Review

Language difficulties and criminal justice: the need for earlier identification

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Abstract

Background: At least 60% of young people in the UK who are accessing youth justice services present with speech, language and communication difficulties which are largely unrecognized. The contributing reasons for this are discussed, suggesting that early language difficulty is a risk factor for other problems such as literacy difficulties and educational failure that may increasingly put the young person at risk of offending. Opportunities for identification and remediation of language difficulties before young people reach youth justice services are also outlined.
Aims: To examine language skills in a sample of children in a secure children's home aged 11–17 years.
Methods & Procedures: A sample of 118 males were routinely assessed on four Comprehensive Evaluation of Language Fundamentals (CELF) subtests and the British Picture Vocabulary Scale (BPVS).
Outcomes & Results: Around 30% of the participants presented with language difficulties scoring 1.5 SD (standard deviation) below the mean on the assessments. Despite them entering the home because their vulnerability was recognized, only two participants had a previous record of language difficulties. A total of 20% of the participants had a diagnosis of mental illness, 50% had a history of drug abuse and 31% had looked-after status prior to entry to the home.
Conclusions & implications: Children experiencing educational or emotional difficulties need to be routinely assessed for speech, language and communication difficulties. More population-based approaches to supporting the development of oral language skills in children and young people are also supported.

Keywords: language impairment, adolescents, speech and language therapy.

What this paper adds

What is already known on the subject?

A significant number of young people in contact with youth justice services have speech, language and communication difficulties. Language difficulties may be a risk factor for offending.

What this paper adds

This paper reviews the compounding risks that early language difficulties may lead to considering social and behavioural factors that link to language development in adolescence. It provides language data on children who are in a secure children's home within the youth justice system. This population has not been studied before. The findings suggest that language difficulties are rarely recognized despite these young people being recognized as vulnerable. Given reoffending rates and the high costs of residential placement, further research is needed on the economic benefits of supporting language development in vulnerable populations.

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Introduction

The World Health Organisation (WHO) recognizes the importance of language and literacy, stating that communication and interpersonal skills are one of five areas of globally relevant life skills (WHO 1999). The United Nations Declaration of Human Rights (1948) states that barriers to communication affect an individual's ability to relate to, and interact with, others. This affects their right to realize social and cultural assets and develop their personality (Article 22), to an education (Article 26) and to access justice systems (Article 7). In 2008, the Bercow Review of services for children with speech, language and communication needs (SLCN) confirmed international opinion that communication is an essential life skill, stating that 'the centrality of communication is not simply a personal statement of value. [. . .] Communication is a fundamental Human right' (Bercow 2008: 16). However, it is recognized that at least 60% of young people accessing youth justice services in the UK have SLCN that significantly impact their ability to benefit from education and other interventions offered by youth justice agencies (Bryan 2004, Bryan *et al.* 2007, Gregory and Bryan 2011). This compares with rates in the general population where estimates vary from 5% (Larson and McKinley 1995) to 14% (McLeod and McKinnon 2007). There are differences in government policies on incarceration of children across the developed world, and studies may use different assessments and cut-off points for disorder. However, levels of difficulty far in excess of the general population have been reported in other countries. In Australia, 52% of young male offenders on community orders were classified as language impaired (Snow and Powell 2008), and more than 20% of incarcerated females in the United States were found to be language impaired (Sanger *et al.* 2001).

These figures suggest that language and communication difficulties may be a risk factor for offending. This might be a direct risk or may result from other risks that link to language difficulty, e.g. vulnerability for compromised literacy, and the risks of low levels of language and literacy for educational achievement (Snow 2009). This might be understood as a compounding risk model where low levels of language lead to other risks, such as low level of educational achievement. Speech and language difficulties, low levels of educational achievement and literacy difficulties are risk factors for mental health problems and offending (Tomblin *et al.* 2000).

Also language difficulty is a risk factor for development of behaviour problems (Lindsay *et al.* 2007, Redmond and Rice 2002) and difficulties with peer interaction creating a vulnerability for association with other young people who are involved in criminal activity (Quinton *et al.* 1993). Brownlie *et al.*'s (2004) and Smart *et al.*'s (2003) longitudinal studies show language impairment is a risk factor for offending, but a causal relationship has not been established. Clegg *et al.*'s (2005) longitudinal study showed that one-third of children with SLCN will develop mental health problems if untreated, with criminal involvement in over half of cases. More recent evidence from a long-term Danish study (Mouridsen and Hauschild 2009) indicates that boys with severe expressive language problems were significantly more likely to be convicted of sexual offences. There is also strong evidence to link SLCN with challenging and antisocial behaviour, but this may be partly due to hidden communication difficulties being labelled as behavioural problems (Beitchman *et al.* 2001). Further research needs to consider the circumstances under which compromised language development interacts with a background of psychosocial disadvantage to increase the risk of offending (Snow *et al.* 2011).

