of this age band) (Meltzer, Gatward, Goodman, & Ford, 2000). Goodman, Ford, Simmons, Gatward and Meltzer (2000) suggest that it is most reliable when completed by the young people themselves (from age 11 onwards), their parents and their teachers. The screening efficiency of the tool has been found to be good (70-90%) for conduct-oppositional disorders, depression, hyperactivity disorders, pervasive developmental disorders and some anxiety disorders (Goodman, Renfrew & Mullick, 2000).

The SDQ has twenty-five statements, some positive and some negative divided into 5 subscales of 5 questions each:

1. Emotional symptoms: measures how often the student feels worried, tearful, nervous, clingy and scared. Example: 'I am often unhappy, downhearted or tearful'.
2. Conduct problems: measures temper, obedience, fighting, telling lies or cheating and stealing. Example: 'I get very angry and often lose my temper'.
3. Hyperactivity scale: investigates the presence of hyperactivity, impulsivity and attention span. Example: 'I am easily distracted'.
4. Peer problems: measures whether a student feels solitary or alone, is liked or picked on by other children and relations with adults and children. Example: 'I am usually on my own'.
5. Prosocial behavior: measures positive behaviors and whether the student is caring, helpful and considerate towards other people. Example: 'I often volunteer to help others'.

Each statement has a 3 point scale. The student indicates if it is 'not true', 'somewhat true' or 'certainly true'. Each of the 5 scales gives a score from 0 to 10. The first four subscales (emotional symptoms, conduct problems, hyperactivity and peer problems) give a total difficulties (TD) score from 0-40. High scores indicate greater SEBD. The prosocial scale gives a separate rating of positive behavior. Here higher scores indicate more prosocial behaviors. There is also a separate Impact Scale which explores the impact of SEBD on the daily life of the participants.

Procedure

Students were assessed individually in a quiet room at their schools. Administration of all tests followed instructions provided in the respective manuals. Statements on the SDQ were read to the participants to ensure understanding and to allow for language and literacy difficulties. The assessments were completed in 2 or 3 sessions of approximately 45 minutes each over a 2-week period. The student's form teacher and parents completed the SDQ during the same period. Each student has a form teacher who they see every day and with whom they usually have most contact. Form teachers were encouraged to get any additional information they needed from other teachers in the school in order to complete the SDQ as fully and accurately as possible. Explanations on completing the form were given to both teachers and parents. Completed forms were either returned via mail to the research team, or collected from the school. Ethical approval was granted by City University Ethics Committee. Informed consent was given by all participating schools, parents and students.

Results

Social, Emotional and Behavioral Functioning (SEBF) of Participants

A series of one sample t-tests were used to compare the participants to a normative sample accessed from the SDQ website (<http://www.sdqinfo.org/>). The participants had significantly higher total difficulties scores (TD) than the normative sample on the self-reported [$t(337) = 11.51, p \leq .001; d = 0.65^{ii}$], parent-reported [$t(206) = 9.70, p \leq .001; d = 0.67$] and teacher-reported [$t(185) = 9.01, p \leq .001; d = 0.70$] SDQ. The effect sizes were medium to large (Cohen, 1988). Students, parents and teachers each had significantly higher scores on each of the four SDQ subscales: emotional functioning, conduct, hyperactivity and peer relationships. However, none of these scores fell within the clinical range for psychiatric disorder (Goodman et al., 2000). Students and teachers, but not parents, reported significantly less prosocial behaviour than the normative sample. The teacher-rating of prosocial behaviour was the only score to fall within the clinical threshold of borderline psychiatric disorder (Goodman et al., 2000). All raters identified the students' SEBD as having a significant impact on their everyday life. See table 2 for self, parent and teacher-reported SDQ scores.

