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Speech Language and Communication Needs and Educational Outcomes in Children in Care: A Secondary Data Analysis

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Abstract

Children in care have been shown to be at a higher risk of speech, language and communication needs (SLCN). However, the presence of several co-occurring adversities means that SLCNs in this group are often overlooked. Improving understanding of SLCN vulnerability among children in care is therefore important for informing targeted interventions and supporting more positive educational and psychosocial outcomes. In our study, we examined the prevalence of SLCN among children in care and its association with educational attainment and social–emotional development as recorded in routine practice. A secondary analysis was conducted using routinely collected data recorded in a local authority database in an inner-city borough in South-East England. The eligible cohort comprised 141 children aged 5–14 years living in out-of-home care, of whom 78 had language screening data available. Measures included educational attainment in English, mathematics, and science, alongside social–emotional and behavioural functioning assessed using the Strengths and Difficulties Questionnaire. Forty-one per cent of the sample presented with SLCN. Difficulties were evident across several domains, including word-finding, initiating and maintaining conversations, and peer relationships. Analyses revealed meaningful associations between SLCN, lower educational attainment, and poorer social–emotional outcomes. These findings provide preliminary group-level evidence of the higher prevalence and complexity of SLCN among children in care and their associations with educational and social–emotional outcomes. These results highlight the need for coordinated clinical, educational, and policy

responses. These include improved recognition of multifaceted SLCN and timely referral to speech and language therapy services, to support more equitable outcomes for children in care.

Keywords: Children in care, speech, language and communication needs, out-of-home-care placement, maltreatment, educational outcomes, social-emotional outcomes

Introduction

In most cases, children's communication and language develop naturally without difficulty. However, substantial variability exists in both the rate and extent of language acquisition (Asmussen et al., 2018; Harrison & McLeod, 2010; Pace et al., 2017). This variability has been attributed to a range of biological and environmental factors, including cognitive differences and social stimulation (Conti-Ramsden & Durkin, 2008; Raaska et al., 2013). Variability in language development is particularly present in children with Speech, Language and Communication Needs (SLCN). Following the CATALISE framework (Bishop et al. 2016, Dockrell et al., 2012; RCSLT, 2018), SLCN describes is a broad, inclusive term used to describe difficulties in speech production, language comprehension and expression, as well as the social use of language. SLCN includes children with neurodevelopmental conditions and especially developmental language disorder (DLD). In the context of the current research, SLCN also includes children whose language difficulties are associated with environmental factors such as limited language exposure. In socially disadvantaged and educational contexts, the term SLCN is preferred in the UK, as it can be used by professionals to capture functional communication needs without implying a specific or formal diagnostic pathway (Dockrell et al., 2012; Law et al., 2011).

One group of children who are often overlooked or excluded from studies of SLCN are those who are in care, despite extensive evidence of poorer life outcomes linked to language. The limited attention to this population is not only a reflection of research priorities but also of significant structural and methodological challenges inherent in conducting research within care contexts. Access to this group is constrained by complex gatekeeping processes within local authorities and care systems, which can make recruitment both time-consuming and difficult. Ethical considerations are also heightened, given the vulnerability of children in care, necessitating rigorous safeguarding procedures that may restrict study design and data collection approaches. Furthermore, the involvement of multiple agencies complicates efforts to obtain consistent and longitudinal data. Collectively, these factors have contributed to the relative underdevelopment of research on SLCN in this population. Thus, the current study looked at the prevalence of SLCN in a secondary data sample of children in care (also known as looked-after children) and its relationship to their educational and social-emotional outcomes.

Children in Care

Children in care are defined as those under 18 years of age placed in foster care, residential care, kinship care, or institutional settings when they cannot safely remain with their birth families. These children are often exposed to cumulative adversities such as maltreatment and parental substance misuse, placing them at heightened developmental risk (DfE, 2024; Jones et al., 2011).

In the period 2022–2023, approximately 107,000 children were recorded as being in care in the UK (NSPCC, 2024). There are several reasons why children enter care. In the UK, it was reported that 65% of children were in care because they had experienced abuse and neglect (DfE, 2023, NSPCC, 2024). Similar figures are reported in other countries (Palmer et al., 2023). Children in care can also include unaccompanied asylum seekers or children entering care through the youth justice system (DfE, 2023). Much evidence demonstrates that, compared to the general population, children in care experience poorer life trajectories in health, education, and language development (e.g., Evans, et al., 2017; Nathanson & Tzioumi, 2007). There is a complex overlap between social disadvantage and children being taken into care (Jones et al., 2011). Some research posits links between lower income, poverty, child abuse and neglect (e.g., DfE, 2023; Gupta, 2016) whereby poorer families are increasingly likely to have children living in care (Bywaters et al., 2018). Being in care can lead to disruptions to early parent-child interaction (e.g., Sylvestre et al., 2016). It is also the case that children residing in long-term institutional care settings are reported to show developmental delays (e.g., Windsor et al., 2007).

Children in care have more challenges in education, social, emotional and mental health (SEMH) compared with non-in care peers. They may have lower literacy and numeracy attainment, increased school instability, and reduced progression to further and higher education, as well as poorer psychosocial outcomes (Clegg et al., 2021; Meltze et al., 2004; O'Higgins et al., 2017; Sebba et al., 2015; Viner & Taylor, 2005). However, despite children in care experiencing disproportionately high levels of educational disadvantage and SEMH difficulties, it remains unclear whether the associations between SLCN, educational attainment, and SEMH operate in the same way within this population as they do in the general population.

SLCN and Children in Care

Although a growing body of developmental literature has included children in care their language skills have typically been assessed only as part of broader evaluations (Evan et al., 2017; Jacobsen et al., 2020; O'Higgins et al., 2017; Sebba et al., 2015). However, the evidence suggests that between 30% and 85% of children in care experience language difficulties (e.g., Evans et al., 2004; Halfon, et al., 1995; Nathanson & Tzioumi, 2007; Simms, 1989). These difficulties have been reported across different out-of-home-care settings and age groups. Studies also report that multiple language domains are affected, with pragmatic and social communication difficulties most consistently identified (Di Sante et al., 2019; Halfon, et al., 1995; Lum et al., 2018; Moreno-Manso et al., 2009). Nevertheless, even the existing literature reporting SLCN prevalence in children in care may be outdated, based on single studies or have small and heterogeneous samples. This highlights the need for larger, inclusive studies to better characterise language vulnerability in this population.

There have been studies of children who enter care due to abuse and neglect. Zajac et al. (2019) compared receptive vocabulary development in two groups of children with a history of maltreatment: children placed in foster care or those who continued to reside with their birth parents. The study found that at 36 months, the group living in foster care had average receptive vocabulary scores at the 23rd percentile, while the children living with birth parents scored at the 10th percentile. In a meta-analysis conducted by Lum et al. (2015), links were reported between early experiences of maltreatment and negative language development outcomes. The authors argued for a connection between responsive parent-child interactions and early language development. Other studies support this connection, indicating that children who have experienced maltreatment often exhibit SLCN. This includes reduced vocabulary, shorter average length of utterances, diminished pragmatic skills and disorders in literacy development compared to peers (Moreno-Manso et al., 2009). In terms of pragmatics (i.e. language in social and communicative contexts), Di Sante et al. (2019) compared 45 neglected children in care and 95 non-neglected 4-year-old French-speaking children. They found that 44% of the neglected children exhibited difficulties compared to just 4% of the non-neglected peers. A recent study (Snow et al., 2020) reported that 92% of the sample scored below the average range on standard language assessments, with both structural and idiomatic aspects of language substantially affected. Overall, existing studies suggest that children in care have a significantly

higher prevalence of SLCN than their peers in the general population. This is important, because for all children, language skills facilitate better life outcomes, as well as improved opportunities in education, social and emotional well-being (Conti-Ramsden et al., 2019). We discuss these links in more detail next.