One of the advantages of a compounding risk model approach is that as each risk occurs there is a potential opportunity to intervene. Similarly where a child or young person's profile becomes complex (e.g. presenting with language difficulty, behavioural issues and lack of engagement), language intervention may be advantageous in that it addresses the language problem directly, but it may also better equip the young person to engage in verbally mediated assessments and interventions to address their other problems. This was the perception of staff working in a community youth offending team (Bryan and Gregory 2013), although further research is needed to verify these benefits in offender populations.

The high levels of SLCN found in young people in contact with youth justice services should not come as a surprise, given that they might have a number of vulnerabilities. (The term 'in contact with' is used to denote involvement that may vary from help to prevent offending, management of offenders in the community and management of offenders who are incarcerated.) These young people tend (although not necessarily) to have an early background where there are disadvantages. These disadvantages may relate to factors such as: other developmental problems, unstable patterns of parenting with or without admission into care, early substance abuse and difficulties at school (Prison Reform Trust 2014). Looked-after children (those who have become the responsibility of statutory services because the child is at risk of significant harm) constitute 33% of boys and 61% of girls in custody (compared with 1% of all children in England) (Kennedy 2012). A study of looked-after children in custody in England showed that half the children interviewed did not know who would be collecting them on the day of release (HM Inspectorate of Prisons 2011). A study of the educational background of young people in custody showed that 88% of boys and 74% of girls had been excluded from school; and 36% of boys and 41% of girls said they were 14 years

or younger when they were last in education (Murray 2012). A total of 25% of children involved in the youth justice system have been identified as requiring special educational needs; 46% are rated as under-achieving at school; and 29% have difficulties with literacy and numeracy (Youth Justice Board 2006). In many cases their language problems are either not recognized or not treated. Opportunities for intervention are therefore not taken, and once children reach secondary school language problems are less likely to be diagnosed given that interaction or social problems tend to be labelled as behaviour problems (Beitchman *et al.* 2001).

Difficulty in developing speech and language skills is one of the most common developmental problems that children may encounter. Estimates of prevalence vary where 6% of children have SLCN in the absence of other developmental problems reported (Law *et al.* 2013), rising to 31% reported in areas of lower socio-economic status (Enderby and Pickstone 2005, Hart and Risley 1995). Some of these children may recover, but research suggests that their educational needs persist throughout the lifespan (Durkin *et al.* 2009); and they are more likely to require ongoing support (Conti-Ramsden and Durkin 2008).

Children who commence school with language and communication difficulties are immediately disadvantaged (Snow 2009). Children who enter school with language difficulties are at risk of literacy difficulties (Catts *et al.* 2002), behavioural problems (Tomblin *et al.* 2000) and psychological problems (Beitchman *et al.* 2001). Comprehension difficulties in particular make children very vulnerable in relation to education (Hooper *et al.* 2003). More recent longitudinal studies also confirm that specific language impairment (SLI) has a long-term effect on a child's development. Freed *et al.* (2011) show that primary school children with pragmatic language difficulties scored at the low end of the normal range for literacy, while those with SLI scored 1–2 SD (standard deviations) below the mean for literacy. Hesketh and Conti-Ramsden (2013) showed that 11 year olds with a history of SLI were significantly impaired on sentence repetition even where the SLI had resolved. Children with persisting SLI have been shown to achieve a lower level of educational attainment than their peers. Conti-Ramsden *et al.* (2009) showed that while 88% of children in their final year of compulsory schooling achieved at least one of the expected qualifications, only 44% of children with persisting SLI achieved this level.

In the main, assessment of young offenders with language difficulties is not sufficiently longitudinal to ascertain whether they have persisting SLI, or indeed whether they meet the criteria described for SLI, therefore language difficulties in young offenders have been described as non-specific (Snow and Powell 2011). However, the ages of samples such as those described by Bryan *et al.* (2007) and Snow and Powell (2011) lend some weight to suggestions that language problems are persisting over time, at least into late adolescence. We do know that 15% of young offenders have statements of educational needs and low levels of literacy are also reported (Davies *et al.* 2004).

