What is the prevalence of primary and secondary types of Special Educational Needs (SEN) in the City of Sunderland?

A national comparative analysis of school census data.

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Executive summary

This report is a commission from Together for Children (TfC) to the University of Sunderland, School of Education. It presents the results from a series of descriptive and inferential analyses using Sunderland school census data from the years 2014-2019 and the publicly available data published by the Office for National Statistics (ONS) for England of the same years.

The purpose of this report and the analyses that will follow is to allow Together for Children (TfC) to better understand the demography of children with Special Education Needs and Disability (SEND) in Sunderland and how they relate and compare to the national picture overall. Specifically, this research will examine the incidence rates of Social, Emotional and Mental Health (SEMH), Autism Spectrum Disorders (ASD), Moderate Learning Difficulties (MLD) and Specific Learning Difficulties (SpLD) alongside other areas of exceptionality.

Across the City of Sunderland, the total number of children and young people with Special Educational Needs and Disabilities (SEND) continues to rise year on year. Analysis of school census data is crucial as intelligence is necessary for effective planning and commissioning of services. This insight would also allow for anticipatory and timely implementation of training across a local area.

The key findings arising from the analysis of the school census data are illustrated below. They include the following headings overall SEN population, primary and secondary type of need (SEN), SEN by key stages, SEN by gender and comparisons of Sunderland rates to national. A combination of descriptive and inferential statistical analyses was employed and the main findings are as follows:

Overall numbers of children in the SEN population in Sunderland

The number of children aged 3-18 years in Sunderland with SEN status has risen for the 5th consecutive year from 2014/15. As of 2018/19, approximately 15.94% of the total child population in Sunderland have an identified SEN.

Primary type of need (SEN) in Sunderland (3-18 years)

In 2018/19 the four most prevalent primary type of need in Sunderland are Moderate Learning Difficulty (MLD) (1,477), Social Emotional Mental Health (SEMH) (1,356), Speech Language Communication Needs (SLCN) (1,295) and Autism Spectrum Disorder (ASD) (1,198).

ASD showed the highest increase from 2014/15, where 710 children were identified as having a diagnosis. In five years, this number has increased to 1,198 children in 2018/19.

Compared to the previous year in 2017/18, there is a reduction in the prevalence of SLCN and Specific Learning Difficulties (SpLD).

Secondary type of need (SEN) in Sunderland (3-18 years)

Like primary type of need, the number of children with a secondary type of need has increased for the fifth consecutive year (albeit by a significantly smaller margin). In 2014/15, 1,346 children had a secondary type of need, in 2018/19 this figure rose to 1,748.

ASD saw the largest rise from 2014/15, where 67 children were identified as having a diagnosis. In five years, this figure has risen to 208 children in 2018/19. SLCN also increased by 156 children to 482 in 2018/19.

The number of children with SpLD in 2014/15 is similar to figures from 2018/19 (76 and 79 respectively); however, it represents a decrease in prevalence overall as the population size has increased.

Primary type of need: SEN in Sunderland compared to England (5-18 years)

In Sunderland, the four most prevalent SEN are MLD (23.23%), SEMH (20.26%), SLCN (18.72%) and ASD (18.34%). Whereas nationally the four most prevalent SEN are MLD (21.61%), SLCN (21.15%), SEMH (16.58%), SpLD (12.64%).

Key stage comparisons: SEN support in Sunderland compared to England (5-18 years)

The four most prevalent SEN in Early Years Foundation Stage (EYFS) in Sunderland are SLCN (52.07%), ASD (15.77%), SEMH (12.24%) and MLD (8.51%). Nationally, the most prevalent SEN in EYFS are SLCN (59.09%), SEMH (12.24%), MLD (7.77%) and ASD (6.72%). Of these types of SEN, Sunderland has significantly higher rates of ASD compared to national (+44 cases).

Key Stage 1 (KS1), the four most prevalent SEN in Sunderland are SLCN (38.37%), MLD (21.79%), SEMH (17.14%) and ASD (15.77%). Whereas nationally, the four most prevalent types of SEN are SLCN (40.69%), MLD (19.78%), SEMH (14.91%) and SpLD (5.60%). Similarly to EYFS, Sunderland has significantly higher rates of ASD compared to national (+61 cases).

Key Stage 2 (KS2) has the greatest proportion of SEN across key stages of Education in Sunderland. The four most prevalent needs are MLD (29.09%), SLCN (21.75%), SEMH (19.77%), and ASD (12.38%). Nationally the four most prevalent types of SEN follow a similar pattern of MLD (28.42%), SLCN (20.34%), SEMH (18.10%); however, SpLD (13.78%) ranks fourth in place of ASD. There are significantly higher rates in Sunderland of ASD (+155 cases) and lower rates of SpLD (-154 cases) and NSA (-62 cases).

In Key Stage 3 (KS3) in Sunderland the four most prevalent SEN are MLD (31.25%), SEMH (27.92%), ASD (12.25%) and SpLD (10.00%). Whereas nationally, MLD (26.11%), SpLD (21.57%), SEMH (19.62%) and SLCN (10.46%) are the most prevalent. Sunderland has significantly higher rates of SEMH (+99 cases) , ASD (+63 cases) and MLD (+62 cases) and lower rates of SpLD (-139 cases).

In Key Stage 4 (KS4) in Sunderland the four most prevalent SEN are MLD (28.38%), SEMH (26.91%), SpLD (17.21%) and ASD (12.21%). Nationally the four most prevalent types of SEN represent different proportions, with SpLD (24.95%), MLD (23.76%), SEMH (19.92%), and SLCN (8.78%). There are significantly higher rates in Sunderland of SEMH (+48 cases) and ASD (+35 cases) and lower rates of SpLD (-53 cases). In Key Stage 5 (KS5) in Sunderland, the two most prevalent SEN categories are SEMH (27.91%), SpLD (25.58%). Nationally the ranking is reversed as SpLD (31.45%) and SEMH (16.74%) are the most prevalent.

Key stage comparisons: SEN with EHCPs in Sunderland compared to England (5-16 years)

In 2018/19, 1,133 children in Sunderland have an EHCP, 2.4% of the entire child population. Nationally the percentage of children with an EHCP is 2.9%. The most prevalent needs in Sunderland are ASD (41.67%), SLD (20.83%) and PMLD (14.58%). Nationally these are ASD (33.94%), SLCN (18.68%) and SLD (13.34%).

KS1, the most prevalent needs in Sunderland are ASD (54.20%), SLD (11.45%) and SLCN (9.16%). Whereas nationally, ASD (34.09%), SLCN (19.41%) and SLD (12.98%) are the most prevalent. Furthermore, there are significantly higher rates of ASD (+26 cases) in this group and lower rates of SpLD (-13 cases) in Sunderland.

KS2, the most prevalent needs in Sunderland are ASD (49.54%), SEMH (13.68%) and SLD (13.68%) compared to ASD (28.77%), SLCN (16.91%), SEMH (13.22%) and SLD (11.98%) nationally. There are significantly higher rates of ASD compared to national (+68 cases) and lower rates of SLCN (-25 cases) and MLD (-22 cases) for this key stage.

KS3, the most prevalent needs in Sunderland are ASD (46.32%), SEMH (18.61%) and MLD (9.96%). Whereas nationally it is ASD (26.08%), SEMH (16.71%), MLD (15.08%) and SLCN (12.83%). In KS3, there are significantly higher rates of ASD (+47 cases) and lower rates of SpLD (-9 cases) compared to national data.

For KS4 in Sunderland, ASD (40%), SEMH (25.88%), and MLD (11.18%) are the most prevalent types of need. Nationally the most prevalent SEN are the same (with the addition of SLCN) however they represent different proportions ASD (24.96%), SEMH (17.58%), MLD (16.70% and SLCN (12.23%). There are significantly higher rates of

ASD (+26 cases) in KS4 and lower rates of SpLD (-15 cases). In Sunderland, KS5 has the fewest children with EHCPs with ASD accounting for (58.49%) and SEMH (18.87%) the two most prevalent needs.

Gender comparisons (SEN Support children 5-18 years)

Across the age phases and all SEN designations in Sunderland, for boys, there are significantly higher rates of ASD and SEMH, and lower rates of MLD, SpLD, HI and PD. The opposite trend is observed for girls in Sunderland, where there are higher rates of MLD, SpLD, HI and PD and lower rates of ASD and SEMH.

Compared to national data for boys, boys in Sunderland have significantly higher rates of ASD (+281 cases) and SEMH (+128 cases) and lower rates of SpLD (-255 cases) and NSA (-104 cases). When analysing girls with designated SEN support in Sunderland, compared to the national data for girls, there are significantly higher rates of SEMH (+78 cases), ASD (+74 cases) and MLD (+63 cases) and lower rates of SpLD (-143 cases) and NSA (-56 cases).

A note on the analysis

It is important to consider that while comparisons to national rates are useful, the constituent local authorities that make up the national average will vary. Some local authority data will naturally fall above, below or similar to the national rates and are not necessarily cause for concern. This is true of Sunderland, however by benchmarking to the national rates, this report provides an evidence base for local policy development and cross-sectional provision planning for meeting the varying needs of children in Sunderland.

Recommendations

Recommendation 1: Due to the significantly higher rates of ASD in Sunderland among girls and boys there needs to be an audit of local services to ensure adequate support systems exist for caregivers and children with ASD, from early years to adulthood. TfC and stakeholders from education, health and social care should explore whether training needs to be provided for all staff to ensure evidence-based approaches are being consistently applied in practice.

Recommendation 2: For TfC to carry out a sample audit of children identified with MLD to understand the range of needs and to determine how they are being identified and assessed. This should be followed by Citywide training to develop a shared understanding of the identification and assessment of MLD.

Recommendation 3: Due to the high prevalence of SLCN in Sunderland in the early years, the process and reporting arrangements for the two-year progress check needs to be audited to ensure they are robust and timely in identifying and sharing concerns with multi-disciplinary teams.

Recommendation 4: As there continues to be a year-on-year increase in some types of SEN such as SEMH and ASD, it is advised that school census data is used by services to proactively forecast and plan for the diverse and holistic needs of children with SEN across multi-disciplinary teams.

Recommendation 5: In light of the low rates of SpLD in females and males, TfC should evaluate the effectiveness and impact of arrangements for identifying and assessing SpLD across the age phases. This will allow them to understand if the low prevalence is due to children not being identified.

Recommendation 6: There is a low prevalence of 'SEN support but no specialist assessment of type of need' (NSA) across all age ranges in Sunderland. This could be indicative of the fast processes in place from when a concern is raised about a child's learning when a child receives an assessment. However, it could also be indicative of hesitance surrounding SEN identification. It is not possible based on the current analysis of data within this report to determine which explanation reflects Sunderland.

National recommendation: National guidance is needed for schools to provide a reliable and evidence-based definition of MLD with clear identification, assessment and approaches to supporting this group of children. Consideration needs to be given to whether this classification should continue or whether 'learning disability' as diagnosed by health services would be more useful.

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Publications:

Martin-Denham, S. and Donaghue, J. (written for submission) 'The impact and measure of Adverse Childhood Experiences: Reflections of undergraduates and graduates in England.'

Martin-Denham, S. (2020) *'A review of school exclusion on the mental health, well-being of children and young people in the City of Sunderland.'* Sunderland: University of Sunderland.