Adverse childhood experiences (ACEs), including maltreatment (abuse and/or neglect) and placement instability, impact the language development of children in care (Byren et al., 2018; Frederico et al., 2018; Krier et al., 2017; Savi-Karayol et al., 2025; Stacks et al., 2011). Although many children in care originate from low socioeconomic status (SES) backgrounds, evidence suggests that their language difficulties are greater than those observed among demographically similar peers from low-SES backgrounds who have not experienced such adversities (e.g., Hart & Risley, 1995; Hoff, 2006). Some evidence suggests that early placement in foster care may confer a degree of protection for language outcomes (Lum et al., 2018; Windsor et al., 2011), however language difficulties frequently persist across development and are strongly associated with later academic, social, and emotional difficulties (Halfon et al., 1995; Savi-Karayol et al., 2025; Snow et al., 2020). Notably, despite many children in care scoring below clinical cut-offs on standardised language assessments, diagnosed language impairment is inconsistently reported, again highlighting the need to interrogate language data more thoroughly. This body of evidence highlights that language and adversity are parallel mechanisms through which early experience shapes broader developmental outcomes in children in care. Addressing this gap is essential for supporting early identification, targeted intervention, and coordinated responses across educational, clinical, and social care systems. Our study addresses this gap by examining language vulnerability in among children in care as recorded routinely by the local authority.

Links between SLCN and educational outcomes

Research in the general population consistently demonstrates links between children's language abilities, educational attainment, and broader social, emotional, and behavioural outcomes. Language ability underpins the understanding of complex concepts and supports classroom learning via debating, describing and analysing, as well as the basis for later literacy development (Roulstone et al., 2011). Studies report between 17–50% of students with SLCN have an associated reading disability (e.g., Catts et al., 2002; Wise et al., 2007) as well as difficulties with numeracy (Cross et al., 2019). Durkin et al. (2013) reported children with language difficulties performed more than 1SD below the mean and the gap widened when

assessed again at age 8 years. Fyfe et al. (2019) report that mathematical difficulties in children with SLCN focused on the involvement of working memory processes in analysing patterns, as well as the integration and manipulation of complex syntax with symbols. However, a recent systematic review reported on the heterogeneity of academic achievement in students with SLCN (Ziegenfusz et al., 2022). Some students showed significantly lower performance compared with typically developing peers, whereas others performed in the average range across primary and secondary school. Thus, findings are mixed and the inclusion of children in care in this area has the potential to illuminate further the links between SLCN and educational outcomes.

Links between SLCN and social emotional development

In wider research, close correlations between SLCN and mental health issues have been reported (e.g., Hollo et al., 2014; Levickis et al., 2017). Some authors have interpreted this as representing co-occurring features rather than causal relationships (Conti-Ramsden & Botting, 2008). Difficulties in social, emotional and mental health can lead to problems developing social relationships, as well as abilities in adapting behaviour and interaction in different contexts. There are also identified overlaps between language and higher levels of conduct disorder and hyperactivity (St Clair et al., 2011), greater difficulties in peer relations and friendships (Conti-Ramsden et al., 2018) and higher levels of mental health difficulties, such as anxiety, fearfulness, depressive symptoms and panic (Botting et al., 2016; Hollo et al., 2014). Thus, difficulties in communication are also associated with increased psychosocial vulnerability (Clegg et al., 2009; Conti-Ramsden & Botting, 2008; Hollo et al., 2014; Snowling et al., 2011; Wren et al., 2021). Despite evidence being available, the contribution of language vulnerability to educational and social–emotional outcomes has not been systematically examined among children in care. These children already experience elevated levels of educational and social–emotional difficulties.

Contexts characterised by stress, trauma, or disrupted caregiving (e.g., Di Sante et al., 2019; Trout et al., 2011) might impact on language development but the literature presents mixed findings. Some studies reporting weak or inconsistent associations (Beitchman et al., 2001; Lewis et al., 2016; McCormack et al., 2011), others report closer links between language difficulties and mental health outcomes (e.g. Durkin et al., 2009; Levickis et al., 2017). The studies are mainly correlational, with no clear direction of cause indicated. These

inconsistencies suggest that for children in care, language development is shaped by multiple moderating factors, including exposure to adversity, placement stability, and access to support.

Present study

In summary, language development varies considerably across children and is shaped by the interaction of social and biological factors. Within this broader developmental domain, children in care represent a group at heightened risk of SLCN, for whom language vulnerability often co-exists with social-emotional difficulties and should therefore be understood within an integrated developmental context. However, few large-scale studies exist on children in care to confirm these possibilities (e.g., Clegg et al., 2021; Evans et al., 2004; Halfon et al., 1995; Snow et al., 2020). The current study analysed existing clinical records on SLCN, educational outcomes and social emotional development in a large sample of children who were in out-of-home care in one inner city borough in South-East England.

Research questions

1. Based on language development screening of children in care in an inner-city borough, what proportion of the sample have SLCN?
2. What is the relationship between children's language abilities and their educational, social and emotional outcomes?

Methods

Secondary data

The current study analysed a secondary data which was collected as routine social care information by an urban Local Authority (LA) in the UK. The children in care population is a difficult group to investigate with several barriers to direct recruitment, thus making the secondary data analysis a feasible alternative. In addition, using a secondary data set approach meant that data was available for all children in this LA, which has the advantage of limiting recruitment bias. The use of a secondary local authority dataset enabled the analysis of a larger, sample, representing a wider group of children, than are typically included in studies of children in care. It also reduced selection and volunteer bias commonly associated with direct recruitment studies, is particularly important in vulnerable populations where engagement may be uneven or influenced by gatekeeping, capacity, or safeguarding concerns. We conducted our study during the COVID-19 pandemic, making direct testing alongside the dataset

impossible. The first author had a professional appointment in the LA, but we had no direct control over data collection procedures or the administration of the screening tool.

The language screening tool used in our study was developed by the LA's speech and language therapy (SLT) team to identify risk across a wide range of communication difficulties. Local Authority Speech and Language Therapists are clinicians employed by UK local government services who are responsible for assessing and supporting children's SLCN across education and social care settings. The screening tool was a non-standardised, internally developed checklist designed for routine clinical use to identify risk of SLCN, rather than to provide diagnostic classification. Although formal psychometric validation of standardised language assessments (e.g. criterion validity, benchmarking or pilot comparison data) was not available, the tool has been implemented consistently over several years within the local authority by a specialist SLT team and is detailed fully below.

Data were available on a range of outcomes for children in care aged 5-14 years who had been under legal guardianship of the LA's care for at least six months. Given the sensitive nature of the topic, ethical approval was granted by the Language and Communication Science Proportionate Ethics Review Panel at City St George's, University of London (Reference: ETH1819-1958) and by the Ethics Committee of the Children and Families Service of the local authority in question to analyse an anonymised secondary dataset.

Data sources The LA used a data gathering system which was maintained across the staff team. This comprised information about each child in care collected from the time a child becomes known to the children in need team. This included their admission to care plan, language, education, social and emotional assessments collected in collaboration with schools. The quality and completeness of the secondary data varied across variables, reflecting real-world clinical and administrative recording practices rather than standardised research protocols. In particular, screening tools were embedded within routine service delivery, which limited standardisation across settings and precluded direct comparison with prevalence estimates derived from research-administered, standardised assessments. In addition, missing data for some children, was due to safeguarding constraints, restricted access to records, and variability in routine documentation practices. These factors may have influenced sample representativeness and should therefore be taken into account when interpreting the findings.

Nevertheless, this secondary data approach offers ecologically valid insights into how SLCNs are identified within local authority systems.

For this population, SLTs in their routine practice often use screening tools rather than individual assessments, in order to avoid removing children from the classroom, as this group is already at increased risk of educational disadvantage, over-assessment and stigma. Language development screening tools are therefore a widely used method of assessment used by educators, speech and language therapists, and other professionals to quickly identify children who may have difficulties with speech, language, or communication. They are not diagnostic but help determine whether further, more detailed assessment is needed (Dockrell et al., 2014). For educational attainment, each school was routinely required to provide each child's progress on a quarterly basis. Lastly, behavioural questionnaires were completed by teachers on a yearly basis using a standardised measure (Strengths and Difficulties Questionnaire; Goodman, 1997) described later under 'Measures'.