One of the key questions about young people in contact with criminal justice is: why has their SLCN not been identified, or indeed remediated long before they are in contact with youth justice services? We might particularly question this as more recent longitudinal studies of population samples of children suggest that language difficulties can be identified at an earlier age. For example, Chiat and Roy (2008, 2013) followed up children aged 4–5 and 9–11 years who had been referred to clinical services with concerns about language at 2–3 years of age. They showed that receptive language problems at 2–3 years were the strongest predictor of general language outcomes.

These findings provide a strong evidence base to support the need for systematic screening of children to identify speech, language and communication difficulties. Unlike countries such as Denmark, the UK does not systematically screen children's language at an early age prior to school entry or prior to entry to secondary school. While the national curriculum changes in 2014(DfE 2014b) do include more emphasis within the English curricula on teaching oral language skills, telling stories etc., the testing regime remains paper tests of language exclusively via literacy. Opportunities are being lost for early identification, although it could be argued that any child found to be underperforming in literacy may well have an underlying or confounding difficulty with oral language and should therefore have their language skills investigated.

There is also evidence to support more systematic, population-based approaches to language intervention. There is strong evidence for the effectiveness of population-based language intervention, be it environmental (Pickstone *et al.* 2009), early intervention from speech and language therapy (SLT) (Gallagher and Chiat 2009) or social language intervention aged 5–10 (Adams *et al.* 2012).

The salutary reminder here is that when populations of young offenders are examined, despite high levels of difficulties demonstrated, none or almost none is known to local SLT services or is flagged as having communication difficulties (Bryan *et al.* 2007). Lanz (2009) showed that 2% of a sample of young offenders in the community in the UK were known to SLT services. This suggests that the current young offender population in the UK, for whatever reason, has not reached SLT services. Also, the agencies involved with those young people have either not recognized their language difficulties or have not deemed these in need

of intervention. The Youth Justice Board has attempted to address this by developing an assessment for young people accessing youth justice services (Comprehensive Health Assessment Tool—CHAT; Lennox *et al.* 2013) to try to identify communication difficulties and other developmental or acquired disorders as part of routine assessment. This might be highlighted as an example of a more public health-focused approach to language difficulties given that evidence presented above suggests that young offenders are likely to have language problems. However, the effectiveness of such initiatives can be jeopardized by inadequate training of the staff conducting the assessments, and by lack of support for those staff (both during assessment and for any subsequent intervention) from professionals such as speech and language therapists and psychologists.

Beyond early recognition and intervention, research studies increasingly focus on particular groups of children, noticeably those with SLI and those with social communication difficulties where there are clear diagnostic criteria. There is less research attention on children with language difficulties who do not fit into such diagnostic groupings. An area of research that is underdeveloped concerns children and young people who appear in non-clinical settings, e.g. schools, with a lower-than-ideal level of language in the absence of a known disorder such as SLI, or other developmental disorder that might affect their language level such as a learning difficulty.

Spencer *et al.* (2012) demonstrated that children aged 13–14 years in an area of social disadvantage had significantly lower scores on language assessment than those in an area of socio-economic advantage. Research rigour requires full appreciation of the factors that may contribute to such findings, e.g. children and young people being unused to assessments, or the extrapolation of a low score on a test to translate directly to functional difficulty may or may not be justified. However, we should not avoid the conclusion that social disadvantage may adversely affect language development. Indeed, there are numerous other sources of evidence for the vulnerability of language development where a child grows up in circumstances of economic disadvantage (Hart and Risley 2003, Reilly *et al.* 2010, Sylvestre *et al.* 2012, Roy *et al.* 2014).

This does not mean that all children growing up in such circumstances will have language and communication difficulties, but we need to move from a position of requiring access to an SLT service and a definitive diagnosis to trigger intervention to a position where difficulties are recognized as highly likely to occur in certain circumstances and where support is provided to help to support language development for the benefit of the whole population. Being in a nursery or school where there is a whole-systems approach to language development has been shown to benefit children with lower levels of language, but also those whose language is at a level expected for their age (Leyden *et al.* 2011). Such interventions benefit children whose language difficulties render them susceptible for other difficulties. However, many young people do not receive the support they need to develop oral language skills (Stringer and Lozano 2007). There has been concern about the lack of support for young people with communication difficulties, including those justice services (Bercow 2008).

