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LANGUAGE AND COMMUNICATION DIFFICULTIES  
IN JUVENILE OFFENDERS

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# Language and communication difficulties in juvenile offenders and the implications for service provision

## ABSTRACT

### Background

Studies of the prison population suggest that the numbers of prisoners with language and communication disorders is higher than that of the overall population. However, the prison population is heterogeneous and it is important to focus on specific areas of the population. This study focuses on juvenile offenders.

### Aim

The study aimed to screen language and communication skills in half the population of an establishment for juvenile offenders aged 15-17 years.

### Methods and procedures

58 participants were selected at random and were screened on the oral subtests of the TOAL-3, the BPVS and the TROG. Literacy and numeracy information was also obtained.

### Outcomes and Results

The mean age of the group was 17 years, 19 were looked-after children and 90% had ceased to attend school before age 16. On the Toal-3 subtests, 66-90% of juvenile offenders in the sample had below average language skills with 46-67% of these being in the poor or very poor group. None of the participants reached their age equivalence on the BPVS but most of them reached the 12 year and above threshold on the TROG. 62% of the sample

had not achieved Level 1 in literacy. The findings suggest that these young people may not have the necessary skills to cope with verbally mediated interventions aimed at reducing re-offending.

#### Conclusions and Implications

The results suggest that speech and language therapy (SLT) assessment should be available to juvenile offenders with SLT intervention available to those found to have language and communication difficulties. There are also implications for SLT provision to young people who are not engaged within the education system. The TOAL-3 appears to be a useful screening instrument for this population but a number of issues around the suitability of assessments for this population are discussed.

It is known that young people with low levels of education and behavioural difficulties are at risk for having language and communication difficulties, and all of these factors are thought to be risk factors for becoming involved in crime. There are no studies of language skills in juvenile offenders in England and Wales (age 14-17 years).

The results of screening language abilities in 58 juvenile offenders showed that a large proportion had lower levels of language than would be expected. 90% of the participants had ceased to attend education before age 16. These young people may not have sufficient language skills to cope with verbally mediated interventions aimed at reducing re-offending. Implications for assessing adolescents and for SLT service provision are discussed.

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## BACKGROUND

Studies of the prison population suggest that the numbers of prisoners with language and communication disorders is significantly higher than that of the overall population. Enderby and Davies (1989) suggest that one per cent of the UK population has a language or communication disorder although these figures may be an underestimate (Bryan et al 1991). Studies of specific disorders often suggest much higher percentages, for example, Tomblim et al 2000 suggest that 5-7% of children have developmental language disorder. However the prison population is heterogeneous and it is important to focus on specific areas of the population for further examination.

Of particular interest are young people who are incarcerated. It is recognized that young people who engage in criminal activity typically have a history characterized by poor school achievement, learning difficulties, and truancy (e.g. Putnins 1999; Snowling, Adams et al. 2000) although the population is known to be diverse. Young people who commit crimes in the UK can be given a range of non-custodial sentences, can be sent to a young offender institution (YOI), a secure training centre or a local authority secure children's home. The latter will be favoured for younger or more vulnerable children although allocation decisions have been described as somewhat arbitrary (Challon and Walton 2004).

YOIs care for convicted juveniles within the age range 14-17 years with those completing sentences before age 18 remaining in juvenile establishments. Older individuals transfer or are remanded to young offender institutions. Juveniles are now cared for in separate provision if the YOI also takes young offenders (aged 18-21). Most juveniles are held on Detention Training Orders.



Exact figures for the number of juvenile offenders in England and Wales are difficult to ascertain, but 11,130 people under the age of 21 were in detention in June 2006 (Howard League 2006).

Literacy levels are reported as low in the general prison population. A study by Davis et al (2004) evaluated the literacy demands of offending behaviour programmes and showed that the reading demands of such programmes were frequently at level 1 (equivalent to that expected for a competent 11 year old) and Level 2 (equivalent to GCSE UK high school exams A-C grade), but 57% of the adult offenders had reading skills below level one. HM Prison Service (2002) reported 76% of prisoners reading at, or below, Level 1 when discharged. Similarly (Davis et al 2004) showed that the speaking and listening demands of the programmes were very high – at level 2 and beyond, and, using a contextualized checklist, 35% of the adult offenders were estimated to have speaking and listening skills below level one.