Participants

The entire LA dataset included 254 children, representing all children up to 14 years old for the academic years 2019 to 2020 who were under the LA's care. This age range was selected because care pathways are difficult to track before and after these periods. To focus on difficulties in language development, only children in care who had no diagnosed intellectual disabilities and were in care for at least 6 months were included, leaving 141 children in the eligible sample. Children who did not meet these criteria were excluded from the dataset. Of these 141, there was a sample of 78 children for whom language screening had been completed. The sample derivation is shown in Figure 1.

The LA was in an inner-city borough where over 30% of primary- and secondary-age children are eligible for free school meals. (In the UK, free school meal eligibility is employed as a proxy measure of low SES and is determined through means-tested criteria, including household income below a threshold and receipt of income-related benefits such as Universal Credit.) At the outset of analysis 141 children in the database aged 5 to 14 years were identified. The mean age of this group was 11 years, 2 months (134.86 months; SD = 25.328). There were 60/141 in foster care (42.6%), and 71/141 placed in other out of home care settings such as

placements with family member or friends, children's homes and hostels (50.4%). The average time spent in care was between 6 to 176 months. The reasons for entering into care varied: 40 children had suspected physical or sexual abuse and 50 entered due to emotional abuse. For the remaining 51 children, data were not recorded or could not be accessed for safeguarding reasons. The ethnicities of the study sample can be seen in Table 1. Due to safety and confidentiality reasons, demographic information could not be accessed for 34/141 children.

Figure 1: The database sample

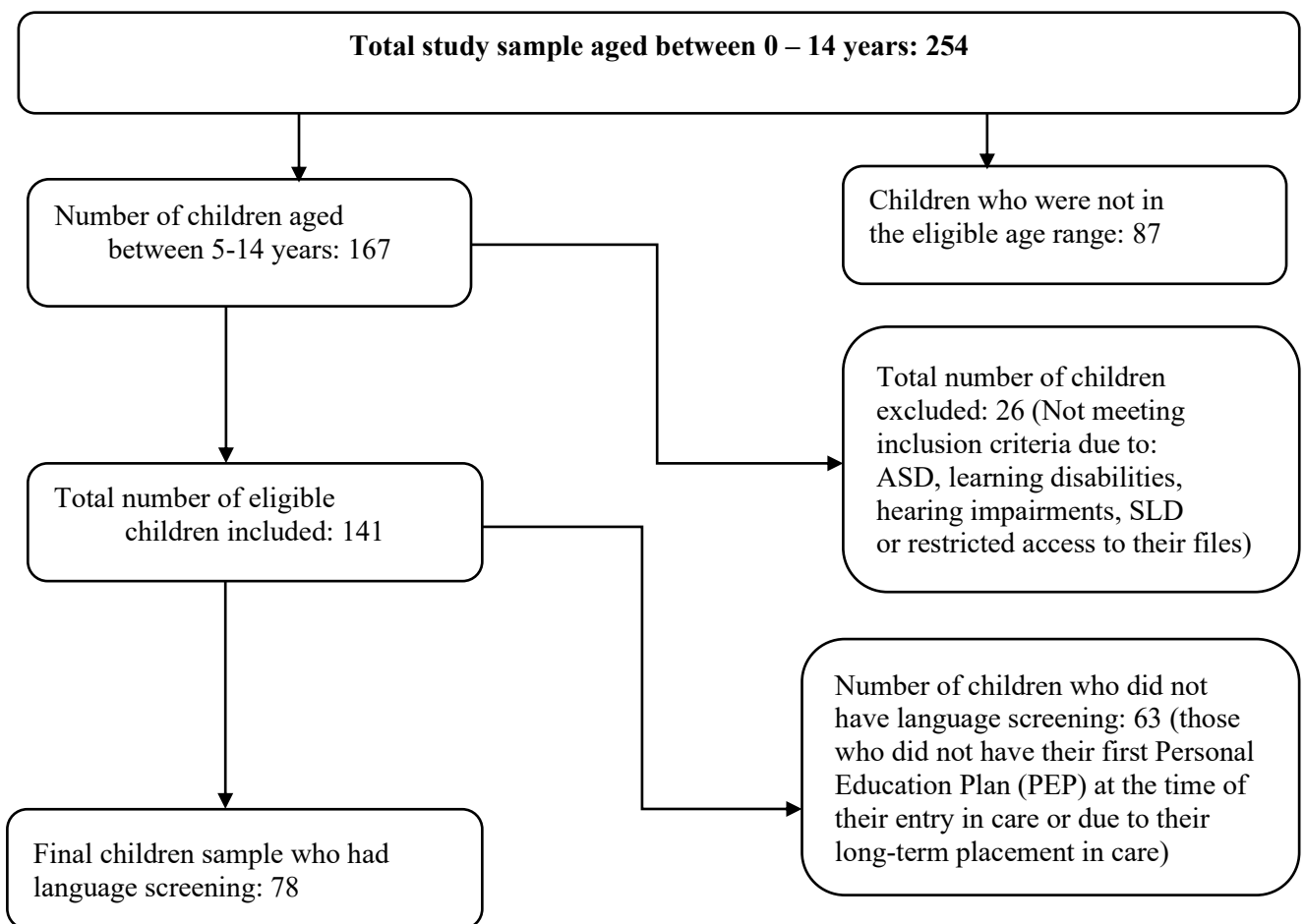


Table 1: The demographic profiles of the whole eligible sample including those without language data (n=141)

Groups	Subgroups	Number	Percentage%
Gender	M	71	50.4
	F	67	47.5
	Information not available	3	2.1
Ethnicities	White	38	27.0
	Black/African/Caribbean/ Black British	47	33.3
	Other ethnicities (Mixed, Asian/Asian British, unspecified or other ethnic groups/Vietnamese)	37	26.2
	Information not available	19	13.5
Placement types	Foster care Placements	60	42.6
	Other placements (e.g., Home/hostels/placement with own family or family member or friend/all types of temporary placements)	71	50.4
	Information not available	10	7.1
Reasons entering care	(Suspected) physical or sexual abuse	40	28.4
	Emotional Abuse	50	35.5
	Information not available	51	36.2
Language history	English is first language	114	80.9
	English is second language	10	7.1
	Information not provided	17	12.1

Note: Table 1 outlines the demographic characteristics of the whole sample (n = 141), providing the number of children in each demographic group and their corresponding percentages.

Characteristics of the language screen sub-sample

Data from the clinical language screening tool came from both males (n=43) and females (n=35) with a mean age of 10.62 years (SD =2.4). The time spent in care ranged between 6 months to 13.5 years. Table 2 presents the demographics of the participants who entered the language sample.

Table 2: The demographic profiles of the final study sample of children with language data (n=78)

Groups	Subgroups	Number	Percentage%
Gender	M	43	55.1
	F	35	44.9
Ethnicity	White	25	32.1
	Black / African / Caribbean / Black British	27	34.6
	Other ethnicities	19	24.3
	Information not available	7	9.0
Placement type	Foster care Placements	49	62.8
	Other placements (e.g., Home /Hostels/ Placement with own family or family member or friend / All types of temporary placements)	21	26.9
	Information not available	8	10.3
Reasons for entering care	(Suspected) physical or sexual abuse	36	46.2
	Emotional Abuse	37	47.4
	Information not available	5	6.4
Language history	English is first language	71	91.2
	English is second language	6	7.6
	Information not provided	1	1.3

Note: Table 2 presents the demographic profiles of the final study sample of children with language data (n = 78), showing the number of children in each demographic category along with their corresponding percentages.

Measures

Clinical language screening tool

The clinical language screening tool used in the current study was a questionnaire developed by the local authority's SLT team and was intended for screening purposes rather than as a standardised assessment of language ability. We acknowledge that formal inter-rater reliability and validity information were not available, which represents a limitation of the study.

However, structured discussions were held with SLTs who routinely used the screening tool in practice to better understand the interpretation of the tool which is detailed below.