Returning to the theme of compounding risk, as children enter adolescence, language plays a key role in creating and maintaining adolescent peer groups, and is used to demonstrate status, cohesion, trust and entitlement to knowledge (Eckert 2005). We might therefore hypothesize that young people who are not in education are particularly vulnerable for this development not to occur or fully occur. Botting and Conti-Ramsden (2008) showed that language impairments had an adverse impact on functional social outcomes for adolescents with SLI. Snowling *et al.* (2006) showed that children with unresolved speech and language difficulties were at risk of psychiatric morbidity. Children with difficulties in establishing positive peer relations are vulnerable to developing relationships with young people who are involved in antisocial or criminal activities, and in developing mental health problems (Quinton *et al.* 1993, Fujiki *et al.* 1999). Thus, the risks associated with language difficulties may compound further in the adolescent period. Education is known to have a protective effect (Smart *et al.* 2003), and perceived rejection by family, community and peer groups is thought to underpin development of gang cultures (Patten 1998). Patten (1998) also showed that all 50 of the gang members he interviewed were failing in secondary education and receiving no help, although some of the interviewees had enjoyed primary school. It is also interesting to note that within gang cultures simple language (including non-verbal hand signals) are used to signal difference and enforce hierarchies (Hasan and Harry 1998).

It is important to remember that young people accessing youth justice services may previously have been in contact with health and social care services such as parenting provision, child development services, school, services for young people who are excluded from school, adolescent mental health services, and substance abuse services. This raises a number of issues in relation to why language difficulties are not identified earlier and why support for SLCN does not continue across services (Bercow 2008). However, some vulnerable young people lead chaotic lives which may contribute to non-identification of SLCN by not accessing services, or not attending appointments. Also, the social context of young people may mean that it is important not to show weakness or vulnerability, leading to the development of

strategies to mask difficulties with understanding or getting their point across. However, such strategies often involve reduced engagement and avoidance.

This suggests that young people in contact with youth justice services could be identified sooner. Gregory and Bryan (2011) found that 75% of young people in a community youth offending service were found to have profiles indicative of SLCN. This suggests that it is possible to identify language difficulties in young people who offend before they reoffend and move into custodial provision.

SLCN is over-represented in sections of the population more likely to be in custody, e.g. looked-after children (McCool and Stevens 2011), and children at risk of exclusion from school (Clegg *et al.* 2009). Also young offender populations show over-representation of young people with a wide range of developmental problems (Loucks 2007), and support to manage such difficulties is variable and inconsistent (Talbot 2010). Again it should be possible to identify SLCN in vulnerable populations such as looked-after children and children at risk of school exclusion much sooner and preferably before the child or young person becomes involved in criminal activity.

Once children and young people are involved with youth justice services, the demands on their language skills increase. Being interviewed by the police or giving evidence in court requires a person to tell their story, get the facts in the correct order, and explain and justify abstract concepts such as intention, motivation and decision-making (Lavigne and van Rybroek 2011).

Lavigne and van Rybroek (2014) examined the effects of language difficulties on the communication within the attorney–client relationship from a legal perspective. They summarized the key issues that would have a direct negative impact on that communication as follows:

- Poor vocabulary.
- Difficulty processing complex sentences.
- Difficulty following directions.
- Deficient auditory memory.
- Staying on topic.
- Poor reading skills.
- Deficient narrative skills (both expressive and receptive).
- Inability to grasp inferences.
- Lack of background knowledge.
- Difficulty learning new material.
- Limited ability to seek clarification.
- Limited ability to recognize and articulate emotional states.
- Difficulty reading social cues.
- Insensitivity to cause and effect.
- Inability to recognize and control inappropriate behaviour.
- Inability to interpret the motivations and thoughts of others.
- Deficits in higher-order skills such as self-monitoring, planning, and appreciation of consequences.

Many of these difficulties would be found in the communication of young people with language difficulties. Therefore, young people with language difficulties face a further compounding risk that they will be unable to give their evidence or explain themselves adequately within justice processes that involve verbal communication.

So could these children be identified earlier? We examined language skills in a population of young people in one of 15 secure children's homes in England and Wales which provide a locked environment and restrict a young person's liberty. They provide care and accommodation for children and young people who have been detained or sentenced by the Youth Justice Board and those who have been remanded to secure local authority accommodation. They also accommodate and care for children and young people who have been placed there on welfare grounds by local authorities or courts (Department for Education 2014a). In all cases the young people are recognized as being vulnerable, with many having complex difficulties. Secure children's homes provide placements for children and young people between the ages of 10 and 17 and include full residential care, educational facilities and healthcare provision. A high level of intensive help is offered to each young person, with low resident-to-staff ratios. The secure children's homes work closely with multi-agency partners to deliver individualized care plans.

It could be argued that the vulnerability of these young people is recognized and therefore we might reasonably hypothesize that their language needs will be recognized and flagged. As far as the authors can ascertain, this is the first study of language skills in a secure children's home sample. The aim of this study was to find out how many of the children being admitted to the secure children's home had language difficulties and whether these were recognized prior to admission.