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Martin-Denham, S. (2020) *'The enablers and barriers to successful managed moves: The voice of children, caregivers and professionals.'* Sunderland: University of Sunderland.

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Publications:

Deacon, L., Macdonald, S. and Donaghue, J. (forthcoming). *'What's wrong with you, are you stupid?" Listening to the biographical narratives of adults with dyslexia in an age of 'inclusive' and 'anti-discriminatory' practice'*, Disability and Society

Martin-Denham, S. and Donaghue, J. (written for submission) 'The impact and measure of Adverse Childhood Experiences: Reflections of undergraduates and graduates in England.'

Martin-Denham, S. and Donaghue, J. (2020) '*A review of fixed-period and permanent school exclusions in children with SEN and no SEN designation in the City of Sunderland.'* Sunderland: University of Sunderland.

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Martin-Denham, S., Benstead, H., Donaghue, J. and Ripley, S. (2017) *'The prevalence of Special Educational Needs and Disabilities (SEND) identified in young people, aged 3-16, across the City of Sunderland.'* Sunderland: University of Sunderland.

Glossary of acronyms

AES Advanced Encryption Standard

ADHD Attention Deficit Hyperactivity Disorder

ASD Autism Spectrum Disorder

DCD Developmental Coordination Disorder

DfE Department for Education

DPIA Data Protection Impact Assessment

EHCP Education Health and Care Plan

EYFS Early Years Foundation Stage

GDPR General Data Protection Regulation

HI Hearing Impairment

HIV Human Immunodeficiency Virus

ICO Information Commissioner's Office

IQ Intelligence Quotient

KS1-4 Key Stage 1-4

MLD Moderate Learning Difficulty

MSI Multi-Sensory Impairment

NAO National Audit Office

NICE The National Institute for Health and Care Excellence

NSA SEN support but no assessed type of need

ONS Office for National Statistics

OTH Other Difficulty/Disability

PD Physical Disability

PMLD Profound and Multiple Learning Difficulty

SEMH Social, Emotional and Mental Health

SEN Special Educational Need

SEND Special Education Needs and Disability

SEP Special Educational Provision

SIRO Senior Information Risk Officer

SLCN Speech, Language and Communications Needs

SLD Severe Learning Difficulty

SpLD Specific Learning Difficulty

TfC Together for Children

UPN Unique Pupil Number

VI Visual Impairment

WHO World Health Organisation

Glossary of terms

Binomial Test: A test that examines whether the observed results of a binary outcome significantly differ from what is expected.

Bonferroni Correction: A conservative correction that controls for the increased risk of making a Type 1 error when carrying out multiple tests on similar data.

Chi-Square Test for Association: A statistical test that examines whether there is an association between two variables.

Chi-square Test Goodness of Fit: A statistical test that examines whether the observed distribution of a variable is significantly different from the expected distribution.

Classification of Primary Need: When children and young people are entered onto the Special Educational Needs register they are entered for their primary need

Descriptive Statistics: A term used to describe, summarise and show the basic details of numerical data.

Early Years Foundation Stage: The framework for the learning, development and care of children from birth to five years.

Education Health and Care Plan: Details the education, health and social care support that is to be provided to a child with SEN and/or disabilities

Inferential Statistics: Refer to statistical analyses that test hypotheses by analysing data generated by a smaller sample of the population of interest.

Local Authority: Leading integration arrangements for children with SEND.

Omnibus Test: A statistical test that is designed to detect broad differences.

Post Hoc Tests: A series of exploratory follow-up tests that are used to determine specific differences following a planned (omnibus) test.

Prevalence: How common a type of exceptionality is within a population, either at a point in time or over a given time.

Primary Type of Need: This is the most prominent SEN a child has that affects their learning

School Census: The School Census (formerly known as the pupil level annual census) is a statutory census which collects information about pupils and schools, including all local authority, maintained schools, some non-maintained academies including alternative provision.

Secondary Type of Need: This is the second most prominent SEN a child has that affects their learning.

SEN Support: Extra or different support that is provided in addition to the school's usual curriculum.

Special Educational Needs Coordinator (SENCO): A qualified teacher in a school or maintained nursery school who has responsibility for coordinating SEN provision

Special Educational Needs: A child has an SEN if they have a learning difficulty or disability which calls for special educational provision to be made

Stakeholder: An organisation/individual with interest in a topic, including public sector providers and commissioners of care or services.

Type 1 Error: Is the erroneous belief following a statistical test, that a genuine effect has been found when there is none.

1. Introduction

1. Introduction

1.1. Rationale for the report

This research was commissioned by Together for Children (TfC) following the findings from the Martin-Denham et al. (2017) publication which highlighted higher than the national prevalence of particular primary types of Special Educational Needs (SEN). It reported that for children in Sunderland with an Education Health and Care Plan (EHCP) those categorised with Social, Emotional and Mental Health Needs as their primary type of need was +14.03% higher than the national rate. TfC were interested in whether the increase continued for SEMH and other primary and secondary types of SEN in 2018/19. It is the aim to use the findings and recommendations from this report to inform the strategic plan for the next five years. This would include transforming how services are commissioned to benefit children with Special Educational Needs and Disabilities (SEND).

1.2. Context: Sunderland

The city of Sunderland lies on the North East coast of England and has a long and illustrious history of shipbuilding, heavy engineering and glass-making (Short and Fundinsland-Tetlow, 2012). Sunderland lies at the mouth of the River Wear and is one of the principal waterways, and it is the regions second-largest city. Overtime, Sunderland has grown from being a small trading port into a large industrial city due to rural-urban migration within the region, high birth rates and historic immigration from Ireland and Scotland (Cookson, 2015). The 2011 census (Nomis, 2019) states that the total number of residents in Sunderland was 275,506, within the City 39.9% of households had no adults currently in employment.

1.3. Research question

What is the prevalence of primary and secondary types of Special Educational Needs (SEN) in the City of Sunderland, and how does it compare to National data?

1.4. Aims and objectives

The project had the following aim and objectives:

Aim

This research aimed to analyse the prevalence of SEN across the City of Sunderland through an examination of school census data from 2014-2019 and to benchmark the prevalence by providing a comparison to the national data.

Objectives

- To calculate and assess local prevalence rates of Special Educational Needs (SEN) with comparisons to the national picture.
- To determine over and under-represented types of SEN for those designated as SEN support or with an Education Health and Care Plan (EHCP) across the key stages of education and gender.
- To produce a report with supporting evidence to inform provision planning and training for education professionals within the local area of Sunderland.
- To propose recommendations to Together for Children as a response to the prevalence of SEN across age phases and types of SEN.

2. Background

2. Background

The school census is a statutory census that takes place every Autumn, Spring and Summer term (DfE, 2019). There are two elements 'school' and 'pupil' each having modules of data that relate to a theme or topic such as the number of children with SEN, SEN provision, SEN type, exclusion category and exclusion reason (ibid). The guidance clarifies that the 'pupil SEN type ranking' of SEN collects their most significant or primary need as '1' with any secondary need '2'. An issue with this system is that it only collects two needs and not the multi-faceted needs of the population. There is an expectation that schools identify a type of need for all children at SEN support but there is no requirement for them to have a specialist assessment to be recorded in the primary SEN type. There is a 'No Specialist Assessment' (NSA) code which should be used in rare instances. There is an expectation that schools are assessing for a primary need and it can only be used when there is a special educational provision in place.

2.1. What are special educational needs?

A Special Educational Need (SEN) is defined as:

A child or young person who has a learning difficulty or disability, which calls for special educational provision to be made for him or her.

A child of compulsory school age or a young person has a learning difficulty or disability if he or she:

- has significantly greater difficulty in learning than the majority of others of the same age,

or

- has a disability which prevents or hinders him or her from making use of facilities of a kind generally provided for others of the same age in mainstream schools or mainstream post-16 institutions (DfE, 2015).

2.2. What is a disability?

The Special Educational Needs and Disability (SEND) Code of Practice (DfE, 2015) shares a definition of disability, which draws upon the Equality Act (2010). This explains that children have a disability if they present with ' a physical or mental impairment which has a long-term and substantial adverse effect on their ability to carry out normal day-to-day activities' (p. 135). This definition provides a relatively low threshold for disability. It includes more children than many realise: 'long-term' is defined as 'a year or more' and 'substantial' is defined as 'more than minor or trivial'. The following needs are automatically treated as a disability under the Equality Act (2010) cancer, Human Immunodeficiency Virus (HIV), multiple sclerosis, severe disfigurement and if you are certified blind or have severe challenges with your sight as confirmed by a consultant ophthalmologist. For other physical and mental health conditions, it depends on the effect on daily life and includes:

- Sight or hearing
- Heart disease and asthma
- Learning disabilities
- Learning differences such as dyslexia and dyspraxia
- Autism
- Depression, schizophrenia, bipolar affective disorders, eating disorders, obsessive-compulsive disorders.
- Difficulties due to brain injury

If a child with a disability also requires Special Educational Provision (SEP), they will also be covered by the SEN definition.

Special Educational Needs (SEN) support and Education Health and Care Plans

The National Audit Office (NAO) (2019) note that on January 2019 20.6% of children had legally enforceable entitlements to packages of support which were set out in education, health and care plans (EHC plans). Almost half of these (47.9%) attended mainstream schools. Likewise,

79.4% of children with SEND did not have an EHC plan but were identified as accessing additional support (SEN support) and 91.6% attended mainstream schools.

2.3. The four broad areas of need

There are four broad areas outlined in the SEND code of practice (DfE, 2015). The Code clarifies that many children will present with challenges in more than one of the four areas, some children will have difficulties in all and in many cases, their needs will change over time.

2.3.1. Communication and interaction

Children identified with Speech Language and Communication Needs (SLCN) may display difficulties in communicating with others, saying what they want to do, understanding what is being said, or being unable to interpret social rules of communication (DfE, 2015). They may have challenges with one, some, or all of the different aspects of SLCN at different times of their lives. Children who are identified with autism are likely to present specific difficulties with social interaction and language, communication and imagination, which can impact on how they relate to others (ibid).

2.3.2. Cognition and learning

The DfE (2015) Code clarifies that this category includes general learning difficulties and disabilities which impact on learning across the curriculum such as Moderate Learning Difficulties (MLD), Severe Learning Difficulties (SLD), Profound and Multiple Learning Difficulties (PMLD), where children are likely to have severe and complex learning challenges as well as physical disability or sensory needs. This area of need also includes specific learning difficulties (SpLD) also known as children who are neurodiverse, who encounter more specific difficulties with aspects of learning such as literacy (Dyslexia), numeracy (Dyscalculia) or motor coordination Developmental Coordination Disorder (DCD).

2.3.3. Social, emotional and mental health difficulties

This category represents a radical change in SEND policy, as it acknowledged mental health needs as SEN for the first time (Martin-Denham and Watts, 2019). The Code (DfE, 2015) explains that children may experience a wide range of Social, Emotional, Mental Health (SEMH) difficulties throughout their childhood and adolescence, which can manifest in different ways. This may include becoming withdrawn or isolated, as well as displaying challenging, disruptive or disturbing behaviour. These behaviours may reflect underlying mental health difficulties such as anxiety or depression, self-harming, substance misuse, eating disorders or physical symptoms that are medically unexplained. Other needs that fall under the broad area of SEMH may include Attention Deficit Disorder(ADD), Attention

2.3.4. Sensory and/or physical needs

In this broad area of need, children are identified with a disability which prevents or hinders them from making use of the educational facilities. The Code (DfE, 2015) explains that these difficulties are often age-related and can fluctuate over time. Many children with a Visual Impairment (VI), Hearing Impairment (HI), or a Multi-Sensory Impairment (MSI) will require specialist support and/or equipment to access their learning. Children identified with a Physical Disability (PD) often need additional ongoing support and equipment to access all of the opportunities available to their peers.