Oral language competence is therefore important in terms of offenders coping with the demands of offending behaviour programmes designed to reduce re-offending (Moseley et al 2006). However, oral language competence has not been systematically investigated in the prison population in England and Wales.

Evidence emerging over the last decade (outlined below) indicates that juvenile offenders are likely to be at significant risk for previously unrecognised language impairment. The studies that have investigated young people in prison have primarily looked at older groups, for example Bryan (2004) reported on a preliminary survey of 18-21 year olds which indicated much higher levels of language and communication difficulties than would be

expected in the overall population. Other studies have examined young offender populations in different countries over various age ranges so that studies are not easy to compare.

Humber and Snow (2001) studied a group of 15 male adolescents in Australia aged 13-21 serving community orders and showed that mean scores on the Speed and Capacity of Processing Test (SCOLP) (Baddeley, Emslie and Smith 1992) and the Test of Language Competence – Expanded Version (TLC-E (Wiig and Secord 1989) sub-tests for understanding ambiguous sentences, making inferences and understanding metaphor were significantly lower for the offender group than for the age and education matched control group. None of the sample was receiving intervention for language difficulties. Snow and Powell (2004) used the same tests on a sample of thirty 13-19 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 (2004, 2004a, 2005) 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), using narrative discourse to organise and convey novel information to a naïve listener, word finding difficulties, and grammatical immaturity relative to their non-offending peers.

Incidence of language problems in female incarcerated adolescents in the USA has been reported to range from 14-22% (Sanger et al 2000, 1997, 2001) in comparison to the 5% estimated in the general adolescent USA population (Larsen and McKinley 1995). Sanger et al (2001) tested 67 girls

aged 13-17 who were incarcerated in the USA on the Clinical Evaluation of Language Fundamentals-3 (CELF -3) (Semel, Wiig and Secord 1995) and the Adolescent WORD Test (Zachman et al 1989). 3 had received SLT and 25 had received special educational services at some point in their life. The results showed that 13 (19%) of the girls scored 1.3 standard deviations (SDs) below the mean on the two tests and met USA eligibility criteria for speech pathology services, although use of IQ criteria suggested a larger proportion might need SLT (46%).

Sanger et al (2001) suggest that even when adolescents perform poorly on language tests they may not access services due to factors such as lack of motivation, lack of background knowledge or emotional antagonism.

Beitchman et al (1999) suggest that communication difficulties are misinterpreted as non-compliance and conduct problems in the classroom environment, and 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 and demands of school.

Sanger et al (2003) used self report (questionnaires) to explore communication interaction in 13 incarcerated females aged 13-17 who were identified as having language difficulties (more than 1.3 SD below the mean on CELF-3 and the Adolescent WORD Test). The results suggested that language difficulties were not being recognised and that communication problems tended to be labelled with terms such as 'lazy' or 'out of control'.

Sanger et al (2003) therefore suggest that language and communication skills should be investigated in adolescents who are experiencing social and/or schooling difficulties. Sanger et al (2001) also suggest that speech and

language therapists (SLTs) need to be represented on teams planning for adolescent offenders.

Some studies have examined language abilities in children at risk of offending. Cohen and co-workers 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 comorbidity of language and behaviour disturbance results in a disproportionate 'favouring' of behaviour when allocation and delivery of intervention services is 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 sub-optimal development in the realms of expressive and receptive language competence. 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. The link between disadvantage in the early years and language difficulties later affecting school performance has been highlighted (Locke, Ginsborg and Peers 2002). Persistent difficulty with language development has been correlated with a greater than usual chance of developing both mental health problems and involvement in criminal activities, although a causal link has not been established and this remains a contentious area for research. A longitudinal study by Clegg, Hollis and Rutter (1999) showed that a third of children with developmental language disorders developed mental health problems with resulting criminal involvement in some cases.