INSERT TABLE 2 ABOUT HERE

Agreement across student, parent and teacher raters on SEBF

Ratings by students, parents and teachers were available for 161 of the participants. Within subject ANOVAs were used to compare these scores. Significant differences were found in the total difficulties scale [$F(2; 228) = 10.40; p \leq .001; \text{partial } \eta^2 = .084$]. Pairwise comparisons with Bonferroni adjustment found that students reported significantly greater SEBD than parents ($p \leq .05$) and teachers ($p \leq .001$). Parents and teachers did not differ. Significant differences were also found on the emotional [$F(2; 282) = 15.40; p \leq .001; \text{partial } \eta^2 = .098$], conduct [$F(2; 276) = 31.23; p \leq .001; \text{partial } \eta^2 = .185$] and prosocial [$F(2; 264) = 70.41; p \leq .001; \text{partial } \eta^2 = .348$] subscales. Pairwise comparisons showed that parents ($p \leq .01$) and

students ($p \leq .001$) reported more emotional difficulties than teachers, students reported more conduct problems than parents ($p \leq .001$) and teachers ($p \leq .001$) and teachers identified less prosocial behaviors than students ($p \leq .001$) and parents ($p \leq .001$). Parents reported more prosocial behaviors than both teachers and students ($p \leq .001$) (see table 3).

INSERT TABLE 3 ABOUT HERE

Differences in SDQ scores with non-verbal ability

To explore the relationship between non-verbal ability and SEBD, the participants were divided into average (non-verbal IQ = ≥ 85) and below average (non-verbal IQ < 85) groups. Independent T-tests were used (to maximise the data available) to compare the scores of students, teachers and parents. No differences in total difficulties on the SDQ were found between average and below average students.

Differences in the SDQ with language ability

Scores on the SDQ were examined as a function of the students' language ability. The BPVS was selected as it was the only measure of receptive language. Scores on the RS and FS subtests of the CELF-4 were used as measures of expressive language, rather than the subtests of the TOWK, as they assessed the use of structural language in connected speech. Students were divided into groups with average and below average expressive language and with average and below average receptive vocabulary. The cut off point in each case was 1.5 standard deviations below the mean. Similar results were found for expressive and receptive language. Students with low expressive language ability reported greater total difficulties on the SDQ than those with average abilities [$t(332) = 2.22, p = .027; d = -0.25$ (small effect size)] and students with low receptive vocabulary reported greater total difficulties than students with average ability [t

(334) = 2.59; $p = .01$; $d = -0.32$ (small effect size)]. No differences were found for the teacher or parent scores.

Differences in SDQ scores with educational attainment

The SDQ scores of students who scored average/low average (4a-4c) and those who scored below average (≤ 3) on an educational attainment test (English KS2 National Standard Assessment Test) were compared. Below average students had higher SDQ scores on the self [$t(325.48) = 4.041$; $p = .001$; $d = -0.44$ (small-moderate effect size)] and teacher ratings [$t(181) = 3.043$; $p = .003$; $d = -0.46$ (moderate effect size)]. A similar pattern was seen for the parent scores but this fell short of significance [$t(182.799) = 1.653$; $p = .100$; $d = -0.22$ (small effect size)].

Differences in SDQ scores with gender and socio-economic status (maternal educational level)

No significant differences in total difficulties were found between male and female students on the self [$t(336) = -1.82$; $p = .070$ (NS); $d = -0.20$ (small effect size)], parent [$t(205) = .20$; $p = .84$ (NS); $d = 0.02$] or teacher [$t(184) = 1.51$; $p = .132$ (NS); $d = 0.23$ (small effect size)] SDQ scores.

Between subject ANOVAs were used to compare total difficulties in students whose mothers' were educated to university level, college level or who had no formal qualificationsⁱⁱⁱ. Significant differences were found on the self [$F(2; 26) = 3.50$, $p = .03$] and teacher [$F(2; 154) = 3.61$, $p = .03$] but not on the parent SDQ scores. Post hoc comparisons on the student and teacher scores found that students of mothers with no qualifications had greater SEBD than those with college level ($p = .02$ and $p = .03$ respectively) and with university level ($p = .01$ and $p = .02$ respectively) qualifications.