2.4. Social, Emotional and Mental Health

The World Health Organisation (WHO) (2018, p. 12) define mental health as ‘a state of well-being in which the individual realises his or her abilities, can cope with the normal stresses of life, can work productively and fruitfully, and can contribute to their community’. They propose that children and young people may have SEMH difficulties which are due to exposure to adversity from at a young age and/or during childhood which we know is a preventable risk

factor. Parkinson (2012, p.12) argues that mental health is a much-debated concept, with no universally accepted definition or terminology consistency in use. She further discussed complexities over the use of language as education professionals will often refer to social and emotional well-being and resilience. In contrast, health colleagues use the term 'mental health.'

Mental health difficulties encompass a wide range of mental and behavioural difficulties described in the International Statistical Classification of Diseases (ICD) and Related Health Problems (10th and upcoming 11th edition, ICD-10 and ICD-11). These include depression, bipolar affective disorder, schizophrenia, anxiety disorders, substance misuse, intellectual disabilities, developmental and behavioural difficulties that typically arise from childhood through adolescence, including autism. The Department of Health (2015) propose that mental health needs range from short spells of depression and anxiety through to severe and persistent conditions which can isolate, disrupt and frighten those who are experiencing them.

Davies (2018, p. 39) states that young people's mental health and wellbeing is now a primary concern to policymakers with a predominant focus on early identification and treatment services for mental illness, rather than promotion and maintenance of good mental health. In 2018, there were 389,727 active referrals to mental health services in England for those 18 or younger (Joseph Rowntree Foundation, 2017).

2.4.1. Rising rates of Social, Emotional and Mental Health Needs

NHS England (2017) report that 1 in 10 children have a mental health need. Evidence also indicates that half of all mental health problems emerge before the age of 14 and three quarters by the age of 25 (Kessler et al., 2005). The World Health Organisation (WHO) (2018, p. 7) suggest that mental health can be affected by a range of socio-economic factors and that Governments need a strategy for promotion, prevention, treatment and recovery. NHS Scotland (2017) report that half of all lifetime mental conditions start by the mid-teens and three-quarters by the mid-20s. There is growing evidence that this may be at a younger age commencing within primary school ranges and escalating in adolescence when more children seek support or are referred by parents/carers or professionals for support. Department of Health (DoH) (2015) indicates that many mental health challenges show their signs in childhood and if left untreated can develop into conditions which require regular care. It was reported by the Office for National Statistics (ONS) (2014) that one in six adults surveyed in England meets the criteria for a common mental health need, with females more likely to report symptoms compared to men. Adversity and multiple disadvantages in childhood, as well as abuse and neglect, parenting approaches and parental health problems, are some of the factors associated with an increased risk of mental health problems in both childhood and adulthood (Martin-Denham and Watts, 2019). A recent report by Action for Children (2019) found that 29% of young people are worried about their mental health and that three-quarters of young people have worries that impact them daily.

2.5. Moderate Learning Difficulties

Neurodiversity is the term used to encompass all specific learning differences (SpLD), many of which co-exist or overlap (British Dyslexia Association, 2019). This includes Attention Deficit (Hyperactivity) Disorder, Autism Spectrum Disorder (ASD), Dyscalculia and Dyspraxia. The distinction is that specific learning difficulties do not affect intellect but do affect the way information is processed and learned. As Mencap (2019) clarify a learning disability is different from a learning difficulty as a learning difficulty does not affect general intellect.

In 2012 Norwich et al. noted that the concept of 'moderate learning difficulty' was not clearly understood in both definition and general use. In 2003 the DfES (p. 3), released formal definitions for eleven categories of SEN to

enable reliable reporting in school census data, MLD was defined as:

'Pupils with MLD will have attainments significantly below expected levels in most areas of the curriculum, despite appropriate interventions. Their needs will not be met by normal differentiation and the flexibilities of the national curriculum. They should only be recorded as MLD if an additional educational provision is being made for them. Pupils with MLD have much greater difficulty than their peers in acquiring basic literacy and numeracy skills and understanding concepts. They may also have associated speech and language delay, low self-esteem, low levels of concentration and under-developed social skills'.

The historic Government Department for Education and Skills (DfES) (2003) did not specify a relationship between the Moderate Learning Difficulty (MLD) definition and intellectual functioning. However, MLD had been seen to relate to an IQ score of 51-70 (Fredrickson and Cline, 2009). The debate on the identification of MLD in terms of whether to classify children according to how their attainment differs to others or whether to take into account intellectual functioning measured through IQ tests has continued (Norwich et al., 2012). Currently, MLD is included in one of the four broad areas of need 'cognition and learning' in the Code of Practice (DfE, 2015). Ofsted (2010) acknowledged variance in how similar needs were identified depending on the local area and schools they attend. They also suggested that some low attainment was due to poor teaching and low expectations rather than intellect. The ongoing concern is that Special Educational Needs Co-ordinators (SENCOs) can assign this category of need without any formal identification or assessment (Martin-Denham and Watts, 2019).

The DfE Code (2015) suggests that support for learning difficulties may be required when children and young people learn at a slower pace than their peers, even with appropriate differentiation and quality first teaching. Learning difficulties cover a wide range of needs, including Moderate Learning Difficulties (MLD), Severe Learning Difficulties (SLD), where children are likely to need support in all areas of the curriculum. They also include associated difficulties with mobility and communication, through to Profound and Multiple Learning Difficulties (PMLD), where children are likely to have severe and complex learning difficulties. It was the Warnock Report (DES, 1978) which signalled the current system of the terminology MLD, SLD and PMLD. These new categories intended to indicate a positive shift from medical terms to learning needs. Tomlinson (1982) clarified that it was the term 'educationally subnormal' that MLD replaced though there was no distinction given between MLD, SLD and PMLD.

The British Institute of Learning Disabilities (BILD) (2018) clarified that internationally three criteria are required to be met before a learning 'disability' can be identified or diagnosed; these are:

- a moderate, severe or profound learning difficulty
- An IQ of less than 70
- Early-onset

An Intelligence Quotient (IQ) score is used by health professionals and educational psychologists to assess the presence and degree of learning disability but an IQ score should not be used as a stand-alone measure (Martin-Denham and Watts, 2019). For some time, Norwich et al. (2014) have suggested that IQ scoring is outdated and such scoring is not referred to in the Code (DfE, 2015). It is also important to first assess and eliminate any underlying specific learning difficulties such as dyslexia due to the unreliable nature of MLD as a category of need.

2.6. Specific Learning Difficulties (SpLD)

The term 'specific learning difficulties (SpLD) is used as an umbrella term for those who have specific rather than general learning differences, which are lifelong and affect the way information is learned and processed. They are neurological (rather than psychological), usually run in families, occur independently of intelligence and vary in severity (Martin-Denham and Watts, 2019). Zakopoulou et al. (2014) acknowledge that the term SpLD integrates several difficulties such as

dyslexia, dyspraxia, dysgraphia, autism, sensory processing disorder, and attention deficit hyperactivity disorder (AD(H)D). A more recent term being used to describe SpLD (reference) is Neurodiversity which promotes the view that neurological differences are to be recognised and respected as any other human variation. Armstrong (2017) suggests that Neurodiversity is an understanding that neurological differences are to be honoured and respected as with any human variation, including diversity in ethnicity, gender identity, religion and sexual orientation.

2.6.1. The impact of Specific Learning Difficulties on SEMH

The effect of learning difficulties on the personal, social and emotional development of children has been the subject of research for some time (Barrett and Jones, 1994; Margerison, 1996). Extensive research has shown that positive self-concept and self-esteem are linked to motivation, academic achievement and peer relations and having a learning difficulty can adversely affect these (Humphrey, 2002; Castro et al., 2014). Snowling (2011) highlights that for many years the importance of early identification and intervention for children with dyslexia has been stressed adding that the benefits of early identification are that children will get support and specific response before a sense of failure sets in. Related to this, Ginieri-Coccossis et al. (2012) reported that children with SpLD experienced poorer emotional well-being, lower self-esteem and a higher level of dissatisfaction with relationships with family and friends. This, they believed, was due to having ongoing difficulties in their school performance. This echoes earlier findings in a study by Michopoulou et al. (2003) who identified psychological difficulties in children with SpLD such as low self-concept (26%), anxiety (31%), anger (21%) and disruptive behaviour (21%). Furthermore, Karande and Kulkarni (2009) found that mothers of male children with SpLD reported experiencing significantly poorer psychological health and social relationships and limited energy, enthusiasm and endurance to perform daily living activities.

The next section in the report shares the methodological approaches used to answer the following research aims and objectives:

Research aim

This research aimed to analyse the prevalence of SEN across the City of Sunderland through an examination of school census data from 2014-2019 and to benchmark the prevalence by providing a comparison to the national data.

Research objectives

- To calculate and assess local prevalence rates of Special Educational Needs (SEN) with comparisons to the national picture.
- To determine over and under-represented types of SEN for those designated as SEN support or with an Education Health and Care Plan (EHCP) across the key stages of education and gender.
- To produce a report with supporting evidence to inform provision planning and training for education professionals within the local area of Sunderland.
- To propose recommendations to Together for Children as a response to the prevalence of SEN across age phases and types of SEN.

3. Methods

3. Methods

3.1. Method

Following adherence to governance arrangements and a data management plan, the school census data were collected from the Local Authority (LA) and transferred to a secure server within the University. As this report concerns the analysis of existing data, the method of collection employed is secondary data collection (O'Leary, 2004). The data were received between November 2018 and January 2019, cleaned and organised in preparation for statistical analysis (see section 2.5 below).

3.2. Participants

Participants in this instance refer to all children enrolled in education at the time the annual statutory census took place. This meant children who attended the following types of schools during 2014-2019 census in Sunderland were included:

- Academies
- Local Authority Maintained Schools
- Free Schools
- Special Schools
- Pupil Referral Units

It is important to note that given the population of interest and type of data collected, the strictest protocols and processes were in place to protect the anonymity of each child and any schools.

3.3. Ethics

The ethics approval documentation for the study was submitted and approved by the University of Sunderland Ethics committee in March 2018. In light of the recent General Data Protection Regulation (GDPR) legislation and before acquiring any data, a Data Protection Impact Assessment (DPIA) was carried out in conjunction with Data Protection Officers from Sunderland City Council and Together for Children. A DPIA as described by the Information Commissioner's Office (ICO) as 'a process to help you identify and minimise the data protection risks of a project' (ICO, 2019, p. 187). Following approval from the Senior Information Risk Officer (SIRO) from Sunderland City Council, data were transferred using AES-256 encryption and saved onto the secure University drives. Access was given solely to the research team. The data did not include any directly identifiable information such as names or address, however, the data did include Unique Pupil Numbers (UPN) differentiate pupils and Unique Reference Numbers to identify education phases for schools (see section 3.4). These numbers were replaced with pseudonymised versions.