There is an urgent need for evidence-based interventions with young people within the criminal justice system, so that unmet developmental difficulties can be addressed to maximise opportunities for gainful participation in society and to avert the adoption of an ongoing adult 'lifestyle' associated with persistent crime (Ward and Stewart 2003). Benasich et al (1993) discussed the need for specialist services for young people with conduct disorders and with social and communication problems to prevent these young people developing mental health problems or possibly becoming involved in criminal activities.

Where young people do become offenders, it is recognised that attempting to improve literacy and social skill competencies is essential to prevent further offending (Venard et al 1997). However, developing and improving oral language skills may be necessary to allow the young person to successfully engage with educational, vocational and social provision.

There are a number of issues associated with assessing language in young people. Many of the tests used are originally designed for use with children and the norms may not reflect 'typical' performance of young people who are alienated from education, may have experienced only limited school attendance and who may have restricted social experience. A number of authors have suggested that self reports and interviews should be used to allow young people to provide meaning to their experiences (Pugach 2001, Zwiers and Morrissette 1999). Others suggest that these assessments allow young people to describe their experiences and explain their emotional reactions to their life experiences (Wiig 1995). Freedman and Wiig (1995) suggest that self-assessment provides information for planning intervention with young people, and some professionals suggest that these are an

alternative to the sole use of standardised tests (Ehren 2000). The study reported here used self report as well as language assessment.

The aim of the study was to screen language and communication skills in half the population of an establishment for juvenile offenders aged 15-17 years.

## Methodology

### Sampling

The setting was a secure college in the North of England. The establishment caters for up to 146 male juvenile offenders (age 15-17 years) who are convicted and are not designated category A (the most dangerous group of offenders). The institution was previously a Young Offender Institution but was in the process of becoming a secure college to promote support and learning for this group of young people.

As the young people are all in full time education, may have additional work placements and may have a variety of legal, family and other visits, it was not viable to try to screen the whole community. The aim was therefore to identify half of the young people present in the establishment. A sample of 68 was identified at random as every second person on the roll call during one particular week. These were prioritised for assessment in order of release date to ensure that identified participants were seen before release. The week was selected to represent a usual week with no scheduled extra activities such as inspections or prison service initiatives.

### Participants

Fifty-eight young people were assessed, although five did not complete all sub-tests mostly due to interruptions in sessions, or due to the young person giving up on a task/s. Of the remaining ten, six were unavailable and four

refused. Apart from the exceptions above, the young people co-operated well and some even appeared to enjoy the tasks.

The age of the sample ranged from 15 years and two months to 18 years one month (juveniles with a short period of their sentence left to run after their eighteenth birthday will normally be permitted to finish their sentence within the juvenile establishment rather than transferring to a Young Offender Institution (18-21 years). The mean age was 17.0 years.

The length of sentence varied from 4-54 months. Forty- three of the young people were sentenced on a detention and training order and 14 on a section 53/2 (this is a sentence for a more serious crime involving violence, assault or firearms). Information for the remaining participant was missing. Fifty-six of the participants had English as a first language and 2 did not. This is a lower than average proportion of non-English first language offenders than might be expected across the juvenile prison estate but this reflects the catchment area of the establishment. Recording of ethnic group information was also available, 37 were white British or Irish, 9 were mixed race white and black Caribbean or white and Asian, 3 were Asian or Asian British, 2 were black Caribbean and 4 did not have this information available.

Nineteen of the participants were 'looked-after 'children who had come from care settings. 9 of the participants had a medical diagnosis listed in their prison record. The medical diagnosis can be mental or physical and can include attention deficit hyperactivity disorder and autistic spectrum disorders or physical illnesses, although the illness would not be so severe as to preclude placement within a prison environment. Forty of the participants had a history of drug and alcohol misuse- this would include a spectrum of

difficulties from single episodes of drunkenness that had attracted the attention of authorities through to prolonged drug and/or alcohol abuse. Five had recognised learning difficulties (they entered prison with a statement of special educational needs or a confirmed diagnosis). Three participants had received SLT previously. In terms of school attendance, data was not available for 8 participants, of the remaining 50, 4 participants ceased to attend school at 16, 1 was still in school at the time of conviction, 18 ceased to attend at age 15, 10 at age 14, 8 at age 13, 6 at age 12, 1 at age 10, 1 at age 9 and 1 at age 8. The analysis show that 90% of juvenile offenders in the sample ceased to attend school before the statutory leaving age with 18% of these not attending at age 12 or younger.