Methods

A sample of 118 young males entering a secure children's home was studied. (The home did not admit females.) The children were resident in the home when the SLT service commenced or were subsequently admitted over a 22-month period. The Community Healthcare NHS Trust gave permission for the study to be conducted using de-identified clinical data including information

from the ASSET assessment (Youth Justice Board 2014) (the assessment of all aspects of need conducted on entry to Youth Justice Board services). The local NHS Ethical Review Committee confirmed that further permission was not required.

Each resident child and then each new entrant to the home was offered a routine SLT assessment. This consisted of the Comprehensive Evaluation of Language Fundamentals (CELF-4) subtests (Semel *et al.* 2006) of word classes receptive (WCR), understanding spoken paragraphs (USP), formulated sentences (FS) and word class expressive (WCE); the British Picture Vocabulary Scale (BPVS) (Dunn Lloyd *et al.* 1997); and a non-standardized observational social skills assessment.

Statistical analysis was carried out using SPSS 21. Data are reported as counts and percentages. Relationships between measured speech and language difficulties and demographic/background factors were explored using the chi-squared test or Fisher's exact test, as appropriate. Linear correlations and factor analysis were used to explore relationships between the BPVS and subscales of the CELF-4.

Results

Background

The participant's ages ranged from 11 years 11 months to 17 years 10 months with a mean of 15 years 2 months. A total of 90% (107 participants) were aged 14–16 years. Their background was explored by examining the files available showing that 37 (31.4%) were believed to have looked-after child status on entry to the centre. Once they enter the home, all are then designated as 'looked after'. Fourteen (11.9%) were known to have a statement of special educational need (which in the UK is a legal document that describes a child's special educational needs). However, some of the young people had missing data in relation to their background information. Full educational histories were not available to the research team.

Twenty-three participants (19.5%) had a confirmed diagnosis of mental illness recorded on the ASSET form, one of Waadenburg Syndrome (a genetic condition that can cause hearing loss and pigmentation changes) and one of 48 xxyy Syndrome (a chromosomal condition that causes medical and behavioural problems in males with some degree of difficulty with speech and language development, and learning disabilities, particularly reading problems, being very common). Only one had a documented hearing impairment.

Nearly half the participants (58) had a history of illegal drug use, while a further three had a history of alcohol abuse. Twenty-four (over 20%) had a high or very high vulnerability score from ASSET, although for 72 participants (over 60%) no vulnerability score was available.

Table 1. Offences committed or alleged

Offence	Frequency	Percent
Violent crimes (other than sexual)	51	43.2
Offences against property	33	28.0
Sexual offences	16	13.6
Breach of Bail/Order/PCJ	14	11.9
Section 25 Secure Welfare	8	6.8
Possession of Class A drugs	2	1.7
Dangerous Drivng	1	0.8
Hoax Calls	1	0.8

Sixty-seven per cent of participants had a level of challenging behaviour based on completion of an incident form documenting aggression or property damage. For most of these, no more than three incidents were involved, but six individuals (5%) had more than 20 recorded incidents. It should be noted that the decision to report inappropriate behaviour is ultimately based on staff judgement, although the home had criteria to support decision making.

Only nine participants (7.6%) had transferred from other custodial establishments; they had come from several different establishments and transferred for no consistent reason. (Again this may reflect them being involved in an incident with others, but equally they could be moved due to their increasing vulnerability.)

Offences and sentencing

Table 1 shows the offences individuals in the sample had committed or were accused of. Some residents were remanded for more than one offence. Among the offences, violent crimes were common (43.2%), along with sexual offences (13.6%) and crimes against property (28%). Eight (6.8%) participants were secured under Section 25 Secure Welfare orders, which means they were detained for their own protection and had not necessarily committed any crime.

Over half the participants (65) were subject to Detention & Training Orders (detention plus education), while over a quarter (31) were in custody on remand, awaiting a court judgement on the offence they were accused of. Amongst the 74 with a fixed-length sentence (excluding those on remand or subject to a secure welfare order) over one-third (26) had a sentence of no longer than 6 months. Sentence lengths ranged from 1 month to 7 years with a median of 8 months.