3.4. Data cleaning and preparation

For all census data, duplicate cases of children were identified and removed (n = 3) using a combination of the Unique Pupil Number (UPN) and enrolment status. For example, where children were recorded as having multiple 'current - single registrations', within the same year; the most recent school was retained. Children with identified primary and secondary Special Educational Needs (SEN) appeared twice in the dataset, once for the primary type of need and once for the secondary type of need. Where this was the case, entries were combined.

Unless stated otherwise, only single entries per student, per year were used for each analysis. This meant children who were enrolled in more than one school, were counted once to reduce inadvertently inflating the prevalence rates of SEN in Sunderland. All quantitative data were analysed using a combination of Microsoft Excel 2016 and IBM Statistical Package for Social Sciences 25 (SPSS).

3.5. Analysis strategy

The rationale for using different types of statistical analysis are described in this section. The purpose of the current report is to investigate the proportions of SEN within Sunderland and to compare these nationally to understand the local SEN population better. A combination of descriptive and inferential statistics will be used using Sunderland School Census data from 2014/15 to 2018/19 and publicly available data published by the Office

for National Statistics (ONS) for corresponding years. Descriptive statistics is a term used when describing aggregate numerical data with one or more variables (Neuman, 2011). In contrast, inferential statistics refers to the techniques employed to test inferences about a population using a small sample from the population of interest (Tabachnick and Fidell, 2014).

To statistically examine these differences, inferential analyses such as the chi-square goodness of fit (χ^2) and chi-square test for association (χ^2) will be used. The chi-square (χ^2) analyses compare two distributions of a variable for a significant difference. It does this by comparing the *'observed frequency'* of a variable against the *'expected frequency'* (Fisher et al., 2011) and is the preferred analysis when working with nominal data such as the proportions (Bryman, 2015). For example, in reference to sections 4.3 and 4.4., the *'observed frequency'* refers to the percentages of SEN in Sunderland and the *'expected frequency'* refers to the percentage of SEN in England. The chi-square goodness of fit (χ^2) will compare the percentages of SEN for significant differences across both areas and treat the population sizes as the same. The chi-square goodness of fit can determine whether Sunderland distributions of SEN are different from England; however, it cannot specify which individual types of SEN are statistically different. This is because the chi-square test is an 'omnibus test' and can only compare general, overall differences rather than specific ones.

Typically, following a significant chi-square test, it is unfortunately common practice for researchers to view tabulated data for patterns to determine where significant differences lie. However, this is subject to considerable error as for large tables, this task becomes increasingly difficult and will ultimately lead to inaccurate results (Sharpe, 2015). To resolve this issue, in addition to the chi-square, a follow-up or post hoc analysis called a 'binomial test' was carried out for each category of SEN to establish which Sunderland values differ significantly from England (McDonald, 2009; Sharpe, 2015).

Using a binomial test following a chi-square is not without its issues, however, as running multiple tests on the same data, increases the likelihood of erroneously reporting significant results when there are none - this is known as a false-positive or Type 1 error (Neuman, 2011). To mitigate this risk, Bonferroni corrections were applied to each post hoc test. In simplified terms, the revision makes it more difficult to find a significant result and effectively negates the increased risk of making a false-positive or Type 1 error. The correction achieves this by reducing the current alpha level of 0.05 (the cut-off for which statistical tests are classed as significant) by dividing it by the total number of post hoc tests carried out (Armstrong, 2017).

4. Findings

4. Findings

The findings section of the report presents an analysis of local and national data on the prevalence of Special Educational Needs (SEN). For ease of reading the section is divided into four main components which investigate: the changing rates of SEN in Sunderland over five years (4.1), summary of the present SEN population in Sunderland (4.2), comparisons between Sunderland and national rates of SEN across key stages (4.3) and an examination of gender differences in Sunderland and England (4.4).

4.1. Prevalence of SEN across the pupil population in Sunderland (2014/15 - 2018/19)

This first section looks at the varying rates of SEN across the entire pupil population in Sunderland over the last five years. It is subdivided into two parts that evaluate the rates of the primary type of need and secondary type of need in Sunderland.

4.1.1. Prevalence of primary type of need in Sunderland (SEN support and EHCPs) (2014/15 - 2018/19)

Table 1 and Figure 1 present the number and percentage of children with a primary type of need in Sunderland. The data show that the size of the SEN population has risen for the fifth consecutive year from 5,099 children in 2014/15 to 6,603 children in 2018/19, an increase from 12.38% to 15.94% of the overall population. This increase is mainly attributed to a sharp rise in 2015/16, where an overall difference of 2.74% was observed. Subsequent years following 2015/16 did not see as large of an increase in the size of the SEN population. The categories of SEN that saw the most substantial increase were Moderate Learning Difficulties (MLD) and Speech, Language and Communication Needs (SLCN), these will be discussed further below.

Table: 1. Number and percentage of primary types of need in Sunderland including the non-SEN population (2014/15 - 2018/19)

Special Educational Need and Disability	2014/15		2015/16		2016/17		2017/18		2018/19	
	Number	%	Number	%	Number	%	Number	%	Number	%
Autism spectrum disorder	710	1.72	824	1.99	922	2.23	1,065	2.58	1,198	2.89
Hearing impairment	91	0.22	104	0.25	119	0.29	110	0.27	112	0.27
Moderate learning difficulty	1,194	2.90	1,575	3.80	1,522	3.68	1,450	3.51	1,477	3.57
Multi-sensory impairment	5	0.01	3	0.01	5	0.01	8	0.02	11	0.03
Other difficulty / disability	161	0.39	187	0.45	182	0.44	161	0.39	212	0.51
Physical disability	165	0.40	173	0.42	188	0.45	183	0.44	176	0.42
Profound & multiple learning difficulty	39	0.09	44	0.11	43	0.10	43	0.10	43	0.10
SEN support but no assessed type of need	32	0.08	52	0.13	47	0.11	55	0.13	65	0.16
Severe learning difficulty	213	0.52	205	0.50	197	0.48	196	0.47	196	0.47
Social, emotional and mental health	1,075	2.61	1,204	2.91	1,325	3.20	1,335	3.23	1,356	3.27
Specific learning difficulty	352	0.85	494	1.19	446	1.08	428	1.04	406	0.98
Speech, language and communication needs	1,025	2.49	1,347	3.25	1,349	3.26	1,328	3.21	1,295	3.13
Visual impairment	37	0.09	48	0.12	55	0.13	47	0.11	56	0.14
Primary SEND sub-total	**5,099**	**12.38**	**6,260**	**15.12**	**6,400**	**15.45**	**6,409**	**15.51**	**6,603**	**15.94**
Not SEND identified	36,088	87.62	35,143	84.88	35,013	84.55	34,922	84.49	34,811	84.06
Total	**41,187**	**100**	**41,403**	**100**	**41,413**	**100**	**41,331**	**100**	**41,414**	**100**

Note. Data includes all types of education provision for children and young people aged 1-18 recorded as part of the School Census in Sunderland.

Source: Sunderland School Census

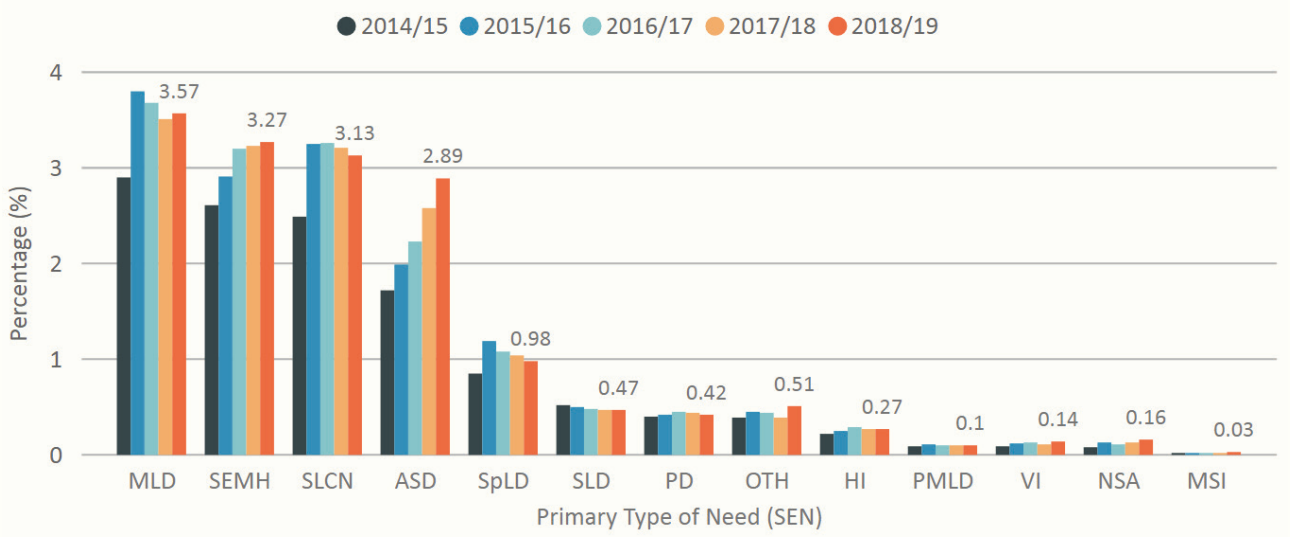

Figure: 1. Percentage of the primary type of need in Sunderland (2014/15 - 2018/19)

Notable changes:

Moderate Learning Difficulties (MLD)

- Remained the most prevalent primary type of need across the previous five years and saw the second-highest growth in the same period (after ASD). In 2018/19, the number of children with MLD is currently 1,477.
- Saw the greatest increase between 2014/15 and 2015/16 of 381 children (+0.91%) followed by the largest decrease between 2016/17 and 2017/18 53 children (-0.13%) in 2016/17 and 72 children in 2017/18 (-0.17%).

Social, Emotional and Mental Health (SEMH)

- Over the five years, the prevalence of SEMH has seen the third-highest increase across the categories (+0.66%) and now sits at 1,356 children.
- There were moderate increases each year between 2014/15 and 2016/17 of 129 and 121 children (+0.30% and +0.29%), followed by a minor increase in the following years.

Speech, Language and Communication Needs (SLCN)

- Had the second-highest increase between 2014/15 and 2015/16 with 322 children (+0.76%).
- The number of children remained relatively stable in the years following and currently, there are 1,295 children with SLCN as a primary type of need.

Autism Spectrum Disorder (ASD)

- Has shown a linear increase over the five years. There were 710 children with ASD in 2014/15, and this has increased to 1,198 children in 2018/19 (+1.17%).
- Saw the greatest increase in years 2016/17 with 922 children (+0.24%), 2017/18 with 1,065 children (+0.35%) and 2018/19 with 1,198 children (0.32%).

Specific Learning Difficulty (SpLD)

- Saw one of the highest increases between 2014/15 and 2015/16 of 142 children (+0.34%).
- Decreases followed this in subsequent years with a notable decline in 2016/17 (-0.12%).

4.1.2. Prevalence of secondary type of need in Sunderland (SEN support and EHCPs) (2014/15 - 2018/19)

Similar to rates of the primary type of need described above, secondary type of need has also increased for the fifth consecutive year, from 1,346 children 2014/15 to 1,748 2018/19, representing an increase from 3.27% to 4.22%. Unlike primary type of need, however, the increase was not principally attributed to one year, as an approximately 0.30% steady increase was observed each year. These figures are given in Table 2 and Figure 2 below.