## **Assessment**

### Education Assessment

Educational assessment results for each individual were obtained. These assessments were conducted by the Education department of the YOI as part of the standard prison induction procedures. The Basic Skills Agency's Initial Assessment as specified by HM Prison Service is used. The assessment does not assess speaking and listening skills, but gives information regarding literacy and numeracy skills. The results give an overall level against the National Standards for Adult Literacy and Numeracy (DfES 2001). These are, Below Entry 1, Entry 1, Entry 2, Entry 3. Details of the standards can be found at [www.dfes.gov.uk/curriculum\\_literacy/](http://www.dfes.gov.uk/curriculum_literacy/)

### Language Assessment

A set of three standardised formal assessments was used with each individual, along with a self assessment checklist developed as part of



induction screening at the establishment. The tools were selected to give standardised scores for the population covering the age range of juveniles. Issues in terms of suitability of the tests have been addressed above.

**Test for Reception of Grammar: Version 2. (TROG-2) Bishop 2003**

This test assesses understanding of English grammatical contrasts marked by inflections, function words and word order. TROG-2 enables the tester to discover not only how a person's grammatical comprehension compares with that of other people of the same age, but also to pinpoint specific areas of difficulty (Bishop 2003). The test uses a multiple choice format of four pictures. There are four samples for each grammatical contrast, and all four must be passed to 'score' for that block. On completion, the test provides four scores: total number of blocks passed, age equivalent (up to age 12 and above), standard score and percentile.

**British Picture Vocabulary Scale (BPCS-II) Dunn et al 1997**

The BPVS is a test of receptive vocabulary for standard English. It is therefore an achievement test since it shows the extent of English vocabulary acquisition. The age range for this test is up to 15 years 8 months. It is possible to derive an age equivalent score from the raw score i.e. number correct responses. A standard score and percentile score can only be calculated for those under 15 years 8 months of age. The BPVS is standardised for a representative sample of the population, across a range of ages, gender mix, geographical variation and ethnic group.

**Test of Adolescent and Adult Language 3<sup>rd</sup> Edition (TOAL-3) Hammill et al 1994 (verbal subtests)**

This test was designed for the purposes of a) identifying students who are significantly below their peers in language proficiency b) determining particular strengths and weaknesses c) documenting students' progress as a consequence of special programmes d) serving as a measure in research studies investigating the language of adolescents. Test re-test reliability is between 0.78 and 0.9 for the sub-tests, inter-rater reliability ranged from 0.87 to 0.98, and the test has been validated in terms of content, criterion validity and construct validity suggesting that it is a highly valid measure (Hammill et al 1994). The test comprises four subtests which focus on spoken language skills and four subtests which feature written language skills.

The TOAL-3 verbal language sub-tests used were:

listening / vocabulary (LV)

listening / grammar (LG)

speaking / vocabulary (SV)

speaking / grammar (SG)

These subtests involve the understanding or use of spoken symbols, their collective results can be used to estimate proficiency in spoken language (Hammill et al 1994).

The standardised data for this test is available up to age 24 years 11 months. On completion of the four subtests then a raw score, standard score and percentile are achieved for each test.

### **Self perception of language and communication difficulties**

The participants completed a series of self-assessment ratings. These were developed by the project team with reference to the Polmont initial interview schedule (Johnson and Hamilton 1997) The participants rated their skills in

certain situations such as asking questions and speaking clearly indicating whether or not they perceived any difficulty. The final rating was an overall perception of difficulty with language and communication or not (see appendix one). Participants also indicated on a chart whether they have 'trouble with' eg listening, finding the right word and saying what you want. The content was as simple as possible and used illustrative cartoons. The content of the chart was developed with a group of young people from the YOI to ensure acceptability to the population, and was later used for young people to self refer to the service (see appendix two).