Relationship between SDQ and non-verbal performance, language ability and educational attainment

Two-tailed Pearson correlations were used to explore the relationship between the total difficulties score of the student, parent and teacher SDQ and performance IQ (WISC III), educational attainment (scores on the national English test) and receptive (BPVS) and expressive language ability. In these analyses, all language measures were included in order to fully explore the relationship between SEBD and language, including both the structural and more idiomatic aspects of language. However, in order to reduce the number of correlations, language subtests were averaged and combined. Two measures of expressive language ability were used, the average score of the CELF-FS and CELF-RS and the average score of the TOWK subtests (TOWK-EV and TOWK-MC and TOWK-FU).

Significant correlations were found between educational attainment and the student [$r(328) = -.182, p = .001$] and teacher [$r(183) = -.15, p = .04$] SDQ scores, and between the student SDQ scores and the BPVS [$r(336) = -.17, p = .002$], and the CELF-4 tests [$r(334) = -.15, p = .007$]. When a Bonferonni correction was applied only the correlations between student SDQ scores and educational attainment ($p = .001$) and between the student-reported SDQ and the BPVS ($p = .002$) remained significant^{iv}.

Discussion

This study investigated the SEBF of mainstream first year secondary school students. Though underperforming academically, their language difficulties had not previously been recognized and they were receiving no specialist support. Self-ratings and ratings by their teachers and parents on the SDQ showed significant SEBD. They had difficulties in all areas including emotional functioning, conduct, hyperactivity and peer relationships. These findings

are consistent with other reports of an association between poor language and communication and social, emotional and behavior problems in adolescents as reported by students themselves (Botting & Conti-Ramsden, 2008; Clegg et al., 2005; Conti-Ramsden & Botting, 2008; Durkin & Conti-Ramsden, 2007; Wadman et al., 2011), their parents (Conti-Ramsden & Botting, 2008; Lindsay & Dockrell, 2000; Lindsay et al., 2007) and teachers (Beitchman et al., 1996; Botting & Conti-Ramsden, 2000; Lindsay & Dockrell, 2000; Lindsay et al., 2007).

With the exception of teachers' reports of their prosocial behavior, the mean scores did not fall below the clinical threshold for psychiatric disorder (Goodman, et al., 2000). Again, this data is consistent with findings on adolescents with SLI (Botting & Conti-Ramsden, 2000; Wadman et al., 2008). Nevertheless, their problems are sufficiently severe to be recognized by teachers and parents as well as themselves suggesting that they impact on many aspects of their everyday lives. These results confirm a relationship between language and communication difficulties and SEBD and extend this to students not previously identified with a language disorder.

Although, as a group, these students exhibited greater SEBD than a normative sample, not all presented with SEBD. This is consistent with reports of positive outcomes despite SLCD (Carroll & Dockrell, 2010; Palikara et al., 2009) and with Conti-Ramsden and Botting's (2008) finding that the majority of their participants with SLI had no emotional difficulties. These studies agree, however, that students with SLCD are at risk for SEBD, and question the support they receive around social and emotional development. Participants in this study received no specialist support for their learning and language difficulties, and were not formally identified by their school as having SLCD or SEBD. This suggests that many secondary school students may fail to receive the support they need and mirrors concerns expressed by speech and language

therapy managers (Dockrell et al., 2006). That students, parents and teachers were in agreement further indicates the need for extra support, and people working with these students need to be responsive to this.

An important caveat is that the participants in the study were compared to the normative data provided from the SDQ data bank. This is a limitation of the study as SEBF may be particularly vulnerable to cultural and environmental differences, and these were not controlled. Future studies should include a comparison group of young people from the same schools who have good academic attainment and language abilities.

Differences between the three raters were also found. Students and their parents identified more difficulties with emotional functioning than teachers and students identified more problems with conduct than their parents or teachers. Parents reported more prosocial behaviors than either the students or their teachers. Differences have been reported elsewhere (Lindsay & Dockrell, 2000; Lindsay et al., 2007; Redmond & Rice, 1998; Sayal & Taylor, 2005) underlining the need for multiple perspectives. These may be explained by differences in behavior in different settings or by differences in the perceptions of the raters. That students reported greater SEBD indicates their awareness of their own behavior and may reflect the negative feedback that they receive from others and their experiences of academic failure (Lindsay & Dockrell, 2000). Snowling et al., (2006) suggested that young people with SLI may respond unreliably to questionnaires due to their weak language skills. However, recent studies have found that young people with SLCD can give realistic insight into their difficulties (Joffe et al., 2011; Palikara et al., 2009; Spencer et al., 2010). In the present study, students completed the questionnaires with a researcher who facilitated understanding where necessary.