The screening tool comprised 19 items (see Appendix 1) completed either by school-based SLTs or by classroom teachers, who worked directly with the children on a day-to-day basis, allowing the screening to draw on detailed and sustained observations of children's functional communication in everyday contexts. The scores were entered by professionals into the LA database used in our study. The responses to each questionnaire item were provided by the school SLTs and/or teachers who worked with the children in care. Answers were coded as 0 = 'No', 1 = 'Sometimes', and 2 = 'Yes'. The scores for these 19 questionnaire items were summed to create a score ranging from 1 to 32. Higher scores equated to poorer language skills or difficulties, while lower scores represented better language skills. Creating a summed score is the way the scale is used by the clinicians in practice and is common for ongoing questionnaire items. The internal consistency of the language screening tool was acceptable (Cronbach's $\alpha = 0.68$). Item-level inspection indicated that items showing weaker performance were broad language functions, that is, those relating to difficulties understanding a range of words, using language to express emotions, explaining ideas or describing events, following spoken instructions (or following only part of them), and listening to extended spoken information. However, these items represent distinct receptive, expressive, and pragmatic language processes and were intentionally retained to maximise sensitivity to varied language vulnerability profiles in children in care. It is important to note that SLCN is a descriptive rather than a diagnostic term, and that the screening tool indicates clinical judgements of SLCN among children in care, rather than confirmed formal diagnoses.

The SLT team routinely use the screening tool scores, alongside clinical judgement to prioritise need using a 'Traffic Light System'. The 'Green' category represented children with no signs of SLCN, the 'Amber' category represented those who may have moderate SLCN, and the 'Red' category represented those children who clinicians felt may have more severe SLCN based on the questionnaire items. As expected, total language scores were highest (poorer) for the red group ($M = 25.27$, $SD = 4.8$) compared to the amber ($M = 20.03$, $SD = 3.18$) and green ($M = 16.33$, $SD = 1.63$) groups, and there was a significant difference between the mean scores ($F(2,75) = 40.054$, $p < 0.001$). Post-hoc testing analysis revealed significant differences between language scores of children across all traffic light groups ($p < 0.001$).

Educational attainments

Children's educational attainment scores were collected as routine data by schools and passed on to the LA to monitor children's overall progress. These scores were from routine teacher-based UK National Curriculum evaluations (pre-2016 scale) recorded by schools on English, Maths and Science subjects and were rated against expected achievement for age on a 1-8 scale.

Strengths and Difficulties Questionnaire (SDQ)

The Strengths and Difficulties Questionnaire (SDQ; Goodman et al., 1997) is a brief emotional and behavioural screening instrument often used for children and young people (Cameron et al., 2003; McCrae & Brown, 2017). It consists of 25 questions scored as 0 = 'never', 1 = 'sometimes' and 2 = 'always'. Item scores are summed to give a total score.

Missing data and analysis procedures

For the 78 children with language data, there were missing data for 20 participants on educational scores (26% of sample) and for 30 children on their SDQ scores (38% of sample). Missing data were addressed using listwise deletion, with analyses restricted to participants with complete data on the variables of interest. Therefore, any participant with missing data on language, educational attainment, or SDQ scores was excluded from the relevant analyses. There was no difference between those with and without educational scores on age ($t(76) = 0.99, p = 0.33$); gender (Fisher's exact $p = 0.62$); time in care ($t(73) = 0.23, p = 0.83$); placement type ($\chi^2(4) = 3.52, p = 0.48$); or total language scores ($t(76) = -0.79, p = 0.43$).

Similarly, no differences were found between those with and without SDQ scores (age ($t(76) = 0.36, p = 0.72$); gender (Fisher's exact $p = 0.81$); time in care ($t(73) = 1.01, p = 0.31$); placement type ($\chi^2(4) = 5.17, p = 0.27$); or total language scores ($t(76) = -0.68, p = 0.50$).

To examine prevalence against a typical distribution, one-sample chi square tests were used. For analysis of relationships, Pearson correlations were used because data was broadly normally distributed and the large sample size meant that parametric analysis was robust. Because this analysis is preliminary and not intended for further regression, we report simple main effects (r) and p values. All analysis was completed using SPSS v.29.

Results

RQ1: Based on language development screening of children in care in an inner-city borough, what proportion of the sample have SLCN?

The wider cohort comprised 141 children aged 5–14 years residing in out-of-home-care, with language screening data available for 78 participants. The proportion of the wider sample with SLCN according to the screening tool, was 41.1% which is significantly larger than the expected general population prevalence (using an inclusive $<1SD$ threshold = 16%) ($\chi^2(1, n = 141) = 79.447, p < 0.001$). Even so, this figure is conservative, as it assumes that none of the 63/141 unscreened children had SLCN. If 7% of the 63 unscreened children have SLCN (following Norbury et al, 2016), this proportion would rise to 43%. When the proportion analysis was repeated for the 78 children in care who had language screening data available, we found 56/78 (72%) scored as having SLCN (amber or red risk), representing an extremely high proportion compared to the general population (using a very inclusive cut off threshold of 16%) ($\chi^2(1, n = 78) = 14.821, p < 0.001$). However, note that these children had been screened due to reported concerns and was therefore pre-identified as “at risk,” which inflates prevalence. Using the more conservative estimate, our results here indicate that as a group, children in care are at least 4 times higher than the 7-10% rate of language and communication difficulties reported in the general population (Norbury et al, 2016). Note however, that population estimates are based on standardised clinical assessment and diagnostic classification, whereas our study utilised a risk-based screening approach.

RQ2: What is the relationship between children’s language abilities and their educational achievement and social and emotional outcomes?

Correlational analyses were used to investigate associations between educational achievement and language scores. Moderate associations were observed for English ($r = .38, p = .003, 95\% \text{ CI } [.14, .58], n = 58$) and mathematics ($r = .29, p = .026, 95\% \text{ CI } [.04, .51], n = 58$). The association between science attainment and language scores was of moderate magnitude but did not reach statistical significance. This was likely due to the small number of children with available science scores ($r = .36, p = .211, 95\% \text{ CI } [-.22, .74], n = 14$).

In terms of social and emotional outcomes a weak positive association was observed between total language scores and SDQ total scores ($r = .24, p = .023, 95\% \text{ CI } [-.05, .49], n = 48$),

indicating that higher language difficulty scores were associated with greater emotional and behavioural difficulties. While a statistically significant association was observed between SLCN and SDQ scores, the proportion of variance explained was modest, suggesting language may be one of several associated factors.

Discussion

Our study reports on one of the largest samples to demonstrate a high risk of SLCN among children in care. In this sample, 56 of 141 children (41.1%) screened positive for SLCN. By comparison, estimates of SLCN in the general population typically range from 7–10% (Norbury et al., 2016). Substantially higher rates, of up to 56%, have been reported among children from socioeconomically disadvantaged contexts (Law et al., 2011; Locke et al., 2002). However, these latter studies have primarily focused on younger children (3 years) than those in the current study (Eadie et al., 2014; Norbury et al., 2016; Tomblin et al., 1997). Although the 41.1% figure reported in the current study should not be interpreted as a stable or definitive prevalence estimate (given the reliance on a non-standardised screening tool and the inclusion of children who did not have screening scores available), this figure is likely to represent a conservative estimate of language vulnerability in this population.

A key finding of our study is that elevated levels of SLCN persist across a wide age range of children in care and span multiple domains, including expressive and receptive language, pragmatics and social communication, and also verbally-mediated cognitive skills. This pattern indicates that language vulnerability in this population is not confined to early childhood or to isolated aspects of language but represents a pervasive and enduring developmental challenge. These findings position SLCN as central to the developmental profile of children in care and highlight language as one of the key mechanisms underpinning their educational and social–emotional vulnerability, rather than a secondary or incidental concern.

While our findings support the co-occurrence of SLCN vulnerability with educational and social–emotional difficulties, the effect sizes observed in our study were generally small, indicating that the strength of these associations is modest and should therefore be interpreted with caution. Language is likely one of several factors in shaping development.

Taken together, our study adds to existing literature on non-looked after children with SLCN and the relationship between language, academic challenges (Conti-Ramsden et al., 2018;

Norbury et al., 2016), and social emotional difficulties (Botting et al., 2016; Holl, 2014). Indeed, growing up with language difficulties is known to associate with wider and long-term outcomes such as educational achievement and employment even into adulthood (Dubois et al., 2020). Although our results suggest only modest associations with educational attainment, and behavioural issues, it is important not to overlook the role of communication difficulties in this population.