Table: 2. Number and percentage of secondary types of need in Sunderland including the non-SEN population (2014/15 - 2018/19)

Special Educational Need and Disability	2014/15		2015/16		2016/17		2017/18		2018/19	
	Number	%	Number	%	Number	%	Number	%	Number	%
Autism spectrum disorder	67	0.16	98	0.24	130	0.31	156	0.38	208	0.50
Hearing impairment	25	0.06	27	0.07	29	0.07	23	0.06	25	0.06
Moderate learning difficulty	279	0.68	345	0.83	347	0.84	344	0.83	323	0.78
Multi-sensory impairment	4	0.01	4	0.01	6	0.01	6	0.01	5	0.01
Other difficulty / disability	87	0.21	85	0.21	77	0.19	81	0.20	86	0.21
Physical disability	97	0.24	93	0.22	111	0.27	117	0.28	102	0.25
Profound & multiple learning difficulty	6	0.01	6	0.01	7	0.02	8	0.02	4	0.01
SEN support but no assessed type of need	-	-	-	-	3	0.01	8	0.02	8	0.02
Severe learning difficulty	20	0.05	22	0.05	25	0.06	24	0.06	22	0.05
Social, emotional and mental health	338	0.82	353	0.85	369	0.89	370	0.90	384	0.93
Specific learning difficulty	76	0.18	76	0.18	86	0.21	99	0.24	79	0.19
Speech, language and communication needs	326	0.79	374	0.90	416	1.01	457	1.11	482	1.16
Visual impairment	21	0.05	27	0.07	26	0.06	20	0.05	20	0.05
Secondary SEND sub-total	**1,346**	**3.27**	**1,510**	**3.65**	**1,632**	**3.95**	**1,713**	**4.15**	**1,748**	**4.22**
Not Secondary SEND identified	36,088	96.73	35,143	96.35	35,013	96.05	34,922	95.85	34,811	95.78
Total	**37,434**	**100**	**36,653**	**100**	**36,645**	**100**	**36,635**	**100**	**36,559**	**100**

Note. Data includes all types of education provision for children and young people aged 1-18 recorded as part of the School Census in Sunderland.

Source: Sunderland School Census

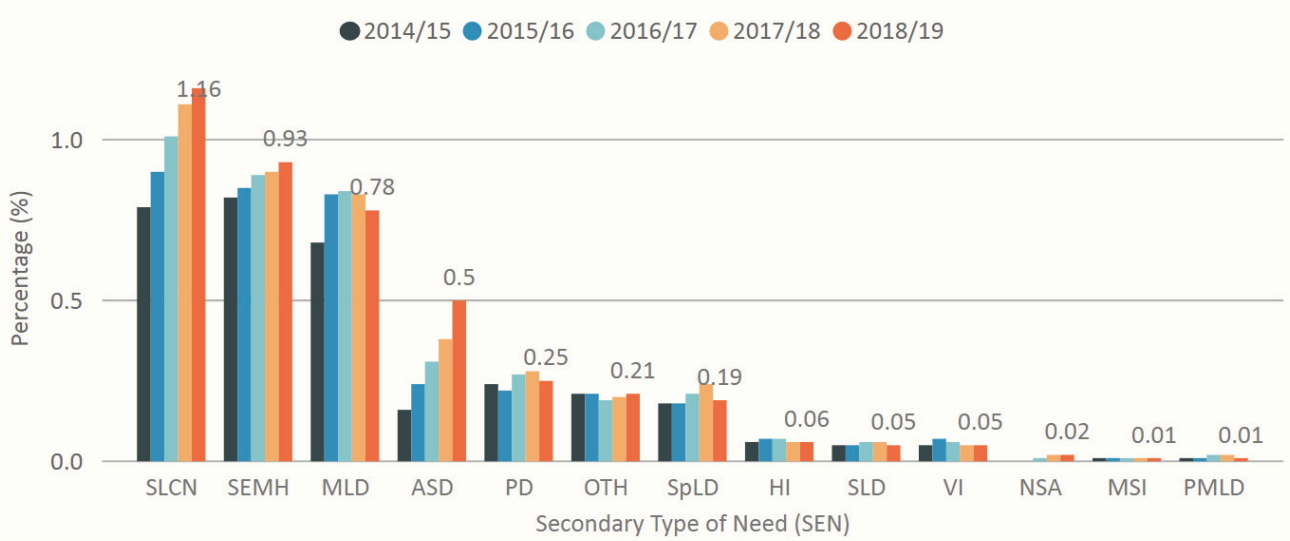

Figure: 2. Percentage of secondary type of need in Sunderland (2014/15 - 2018/19)

Notable changes:

Speech, Language and Communication Needs (SLCN)

- Saw the second-highest year on year percentage increase across all categories between 2014/15 and 2017/18 (+0.10%).
- This has resulted in SLCN, being observed as the most prevalent secondary type of need in Sunderland since 2015/16 and type of SEN that saw the highest percentage increase over the five years (+0.37%).

Social, Emotional and Mental Health (SEMH)

- Was the most prevalent secondary type of need in 2014/15 (0.82%), but remained the second most prevalent need from 2015/16 where it continued to increase in a linear fashion year on year by a small percentage.

Moderate Learning Difficulty (MLD)

- Saw the most substantial increase across all categories between 2014/15 and 2015/16 from 0.68% to 0.83%.
- Along with SpLD, saw the greatest decrease between 2017/18 and 2018/19 (-0.05%).

Autism Spectrum Disorder (ASD)

- Like rates of ASD as a primary type of need, ASD as a secondary type of need also increased in a linear fashion year on year.
- It saw the highest percentage increase between 2017/18 and 2018/19 (+0.12%) and the second-highest percentage increase over the five years (+0.34%).

Specific Learning Difficulty (SpLD)

- Saw no or very little change between 2014/15 and 2016/17.
- Along with MLD, saw the greatest decrease in 2018/19 (-0.05%).

4.2. The SEN population in Sunderland (2018/19)

This section focuses on the Sunderland SEN population only across three components, the percentage share of primary type of need, secondary types of need and children in receipt of SEN support or an Education, Health and Care Plan (EHCP).

4.2.1. Percentage of children with a primary type of need in Sunderland (SEN support and EHCPs) (2018/19)

Figure 3 illustrates that, of children with SEN, the most prevalent primary type of need are: MLD (23.23%), SEMH (20.26%), SLCN (18.72%) and ASD (18.34%). Cumulatively, these represent 80.66% of all primary types of need in Sunderland with the remaining 19.34% spread over: Visual Impairment (VI), Hearing Impairment (HI), Multi-Sensory Impairment (MSI), Other Difficulty/Disability (OTH), Physical Disability (PD), Profound & Multiple Learning Difficulty (PMLD), SEN support but no assessed type of need (NSA), Severe Learning Difficulty (SLD) and Specific Learning Difficulty (SpLD).

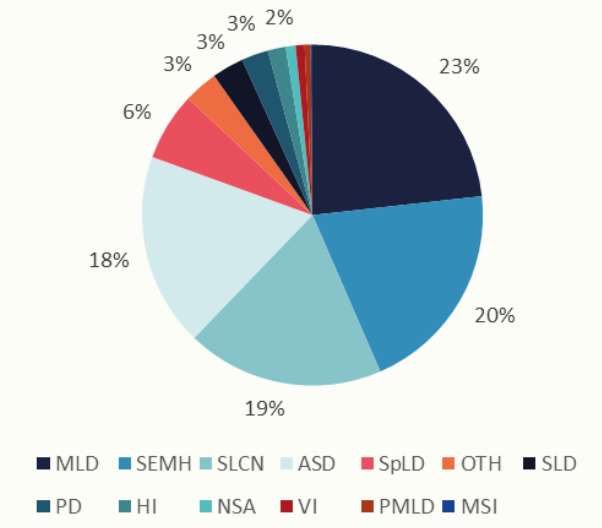

Figure: 3. Percentage of primary type of need in Sunderland (2018/19)

4.2.2. Percentage of children with a secondary type of need in Sunderland (SEN support and EHCPs) (2018/19)

For secondary type need in Sunderland, Figure 4 identifies that secondary type of need follows a similar pattern to primary types of need discussed above, as the four most prevalent types are the same but ranked: SLCN (27.57%), SEMH (21.97%), MLD (18.48%) and ASD (11.90%). These secondary type of need cumulatively account for 79.92% of all secondary SEN on the school census with the remaining 20.08% accounting for Visual Impairment (VI), Hearing Impairment (HI), Multi-Sensory Impairment (MSI), Other Difficulty/ Disability (OTH), Physical Disability (PD), Profound & Multiple Learning Difficulty (PMLD), SEN support but no assessed type of need (NSA), Severe Learning Difficulty (SLD) and Specific Learning Difficulty (SpLD).

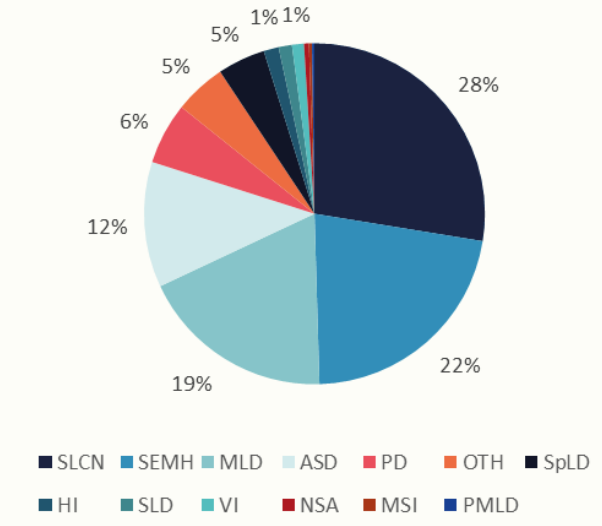

Figure: 4. Percentage of secondary type of need in Sunderland (2018/19)

4.2.3. Percentage of children with a designated SEN Support and EHCPs in Sunderland (2018/19)

Figure 5 illustrates that In 2018/19, of the 6,603 children with an identified special educational need (SEN) in Sunderland, 5,470 were designated SEN support. This equates to 82.83% of the SEN population and 13.21% of all children in Sunderland.

In 2018/19 1,134 children received an EHCP. Overall, this represents 17.17% of the SEN population and 2.74% of children in Sunderland. Please note that for years before 2015/16, statements of SEN have been combined with EHC plans and for 2014/15 figures, school action and school action plus numbers have been omitted (n = 2,847) therefore the percentage of children designated as SEN support will appear lower.