Speech and language assessments

Only two participants had speech and language concerns recorded prior to entry to the home. Eleven refused all

Table 2. CELF-4 and BPVS scores

	CELF WCR		CELF USP		CELF FS		CELF WCE		BPVS	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
1.5 or more SD below mean	50	42.4	47	39.8	13	11.0	25	21.2	42	35.6
Less than 1.5 SD below mean	41	34.7	51	43.2	76	64.4	66	55.9	38	32.2
Total	91	77.1	98	83.1	89	75.4	91	77.1	80	67.8
Missing	27	22.9	20	16.9	29	24.6	27	22.9	38	32.2
Total	118	100.0	118	100.0	118	100.0	118	100.0	118	100.0

Table 3. SLT input for participants

Support provided	Frequency	%
None identified	33	28.0
1:1 Speech and language therapy	17	14.4
1:1 Teaching and learning assistant support	3	2.5
Support across the curriculum	58	49.2
Intensive support	7	5.9
Total	118	100.0

Note: [a]One refused and one left before receiving therapy.

Table 4. Engagement with education

Engagement	Frequency	%
Outstanding	7	5.9
Outstanding/good	1	8.0
Good	18	15.3
Good/mixed	5	4.2
Mixed (needs improvement)	39	33.1
Mixed/inadequate	5	4.2
Inadequate	18	15.3
Subtotal	93	78.8
Missing data	25	21.2
Total	118	100.0

formal speech and language assessments on entry, whilst a further 19 refused some of the assessments.

For the CELF-4, 50 (42.4%), 47 (39.8%), 13 (11.0%) and 25 (21.2%) recorded a score of 1.5 SD or more below the mean on the word classes receptive, understanding spoken paragraphs, formulated sentences and word classes expressive tests respectively (table 2).

A similar picture is seen with the BPVS, with 42 (35.6% of all the participants) recording a score of 1.5 SD or more below the mean. Given that we might anticipate about 2.5% of the UK population having speech and language difficulties at this age, the data suggest that levels of SLCN are significantly higher within this sample.

Speech and language intervention

Eighty-four (72%) of the sample had speech and language targets set for them, often more than one. These were mostly in the areas of processing and memory (59.3%) and increasing receptive and expressive vocabulary (61%). Seven participants received intensive therapeutic intervention, 24 participants were designated as requiring one-to-one SLT, three were given a programme of support administered by a teaching and learning assistant, and 58 were given language support to access the curriculum during education (table 3). The decision to treat an individual directly or to support him indirectly was made by the SLT as part of standard practice based on her analysis of the screening results, further assessment where necessary and the multidisciplinary team discussion and decision-making around each individual.

A total of 93 (78.8%) engaged with education while at the home and their level of engagement was assessed and graded by education staff based on staff judgement. Sixty-two participants were noted to need to improve their level of engagement (table 4).

Exploring relationships between speech and language difficulties and other factors

Taking a scaled score of 1.5 SD or more below the mean on the BPVS, or any of the subscales of CELF-4, as an indicator of speech and language difficulties, relationships with other factors were explored.

There appeared to be no significant relationship between SLCN and any diagnosis of mental health problems. Low scores on the CELF-4 word classes expressive ($p = 0.015$) and understanding spoken paragraphs ($p = 0.05$) tended to be associated with *less* challenging behaviour (recorded incidents ≤ 10), but this was less apparent with the CELF-4 word classes receptive and not apparent at all with the formulated sentences test or the BPVS (table 5).

Low scores on the BPVS/CELF-4 were not significantly associated with previous looked-after child status, having an educational statement, education status or any particular category of offence.

Those detained under a Section 25 Secure Welfare Order were significantly less likely to have SLCN measured by the CELF-4 word classes receptive ($p = 0.016$); for other assessments this affect was also apparent, but not significant. However, only five boys in this category completed the assessments.

Table 5. SLCN and challenging behaviour

			Challenging behaviour			
			Less challenging (ROSE ≤ 10)	More challenging (ROSE > 10)	Total	p-value[a]
BPVS	Less than 1.5 SD below the mean	*n*	31	3	34	0.722
		%	91.2%	8.8%	100.0%	
	1.5 or more SD below the mean	*n*	36	5	41	
		%	87.8%	12.2%	100.0%	
	Total	*n*	67	8	75	
		%	89.3%	10.7%	100.0%	
CELF WCR	Less than 1.5 SD below the mean	*n*	39	1	40	0.121
		%	97.5%	2.5%	100.0%	
	1.5 or more SD below the mean	*n*	42	6	48	
		%	87.5%	12.5%	100.0%	
	Total	*n*	81	7	88	
		%	92.0%	8.0%	100.0%	
CELF USP	Less than 1.5 SD below the mean	*n*	48	1	49	0.050
		%	98.0%	2.0%	100.0%	
	1.5 or more SD below the mean	*n*	38	6	44	
		%	86.4%	13.6%	100.0%	
	Total	*n*	86	7	93	
		%	92.5%	7.5%	100.0%	
CELF FS	Less than 1.5 SD below the mean	*n*	68	5	73	0.285
		%	93.2%	6.8%	100.0%	
	1.5 or more SD below the mean	*n*	11	2	13	
		%	84.6%	15.4%	100.0%	
	Total	*n*	79	7	86	
		%	91.9%	8.1%	100.0%	
CELF WCR	Less than 1.5 SD below the mean	*n*	62	2	64	0.015
		%	96.9%	3.1%	100.0%	
	1.5 or more SD below the mean	*n*	19	5	24	
		%	79.2%	20.8%	100.0%	
	Total	*n*	81	7	88	
		%	92.0%	8.0%	100.0%	