### Procedures

The study had all the necessary permissions required by the prison service. Informed consent was gained from each participant. This involved meeting with them individually to explain the purpose of the study. Confidentiality was explained although participants could opt to be referred for support if any significant difficulties were identified. Participants were offered time to think before agreeing to be part of the study.

The language assessments were conducted by the SLT or by a learning support assistant (LSA) who was assigned to assist the SLT and who had received training in conducting the tests. Assessments were conducted wherever the participant was, for example in the education department, the workshops or on the residential wings. Therapist safety (ie needing to work within the constraints of the environment and ensuring that other staff were present if necessary) meant that the participants were sometimes tested in a noisy environment.

The full set of assessments took an average of 50-60 minutes per person to administer. Participants were assessed in 1-2 sessions. Length of sessions was determined partly by the participant's ability to concentrate. Some sessions were also curtailed by external factors such as the end of an education session or by a security alert (where all inmates return to their residential area for checking). On completion of the assessments, participants were advised that they would be awarded "points" as per the establishment's Incentives and Earned Privileges Scheme (IEP) scheme.

Educational scores were obtained from the prison records.

## Results

Literacy and numeracy information for the participants is given in table one.

This data was obtained from the prison records.

Table one here.

The data suggests that 62% of the participants did not reach level one in literacy and 60% did not for numeracy. Therefore at least 60% of the sample were not reaching this minimum level of literacy which has implications for their educational needs and for their ability to benefit from verbally mediated interventions.

On the TROG, the expected score for people age 12 and above is seventeen to twenty blocks passed. 49 of the participants achieved this with the remaining four scoring 9, 11, 13 and 14 blocks each.

On the BPVS, norms are available up to age 15.8 years. The group had a mean age equivalent score of 11.5 with a minimum of 6.6 and a maximum of 15.2. None of the participants therefore reached their chronological age

equivalence on the BPVS. The smallest difference was 1.5 years and the largest 11.25 years.

On the TOAL-3, summary statistics for standard scores (scoring scale 1-20) are given in Table two.

Table Two here

The scores show that as a group, the mean scores are below the midpoint on the standard scoring. This suggests that the juvenile offenders in this sample are likely to have lower levels of vocabulary and grammatical competence than age matched peers. The guidelines for scores (based on a standard distribution) are included in appendix one. Using these parameters, the performance of the participants can be classified as shown in table three.

Table Three here

Two thirds of the sample of juvenile offenders displayed difficulties on at least one of the TOAL-3 subtests, with the majority (90%) having difficulty on the Listening Vocabulary Subtest. Taking the poor or very poor group (equivalent to the bottom 9% of the overall population for this age group, see appendix three), the juvenile population shows a much higher than expected proportion of young people within this category (46-67% across the four sub-tests). This suggests that young people with very low levels of language ability were present within the juvenile offender sample in this study. The below average group (20-23% across sub-tests) are less clear cut. Again the number is larger than would be expected in the typical population, and while these juveniles perform better on the Toal-3 measures than the poor/very poor group, their skills are below average for their age.

From the self assessment ratings, the overall self assessment rating was used to determine those who had self-identified a problem in language or communication and those who did not. The standard scores on the Toal-3 sub-tests, TROG and BPVS were then compared using a series of T-tests. (see table four). Scores on the TOAL-3 speaking vocabulary and speaking grammar sub-tests were significantly lower for those who perceived themselves as having language or communication difficulties. This may suggest that for juvenile offenders, self awareness of difficulties is more apparent in speaking situations. Although self assessments were found by the SLTs to be clinically useful, in that they gave an initial indication of levels of awareness, and willingness to engage in discussion of skills and difficulties, the results suggest that systematic language assessment is necessary to accurately establish the nature of the language and communication difficulties in juvenile offenders.

Table four here.