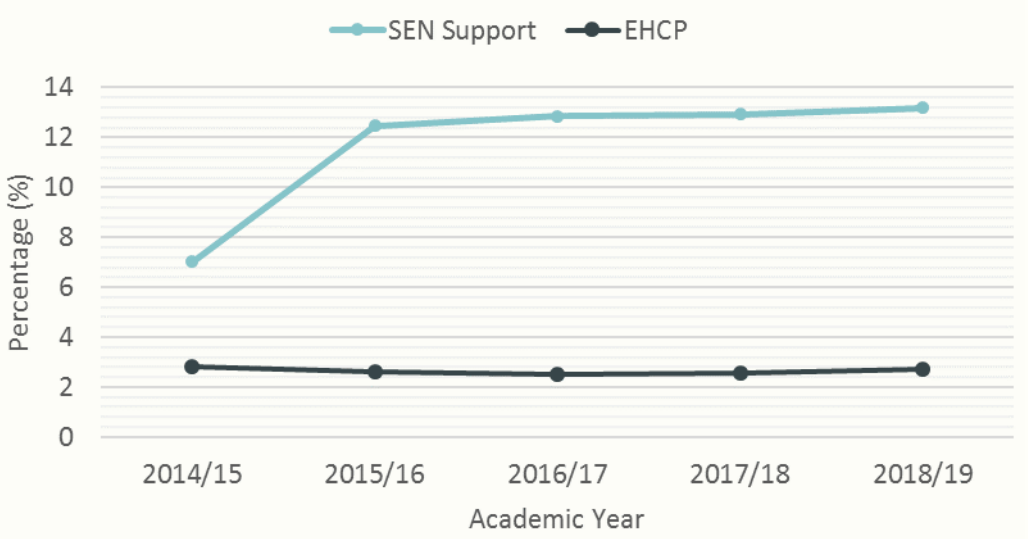

Figure: 5. Percentage of children designated as SEN Support and EHCP in Sunderland (2014/15 - 2018/19)

4.3. Comparing the SEN prevalence in Sunderland and England (2018/19)

This section will analyse the prevalence rates of SEN in Sunderland to the SEN rates nationally. Only comparable data from Sunderland from 2018/19 were included to make valid comparisons between Sunderland and England. This meant single and dual registered children were included in calculations. In contrast, children attending nursery schools, general hospital schools, independent schools and pupil referral units were excluded as these were also excluded from the national dataset. Overall this meant the original Sunderland sample of 6,603 children with SEN was adjusted to lower figure of 6,272 children.

4.3.1. Comparing primary type of need prevalence (SEN support and EHCPs): Sunderland and England (2018/19)

Approximately 14.61% of the national pupil population have an identified primary need (DfE, 2018a). As mentioned at the start of the findings section, 15.94% of the pupil population in Sunderland have a designated primary need. However, to make valid comparisons between Sunderland and England and as outlined in section 4.3 above, the overall prevalence of SEN in Sunderland was changed to 15.58%. Table 3 and Figure 6 below presents the number and percentage of children in Sunderland and England with SEN with SEN support and EHCPs.

Table: 3. Number and percentage of primary type of need (SEN support and EHCP): Sunderland and England (2018/19)

Special Educational Need and Disability	Sunderland		England	
	Number	%	Number	%
Autism Spectrum Disorder	1,150	18.34	119,909	10.26
Hearing Impairment	107	1.71	21,746	1.86
Moderate Learning Difficulty	1,457	23.23	252,431	21.61
Multi-Sensory Impairment	10	0.16	3,020	0.26
Other Difficulty/Disability	202	3.22	53,287	4.56
Physical Disability	159	2.54	34,765	2.98
Profound & Multiple Learning Difficulty	36	0.57	10,969	0.94
SEN support but no assessed type of need	59	0.94	38,669	3.31
Severe Learning Difficulty	189	3.01	32,680	2.80
Social, Emotional and Mental Health	1,271	20.26	193,657	16.58
Specific Learning Difficulty	405	6.46	147,679	12.64
Speech, Language and Communications Needs	1,174	18.72	247,041	21.15
Visual Impairment	53	0.85	12,290	1.05
Total	**6,272**	**100**	**1,168,143**	**100**

Note. Data excludes nursery schools, independent schools, general hospital schools and pupil referral units.

Source: Sunderland School Census and National School Census

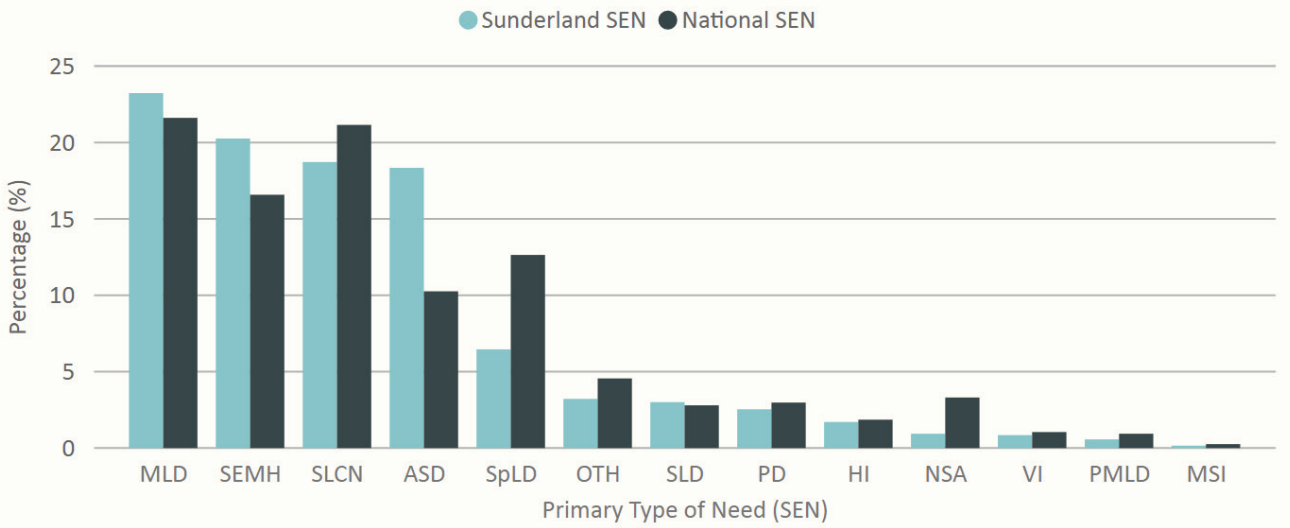

Figure: 6. Percentages of primary type of need (SEN support and EHCP): Sunderland and England (2018/19)

The 2018/19 proportions of SEN in Sunderland and England were compared using an analysis called a chi-square goodness of fit test (χ^2). The analysis found the Sunderland distribution of SEN was significantly different from England overall, χ^2 (12) 820.35, p <.001. This analysis very generally suggests the proportions of SEN in Sunderland are different from national. However, to investigate this result in greater depth, additional analyses were carried out specifically incorporating rates of SEN support, EHC plans, key stage, and gender.

4.3.2. Comparing SEN support across Key Stages: Sunderland and England (2018/19)

Figure 7 illustrates that in 2018/19, the most prevalent primary types of SEN receiving SEN support across all key stage groups were: MLD (25.69%), SLCN (22.36%), SEMH (22.01%) and ASD (12.41%) and equate to over 82% of all children with SEN support in Sunderland.

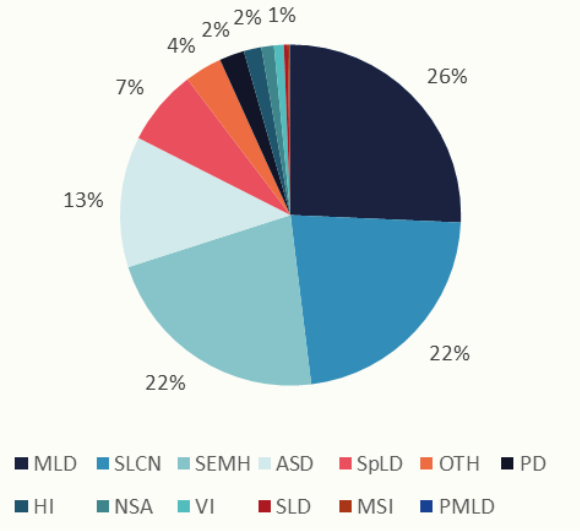

Figure: 7. Percentage of SEN support by type of SEN in Sunderland (2018/19))

4.3.2.1. SEN support in EYFS and KS1: Sunderland and England (2018/19)

Further analysis was carried out across key stage groups with children identified as SEN in designated SEN support, starting with children in Early Years Foundation Stage (EYFS) and key stage 1 (KS1). The most prevalent types of need designated SEN support within EYFS were: SLCN (52.07%), ASD (15.77%), SEMH (12.24%) and MLD (8.51%). Nationally, the most prevalent SEN were the same but ranked accordingly: SLCN (59.09%), SEMH (12.24%), MLD (7.77%) and ASD (6.72%) (DfE, 2018b). These values and those for the rest of SEN in Sunderland and England are presented in Table 4 below.

Table: 4. SEN support in EYFS and Key Stage 1: Sunderland and England (2018/19

Special Educational Need and Disability	Early Years Foundation Stage				Key Stage 1			
	Sunderland		England		Sunderland		England	
	Number	%	Number	%	Number	%	Number	%
Autism Spectrum Disorder	76	15.77	4,641	6.72	101	11.46	7,211	4.54
Hearing Impairment	7	1.45	1,092	1.58	11	1.25	2,373	1.49
Moderate Learning Difficulty	41	8.51	5,370	7.77	192	21.79	31,428	19.78
Multi-Sensory Impairment	1	0.21	217	0.31	3	0.34	525	0.33
Other Difficulty/Disability	19	3.94	2,151	3.11	21	2.38	5,981	3.77
Physical Disability	15	3.11	2,234	3.23	24	2.72	4,035	2.54
Profound & Multiple Learning Difficulty	4	0.83	309	0.45	-	-	180	0.11
SEN support but no assessed type of need	2	0.41	2,159	3.12	7	0.79	8,002	5.04
Severe Learning Difficulty	3	0.62	581	0.84	2	0.23	491	0.31
Social, Emotional and Mental Health	59	12.24	7,496	10.85	151	17.14	23,684	14.91
Specific Learning Difficulty	2	0.41	1,377	1.99	19	2.16	8,899	5.60
Speech, Language and Communications Needs	251	52.07	40,827	59.09	338	38.37	64,642	40.69
Visual Impairment	2	0.41	639	0.92	12	1.36	1,400	0.88
Total	**482**	**100**	**69,093**	**100**	**881**	**100**	**158,851**	**100**

Note. Data excludes nursery schools, independent schools, general hospital schools and pupil referral units. '-' denotes zero values.

Source: Sunderland School Census and National School Census

The proportions of EYFS children on SEN support in Sunderland were compared to the national equivalent proportions using the chi-square goodness of fit test (χ^2). However, due to the limited amount of data in Sunderland and to meet the statistical assumptions for the analysis to run correctly, VI and MSI were collapsed into one overall SEN group (reducing the number of SEN types from 13 to 12). The chi-square analysis found an overall significant difference between the Sunderland and national proportions of children in EYFS with SEN designated SEN support, χ^2 (11) 85.63, p <.001. However, to establish which types of SEN were different, follow-up binomial tests with Bonferroni corrections were run and found that SEN support in Sunderland had:

significantly higher rates for:

- ASD (+44 cases)

and significantly lower rates for:

- SLCN (-34 cases)
- NSA (-13 cases) (p <.0038 in each case).

These values presented above and in Figure 8 below represent the difference between the observed Sunderland figures and the expected national figures. Typically in research, these differences (also known as residuals) are standardised or adjusted to make comparisons across multiple variables such as key stage groups possible (Sharpe, 2015). However, for this report, the differences will be kept as unstandardised residuals for ease of readability. As such, it is recommended that these figures should be used as a guide only and should not be used as a quota.