Consistent with the findings of Lindsay et al., (2007), teachers identified less SEBD than parents or students. Teachers see students in a restricted environment and some may be less familiar with new arrivals at the school. Parents have many opportunities to see the students' emotional reaction to social events and their relationships with friends and family. This may be especially true of peer relationships. Durkin and Conti-Ramsden (2007) found only 64% of adolescents with SLI had one or more close relationship compared to 92% of their typically developing group. Parents will be more aware of an absence of close relationships.

Students' reports of conduct difficulties were significantly higher than teachers. This area includes ratings of the students' responsiveness to adult requests, lying, stealing or cheating and fighting with or bullying other children, areas where self report may be more revealing than the reports of others.

Teachers rated students significantly poorer at prosocial behavior than either parents or the students themselves. This replicates findings by Lindsay and Dockrell (2000) and Lindsay et al. (2007). It may not be surprising that greater demands are made upon these behaviors at school than at home or that teachers readily notice the lack of such behaviors. This highlights a need to develop students' awareness of appropriate social skills and to increase awareness of their likely weaknesses in this area in children with SLCD.

The finding that parents reported more SEBD than teachers is in contrast with reports by Redmond and Rice (1998) and Sayal and Taylor (2005). The children in both of these studies were younger which may account for these differences. Parental anxiety may increase as children grow older and particularly as they move into secondary education. Support for this comes from Lindsay et al (2007) who found that parental concern increased at 12-years when reporting about their children at 8, 10 and 12-years of age.

The differences across ratings are important and help build a holistic profile of a child's social, emotional and behavioral functioning. There is little value in arguing about which reports are most 'valid' or 'correct'. Each presents a different perspective and provides a valuable profile of social, emotional and behavioral functioning of a child. It is not always easy to obtain a range of perspectives, particularly in secondary schools where students have multiple teachers and parents are less involved in their children's school lives. By completing the questionnaires with the students a return rate of 98% was achieved. However, only 56% of parents and 60% of teacher questionnaires were returned illustrating this difficulty.

The findings in this study confirm previous reports (Botting & Conti-Ramsden, 2000; Conti-Ramsden & Botting, 2008; Lindsay et al., 2010) of little or no association between SEBD and non-verbal IQ. The lack of a difference in males and females also confirms previous findings on SEBF (Botting & Conti-Ramsden, 2000; Conti-Ramsden & Botting, 2004; 2008; Lindsay et al., 2002; Lindsay et al., 2007).

Social, emotional and behavioral functioning did differ with socio-economic status (measured by maternal education). Children of mothers with no formal education had significantly greater SEBD. This was not detected in the parent ratings, however. Mackie and Law (2010) found that many children with emotional and behavioral difficulties had mothers with low levels of education. There is growing evidence for impoverished language in areas of social deprivation in younger children (Hart & Risley, 1995; Locke, Ginsborg & Peers, 2002; Law, McBean & Rush, 2011) and in adolescence (Clegg et al., 2009; Myers & Botting, 2008) and the interplay between social deprivation, language and communication difficulties and SEBF needs further systematic investigation to explore causal relationships.

