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Speech and language therapy intervention with a group of persistent and prolific young offenders in a non-custodial setting with previously un-diagnosed SLCD.

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## **Abstract**

### *Background*

Increasing numbers of children with behaviour and school problems (related to both academic achievement and social participation) are recognised as having undiagnosed speech, language and communication difficulties (SLCD). Both SLCD and school failure are risk factors for offending.

### *Aims*

To investigate the prevalence of SLCD in a group of persistent and prolific young offenders sentenced to the Intensive Supervision and Surveillance Programme (ISSP), and to provide a preliminary evaluation of the impact of speech and language therapy (SLT) intervention.

### *Methods and Procedures*

72 entrants to ISSP over twelve months were screened by the SLT; those showing difficulties then had a detailed language assessment followed by intervention delivered jointly by the SLT and the Youth Offending Team staff. Re-assessment occurred at programme completion.

### *Outcomes and Results*

65% of those screened had profiles indicating that they had language difficulties and might benefit from SLT intervention. As a cohort, their language skills were lower than those of the general population, and 20% scored at the 'severely delayed' level on standardised assessment. This is the first study of SLT within community services for young offenders, and is the first to demonstrate language improvement detectable on standardised language tests. However, further research is needed to determine the precise role of SLT within the intervention programme.

### *Conclusions and Implications*

Children and young people with behavioural or school difficulties coming into contact with criminal justice, mental health, psychiatric and social care services need to be systematically assessed for undiagnosed SLCD. Appropriate interventions can then enable the young person to engage with verbally mediated interventions.

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**Word count 282**

## **Introduction**

Young people who engage in criminal activity typically have a history characterised by poor school achievement, learning difficulties and truancy (Putnins, 1999; Snowling *et al.*, 2000), although the population is acknowledged to be diverse. Evidence emerging over the last decade indicates that juvenile offenders are likely to be at significant risk of previously unrecognised language impairment. Speaking and listening skills are necessary for offenders to cope with the demands of education provision and behaviour programmes designed to reduce re-offending. It is also important that specific disabilities and special educational needs, including difficulties with speech, language and communication, are recognised in order to comply with the Disability Discrimination Act, 2005. Both the Youth Justice Board and the Department for Education and Skills recognise that identification of needs and provision for special educational needs are important ([www.dfes.gov.uk/sen](http://www.dfes.gov.uk/sen)). Snow (2009) outlines the impact of poor oral language skills on early development, educational achievement, later socialisation and career prospects. She also assesses the costs to society of not addressing oral language difficulties in children who become offenders.

Studies of offenders' speaking and listening skills have used populations of young people in different countries over various age ranges. This means that studies are not directly compatible, but a consensus figure of 50-60% of young people who are involved in offending having speech, language and communication needs is emerging. Humber and Snow (2001) assessed a group of 15 male adolescents aged 13–21 serving community orders in Australia. They showed that mean scores on the Speed and Capacity of Processing Test (Baddeley *et al.*, 1992) and the Test of

Language Competence – Expanded Version (Wiig and Secord, 1989) subtests for understanding ambiguous sentences, making inferences and understanding metaphor were significantly lower for the offender group than for the age-matched and education-matched control group. None of the sample were receiving intervention for language difficulties. Snow and Powell (2004) used the same tests on a larger sample of seventy 13-21 year olds serving community orders and found that they were on average functioning two years below their peer group even when matched for years of schooling. Snow and Powell (2005; 2008) suggest that high risk adolescents whose conduct disturbances bring them into contact with the law are likely to display difficulties in understanding and using abstract language (e.g., idioms, metaphor) and using narrative discourse to convey new information to a listener, word-finding difficulties and grammatical immaturity relative to their non-offending peers.

Some studies have examined language abilities in children at risk of offending. Cohen and her team in Canada (Cohen *et al.*, 1993; Vallance *et al.*, 1999) have reported that around 50% of children and adolescents receiving services for a range of adjustment disorders (e.g., behaviour disturbances, anxiety disorders) actually display language impairments when specifically tested. Cohen has speculated that the combination of language and behaviour disturbance results in a disproportionate 'favouring' of behaviour when allocation and delivery of intervention services are considered. This means that high-risk children may receive services aimed at ameliorating their behaviour problems, but there may be little or no attention paid to development of language comprehension and expression. This in turn reduces the likelihood of school engagement, thus lessening the access that high-risk young

people have to the protective effects of academic achievement. Beitchman *et al.*, (1999) suggest that communication difficulties tend to be misinterpreted as non-compliance and conduct problems in the classroom environment. Whitmire (2000) suggests that adolescents with language disorders are vulnerable to problems in developing peer and family relationships, as well as in meeting the expectations of school. Subsequent research has confirmed the disadvantages for children with speech, language and communication difficulties in terms of educational achievement (Conti-Ramsden *et al.*, 2009) and social development (Botting and Conti-Ramsden, 2008). Sanger *et al.*, (2003) indicate that language difficulties were not being recognised at school and that communication problems tended to be labelled in terms such as 'lazy' or 'out of control'. They also suggest that language and communication skills should be investigated in adolescents who are experiencing social and/or schooling difficulties. Sanger *et al.*, (2001) recommended that teams who are planning interventions for adolescent offenders should include speech and language therapists. Lindsay and Dockrell (2008) have discussed the potential impact of improved educational support for children with specific language impairments. Palikara *et al.*, (2009) suggest that good family relationships may also be positive in helping children with SLT to cope with secondary education, although many young people who become involved in criminal activity have little or no family support.

The link between disadvantage in the early years and language difficulties which later affect school performance has been highlighted by Locke *et al.*, (2002). Persistent difficulty with language development has been linked with a greater chance than normal of the development of both mental health problems and involvement in

criminal activities (Clegg *et al.*, 2005). Longitudinal studies by Beitchman *et al.*, (2001) and Smart *et al.*, (2003) showed that boys with early language development problems were significantly at risk of teenage anti-social behaviour.