It is the case that SLCN in children in care is best understood as arising from multiple, cumulative, and interacting risk factors, rather than from discrete or easily separable causes. These include the severity of maltreatment, the timing of ACEs, placement stability, and the availability of supportive caregiving and professional interventions (Higgins, 2004; Krier et al., 2017; Lum et al., 2015; Stacks et al., 2011; Sylvestre et al., 2016). There is substantial evidence that the frequency and cumulative impact of maltreatment experiences may be more salient predictors of later difficulties (e.g., Eigsti & Cicchetti, 2004; Savi-Karayol et al., 2025; Trout et al., 2011). In addition, several risk factors associated with SLCN overlap with those identified in other vulnerable populations such as impact of social disadvantage on language development (e.g., Pace et al., 2017).

An analysis of individual-level socioeconomic status was not possible in our study for several reasons, including missing data and restricted access to some children's records due to safeguarding considerations. As our study used an anonymised clinical dataset, detailed family demographic information was unavailable. Nevertheless, the LA from which the sample was drawn has over 30% of primary- and secondary-aged pupils eligible for free school meals. One recommendation from the study is that routinely collected data on children in care include demographic variables.

Additional factors might impact language skills other than social disadvantage. One such factor is likely to be the environments these children are raised in (both prior to being taken into care and during the care experience) which pose additional risks. Negative experiences of caregiver-child interactions and possible poor care in the out of home placements, including disruptions or instabilities, constitute major risks for language development (e.g., Hwa-Froelich, 2012). Parent-child interaction is considered in the broader literature to be a major factor explaining variability in rate of language development (Neppi et al., 2020). Much of the wider literature, outside the context of children in care, identifies parental sensitivity, active interaction, high-

quality verbal stimulation, and broader parenting knowledge as central to positive developmental outcomes (e.g., Donnellan, et al, 2020). Children in care face several adverse pre-care experiences, including limited early parent-child interactions, and parental neglect (DfE, 2023; Krier et al., 2017). Parental maltreatment is characterized by the absence of or interruption in the amount and quality of verbal and nonverbal communication (Sylvestre et al., 2016). Most of the children in care in the current study were in care for these very reasons. Hence, being born and raised in such an environment is more likely to pose considerable risk for language development. In identifying pathways to SLCN it would have been beneficial to have pre-care interaction data recorded by the LA in order for us to complete this analysis directly. A second possibility is that children in care have higher genetic likelihood of SLCN; and that this in turn increases risk of family breakdown. We did not have access to any information about biological families, but this warrants further investigation in future research. While associations between maltreatment, early parent-child interactions, and language development are theoretically plausible, the present analyses are correlational and therefore do not allow causal conclusions to be drawn.

Children in care are 10 times more likely to have a statement of educational need or an Education, Health and Care Plan (EHCP) compared to all other children (DfE, 2023). Language and communication skills may play a crucial role in this population's school readiness (Roulstone et al., 2011). SLCN frequently extends beyond structural aspects of language to include disruptions in pragmatic language use, such as understanding and engaging appropriately across diverse social contexts (Ketelaars et al., 2009). Consequently, underlying language needs are more likely to be overlooked within complex clinical and educational presentations. Disruption and instability in the early family environment may further compound these difficulties (Becker-Weidman & Hughes, 2008). In general, children from socioeconomically disadvantaged backgrounds are more likely to enter early education with limited oral language skills (Chiat & Roy, 2014; Dockrell et al., 2022; Law et al., 2017). For children in care, however, these language vulnerabilities frequently co-occur with experiences of maltreatment and broader adversities, highlighting the need to consider developmental language and child welfare perspectives in tandem. (Byrne et al., 2018; Coster et al., 1989; Lum et al., 2018; Segal & Collin-Vézina, 2019; Sylvestre et al., 2016).

A small number of studies also identify protective factors that support speech, language, and communication outcomes in the children in care population. For example, early entry into care

combined with stable foster care placements has been associated with improved language outcomes (Byrne et al., 2018; Coman & Devaney, 2011; Windsor et al., 2011). In addition, early speech, language, and communication assessment and intervention have been shown to lead to measurable improvements in language outcomes for children in care (Byrne et al., 2018; Windsor et al., 2011). Future research should prioritise longitudinal and intervention-focused designs that examine how SLCN are identified and addressed within existing services, and evaluate the effectiveness of coordinated, multidisciplinary approaches in supporting language development, social–emotional functioning, and broader life outcomes for this population.

Strengths and Limitations

Our study addresses a significant gap in understanding the language needs of children in care and their associations with educational and social–emotional outcomes as collected in routine practice. The use of a large secondary local authority dataset represents a key methodological strength, enabling group-level inclusion and reducing the selection bias inherent in opt-in recruitment and direct assessment designs when working with vulnerable populations. The approach used in the current study minimised additional assessment burden while safeguarding children with complex and multifaceted needs. At the same time, reliance on routinely collected local authority data presents challenges, including variability in recording practices and limited standardisation of care-related variables across authorities. Nevertheless, these findings demonstrate the value of secondary administrative data in illuminating patterns of SLCN vulnerability that are difficult to capture through traditional research designs.

Since this research was conducted during the COVID-19 pandemic, public health restrictions precluded the use of direct language assessments. Consequently, the clinical database scores could not be validated against direct language testing. This meant we had no control over measurement design, and have no formal measures of inter-rater reliability. Furthermore, a mix of SLTs and teachers completed the language screening. The inclusion of a broader and more objective battery of language measures would therefore strengthen future research. The language screening tool is primarily clinical in nature and was designed by professionals to maximise sensitivity rather than specificity, and as such prevalence estimates. Therefore, the results should be interpreted as indicative of potential risk rather than precise population-level prevalence. In addition, because the database was compiled during the course of regular clinical practice, it included missing data and variables that were not easily interpretable. For example, in the present dataset, reasons for children entering care were highly variable and not

consistently recorded. In addition, some data were missing because certain children's records were not accessible due to safeguarding restrictions¹, meaning that these variables could not be reliably interpreted. Given that existing literature highlights important care pathways including reason for entering and subsequent placement (Savi-Karayol et al., 2025), where future local authority databases would benefit from the use of standardised criteria and consistent terminology across services LAs.

Current perspectives on language disorder, including the CATALISE consensus, emphasise that co-occurrence with other forms of neurodiversity is common and should be accommodated rather than treated as exclusionary (Bishop et al., 2016). In our study, however, children with clinician-recorded diagnoses of autism, learning disabilities, or hearing impairment were not included in the analytic sample. We chose to exclude these children because we were interested in primary SLCN and the sample was drawn from a large, routinely collected clinical dataset in which inclusion and exclusion criteria were determined by clinicians as part of standard service categorisation and so we could not validate additional diagnoses. We do not suggest that children with co-occurring conditions fall outside contemporary definitions of language need. Rather, their exclusion reflects an analytical decision specific to this secondary data analysis and should not be interpreted as undermining the importance of their language needs, which are fully recognised within the CATALISE framework (Bishop et al., 2016). This approach may limit the representativeness of the analysed sample. Accordingly, the findings should be interpreted as applying to a clinically defined subgroup of children in care and are likely to underestimate the overall prevalence of SLCN within this population.

A final limitation of this study is the use of dual respondents (teachers and SLTs) in the language screening ratings. Although teachers received basic guidance from SLTs and no significant differences were found between ratings, differences in professional perspectives may have influenced outcomes. Additionally, as data collection was conducted independently, we had no control over training or consistency of implementation. In addition, our study draws on data from a single local authority, which may limit the generalisability of the findings to other regions, however the use of a routine dataset provides valuable real-world insight into

¹ We stated safeguarding reasons because background information for some children was not released to us due to the nature of their care status and the need to protect their personal safety. This reflects restrictions associated with safeguarding procedures, particularly given the sensitive nature of their maltreatment experiences and individual family circumstances.

SLCN within a complete local authority cohort. The interpretation of prevalence estimates and observed associations should be approached with caution, due to missing data and non-standardised measures. Our findings are intended to provide a foundation for future research highlighting language as an important issue for children in care.