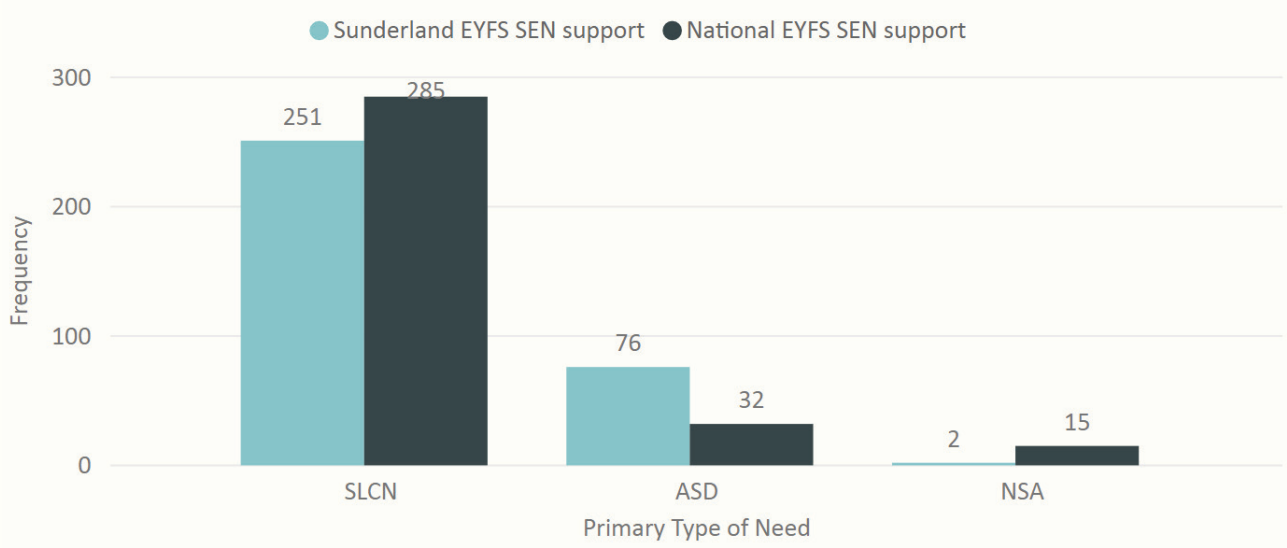

Figure: 8. Incidence of primary type of need in Sunderland that is significantly different from national: Children in EYFS designated SEN support (2018/19)

For KS1, the most prevalent types of SEN in Sunderland were SLCN (38.37%), MLD (21.79%), SEMH (17.14%) and ASD (15.77%), whereas nationally they were SLCN (40.69%), MLD (19.78%), SEMH (14.91%) and SpLD (5.60%). These proportions were compared using the same chi-square goodness of fit test. There was no need to collapse any type of SEN as the KS1 sample size was sufficient to meet the requirements of the analysis; however, PMLD was excluded as there were no KS1 cases in Sunderland. The analysis found a significant difference between Sunderland and national proportions of KS1 children with SEN support, χ^2 (11) 156.63, p <.001. Again, to establish which proportions of SEN in Sunderland were statistically different, follow-up tests were run and found that KS1 children with SEN support in Sunderland had:

significantly higher rates for:

- ASD (+61 cases)

and significantly lower rates for:

- NSA (-37 cases)
- SpLD (-30 cases) (p <.0038 in each case).

These values presented above and in Figure 9 below represent the difference between the *observed* Sunderland figures and the *expected* national equivalent figures and should be used as a guide only.

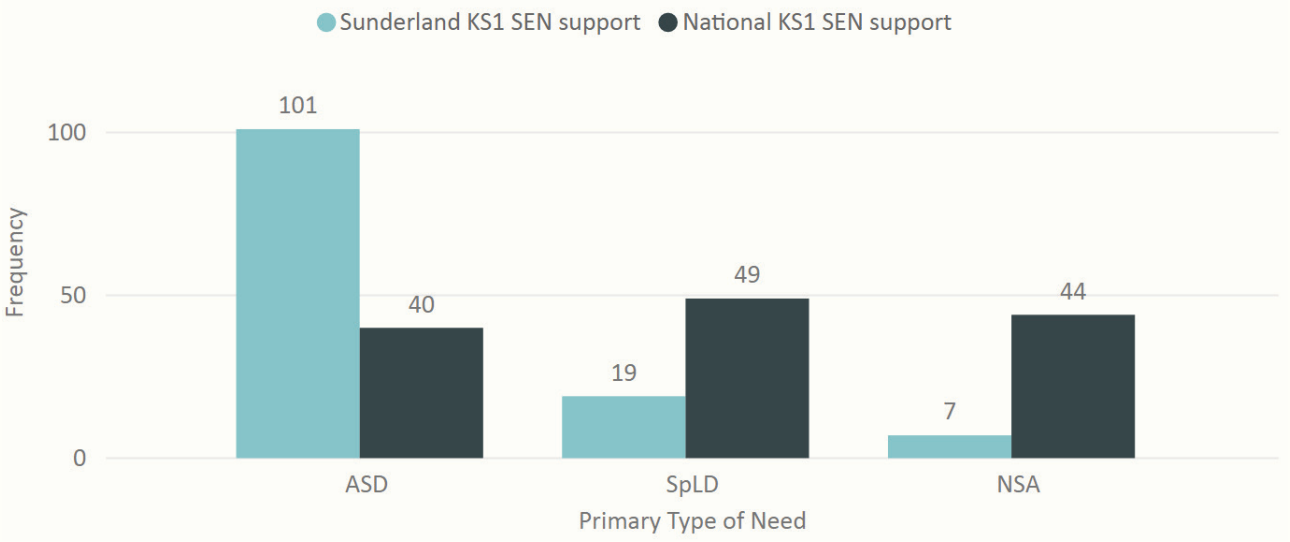

Figure: 9. Incidence of primary type of need in Sunderland that is significantly different from national: Children in KS1 designated SEN support (2018/19)

4.3.2.2. SEN support in KS2 and KS3: Sunderland and England (2018/19)

Of all key stage groups, KS2 had the highest proportion of SEN support representing 38% of all children designated SEN with SEN support. The most prevalent types with SEN support were MLD (29.09%), SLCN (21.75%), SEMH (19.77%), and ASD (12.38%). There was a similar pattern observed nationally with MLD (28.42%), SLCN (20.34%), SEMH (18.10%); however, SpLD (13.78%) ranks fourth in place of ASD. These values are presented in Table 5 below.

Table: 5. Prevalence of SEN support in Key Stage 2 and Key Stage 3: Sunderland and England (2018/19

Special Educational Need and Disability	Key Stage 2				Key Stage 3			
	Sunderland		England		Sunderland		England	
	Number	%	Number	%	Number	%	Number	%
Autism Spectrum Disorder	251	12.38	17,414	4.74	147	12.25	14,367	6.98
Hearing Impairment	26	1.28	5,335	1.45	25	2.08	3,979	1.93
Moderate Learning Difficulty	590	29.09	104,381	28.42	375	31.25	53,704	26.11
Multi-Sensory Impairment	4	0.20	981	0.27	2	0.17	338	0.16
Other Difficulty/Disability	83	4.09	16,270	4.43	36	3.00	13,205	6.42
Physical Disability	44	2.17	7,807	2.13	30	2.50	4,569	2.22
Profound & Multiple Learning Difficulty	-	-	264	0.07	-	-	106	0.05
SEN support but no assessed type of need	42	2.07	18,907	5.15	6	0.50	6,387	3.11
Severe Learning Difficulty	9	0.44	1,110	0.30	4	0.33	651	0.32
Social, Emotional and Mental Health	401	19.77	66,471	18.10	335	27.92	40,357	19.62
Specific Learning Difficulty	125	6.16	50,611	13.78	120	10.00	44,367	21.57
Speech, Language and Communications Needs	441	21.75	74,698	20.34	108	9.00	21,517	10.46
Visual Impairment	12	0.59	3,016	0.82	12	1.00	2,138	1.04
Total	**2,028**	**100**	**367,265**	**100**	**1,200**	**100**	**205,685**	**100**

Note. Data excludes nursery schools, independent schools, general hospital schools and pupil referral units. '-' denotes zero values.

Source: Sunderland School Census and National School Census

The proportions of KS2 children designated SEN support in Sunderland were compared against the national equivalent proportions using the same chi-square analysis. PMLD was excluded from the analysis as there were no cases in Sunderland for KS2. The chi-square goodness of fit analysis revealed Sunderland had significantly different proportions of SEN in KS2 compared to the national equivalent, χ^2 (11) 381.40, p <.001.

Follow-up tests were run to establish which types of SEN were different and found Sunderland had:

significantly higher rates of:

- ASD (+155 cases)

and significantly lower rates of:

- SpLD (-154 cases)
- NSA (-62 cases) (p <.0038 in each case).

These values presented above and in Figure 10 below represent the difference between the *observed* Sunderland figures and the *expected* national equivalent figures and should be used as a guide only.

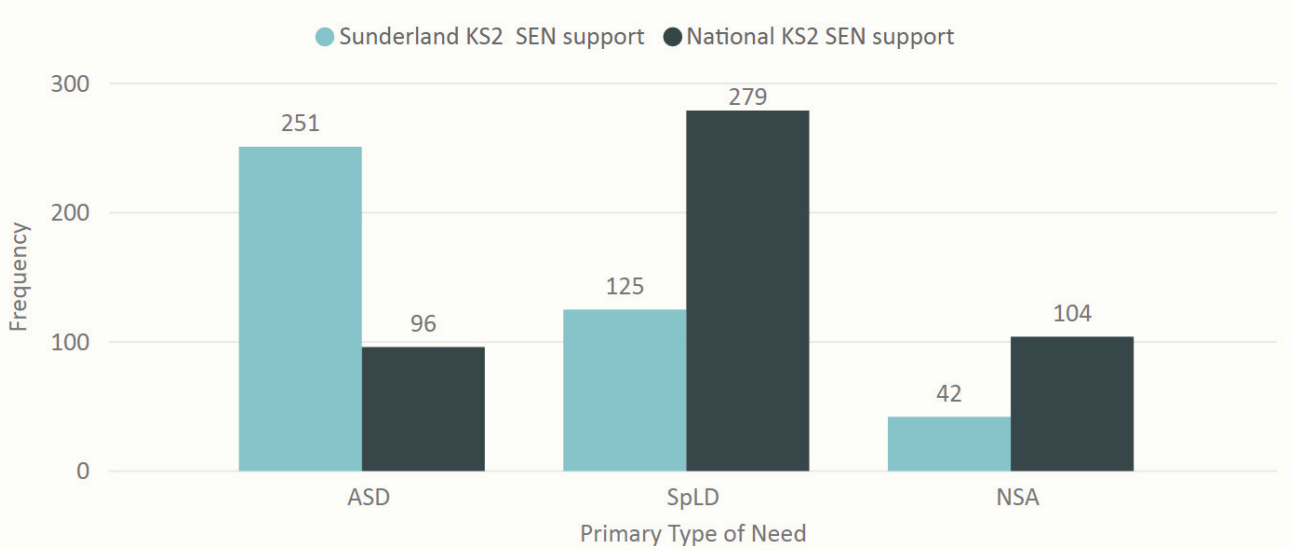

Figure: 10. Incidence of primary type of need in Sunderland that is significantly different from national: Children in KS2 designated SEN support (2018/19)

For KS3, the most prevalent SEN in receipt of SEN support in Sunderland were MLD (31.25%), SEMH (27.92%), ASD (12.25%) and SpLD (10.00%). Whereas nationally, MLD (26.11%), SpLD (21.57%), SEMH (19.62%) and SLCN (10.46%) were the most prevalent.
The chi-square analysis was repeated with KS3 data and like the above analysis, PMLD was excluded as there were no cases in Sunderland for KS3. The results from the analysis found Sunderland has significantly different proportions of SEN support compared to national, χ^2 (11) 227.34, p <.001. Follow-up tests were run to establish which types of SEN were different and found that SEN support in Sunderland had:

significantly higher rates of:

- SEMH (+99 cases)
- ASD (+63 cases)
- MLD (+62 cases)

and significantly lower rates of:

- SpLD (-139 cases)
- OTH (-41 cases)
- NSA (-31 cases) (p <.0038 in each case).