In the UK, Bryan *et al.*, (2007) assessed a sample of 58 juvenile offenders (aged 14-17). The sample consisted of half of one Youth Offender Institution, randomly selected with no exclusions in order to be reasonably representative of the juvenile population (although admission criteria to UK young offender establishments vary slightly). They were assessed on the four verbal subtests of the Test of Adolescent and Adult Language, third edition (TOAL-3) (Hammill *et al.*, 1994). The results on the language tests showed that 66–90% score below average on verbal subtests of the TOAL-3 i.e., have skills below the level that would be expected for their age. These young people with low levels of language ability are likely to struggle particularly with verbally mediated interventions and may need access to SLT if their education and skill development programme is to address their individual needs, as the government's green paper '*Reducing re-offending through skills and employment*' (HMSO, 2006) suggests.

Where up to 90% of a population has language limitations, there is a danger that this becomes the norm. This is very relevant to concerns about the effectiveness of interventions for juvenile offenders (Youth Justice Board, 2004) and the high levels of withdrawal and non-attendance in relation to educational provision (HMSO, 2006). Bryan (2004) showed that SLT intervention enabled young people with speech, language and communication needs to cope with the verbal demands of the regime, and established that SLT could be successfully delivered within the context of a

Young Offender Institution, and that the value to the regime could be demonstrated. However, more research is needed to establish the most effective ways of delivering SLT to the wider juvenile offender population.

There are currently no available data on speech, language and communication needs for young people accessing wider criminal justice services in the community. In England these young people would be under the care of Youth Offending Teams who support young people to prevent re-offending. The study described in this paper provides the first systematic screening using standardised tests of young people accessing an ISSP programme within a Youth Offending Team. There is also an urgent need for evidence-based interventions with young people within the wider criminal justice system (including those who have offended as well as those at risk of offending), so that un-met developmental difficulties can be addressed in order to maximise their opportunities for gainful participation in society and to avert the adoption of an ongoing adult 'lifestyle' associated with persistent crime (Ward and Stewart, 2003). In particular, developing and improving oral language abilities may be necessary to allow the young person to engage successfully with educational, vocational and social provision (Bryan *et al.*, 2007).

In response to the breadth of evidence cited above and before the review by Bercow (2008), which highlighted the need for SLTs to work with vulnerable young people in contact with the criminal justice system, joint funding was obtained for an experienced SLT to work three and a half days a week for 17 months within the local Youth Offending Service of a city in England. A decision was made to target young people on the Intensive Supervision and Surveillance Programme (ISSP). ISSP is

the most rigorous non-custodial intervention available for young offenders. ISSP targets the most active repeat young offenders, and those who commit the most serious crimes.

The programme aims to:

- reduce the frequency and seriousness of offending in the target groups;
- tackle the underlying needs of offenders which give rise to offending, with a particular emphasis on education and training;
- provide reassurance to communities through close surveillance backed up by rigorous enforcement.

To meet the criteria for ISSP, the young people will either be prolific offenders who have committed at least ten crimes over the past year and who have already received other community sentences through the English courts, or they will have committed a crime that, if committed by an adult, would have carried a custodial sentence of ten years or more. ISSP involves intensive input for three months (25 hours a week) and reduced contact for a further three months (down to a minimum of Five hours a week). The aim of ISSP is to address the young person's offending behaviour and to reduce the risk of re-offending by supporting them in accessing education or training and positive community activities. Many other developed countries will have similar intensive programmes aimed at preventing young people from entering custody.

### **Aims**

The project aims were to:

- identify any language and communication difficulties in the young people on ISSP;
- plan and co-ordinate intervention to address their identified needs;

- evaluate any change in language and communication skills post intervention;

## **Methods**

### *Participants*

All 73 young people (now to be referred to as participants) sentenced by courts to ISSP in the city between in 2008. One participant did not have English as his first language and was excluded from the study. The participants on the ISSP were aged between 11 and 18 years.

The majority of the school age participants on the ISSP were either excluded from mainstream schools or had reduced hours and alternative programmes. Those attending more regularly tended to be enrolled at the local Behavioural, Emotional and Social Difficulties school and to have a statement of special needs for challenging behaviour. None had statements for learning difficulties or for language difficulties.

[insert Table 1]

Data obtained from the Education Officer based at the ISSP showed that 40% (19 out of the available 47 scores) of the participants were at Adult Literacy and Numeracy Level 1 (the level expected of a 14 year old), although the mean age of the group was 15.35 years. Overall, 74.5% (35 out of the 47) were at or below this 14 year level. This result reflected findings in the literature and the research by the Basic Skills Agency (1994) that up to half the prison population have literacy difficulties.

## **Measures**

### *Screening*

The SLT routinely conducted the following screening assessment with all participants:

- Brief self-assessment questionnaire (adapted from Bryan, 2004 and previously used with young offenders) (appendix 1)
- CELF 4 Communication Observation Schedule (CELF-UK 4) (Semel *et al.*, 2006)

Both the above were read by the SLT to the young person to seek the participant's views. The participant either ticked the boxes themselves or answered the questions verbally and the SLT recorded the responses.

- A verbal reasoning 'Deduction' task at 14 year level from the Canterbury and Thanet Verbal Reasoning Skills Assessment (Johnson, 1998)

The SLT met with the key worker and supported them in their completion of the following three questionnaires. (The first two are the same as those completed by the participant):

- Brief questions on their opinion of the young person's communication skills (appendix 1)
- CELF 4 Communication Observation Schedule (Semel *et al.*, 2006)
- Annotated version of the Broadmoor Observation of Communication (appendix 2).

This tool is not standardised but has been used widely in the UK with forensic populations. Normative data for young adults are being developed (Turner, Pring and Bryan in preparation). Staff received training in the use of this tool.