Turning to strengths the current study demonstrated adequate internal consistency, and revealed clearly raised estimates of risk for SLCN, compared to rates expected in the general population (Norbury et al., 2016). It also provides ecologically valid insights into language vulnerability as identified within routine service contexts. The aim is to support the identification and referral of children at risk of SLCN within a highly vulnerable population. Another key strength of the secondary data approach adopted was that it was inclusive, and so most children served by one local authority were included. This reduced the selection bias commonly associated with opt-in consent procedures and direct assessment approaches in vulnerable populations. However, we acknowledge that co-occurring difficulties are common among children in care (e.g. autism, intellectual disability, and hearing impairment) and children whose primary diagnosis was not SLCN were excluded. This was a deliberately conservative approach that enabled us to estimate the prevalence of primary SLCN among children in care, within the limits of the available secondary dataset, while also protecting children with complex needs from unnecessary additional testing and research burden. Finally, although we note that the remaining sample sizes are somewhat limited, they are substantially larger and more inclusive than much of the existing evidence for this population.

Implications for clinicians, education and policy makers

The language difficulties experienced by children in care are often undetected and unmet. Our findings indicate SLCN are likely to play a critical role in educational attainment, social–emotional development, and mental health outcomes; and that these SLCN extend beyond speech and vocabulary difficulties to include pragmatic and context-dependent communication difficulties. In clinical, educational, and care settings, language difficulties may be overshadowed by co-occurring needs, increasing the risk of mislabelling or inappropriate diagnoses and delaying access to targeted support. The use of a non-standardised, clinically embedded language screening tool may be a useful way to identify the need for fuller assessment in practice and inform future research that draws on routinely collected local authority data.

Building on this, our findings have clear implications for education and policy. Staff working with children in care would benefit from compulsory, ongoing training to improve recognition of language difficulties and to support appropriate communication adjustments in practice. At a systems level, routine language screening at entry-into-care should be embedded within statutory health and developmental reviews with inclusion of SLTs within multidisciplinary review teams, ensuring that communication needs are considered alongside social, emotional, and educational factors. The adoption of standardised record formats across services would further facilitate consistent documentation, information sharing, and continuity of care, reducing the risk that children's SLCN are overlooked within fragmented systems. Collectively, our study findings highlight the need for coordinated processes, led by clinicians in collaboration with educators and service providers.

Conclusion

Our analysis of a large sample of children in care aged 5–14 years revealed a high prevalence of SLCN, which were associated with educational attainment, social and emotional outcomes in school. The causes for high rates of SLCN in this group could not be investigated from this dataset. However, the findings have implications for professionals working with children in care and highlight that communication is a key aspect of development that needs to be raised to the forefront of practice and policy.

References

- Asmussen, K., Law, J., Charlton, J., Acquah, D., Brims, L., Pote, I., & McBride, T. (2018). *Key competencies in early cognitive development: Things, people, numbers and words*. Early Intervention Foundation. Retrieved 24 December 2019, from <https://www.eif.org.uk/report/key-competencies-in-early-cognitive-development-things-people-numbers-and-words>
- Bryan, K., Garvani, G., Gregory, J., & Kilner, K. (2015). Language difficulties and criminal justice: the need for earlier identification. *International Journal of Language & Communication Disorders*, 50(6), 763-775.
- Becker-Weidman, A. & Hughes, D. (2008). Dyadic Developmental Psychotherapy: an evidence-based treatment for children with complex trauma and disorders of attachment: *Child & Family Social Work*, 13(3), 329-337
- Bywaters, P., Bunting, L., Davidson, G., Hanratty, J., Mason, W., McCartan, C., & Steils, N. (2016). The relationship between poverty, child abuse and neglect: an evidence review. <https://www.jrf.org.uk/child-poverty/the-relationship-between-poverty-child-abuse-and-neglect-an-evidence-review>. Retrieved 15 March 2025.
- Beitchman, J. H., Wilson, B., Johnson, C. J., Atkinson, L., Young, A., Adlaf, E., Escobar, M., & Douglas, L. (2001). Fourteen-year follow-up of speech/language-impaired and control children: *Psychiatric outcome*. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(1), 75-82.
- Beitchman, J., & Brownlie, E. (2010). Language development and its impact on children's psychosocial and emotional development. *Encyclopaedia on Early Childhood Development*. Retrieved 20 March 2020, from <http://www.childencyclopedia>.
- Bishop, D., Snowling, M., Thompson, P., & Greenhalgh, T. (2016). CATALISE: multinational and multidisciplinary Delphi consensus study. identifying language impairments in children. *PLOS ONE*, 11(7), 1-26
- Botting, N., Durkin, K., Toseeb, U., Pickles, A., & Conti-Ramsden, G. (2016). Emotional health, support, and self-efficacy in young adults with a history of language impairment. *British Journal of Developmental Psychology*, 34(4), 538-554.
- Cameron, F. J., Smidts, D., Hesketh, K., Wake, M., & Northam, E. A. (2003). Early detection of emotional and behavioural problems in children with diabetes: The validity of the Child Health Questionnaire as a screening instrument. *Diabetic Medicine*, 20(8), 646-650.
- Catts, H.W., Fey, M.E., Tomblin, J.B., & Zhang, X. (2002). A Longitudinal Investigation of Reading Outcomes in Children with Language Impairments. *Journal of Speech, Language, and Hearing Research*, 45(6), 1142-1157.
- Clegg J, Crawford E, Spencer S, et al. (2021). Developmental language disorder (DLD) in young people leaving care in England: A study profiling the language, literacy and communication abilities of young people transitioning from care to independence. *International Journal of Environmental Research and Public Health* 18(8): 1-19.
- Clegg, J., Stackhouse, J., Finch, K., Murphy, C., & Nicholls, S. (2009). Language abilities of secondary age pupils at risk of school exclusion: A preliminary report. *Child Language Teaching and Therapy*, 25 (1), 123-140.
- Conti-Ramsden, G., Durkin, K., Simkin, Z., & Knox, E. (2009). Specific language impairment and school outcomes. I: Identifying and explaining variability at the end of compulsory education. *International Journal of Language & Communication Disorders*, 44(1), 15-35.

- Conti-Ramsden, G., Mok, P., Durkin, K., Pickles, A., Toseeb, U., & Botting, N. (2019). Do emotional difficulties and peer problems occur together from childhood to adolescence? The case of children with a history of developmental language disorder (DLD). *European Child & Adolescent Psychiatry*, 28 (7), 993–1004.
- Conti-Ramsden G, Botting N. (2008). Emotional health in adolescents with and without a history of specific language impairment (SLI). *Journal of Child Psychology and Psychiatry*, 49(5):516-25.
- Conti-Ramsden, G., Durkin, K., Toseeb, U., Botting, N., & Pickles, A. (2018). Education and employment outcomes of young adults with a history of developmental language disorder. *International Journal of Language & Communication Disorders*, 53(2), 237–255. <https://doi.org/10.1111/1460-6984.12338>
- Cross, M. (1998). Undetected communication problems in children with behavioural problems. *International Journal of Language & Communication Disorders*, 33, 510–511.
- Cross, A. M. J., Marc, F., & Archibald, L. M. D. (2019). Mathematical abilities in children with developmental language disorder. *Language, Speech & Hearing Services in Schools*, 50(1), 150–163.
- Department for Education (2024). Children looked after in England including adoptions, reporting year 2024. GOV.UK. Retrieved January 10, 2024, from <https://explore-education-statistics.service.gov.uk/find-statistics/children-looked-after-in-england-including-adoptions/2025>
- Department for Education (2023). Children looked after in England including adoptions, reporting year 2022. GOV.UK. Retrieved March 22, 2023, from <https://explore-education-statistics.service.gov.uk/find-statistics/children-looked-after-in-england-including-adoptions>.
- Di Sante, M., Sylvestre, A., Bouchard, C., & Leblond, J. (2019). The Pragmatic language skills of severely neglected 42-month-old children: Results of the ELLAN Study. *Child Maltreatment*, 24(3), 244-253.
- Durkin, K., Mok, P.L.H. and Conti-Ramsden, G. (2013). Severity of specific language impairment predicts delayed development in number skills. *Frontiers in Psychology*, 4, 1-10.
- Dockrell, J., Ricketts, J. and Lindsay, G. (2012). Understanding speech, language and communication needs: Profiles of need and provision (2012). [online] Available at: <https://assets.publishing.service.gov.uk/media/5a80840ae5274a2e87dba411/DFE-RR247-BCRP4.pdf>.
- Dockrell, J., Lindsay, G., Roulstone, S., & Law, J. (2014). Supporting children with speech, language and communication needs: An overview of the results of the Better Communication Research Programme. *International Journal of Language & Communication Disorders*, 49(5), 543–557.
- Donnellan, E., Bannard, C., McGillion, M.L., Slocombe, K.E. & Matthews, D. (2020). Infants' intentionally communicative vocalizations elicit responses from caregivers and are the best predictors of the transition to language: A longitudinal investigation of infants' vocalizations, gestures and word production. *Developmental Science*, 23(1), 1–21.
- Dubois, P., St-Pierre, M. C., Desmarais, C., & Guay, F. (2020). Young adults with developmental language disorder: A systematic review of education, employment, and independent living outcomes. *Journal of Speech, Language, and Hearing Research*, 63(11), 3786-3800.