Note: [a]Fisher's exact test.

Patterns of support provided at the home clearly differed for those with and without SLCN; statistical testing is not relevant here since support has been targeted partly on the basis of speech and language assessments.

Links between assessments

With 30 participants from the sample refusing some or all speech and language assessments, it would be valuable to reduce the assessment burden while still identifying participants experiencing difficulties.

Correlation analysis using the BPVS and the four CELF-4 subtests (it was not possible to use the aggregate language score from the CELF-4 because not all required subtests were used) shows that four of the five assessments tend to produce highly correlated scaled scores, i.e. of 0.65 and above. In this group of participants only the CELF-4 understanding spoken paragraphs scaled score is more moderately correlated with the other scales (table 6).

Table 6. Correlations between the assessments

	Pearson correlation (*N*)			
Scaled scores	BPVS	CELF WCR	CELF USP	CELF FS
BPVS				
CELF WCR	0.71 (66)			
CELF USP	0.35 (72)	0.51 (90)		
CELF FS	0.65 (65)	0.75 (88)	0.47 (88)	
CELF WCE	0.69 (66)	0.91 (91)	0.47 (90)	0.78 (88)

Factor analysis was used to identify if different subscales tended to measure the same difficulty or different ones and if so whether use of just one or two subscales could reasonably capture the majority of those with speech and language difficulties. The one factor identified brings together basic aspects of receptive and expressive language at the word and sentence level. CELF-4 USP appears to measure a rather different aspect, which is that of auditory memory, comprehension and inference.

Factor analysis identifies just one factor with eigenvalue greater than 1, which explains 70% of the

Table 7. Factor loadings for identified factor

	Factor
	1
BPVS standardized score	0.831
CELF WCR scaled score	0.938
CELF USP scaled score	0.551
CELF FS scaled score	0.881
CELF WCE scaled score	0.930

variance in scores; the factors loadings are greatest on the BPVS, and CELF-4 word classes receptive, formulated sentences and word classes expressive subtests; the loading for the CELF-4 understanding spoken paragraphs score is much lower (table 7).

This tends to suggest that it might be possible to use one or two of the assessments in cases where lack of cooperation with assessment is an issue. The CELF-4 word classes expressive and CELF-4 word classes receptive have the highest weightings in the single factor identified, so their ability to identify individuals who scored more than 1.5 SD below the mean in any speech and language assessment has been explored to identify a pragmatic approach to assessment. In this sample, 67 (57%) individuals scored more than 1.5 SD below the mean on at least one of the five speech and language assessments. Of these 50 (75%) could have been identified by using the CELF-4 word classes receptive alone. A further 9 (13%) could have been identified using the CELF-4 understanding spoken paragraphs in addition, leaving only eight (12%) whose speech and language difficulties were confined to the three other assessment areas. This suggests that these two assessments could be used to provide a generic assessment in cases where further assessment is difficult, although completion of all the tests is highly desirable if at all possible.

Discussion

This paper provides information on language difficulties for a sample of children who are detained in a secure children's home. They are also recognized as vulnerable and some have committed serious crimes, although some were on remand and given the premise of innocent until proven guilty, it must be acknowledged that those on remand could be found not to have committed a crime. Also eight of the participants were detained on a welfare order and may not have committed a crime. When discussing the prevalence of language disorders in children and young people who offend, it is important to acknowledge that a sample such as the one presented here includes participants who may not have offended.

The majority came into the secure children's home from the community with only 8% transferring from another custodial setting. We see a similar pattern of relatively high levels of language difficulty in this younger sample with around 30% being 1.5 SD below the mean on the tests used. Although these young people were deemed vulnerable, hence their admission to a secure children's home, only two had previously documented speech and language needs. This suggests that even where children are recognized as vulnerable, their speech, language and communication difficulties are not being recognized.