The SLT analysed the data and where any language, attention, speech or social communication difficulties were found, an assessment process was triggered.

### *Assessment*

The assessments were selected to target areas of language that were predicted to have the greatest impact on the young person's ability to function in education or training:

- 'Understanding Spoken Paragraphs' subtest from CELF 4 gave a standardised score for the young person's ability to process, understand and respond to both factual recall and inferential information given verbally. Arguably this assessed just one aspect of comprehension and a wider range of assessments would have given a more comprehensive profile. However, the test did highlight difficulties in the area of listening and understanding spoken chunks of language, the medium through which much of the ISSP programme is delivered.
- The 'Word Associations' subtest from CELF 4 was used to measure the young person's naming and vocabulary skills against age norms. The task required naming as many items as possible in one minute in a given category. This gave an indication of the young person's ability to search for and retrieve words within their vocabulary.
- The 'Formulated Sentences' subtest from CELF 4 was used to give a standardised score for expressive language.

### **Procedure**

The SLT routinely conducted the screening assessment with all the entrants to the ISSP programme. Where the screening indicated any difficulties with language attention, speech or social communication, the full assessment process was then conducted as specified above.

For all the young people with identified communication needs, individually tailored intervention was developed within the ISSP programme. Each had a communication plan to meet their specific communication needs which was written by the SLT and discussed with their key youth justice worker. The youth justice workers on the ISSP staff were very diverse in terms of educational background, age and ethnicity. Some

staff had received no formal education beyond school leaving age other than the training provided in employment including e-learning modules achieved while with the Youth Offending Service. Some had left school at 18 years, whereas others were graduates with a background in social work or probation or had qualified in professions such as nursing and the police force. The majority of the workers were not graduates. None had prior knowledge around language and communication difficulties in young people, but all staff received training from the SLT as part of the project.

Specific resources were suggested and information was also given on how to adapt existing resources and interventions in the light of the information known about the participant's level of language functioning. Intervention plans focused on areas such as listening, understanding, vocabulary, narrative skills, speech production, fluency management, language skills, non verbal communication, appropriate assertive communication, social communication, and interview and court preparation.

Staff were able to meet with the SLT throughout the week to exchange resources, ask advice or to give feedback on specific participants. Individual intervention was usually conducted by the key worker, but joint individual and group sessions with SLT, and individual sessions delivered by SLT were also included. The degree to which the SLT was involved in delivering the communication plan depended on factors such as complexity of need and pragmatic factors e.g., staffing, timetabled activities and the skill level of the key worker. Details of the intervention will be available elsewhere (Gregory and Bryan, 2009). An example of a specific

intervention with an individual programme delivered by key worker and SLT and attendance at a communication group is given below:

- Male age 16;
- Poor social skills (scored 63 on the Broadmoor)
- On assessment had severe delay in understanding spoken language (standard score of 4 on Understanding Spoken Paragraphs on the CELF) and mild-moderate expressive language delay.
- SLT and key worker jointly delivered the communication plan, and he attended a communication group which focused on narrative, self esteem and vocabulary.
- Re-assessment showed a gain in understanding to within the normal range (standard score of 8 on Understanding Spoken Paragraphs) and increased confidence socially (scored 79 on Broadmoor).

#### *Re-assessment*

Approximately two weeks before the young person was due to leave ISSP, or left early due to early release, re-offending or breaching their ISSP conditions, re-assessment was conducted by the SLT. This was a repeat of the initial screen and the assessment. Subtests on which participants scored at an age appropriate level or above in the initial assessment were not repeated.

## **Results**

#### *Incidence of language and social skills difficulties*

72 participants were successfully screened by the SLT within the twelve month period (Jan-Dec 2008). Three others were not screened as two were taken into custody before screening, and one was non-compliant.

14 had language and communication skills within normal limits, 58 participants went on to have a full assessment and, of those, 49 were given a communication plan and resource pack (table 2)

[insert table 2 here]

The remaining nine had language skills within the normal range on formal assessment. The mean age for the screened group was 15.35 yrs and for those assessed 15.15 yrs. 88% (43) of the group who needed communication plans were male and 12% (6) were female. The percentage of girls in the ISSP assessed cohort was 15.5%.

Table 2 shows the type and incidence of language difficulty identified when a language difficulty is defined as a standard score of 7 (-1 Standard Deviation) and below on either of the two CELF subtests used, or by the young person not meeting their age level on the CELF-4 Word Associations task. Also included is the incidence of stammering, ascertained by self-reporting, and of social skills impairment, defined as scoring below 96 on the Broadmoor Observation of Communication.

[insert table 3 here]

The results show that approximately half of the participants who were given ISSP as a sentence had difficulties in understanding spoken language (as measured by the CELF) and over a quarter had expressive language difficulties. A similar number had difficulties in their social skills identified by staff.

The full assessment procedure was carried out on the 58 participants who were identified by the screen as in need of further assessment. Results from the CELF-4

and the deduction test (from Canterbury and Thanet Verbal reasoning skills assessment) are shown in the tables 4 and 5.

[insert table 4 here]

[insert table 5 here]

The data indicate 20% of participants on the ISSP programme had very low levels of understanding of verbally presented information (Standard Deviation of -2 and below). Statistical analysis using the CELF data tables indicated that 98% of the population would score at a higher level at an equivalent age. Just under 6% of the participants fell into the 'very severe' category (Standard Deviation of -3 and below) indicating extreme difficulty with processing, recalling, and understanding of what was said to them. Population norms suggest that 99.9% of the population would score higher on the assessment.

The mean scores for both subtests are shown and indicate that as a group the ISSP participants were below the midpoint on the standard scoring for both their receptive (verbal understanding) and their expressive language skills. Despite 14% of the participants scoring below the normal range on both assessments it should be noted that 8% (on Understanding Spoken Paragraphs) and 6% (on Formulated Sentences) of the group displayed above average verbal skills and two participants gained a standard score of 15 for understanding.