- Eadie, P. A., Youssef, G. J., Kohnert, K., & Reilly, S. (2015). Speech sound disorder at 4 years: Prevalence, comorbidities, and predictors in a population cohort. *Journal of Speech, Language, and Hearing Research*, 58(6), 1746–1759.
- Eadie, P.A., Snow, P.C., Stark, H.L., Sidoti, N., & Berndt, J. (2020). Language skills of vulnerable children with social, emotional, and behavioural difficulties: An Australian primary school sample. *Behavioural Disorders*, 46(4), 578-584.
- Evans, R., Brown, R., Rees, G., & Smith, P. (2017). Systematic review of educational interventions for looked-after children and young people: Recommendations for intervention development and evaluation. *British Educational Research Journal*, 43(1), 68-94.
- Evans, L., Scott, S., & Schulz, E. (2004). The need for educational assessment of children entering foster care. *Child Welfare League of America*, (6), 565-580
- Frederico, M., Jackson, A., Black, C., Cox, A., & Joffe, B. (2018). Small Talk: Identifying communication problems in maltreated children. *Child Abuse & Neglect*, 75, 139-148.
- Fyfe, E. R., Matz, L. E., Hunt, K. M., & Alibali, M. W. (2019). Mathematical thinking in children with developmental language disorder: The roles of pattern skills and verbal working memory. *Journal of Communication Disorders*, 77, 17–30.
- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A Research Note. *Journal of Child Psychology and Psychiatry*, 38(5), 581–586.
- Gupta, A. (2016). Children Looked After in England – Reflections on the Past, Present and Future. *Children Australia*, 40(4), 304–309.
- Halfon, N., Mendonca, A., & Berkowitz, G. (1995). Health status of children in foster care: The experience of the centre for the vulnerable child. *Archives of Paediatrics & Adolescent Medicine*, 149(4), 386- 392.
- Harrison, L., & McLeod, S. (2010). Risk and protective factors associated with speech and language impairment in a nationally representative sample of 4- to 5-year-old children. *Journal of Speech, Language, and Hearing Research*, 53 (2), 508-529.
- Hart, B., & Risley, T. (1995). The Early Catastrophe: The Thirty Million Word Gap. Retrieved 19 May 2020, from http://www.wvearlychildhood.org/resources/C-13_Handout_1.pdf
- Higgins, D. J. (2004). Differentiating between child maltreatment experiences. *Family Matters*, (69), 50-55.
- Hoff, E. (2006). How social contexts support and shape language development. *Developmental Review*, 26 (1), 55-88.
- Hollo, A., Wehby, J. H., & Oliver, R. M. (2014). Unidentified language deficits in children with emotional and behavioural disorders: A meta-analysis. *Exceptional Children*, 80(2), 169–186.
- Hwa-Froelich, D. (2012). Childhood Maltreatment and Communication Development. *Perspectives on School-Based Issues*, 13(2), 43-53.
- Jacobsen, H., Bergsund, H., Wentzel-Larsen, T., Smith, L., & Moe, V. (2020). Foster children are at risk for developing problems in social-emotional functioning: A follow-up study at 8 years of age. *Children and Youth Services Review*, 108, 1-10.
- Jones, R., Everson-Hock, E., Papaioannou, D., Guillaume, L., Goyder, E., & Chilcott, J. (2011). Factors associated with outcomes for looked-after children and young people: a correlates review of the literature. *Child: Care, Health and Development*, 37(5), 613-622.
- Ketelaars, M., Cuperus, J., Jansonius, K., & Verhoeven, L. (2009). Pragmatic language impairment and associated behavioural problems. *International Journal of Language & Communication Disorders*, 45 (2), 204-14.

- Krier, J., Green, T., & Kruger, A. (2018). Youths in foster care with language delays: Prevalence, causes, and interventions. *Psychology in Schools*, 55 (5), 523-538.
- Law, J., McBean, K. & Rush, R. (2011). Communication skills in a population of primary school-aged children raised in an area of pronounced social disadvantage. *International Journal of Language and Communication Disorders*, 46(6), 657-64.
- Law, J., & Charlton, J. (2017). Language as a child wellbeing indicator. Early Intervention Foundation. Retrieved 21 September 2021, from <https://www.eif.org.uk/report/languageas-a-child-wellbeing-indicator>.
- Levickis, P., Sciberras, E., McKean, C., Conway, L., Pezic, A., & Mensah, F. et al. (2017). Language and social-emotional and behavioural wellbeing from 4 to 7 years: a community-based study. *European Child & Adolescent Psychiatry*, 27 (7), 849-859.
- Lewis, B. A., Patton, E., Freebairn, L., Tag, J., Iyengar, S. K., Stein, C. M., & Taylor, H. G. (2016). Psychosocial co-morbidities in adolescents and adults with histories of communication disorders. *Journal of Communication Disorders*, 61, 60–70.
- Locke, A., Ginsborg, J., & Peers, I. (2002). Development and disadvantage: implications for the early years and beyond. *International Journal of Language & Communication Disorders*, 37(1), 3–15.
- Lum, J., Powell, M., Timms, L., & Snow, P. (2015). A meta-analysis of cross-sectional studies investigating language in maltreated children. *Journal of Speech, Language, and Hearing Research*, 58 (3), 961-976.
- Lum, J., Powell, M., & Snow, P. (2018). The influence of maltreatment history and out-of-home-care on children's language and social skills. *Child Abuse & Neglect*, 76, 65-74.
- McCormack, J., Harrison, L. J., McLeod, S., & McAllister, L. (2011). A nationally representative study of the association between communication impairment at 4–5 years and children's life activities at 7–9 years. *Journal of Speech, Language, and Hearing Research*, 54(5), 1328–1348.
- McCrae, J. S., & Brown, S. M. (2017). Systematic review of social–emotional screening instruments for young children in child welfare. *Research on Social Work Practice*, 28 (7), 767–788.
- McCool, S., & Stevens, I. (2011). Identifying speech, language and communication needs among children and young people in residential care. *International Journal of Language & Communication Disorders*, 46(6), 665-674.
- Meltzer, H., Lader, D., Corbin, T., Goodman, R., & Ford, T. (2003). The mental health of young people looked after by local authorities in Scotland. *International Reviews in Psychiatry*, 15(1-2), 185-187.
- Moreno-Manso, J., & García-Baamonde Sánchez y Macaren, M. (2009). Social adaptation and communicative competence in children in care. *Children and Youth Services Review*, 31(6), 642-648.
- Nathanson, D., & Tzioumi, D. (2007). Health needs of Australian children living in out-of home care. *Journal of Paediatrics and Child Health*, 43(10), 695-699.
- Neppl, T., Jeon, S., Diggs, O., & Donnellan, M. (2020). Positive parenting, effortful control, and developmental outcomes across early childhood. *Developmental Psychology*, 56 (3), 444-457.
- Norbury, C., Gooch, D., Baird, G., Charman, T., Simonoff, E., & Pickles, A. (2016). Younger children experience lower levels of language competence and academic progress in the first year of school: evidence from a population study. *Journal of Child Psychology and Psychiatry*, 57(1), 65-73.