This was a convenience sample with background data being that available to a clinical service. Methodological weaknesses of the findings are that there was no control group, some data were missing and there were no available data on socio-economic status or educational history. It is common in criminal justice settings for clinicians to lack these types of background data which are more likely to be available in more traditional healthcare settings. Future research could address the control issue by matching such participants with age and education-level control participants. The study used standardized tests so it could be argued that a control group is not required. However, if the participants were matched with age and education level non-offending control participants from similar socio-economic status backgrounds, this might help to establish the factors that contribute to offending. However, more detailed background information would be required to achieve this matching. Non-standardized rating tools were used to assess participant engagement in education and social skills so the risk of observer bias influencing ratings must be acknowledged, and use of standardized assessment tools would be recommended for future studies. Aside from these issues, the data do suggest that further research into the speech, language and communication skills of children held within the secure children's home estate would be justified.

It should be noted that the speech and language therapist provided support for a higher number of individuals (72%) in terms of setting targets for them to achieve. This suggests that although some were above the cut-off level set for research purposes, in terms of a multi-agency approach to intervention it was deemed necessary to support language to facilitate other interventions such as education or mental health interventions.

These results suggest that when children come into custodial settings at a young age with pre-existing SLCN, this is not recognized in the vast majority of cases despite their vulnerability being recognized. The level of SLCN is lower than that demonstrated in older young offender samples. This may be due to some of these younger vulnerable young people being diverted away from young offender establishments or to the higher level of support provided allowing the children and young people to address their difficulties, but this is speculative. Longitudinal studies are needed to examine

the language and wider outcomes for such children. There is evidence to suggest that where children with language impairments are supported through secondary schooling, their education outcomes are improved (Durkin *et al.* (2009). Therefore it is important to identify language difficulties as early as possible to ensure that the child or young person receives support with language so that they can gain the best possible outcomes from education. There is then an added gain of engagement in education which is a protective factor against involvement in criminal activities (Smart *et al.* 2003).

The economic case for SLT in terms of preventing later care costs has been made (Marsh *et al.* 2010). In addition, the cost of SLT is small compared with the costs of youth justice services, although more research is needed on the economic impact of SLT outcomes for young people in the youth justice system. In 2013, 1780 under 18s and 6272 young people aged 18–20 were in custody (Youth Justice Board 2013) at a cost of £60 000–209 000 per person per year depending on the type of placement (Prison Reform Trust 2014). In addition, around 19 000 new entrants to youth justice services were managed by youth offending teams in the community in 2013, although this includes preventative referrals (Youth Justice Board 2013). In 2013, reoffending rates for young people had reduced from a peak in 2006, but still stood at 58% of young people (18–20 years) and 72% for children aged 10–17 (Ministry of Justice 2013). It would therefore seem timely for service commissioners to address the young person's ability to understand and communicate in order to help them to benefit more from both education and measures to prevent reoffending. Children entering secure accommodation within youth justice services should have routine assessment of their oral language skills. SLT services in the youth justice system are developing, but further service development will be required to give access to all young people involved. Snow *et al.* (2015) also advocate for further development of the evidence base for language intervention in youth justice services.

Law *et al.* (2013) advocate a public health approach rather than a clinical approach to child language and this may be very helpful in determining a whole population approach to language development. An example would be language development and enrichment programmes in schools and nurseries. These should be required in areas where a significant number of children are from areas of socio-economic disadvantage. Furthermore, the literature reviewed above may suggest that in certain circumstances children should be considered as likely to have communication difficulty, and should therefore have their language skills assessed routinely in nursery and school.

Teachers and staff working across services for children in the wider community and in youth justice services need training to understand the effects of communication difficulties and how to identify them. Health and educational services should include SLT services or access to them so that staff are supported to identify and manage children with lower than expected levels of language. Where children are falling behind in educational attainment, assessment of oral language skills should be routinely undertaken to ensure that any underlying language difficulties can be recognized and supported.

What is required is that speech and language difficulties are identified early, but also that development during childhood or adolescence of literacy difficulties, peer interaction problems, teacher (or other authority figure) interaction difficulties, behaviour problems, or emotional problems should trigger full assessment of oral language skills.

We hypothesized that as the children entering a secure children's home are recognized as vulnerable, any language difficulties would be recognized. This was not the case, despite around 30% of the participants being at least 1.5 SD below the expected mean for their age on language assessments. Given that we have evidence of over-representation of children who are excluded from school, in care and presenting with mental health or behavioural issues in the criminal justice system, it would also seem important to focus SLT provision on settings where the young people who are most vulnerable to involvement in criminal activity may be found, such as schemes for children at risk of school exclusion, and within services for children with behavioural problems and services for children presenting with mental health or addiction problems.

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