The CELF scores are standardised up to the age of 16;11. Fifteen of the participants screened were aged between 17;00 and 18;00 so above the standardisation level, indicating that their relative performance was actually slightly lower than that recorded. Analysis of the deduction task results indicated that the participants

generally scored better on this than on the Understanding Spoken Paragraphs test, with 80% passing at the 14 year level. Both the receptive tasks require some reasoning and inferential ability; however, the memory load was removed on the deduction task as the SLT could repeat the information at the participant's request. This was a crude measure as the mean age of the sample was 15.35 yrs; however, it gives an indication that memory and attention may critically affect a young person's ability to comprehend what is said to them.

Analysis of the additional expressive language tasks showed that a higher percentage of the participants could achieve an age appropriate level on the naming task than on the Formulating Sentences test. However, 12 (18%) of the group could not name enough words to pass the test, indicating limited vocabulary and/or word retrieval difficulties.

The social skills measure used was the Broadmoor Observation of Communication. This is not standardised but was used as an indicator of difficulty and as a pre and post intervention objective measure. Preliminary results of a study to develop norms for the Broadmoor Assessment are in preparation (Turner *et al.*, in preparation). Ratings were given on a 0-5 scale with 0 as a "very severe issue" up to 5 as "entirely right for the general public," (significant problems noticeable to staff score 3 and below). A score of 96-120 (maximum) indicated minimal or no difficulty. Scores below 96 indicated that the participant had issues in one or more areas. In total, the Broadmoor ratings were completed on 69 participants.

[insert table 6 here]

Table 6 shows the numbers scoring above and below 96 and also those with individual scores in the 0-2 (severe) category in one or more areas (overall score may be above 96 in total). The scores show that over half of the participants given ISSP as a sentence had social skills difficulties which were noticeable to staff. For those who completed the programme, the number of sessions with a communication focus ranged from 0-24 with an average recorded number of 8.6. The number of sessions with the SLT ranged from 0-12, with an average of 2.2.

#### *Re-assessment results post-SLT intervention*

20 of the 49 participants who received SLT intervention were re-assessed on leaving ISSP (as described in the methodology). This was at the end of their sentence or, in some cases, prior to going back to court for re-sentencing. Re-assessment was not possible on the other 29 as they failed to complete ISSP, were given alternative sentences or moved away.

#### *Understanding Spoken Paragraphs assessment.*

[insert fig 1 here]

Of the twenty participants who were re-assessed on the Understanding Spoken Paragraphs, 85% (17) improved their scores. The average gain in standard score was 2.9 (see figure 1). One young person dropped a standard score and two others made no change. A shift of one standard score or more, which was made by 85% of the participants, indicated that the young person was both better able to retain information and could cope with a greater quantity of information. This assessment measured specifically listening, retention and recall of information, all of which are essential for successful functioning in the classroom or work place.

Nine participants were re-assessed on the Sentence Formulation assessment. 88% (9) increased their scores. The average improvement in standard score was 1.6. One participant's score remained the same (see figures 2 and 3).

[insert figs 2 and 3 here]

- An increase of one standard score or more, made by 88% of the participants, meant that the young person was able to say what he wanted to say in a more coherent and logical order and to better explain his view or need. This is a critical skill for all young people, but of particular relevance to this cohort who were frequently asked to verbally account for their actions (including in court) and who often cannot rely on writing down information.

The gains in scores showed that 85-88% of the participants who received a communication plan and intervention for their communication skills made measurable progress demonstrated by increases in standard scores following 3-6 months of intervention.

#### *Word Association re-assessment results*

Twelve participants failed to meet the level for their age on this assessment pre intervention. Five of them were available for re-assessment and four were then able to name the required number of words in the different categories in order to meet the required level.

#### *Deduction Test re-assessment results*

Thirteen participants were unable to pass this assessment at the level expected of a 14 year old on initial assessment. Five were available for re-assessment and of these two passed. The other three still needed support in order to solve the problem.

#### *Broadmoor re-assessment results*

This assessment did not require the young person to be present as it was completed by the key worker. This enabled a higher number of re-tests to be completed (e.g., when a young person left ISSP without time to arrange re-assessment the key worker could still complete the assessment). Twenty seven participants were re-assessed on this measure. Three had no difficulties on initial assessment (scoring 119/120). Of the remaining 24 cases, 18 (75%) improved their scores. There was an average gain in individual scores of 11.5 from pre to post intervention. The percentage of participants scoring very low (0-2) shifted down after intervention from 70% to 48%, indicating improved social communication.

[insert fig 4 here]

Although part of the shift noticed by staff might be accounted for by the participant's familiarity with the ISSP workers, staff were asked to score the participants based on observations of the participants in a range of contexts.

## **Discussion**

### *Incidence*

The incidence of communication difficulties identified in the ISSP cohort is in line with other reported findings in the literature for the offending population (66% of those screened required intervention, 45% had a comprehension delay, with 20% of these falling into the very low or severe category). Prevalence rates vary according to language measures used and the demographics of the sample (Benner *et al.*, 2002) but there is general agreement that language difficulties are prevalent in young offenders (Snow and Powell, 2008; Bryan 2004; Bryan *et al.*, 2007) and that they are at high risk of not being identified. There is a broad range of prevalence figures reported in the literature in relation to speech language and communication

difficulties but the figure of 1% (Enderby and Davies, 1989) was derived from systematic analysis of the SLT provision in one UK District Health Authority. Similarly the incidence of stammering is also reported to be 1% (Packman and Onslow, 2002). In contrast to this, the incidence of stammering in the ISSP cohort is 8%. In the ISSP cohort only four (8%) of the participants in receipt of communication plans had had previous contact with the SLT service. Two had been referred in the past and two were known to the SLT working in the local school for students with Behavioural, Emotional and Social Difficulties. There are many reasons cited in the literature as to why communication difficulties in this population may be overlooked. Cross (1999) suggests that comprehension difficulties are overlooked as they are harder to identify than expressive difficulties. Language problems may not be considered when behaviour is seen as the major issue, and also that professionals working with this client group lack awareness and training in communication difficulties. Discussions with the ISSP staff during the project indicated that they were generally aware of the social skills deficits of the participants, but they were less aware of both the extent and the nature of their understanding difficulties.