#### Discussion

The results show that a large proportion of juvenile offenders in this sample have language skills below the level that would be expected for their age, with 66-90% scoring below average on sub-tests of the TOAL-3. The TOAL-3 was designed for use with this age group and appeared to be acceptable to the young people as it was short and entirely oral. Testing with the written language section of the test had to be abandoned due to the high levels of literacy difficulty. None of the young people scored as age equivalent on the BPVS with the gap between chronological age varying from 1.5 to 11.25 years. The results on the TROG suggested that most of the young people

could perform at the level expected for age 12 and above on grammatical comprehension. However, the age equivalent scores may not have sufficiently discriminated between the abilities of young people at different ages. Of note to clinicians is that the young people found the TROG unacceptable. They reported that it was demeaning and boring despite on the whole performing well.

The results suggest that the Toal-3 verbal sub-tests may be a useful assessment instrument of choice in this population when testing time is limited. However, more work is needed to refine assessment processes for older adolescent populations and to examine more functional language skills, such as narrative skills, in the juvenile offender population. Self report was found helpful in gaining the young person's perspective on speech, language and communication issues and in establishing an initial rapport as a basis for further intervention, in agreement with Pugach (2001) and Zwiers and Morissette (1999), but was not found to be a reliable substitute for language assessment as Ehren (2000) suggested.

Of the young people in this sample, 46-67% scored within the poor or very poor categories on the TOAL-3 subtests, as compared to 9% of the typical adolescent population. This suggests that a much higher proportion of the juvenile offender population has language limitations than would be expected within the typical adolescent population. This group is likely to particularly struggle 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 on Reducing Re-offending Through Skills and Employment (2006) suggests.

The status of language skills that are below average but above the poor or very poor levels also warrants further investigation. How effectively do these young people with lower than average levels of language ability communicate, and does this level of language ability affect their ability to benefit from verbally mediated interventions? A greater understanding of these issues might also allow the significance of lower than average language skills to be identified so that intervention can be targeted at those young people most in need. SLT was provided within the institution where the assessments described here took place, and in another larger YOI. Intervention used an individualised goal setting approach and focussed on enabling young people with language and communication problems to cope with the verbal demands of the regime. These pilot services 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 (Bryan et al 2004). However more research is needed to establish the most effective ways of delivering SLT to the juvenile offender population.

Where up to 90% of a population has language limitations, such as in our study, there is a danger that this becomes the 'norm' so that the limitations on abilities may not be recognised. Staff in young offender institutions are dealing with young people who may not have age specific language skills on a day to day basis, as well as trying to involve them in verbally mediated interventions that they may not have the language skills to cope with. This may be 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). The findings



also suggest that prison staff who care for young people require training and support to understand and manage the language limitations that some young people have.

While this study concentrated on verbal skills, literacy skills levels (from the standard DfES assessments) were noted. 62% of the juvenile offenders in this sample had literacy skills below level 1. Davis et al (2004) found similar levels in adult offenders (57% with literacy skills below level 1). More research is needed to examine the effects of low verbal skills (with and without low literacy skills) on the ability of young people to cope with educational and skills provision within and outside penal establishments. Ninety per cent of the young people had ceased to attend school before the age of sixteen with 18% of these not attending at age 12 or younger. This supports the findings of Sanger et al (2003) and the suggestion that adolescents with schooling or social difficulties should have their language and communication skills investigated. Whitmire (2000) and Beitchman et al (1999) suggest that communication difficulties tend to be viewed as behavioural problems in adolescents which may, at least partly, explain why communication problems are not recognised and why referrals to SLT are not made.

Juvenile offenders and young people who may not be engaged within the school system should have access to SLT assessment and those found to have difficulties with language and communication should have access to SLT intervention. Only three of the participants were aware of having had SLT in the past. Targeting provision at pupil referral units and ensuring that services dealing with young people, such as youth offending teams, social work and

probation, can easily access SLT may be issues that should be addressed with local Youth Justice Boards and education providers.

The study was limited in that only half of the population was sampled and the establishment may not be fully generalisable to the juvenile offender population as a whole. The establishment where the sampling took place, did not include category A (the most dangerous offenders) or those on remand so further sampling would be needed to examine these groups of juvenile offenders. The assessments used were standardised (apart from the self report) but did not assess functional communication. It would be useful to examine the viability of more functional methods of screening language skills in offender populations.