Differences in SEBD were also found in the comparison of students with average versus below average expressive language and receptive vocabulary. Students with average language ability reported less total difficulties than students with below average ability. These differences were not found with the parent or teacher-rated SDQ, however. Parents and teachers, it appears are more aware of social, emotional and behavioral functioning than they are of the students' language. Correlations of SEBD with language were also found although only that between SEBD and the BPVS remained significant after the application of a Bonferroni correction. Durkin and Conti-Ramsden (2007) also reported receptive language to be the strongest predictor of friendships, and Lindsay and Dockrell (2000) found oral and written comprehension was most strongly associated with SEBD. Small and inconsistent associations between language and SEBD have previously been reported (Botting & Conti-Ramsden, 2008; Clegg et al., 2005; Conti-Ramsden & Botting, 2008; Lindsay et al., 2010). In a 20-year longitudinal study Johnson et al (2010) reported that the presence of social networks was more predictive of perceived well being in young adults with SLCD than objective measures of communication. In this study only the BPVS was used to assess receptive language. Given the above results, future studies should include a more comprehensive receptive language battery. Expressive language measures only included assessment of structural and idiomatic language. No measures of pragmatic ability or social language skills were used here. Other studies have found a relationship between pragmatic language and SEBD (Conti-Ramsden & Botting, 2004; Lindsay et al., 2007; Mackie & Law, 2010) and further investigation around social use of language and SEBF is warranted.

Performance on an English educational attainment test was the strongest predictor of SEBD. Students scoring below average showed significantly greater SEBD than those in the average range. This was found on the student and teacher-rated SDQ and is supported by a

significant correlation between the student SDQ ratings and scores on the test. Similar links between SEBD and educational attainment have been reported (Lindsay et al., 2002; 2010). It appears that students with poor academic attainment and weak receptive language identify significantly more SEBD. Academic failure and problems in school can lead to poor self-esteem (Lindsay et al., 2002, 2010). In light of these findings, it is important to monitor the SEBF of students experiencing academic failure. Educational attainment seems to play an important role in the social, emotional and behavioral functioning of secondary school students.

Conclusion

These results are consistent with previous research showing that adolescents with language difficulties are at greater risk of experiencing social, emotional and behavioral difficulties than their peers. The participants in this study had not previously been diagnosed with language and communication difficulties. They were referred by teachers because of their poor academic attainment and/or low language performance, subsequent assessment revealing their language problems. Their vulnerability to SEBD emphasizes the importance of support to secondary school students with language difficulties and/or weak academic performance. Specialist language support in secondary schools is limited and the focus on academic attainment gives little time to support social and emotional functioning. The findings of this study show that a greater awareness of social, emotional and behavioral functioning of secondary school students with low academic achievement and poor language performance is needed to provide an appropriate network of support.

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ⁱ Standard assessment tests (SATs) are also given to all students in the UK at 7-years of age (Key stage 1) in English, Maths and Science

ⁱⁱ Cohen's descriptors are used to describe the degree of the effect size (0.2 = small; 0.5 = medium; 0.8 = large)

ⁱⁱⁱ Three one way ANOVA's were used for each of the three SDQ questionnaires. The one-way ANOVA test was used instead of a mixed ANOVA as for the latter, the data would have been significantly reduced due to the smaller number of teacher and parent-reported SDQ's

^{iv} There were 15 correlations in total, and with the Bonferroni correction applied, the corrected level of significance was 0.003.

Table 1

Means, Standard Deviations (in parentheses), Ranges and Z scores for Verbal and Non-Verbal Abilities of Participants

	Mean (SD)	Range	Z score (SD)
			Mean = 0; SD = 1
<u>Verbal Measures</u>			
BPVS-II ^a	85.1 (12.3)	44-144	-.99 (.82)
CELF-4 Formulated Sentences ^b	6.0 (3.0)	1-14	-1.3 (1.0)
CELF-4 Recalling Sentences ^b	6.3 (2.8)	1-15	-1.2 (1.0)
TOWK Expressive Vocabulary ^b	5.7 (1.7)	3-13	-1.4 (.57)
TOWK Multiple Contexts ^b	6.1 (2.1)	3-12	-1.2 (.71)
TOWK Figurative Usage ^b	6.4 (1.9)	3-12	-1.2 (.64)
<u>Non-verbal Measure</u>			

WISC III Performance IQ ^a	84.7 (14.2)	53-132	-1.0 (.94)
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Note: BPVS-II = British Picture Vocabulary Scale Second Edition; CELF-4 = Clinical Evaluation of Language Fundamentals – Fourth Edition; TOWK = Test of Word Knowledge; WISC III = The Wechsler Intelligence Scale for Children – Third Edition. ^a = mean = 100, SD = 15; ^b = Mean = 10, SD = 3.