The consistency of the findings from this report, from the literature review and from the profile of the young offenders in the Bryan *et al.*, (2007) study provide further evidence that similar levels of speech language and communication needs are being reported whether they are identified in youth offending teams, in the secure estate, or in children excluded from school. However, previous opportunities to identify these difficulties appear not to have been utilised e.g., when children and young people are referred to services such as mental health, child guidance, social care, drug misuse services and services for children who are excluded from school.

### *Intervention and results*

75% of the young people who were re-assessed before leaving ISSP made improvements in all areas of communication targeted. An even higher percentage (85-88%) of those who were re-assessed on the CELF subtests had improved their scores. The resulting increases in standard scores (mean change of +2.3 for Understanding Spoken Paragraphs and of +1.6 for Formulating Sentences) was greater than expected given the relatively short time scale (3-6 months).

### *Strengths and limitations*

There are a multitude of factors involved in each individual's situation that might have a bearing on his/her performance in assessment, but the fact that over 75% of the cohort made positive gains on re-assessment indicates that the ISSP programme including SLT is improving the young people's ability to respond to oral language based assessment. As there was no control group of young people with matched abilities it is not possible to categorically state that it was the SLT intervention which led to the improvement in assessment scores. In the current study, we cannot rule out spontaneous improvements, test/re-test effects, or the other benefits of the ISSP programme as having a role to play in the language improvement. Further research is needed to specify the exact contribution that SLT plays in improving language abilities.

The successful completion rate for ISSP (37% for 2008) reflects how difficult it is for some of the young people to engage with the programme. For those who do complete, the effect of improved understanding and communication is likely to be a reduction in the frustration and lack of motivation felt by many of the young people and an improvement in their self esteem, all of which will help support them in their

personal relationships and ability to engage in education, training and employment. It would be useful to re-assess language in those who do not complete the programme, but logistically this was not possible in the current project.

Despite a general trend to indicate greater improvement in the participants who received the most sessions, the correlation between numbers of communication sessions delivered and individual improvement was not statistically significant (0.388) for the small number (15) on whom data were available. Many staff reported that, rather than conduct specific communication sessions, they were meeting the young people's needs by incorporating targets into general sessions, particularly with the participants aged 16 yrs and over.

### **Summary and conclusions**

The project identified the high incidence of un-diagnosed SLCD in this client group. Raising the awareness of SLCD in education staff, particularly of those in centres for excluded pupils, is seen as vital to enable appropriate referrals to SLT to be made. The speech, language and communication profiles of the participants showed considerable variation, with participants with severe difficulties tending to fail on tests on understanding spoken paragraphs and formulating sentences. A range of assessments was needed to identify the profile of speech, language and communication difficulties in any one individual. SLT intervention within ISSP was found to be effective in improving the young people's language and communication skills, measured both by staff observations and by standardised assessment.

There is a growing awareness nationally and within youth offending teams and their partner agencies of the need to recognise and support the communication needs of these vulnerable young people. Professionals who come into contact with these children and young people, both before and after they reach criminal justice services, need to ensure that the possibility of undiagnosed SLCD is considered and acted upon.

### **Word count 5,246**

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#### **What this paper adds**

##### **What is already known on this subject**

Young offenders present with high levels of speech, language and communication difficulty. SLT can successfully be delivered to Young Offenders in custodial settings.

##### **What this study adds**

This study suggests that SLT intervention can be effectively delivered within a community based Youth Offending Team. This study suggests that improvement in language skills is demonstrable on standardised assessments.

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**Table 1:** Table to show the participants' age, ethnicity, looked after status, education placement and whether they had a statement of special educational need at the time of the screening.

Unique ID	Gender	Ethnicity	LAC	Age	Education	Statement
1	Male	White	No	13.4	Excluded	No
2	Male	White	No	16.1	PRU	No
3	Male	White	No	13.7	Mainstream	No
4	Male	Other	No	16.8	NEET	No
5	Female	Mixed	No	14.2	BESD	yes
6	Male	White	Yes	16.8	PRU	No
7	Male	White	No	13.6	Excluded	No
8	Male	White	No	17.0	Unknown	No
9	Male	White	No	12.7	BESD	yes
10	Male	White	No	15.4	Mainstream	No
11	Male	Black	No	15.9	Unknown	No
12	Male	Black	No	18.0	NEET	No
13	Male	White	No	16.6	NEET	No
14	Male	White	No	17.7	NEET	No
15	Male	White	No	17.2	NEET	No
16	Male	Black	No	15.0	Mainstream	No
17	Male	Black	No	16.2	Mainstream	No
18	Male	White	No	17.4	NEET	No
19	Male	White	No	17.2	Post 16	No
20	Male	White	No	18.3	NEET	No
21	Male	Mixed	No	15.2	Mainstream	No
22	Male	White	No	16.2	Mainstream	No
23	Male	Black	No	16.1	Post 16	No
25	Male	White	No	16.1	Post 16	unknown
26	Male	White	No	14.0	Mainstream	No
27	Female	Mixed	Yes	14.3	Excluded	No
28	Male	White	No	16.9	NEET	No
29	Male	Mixed	Yes	17.3	NEET	No
30	Male	Black	No	13.9	Mainstream	No
31	Male	White	No	16.6	Excluded	No
32	Female	White	Yes	16.7	BESD	yes
39	Male	White	No	18.4	Mainstream	No
40	Male	White	no	14.3	BESD	unknown
41	Male	Black	No	17.1	Post 16	No
42	Female	White	No	16.2	Post 16	No
43	Male	Asian	No	17.5	Post 16	No
44	Male	White	No	12.9	Mainstream	No
45	Male	Black	No	15.8	Excluded	No
46	Male	White	No	16.5	NEET	unknown