Further research is also needed to examine the effects of low levels of language skills on offenders' ability to engage with verbally mediated interventions, and to strengthen the evidence base for speech and language therapy intervention within YOIs.

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*Table One* Literacy and Numeracy levels for the participants on entry to the establishment. (Using DfES standard screening).

Using prison service standard screening.

	Literacy	Numeracy
Below entry level	1	0
Entry 1	5	6
Entry 2	8	7
Entry 3	22	22
Level 1	10	13
Level 1+	2	2
Level 2	3	1
No information available	7	7
Total	58	58



Table Two: TOAL-3, summary statistics for standard scores (scoring scale 1-20)

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
TOAL3 Listening/Vocabulary Standard Score	55	1.00	8.00	4.4364	2.14099
TOAL3 Listening/Grammar Standard Score	53	1.00	11.00	5.1887	2.60219
TOAL3 Speaking/Vocabulary Standard Score	55	1.00	10.00	4.9636	2.21078
TOAL3 Speaking/Grammar Standard Score	54	1.00	17.00	6.2778	4.14099
Valid N (listwise)	53				

Table Three: performance of the participants classified using TOAL-3  
standard score parameters

Test	Poor or very poor %	Below average %	Average or above %	Total % below average
Listening vocabulary	67%	23%	10%	90%
Listening Grammar	51%	33%	16%	84%
Speaking Vocabulary	62%	20%	18%	82%
Speaking Grammar	46%	20%	34%	66%

Table Four: T- test comparison of performance on standard measures between those who self identified language and communication difficulties and those who did not

Test	No Difficulty Perceived			Perceived Difficulty			T	Df	Sig (2 tailed)
	Mean	SD	N	Mean	SD	N			
TOAL3 Listening/Vocabulary 1	11.81	4.99	36	11.06	4.02	18	.55	52	.58
TOAL3 Listening/Grammar 1	11.03	6.53	36	11.56	7.41	16	-.26	50	.80
TOAL3 Speaking/Vocabulary 1	12.83	4.21	36	10.39	3.22	18	2.16	52	.04
TOAL3 Speaking/Grammar 1	15.53	5.35	36	12.12	5.93	17	2.09	51	.04
TROG Standard Score	100.81	10.90	36	93.82	15.04	17	1.92	51	.06
BPVS2 Raw Score	108.89	12.35	36	102.15	13.47	20	1.91	55	.06

Appendix one

Trainee Awareness Checklist

Question	R	Y	N	Comment
Can you follow prison regimes and routines easily?	T			
	S			
Do other people understand what you say?	T			
	S			
Do you think your voice sounds okay?	T			
	S			
Do you get stuck on words?	T			
	S			
Do you always understand what is said to you?	T			
	S			
Can you tell people what you want or need?	T			
	S			
Can you talk to other people about how you feel?	T			
	S			
Do you think its equal when you are talking to someone?	T			
	S			
Do you find it easy to talk to staff?	T			
	S			
Do you find it easy to talk to other trainees?	T			
	S			
Do you sometimes find it hard t think of the word you want to say?	T			
	S			
Do you think you have any difficulty with your speech, language or communication?	T			
	S			

Signed: .....

Date: .....

NAME .....	NUMBER .....
<p>TRouble</p> <p>TALKING?</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>	<p>TRouble</p> <p>SAYING WHAT YOU WANT?</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>
<p>TRouble</p> <p>GETTING WORDS OUT?</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>	<p>TRouble</p> <p>SAYING HOW YOU FEEL?</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>
<p>TRouble</p> <p>SAYING WHAT YOU DON'T WANT?</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>	<p>TRouble</p> <p>FOLLOWING WHAT PEOPLE SAY?</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>
<p>TRouble</p> <p>FINDING THE RIGHT WORD?</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>	<p>TRouble</p> <p>FINDING THE RIGHT WORD?</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>

## Appendix three

Toale-3, performance indicators based on standard scores

Standard score	Description	% normal population included
17-20	very superior	2.34
15-16	superior	6.87
13-14	above average	16.12
8-12	average	49.51
6-7	below average	16.12
4-5	poor	6.87
1-3	very poor	2.34