Table 2

Responses on the Self, Parent and Teacher-Reported Strengths and Difficulties Questionnaire (SDQ)

	Group Mean (SD)	Normative sample mean (SD) ^a	T Value
<u>Self-reported SDQ</u>			
Total Difficulties (N = 338)	13.8 (5.7)	10.3 (5.2)	11.51***
Emotional subscale (N = 341)	3.7 (2.3)	2.8 (2.1)	7.07***
Conduct subscale (N = 344)	3.2 (2.0)	2.2 (1.7)	8.93***
Hyperactivity subscale (N = 344)	5.0 (2.3)	3.8 (2.2)	9.09***
Peer subscale (N = 344)	2.1 (1.9)	1.5 (1.4)	5.88***
Prosocial subscale (N = 344)	7.5 (1.8)	8.0 (1.7)	-5.35***
Impact subscale (N = 341)	1.0 (1.5)	0.2 (0.8)	9.16***
<u>Parent-reported SDQ</u>			
Total Difficulties (N = 207)	12.1 (5.7)	8.2 (5.8)	9.70***
Emotional subscale (N = 221)	3.0 (2.3)	1.9 (2.0)	6.92***

Conduct subscale (N = 222)	2.1 (1.8)	1.5 (1.7)	4.66***
Hyperactivity subscale (N = 220)	4.9 (2.7)	3.2 (2.6)	9.32***
Peer subscale (N = 221)	2.1 (1.7)	1.5 (1.7)	4.65***
Prosocial subscale (N = 224)	8.6 (1.8)	8.6 (1.6)	-.347 ^{NS}
Impact subscale (N = 216)	1.1 (1.7)	0.4 (1.2)	6.03***

Teacher-Reported SDQ

Total Difficulties (N = 186)	11.0 (7.0)	6.3 (6.1)	9.01***
Emotional subscale (N = 221)	2.1 (2.2)	1.3 (1.9)	5.21***
Conduct subscale (N = 211)	1.9 (2.2)	0.9 (1.7)	6.77***
Hyperactivity subscale (N = 229)	4.8 (3.0)	2.6 (2.7)	10.66***
Peer subscale (N = 218)	2.3 (2.1)	1.4 (1.8)	6.47***
Prosocial subscale (N = 206)	5.8 (2.4)	7.1 (2.4)	-7.44***
Impact subscale (N = 226)	1.0 (1.3)	0.4 (1.0)	4.19***

Note: ^a = Goodman's normative sample for self-reported SDQ was completed with 4228 participants, the parent-completed SDQ with 4443 participants and the teacher-reported SDQ with 3407 participants; N = number of participants; *** = significant at .01 level; ^{NS} = not significant

Table 3

Comparisons in Responses (means and SD) on the SDQ across the 3 Raters

SDQ subscales	Student-SDQ Mean (SD)	Parent-SDQ Mean (SD)	Teacher-SDQ Mean (SD)	F	Effect Size Partial Eta Squared ^a
Total Difficulties (N = 115)	14.1 (5.8)	12.2 (5.7)	11.1 (6.7)	10.40***	.084 (small)
Emotional (N = 142)	3.7 (2.5)	3.1 (2.4)	2.3 (2.4)	15.40***	.098 (small)
Conduct (N = 139)	3.3 (1.9)	2.2 (1.8)	1.8 (2.0)	31.23***	.185 (small)
Hyperactivity (N = 146)	4.9 (2.2)	4.9 (2.6)	4.9 (3.0)	.026 ^{NS}	-
Peer (N = 141)	1.9 (1.8)	2.0 (1.7)	2.2 (2.0)	1.60 ^{NS}	-

Prosocial subscale	7.6 (1.8)	8.7 (1.7)	6.1 (2.3)	70.41***	.348 (medium)
(N = 133)					
Impact subscale	1.0 (1.4)	1.1 (1.6)	.1.0 (1.4)	2.21 ^{NS}	-
(N = 137)					

Note: ^a = > 0.1 is a small effect, > .0.3 is medium and > .0.5 is large; N = number of participants; *** = significant at .01 level; ^{NS} = not significant