47	Female	White	Yes	17.5	NEET	No
48	Male	Black	No	17.7	NEET	No
49	Male	White	No	18.0	NEET	no
50	Male	White	No	15.2	Mainstream	No
51	Male	White	No	13.0	Excluded	No
52	Female	White	No	17.0	NEET	No
53	Male	White	No	15.1	BESD	Yes
54	Male	White	No	17.1	NEET	No
55	Male	White	No	16.8	Post 16	No
56	Male	Black	No	18.2	NEET	No
57	Female	White	No	13.8	Mainstream	No
58	Male	White	No	16.5	Excluded	No
59	Male	White	No	15.7	Mainstream	No
60	Male	White	No	13.4	PRU	No
61	Male	White	Yes	16.6	NEET	No
62	Male	White	No	17.5	Post 16	No
64	Male	White	No	18.1	Post 16	No
65	Male	White	No	14.3	Mainstream	No
66	Male	White	No	16.3	NEET	No
67	Male	White	Yes	16.8	Post 16	No
68	Male	White	Yes	15.9	Excluded	No
69	Female	White	Yes	17.4	NEET	Unknown
70	Male	White	Yes	13.2	Mainstream	No
71	Male	Mixed	No	17.1	NEET	No
72	Female	White	No	15.5	Mainstream	No
73	Male	White	No	17.2	NEET	No
76	Male	White	No	15.4	Mainstream	No
77	Male	White	Yes	16.2	Unknown	No
78	Male	White	No	16.1	Post 16	No
79	Male	Black	No	16.5	Post 16	No
80	Male	Black	No	17.8	Unknown	No
81	Male	White	Yes	14.4	BESD	yes
82	Male	Black	No	16.7	NEET	No

**Notes**

\*Age is expressed as a decimal

**Key**

NEET: Not in education, employment or training

Post 16: Accessing college course or work placement

BESD: School for students with Behavioural Emotional Social Difficulties

LAC: In Local Authority Care

Statements were for challenging behaviour as primary difficulty

**Table 2:** Numbers screened and assessed

	No. screened (mean age 15.35)	No. assessed (Mean age 15.15)	Communication Plan Needed
No	3	17	26 (45.66%)
Yes	72	58	49 (65.33%)

**Table 3:** Screening results

Problems	Expressive Language	Receptive Language	Social Skills	Stammer
No	32	37	37	66
Yes	19	32	37	6
Unknown	24	6	1	3
Total	75	75	75	75
% Yes of total screened	28.0%	45.3%	49.3%	8.0%
% Yes of total confirmed by formal assessment (n)	n=51 37.3%	n=69 46.4%		

**Table 4:** The distribution of standard scores (scoring scale 1-19)  
and the standard deviations on two subtests of the CELF

Standard score and descriptions of language delay	Standard deviation (SD)	Understanding spoken paragraphs n= 68	As a % of the sample	Formulating sentences n=50	As a % of the sample
13 + above average	+ 1 SD and above	8	11.76	3	6
8-12 mean/average	Within -1 to +1SD	29	42.64	29	58
5-7 mild- moderate	-1 to -1.9	17	25	11	22
2-4 very low- severe	-2 to -2.9	10	14.74	5	10
1 very severe	-3 and below	4	5.88	2	4
Total scores		522	100	402	100

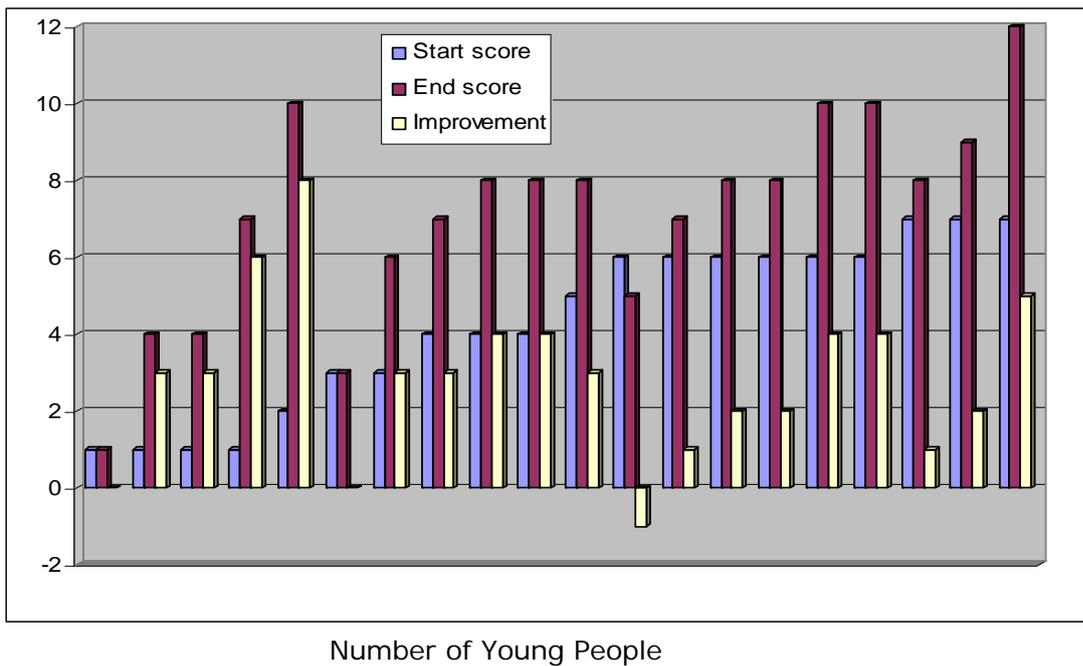
**Table 5:** The results for the deduction task  
and CELF-4 Word Associations task