- NSPCC Learning. (2024). *Children in care (looked after children): statistics briefing | NSPCC Learning*. [online] Available at: <https://learning.nspcc.org.uk/research-resources/statistics-briefings/children-in-care>.
- O'Higgins, A., Sebba, J., & Gardner, F. (2017). What are the factors associated with educational achievement for children in kinship or foster care: A systematic review. *Children and Youth Services Review*, 79,198–220.
- Pace, A., Luo, R., Hirsh-Pasek, K., & Golinkoff, R. (2017). Identifying Pathways Between Socioeconomic Status and Language Development. *Annual Review of Linguistics*, 3 (1), 285-308.
- Palmer, L., Front, S., Rebbe, R. and Putman-Hornstein, E. (2023). Lifetime rates and types of subsequent child protection system contact following a first report of neglect: An age-stratified analysis. *Plos One*, 1–13.
- Petranovich, C., Walz, N., Staat, M., Chiu, C., & Wade, S. (2017). Structural language, pragmatic communication, behavior, and social competence in children adopted internationally: A pilot study. *Applied Neuropsychology: Child*, 6(4), 315-326.
- Raaska, H., Elovainio, M., Sinkkonen, J., Stolt, S., Jalonen, I., & Matomäki, J. et al. (2013). Adopted children's language difficulties and their relation to symptoms of reactive attachment disorder: FinAdo study. *Journal of Applied Developmental Psychology*, 34(3), 152-160.
- Raby, K., Freedman, E., Yarger, H., Lind, T., & Dozier, M. (2018). Enhancing the language development of toddlers in foster care by promoting foster parents' sensitivity: Results from a randomized controlled trial. *Developmental Science*, 22 (2),1-9.
- Royal College of Speech and Language Therapy -Factsheet, (2018). *What are speech, language and communication needs?*<https://www.rcslt.org/wp-content/uploads/media/Project/RCSLT/rcslt-communication-needs-factsheet.pdf>
- Royal College of Nursing and the Royal College of Paediatrics and Child Health, R. (2015). Looked after children: Knowledge, skills and competences of healthcare staff. Rcpch.ac.uk. Retrieved 23 May 2020, from https://www.rcpch.ac.uk/sites/default/files/Looked_after_children_Knowledge__skills_and_competence_of_healthcare_staff.pdf.
- Roulstone, S., Law, J., Rush, R., Clegg, J., & Peters, T. (2011). Investigating the role of language in children's early educational outcomes. Assets.publishing.service.gov.uk. Retrieved 28 February 2020, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/181549/DFE-RR134.pdf.
- Roy, P., Chiat, S., & Dodd, S. (2014). Language and Socioeconomic Disadvantage: From Research to Practice. Briefing Paprr. Retrieved 19 July 2020, from https://openaccess.city.ac.uk/id/eprint/4989/1/Language%20and%20Socioeconomic%20Disadvantage%20Briefing%20Paper_3.pdf.
- Sebba, J., Berridge, D., Luke, N., Fletcher, J., Strand, S., & Thomas, S. et al. (2015). The educational progress of looked after children in England: Linking care and educational data. 8-35 Retrieved 17 December 2019, from <http://www.education.ox.ac.uk>
- Savi-Karayol, S., Botting, N., Kladouchou, V., & Morgan, G. (2025). Language Difficulties in Children and Young People Living in Care. *Child Language Teaching and Therapy*, 1-22,
- Semel E, Wiig EH, and Secord WA (2003) *Clinical Evaluation of Language Fundamentals (CELF-4)*, 4th UK ed. Oxford: Pearson.
- Schofield, G., Biggart, L., Ward, E., & Larsson, B. (2015). Looked after children and offending: An exploration of risk, resilience and the role of social cognition. *Children and Youth Services Review*, 51,125-133.

- Simkiss, D. (2012). Outcomes for looked after children and young people. *Paediatrics and Child Health*, 22 (9), 388-392.
- Snow, P., McLean, E., & Frederico, M. (2020). The language, literacy and mental health profiles of adolescents in out-of-home care: An Australian sample. *Child Language Teaching and Therapy*, 36 (3), 151-163.
- Snowling, M. J., Bishop, D. V. M., Stothard, S. E., Chipchase, B., & Kaplan, C. (2006). Psychosocial outcomes at 15 years of children with a preschool history of speech-language impairment. *Journal of Child Psychology and Psychiatry*, 47(8), 759–765.
- St Clair, M.C., Pickles, A., Durkin, K. and Conti-Ramsden, G. (2011). A longitudinal study of behavioural, emotional and social difficulties in individuals with a history of specific language impairment (SLI). *Journal of Communication Disorders*, 44(2), 186–199.
- Sylvestre, A., Bussi eres,  ., & Bouchard, C. (2016). Language problems among abused and neglected children. *Child Maltreatment*, 21(1), 47-58.
- Tomblin, J. B., Records, N. L., Buckwalter, P., Zhang, X., Smith, E., & O'Brien, M. (1997). Prevalence of specific language impairment in kindergarten children. *Journal of Speech, Language, and Hearing Research*, 40(6), 1245-1260.
- Trout, A., Huscroft-D'Angelo, J., DeSalvo, C., & Gehringer, R. (2011). The language functioning of youth at entry to residential treatment. *Residential Treatment for Children & Youth*, 28 (4), 269-282.
- Viner, R., & Taylor, B. (2005). Adult health and social outcomes of children who have been in public care: Population-based study. *Paediatrics*, 115(4), 894-899.
- Wren, Y., Pagnamenta, E., Peters, T. J., Emond, A., Northstone, K., Miller, L. L., & Roulstone, S. (2021). Educational outcomes associated with persistent speech disorder. *International Journal of Language & Communication Disorders*, 56(2), 299–312.
- Wise, J., Sevcik, R., Morris, R., Lovett, M., & Wolf, M. (2007). The relationship among receptive and expressive vocabulary, listening comprehension, Pre-reading skills, word identification skills, and reading comprehension by children with reading disabilities. *Journal of Speech, Language, and Hearing Research*, 50(4), 1093-1109.
- Windsor, J., Glaze, L., & Koga, S. (2007). Language acquisition with limited input: Romanian institution and foster care. *Journal of Speech, Language, and Hearing Research*, 50 (5), 1365-1381.
- Windsor, J., Benigno, J., Wing, C., Carroll, P., Koga, S., & Nelson, C. (2011). Effect of foster care on young children's language learning. *Child Development*, 82(4), 1040-1046.
- Zajac, L., Raby, K., & Dozier, M. (2019). Receptive vocabulary development of children placed in foster care and children who remained with birth parents after involvement with child protective services. *Child Maltreatment*, 24(1), 107-112.
- Ziegenfusz, S., Paynter, J., Fl uckiger, B., & Westerveld, M. F. (2022). A systematic review of the academic achievement of primary and secondary school-aged students with developmental language disorder. *Autism & Developmental Language Impairments*, 7, 23969415221099397.

Appendix 1

LA Language Difficulties Screening Tool

1. Have difficulty listening to spoken information?
2. Have difficulty paying attention to spoken information?
3. Have difficulty paying attention and following an adult led activity?
4. Have difficulty remembering things people say?
5. Have difficulty following spoken instructions or only follow part of them?
6. Have difficulty understanding a range of words?
7. Needs regular repetition of information.
8. Have difficulty thinking of the words s/he wants to say or use very simple/non-specific words?
9. Have difficulty explaining their ideas or describing events?
10. Have difficulty understanding a range of questions?
11. Have difficulty answering a range of questions?
12. Is their speech difficult to understand?
13. Have no/limited imaginative or pretend play?
14. Have difficulty interacting with peers?
15. Appear frustrated or anxious when there is an unexpected change or transition?
16. Have difficulty understanding or using non-verbal communication?
17. Have difficulties using language to express their emotions?
18. Often misinterpret information you have said?
19. Have difficulties with time concepts?