Test	Met criteria expected for age		Did not meet criteria for age	
	Number	% of sample	Number	% of sample
Deduction task (pass = 14 yr level)	53 (n=66)	80	13 (n=66)	20
Word Associations	55 (N=67)	82	12 (n=67)	18

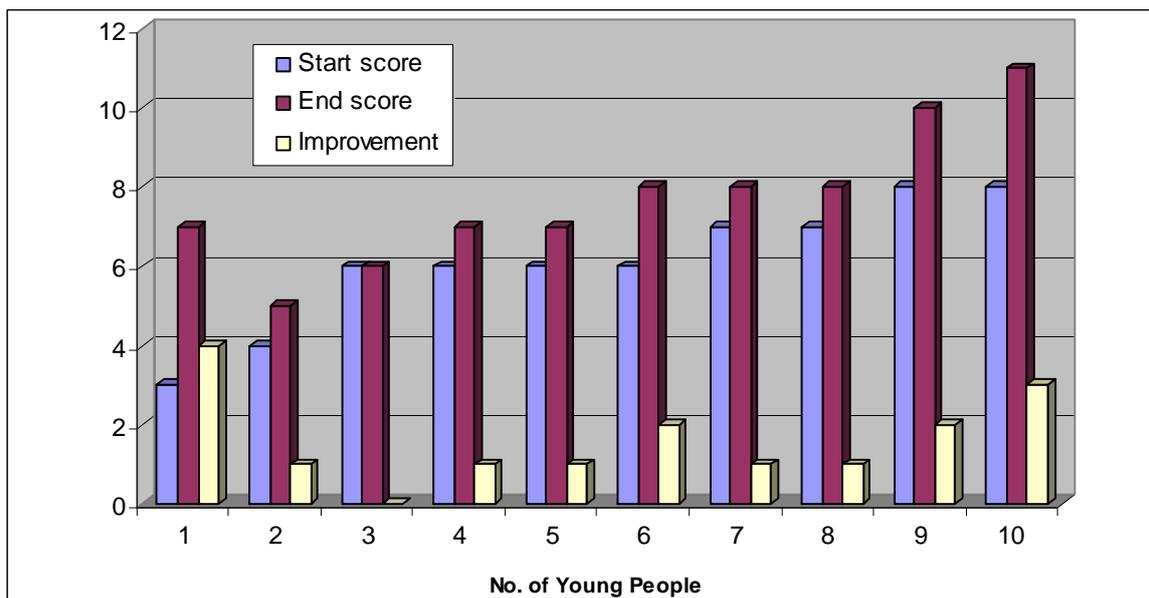
**Table 6:** Numbers of young people scoring above and below 96 and between 0-2 on the Broadmoor

	Number at this level N=69	% of sample N=69
Broadmoor Score 96 and above	35	50.7
Broadmoor Score 95 and below	34	49.3
Individual scores between 0-2	40	58

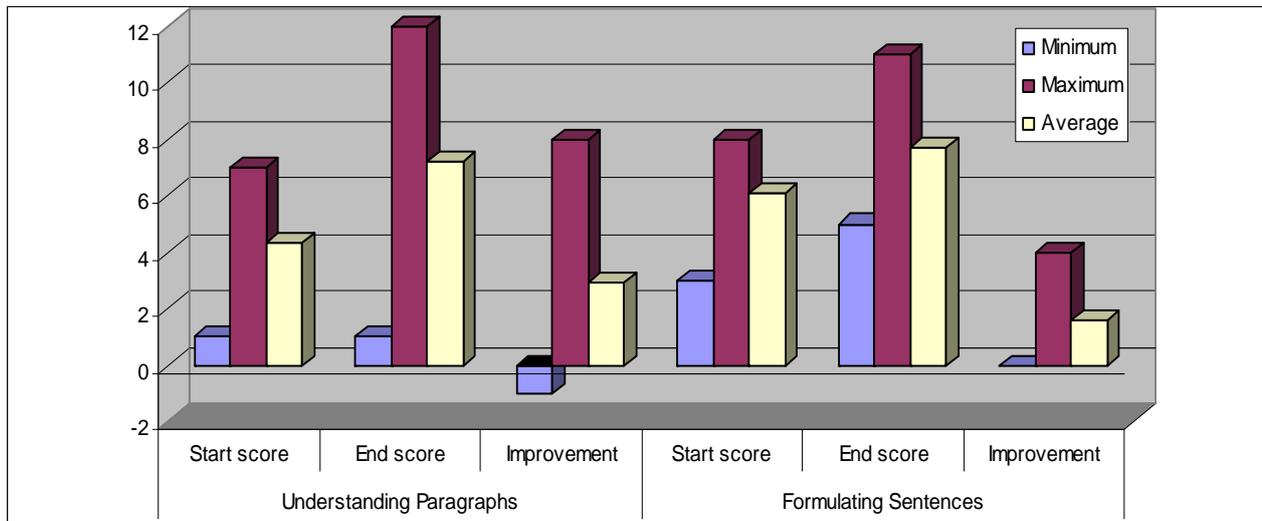
**Figure 1:** Pre and post intervention scores on the Understanding Spoken Paragraphs assessment



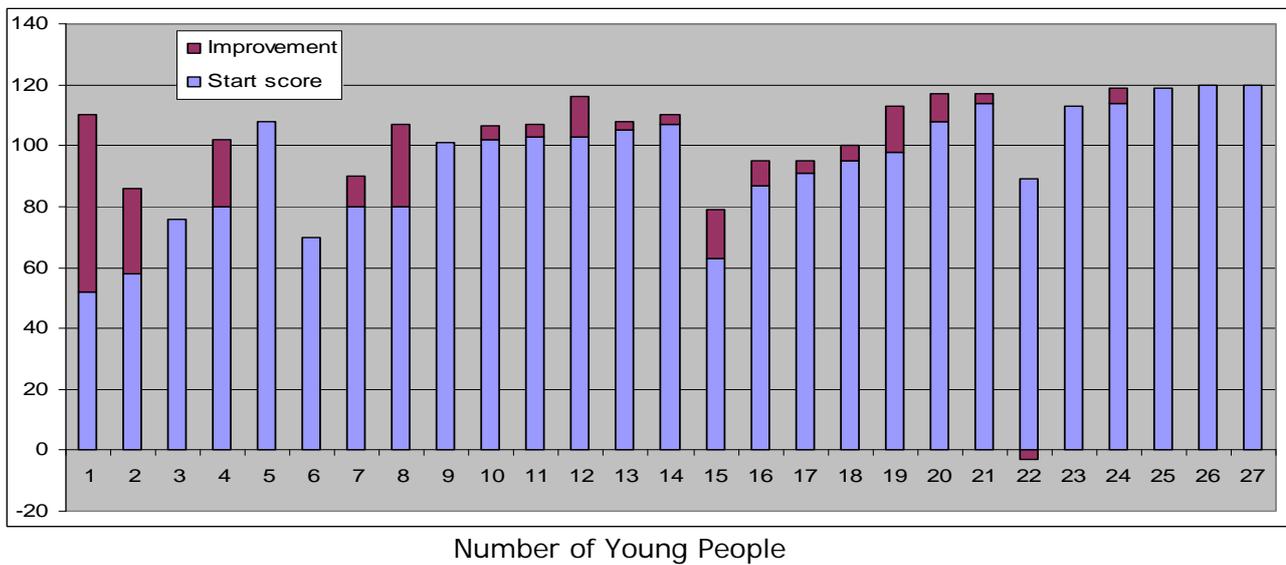
**Figure 2:** Pre and post intervention scores on the Formulating Sentences assessment



**Figure 3:** Pre/post scores and improvement in Understanding Spoken Paragraphs and Formulating Sentences



**Figure 4:** Pre and post intervention scores on the Broadmoor observation schedule



**APPENDIX 1:** Self Assessment questionnaire (completed by participant and by staff)

Name:

Date:

Key Worker:

Questions	Yes/No	Comment
Do other people understand what you say?		
Do you think your voice sounds OK?		
Do you get stuck on words?		
Do you always understand what is said to you?		
Can you tell people what you want or need?		
Can you talk to other people about how you feel?		
Do you think it's equal when you are talking to someone?		
Do you find it easy to talk to staff?		
Do you find it easy to talk to friends?		
Do you sometimes find it hard to think of the word you want to say?		
Do you think you have any difficulty with your speech, language or communication?		
Can you follow routines easily eg: ISSP timetables, school?		

**APPENDIX 2:** Annotated Broadmoor observation of communication

Observation of Communication (0=inappropriate > 5=appropriate)

	0	1	2	3	4	5	Comments
<b>Non Verbal</b>							
Gesture	0..None or highly exaggerated .....						Appropriate natural gestures...5
Facial Expression	0..Blank or exaggerated expression...						Appropriate smiling/frowning ...5
Eye Contact	0..Staring/avoidance of eye gaze						Easy relaxed natural eye contact ...5
Posture	0..Hunched up, /over- exaggerated.....						Appropriate body language...5
Proximity	0..Too close, touching/too distant..						Comfortable distance for situation...5
Listening/Attention	0..Complete lack of attention.....						Good listening/attention.....5
<b>Speech</b>							
Intelligibility	0..Impossible to understand.....						Clear easy to understand speech...5
Articulation	0..Laboured /struggling/clumsy speech...						Relaxed clear easy speech...5
Rate	0..Much too fast/too slow .....						Appropriate speed for the situation...5
Volume	0..Inaudible/extremely loud...						Appropriate speed for the situation...5
Resonance	0..Very nasal/nasal air escape.....						Normal nasality.....5
Intonation	0..Flat/monotone voice***.....						Voice rising & falling appropriately...5
Fluency	0..Stammering/hesitant/struggling...						Smooth, non-hesitant speech.....5
Voice Quality	0..Husky, hoarse, strained voice.....						Clear unstrained voice.....5
<b>Language</b>							
Initiation	0..Never starts conversation.....						Starts conversations appropriately...5
Topic Maintenance	0..Completely unable to maintain topic.....						Stays on topic.....5
Topic Changes	0..Constant changing of the subject.....						Moving on when appropriate...5
Response Time	0..No response/very slow.....						Answering straight away.....5
Content	0..Irrelevant/inappropriate content.....						Appropriate content.....5
Assumptions	0..Incorrect assumptions *..						Aware of listener's knowledge...5
Assertive Routines	0..Constant interruption/never speaks**...						Voices own opinion calmly...5
Supportive Routines	0..No signs of listening/empathy..						Positive signs of listening/understanding.5
Inference	0..Literal understanding only...						Understands implied/unstated information.5
Humour	0..No understanding of shared humour...						Shares jokes/funny comments....5

\***Assumptions**...being aware of what your listener knows  
eg "John said.." when listener knows who John is.

\*\* **Assertive routines**...standing up for self, stating own view, not being dominating or dominated in a conversation.  
Being able to interrupt successfully but taking turns and listening too.

\*\*\* or exaggerated prosody

**USE OF THE SCALE**

- 0 very severe issue (as described above)**
- 1 severe issue**
- 2 moderately severe issue**
- 3 issue definitely noticed**
- 4 just not right**
- 5 entirely right for the general public**

(significant problems noticeable to staff should score 2 or 3)