These values presented above and in Figure 11 below represent the difference between the *observed* Sunderland figures and the *expected* national equivalent figures and should be used as a guide only.

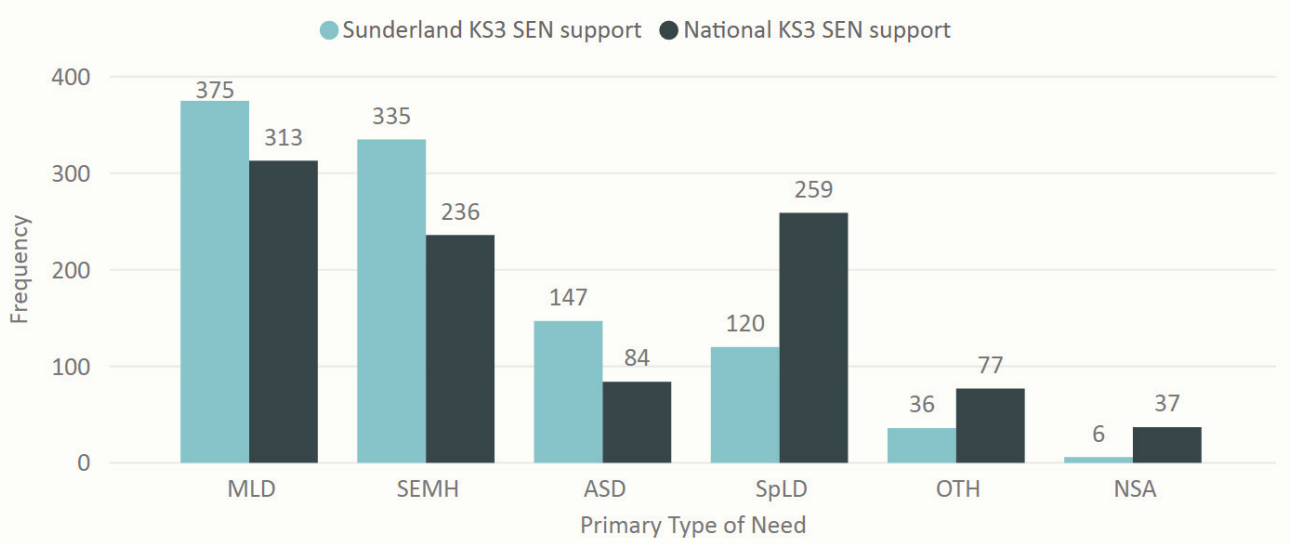

Figure: 11. Incidence of primary type of need in Sunderland that is significantly different from national: Children in KS3 designated SEN support (2018/19)

4.3.2.3. SEN support in KS4 and KS5: Sunderland and England (2018/19)

Children in KS4 in Sunderland make up approximately 13% of the SEN population overall, with the most frequently identified SEN in SEN support being MLD (28.38%), SEMH (26.91%), SpLD (17.21%) and ASD (12.21%). Nationally, SpLD (24.95%), MLD (23.76%), SEMH (19.92%), and SLCN (8.78%) were the most prevalent types of SEN with SEN support in KS4. These figures are presented in Table 6 below.

Table: 6. Prevalence of SEN support in Key Stage 4 and Key Stage 5: Sunderland and England (2018/19)

Special Educational Need and Disability	Key Stage 4				Key Stage 5			
	Sunderland		England		Sunderland		England	
	Number	%	Number	%	Number	%	Number	%
Autism Spectrum Disorder	83	12.21	7,921	7.08	4	9.30	1,990	9.92
Hearing Impairment	14	2.06	2,421	2.17	4	9.30	676	3.37
Moderate Learning Difficulty	193	28.38	26,566	23.76	4	9.30	2,741	13.67
Multi-Sensory Impairment	-	-	168	0.15	-	-	42	0.21
Other Difficulty/Disability	29	4.26	7,637	6.83	2	4.65	1,955	9.75
Physical Disability	8	1.18	2,535	2.27	2	4.65	809	4.03
Profound & Multiple Learning Difficulty	-	-	65	0.06	-	-	13	0.06
SEN support but no assessed type of need	3	0.44	2,805	2.51	-	-	408	2.03
Severe Learning Difficulty	2	0.29	303	0.27	-	-	52	0.26
Social, Emotional and Mental Health	183	26.91	22,269	19.92	12	27.91	3,357	16.74
Specific Learning Difficulty	117	17.21	27,899	24.95	11	25.58	6,308	31.45
Speech, Language and Communications Needs	39	5.74	9,816	8.78	2	4.65	1,288	6.42
Visual Impairment	9	1.32	1,399	1.25	2	4.65	419	2.09
Total	**680**	**100**	**111,804**	**100**	**43**	**100**	**20,058**	**100**

Note. Data excludes nursery schools, independent schools, general hospital schools and pupil referral units. '-' denotes zero values.

Source: Sunderland School Census and National School Census

The chi-square goodness of fit analysis revealed Sunderland has significantly different proportions of SEN with SEN support in KS4 compared to national, χ^2 (10) 93.07, p <.001. Follow-up tests revealed that when compared to England, Sunderland had:

significantly higher rates for:

- SEMH (+48 cases)
- ASD (+35 cases)

and significantly lower rates for:

- SpLD (-53 cases)
- NSA (-14 cases) (p <.0038 in each case).

These values presented above and in Figure 12 overleaf represent the difference between the *observed* Sunderland figures and the *expected* national equivalent figures and should be used as a guide only.

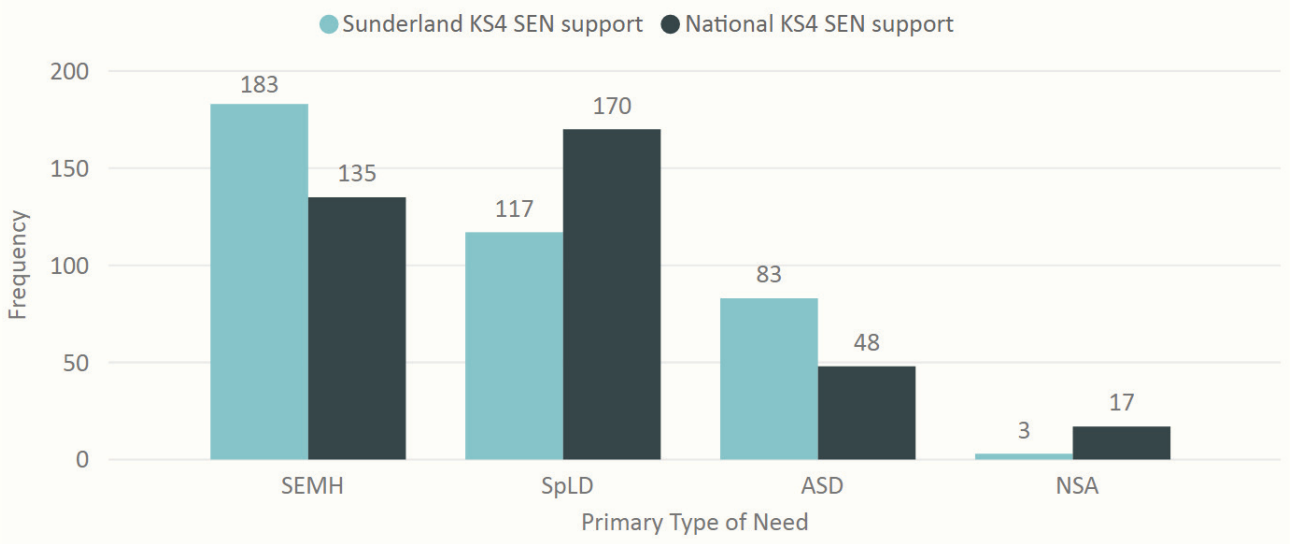

Figure: 12. Incidence of primary type of need in Sunderland that is significantly different from national: Children in KS4 designated SEN support (2018/19)

The four most prevalent identified types of need designated with SEN support in KS5 were SEMH (27.91%), SpLD (25.58%). Nationally, the opposite is found as SpLD (31.45%) is the most prevalent, followed by SEMH (16.74%). Unfortunately due to the limited amount of data available in Sunderland, it was not possible to reliably and statistically analyse the proportions of children with SEN and SEN Support for KS5.

4.3.3. Comparing EHCPs across Key Stages: Sunderland and England (2018/19)

For 2018/19, the most prevalent types of SEN with an EHC plan across all age groups were ASD with 45.77%, followed by SLD (15.52%), SEMH (13.49%) and MLD (6.35%) and amount to over 81% of all children with an EHCP in Sunderland. These values are presented in Figure 13.

4.3.3.1. EHCPs in EYFS and KS1: Sunderland and England (2018/19)

Further analysis was carried out across key stage groups with children with EHC plans, starting with EYFS and KS1. The most prevalent types of SEN with EHC plans in Sunderland for EYFS were ASD (41.67%), SLD (20.83%) and PMLD (14.58%). Nationally, these were ASD (33.94%), SLCN (18.68%), SLD (13.34%) (DfE, 2018b). These values for Sunderland and England are presented in Table 7 opposite.

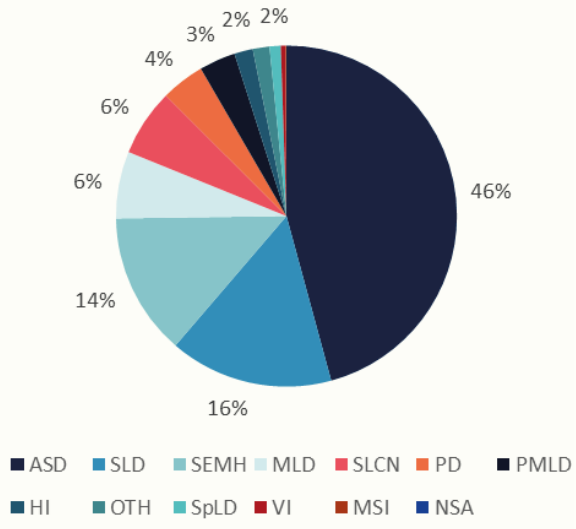

Figure: 13. Percentage of EHC plans by type of SEN in Sunderland (2018/19)

Table: 7. Prevalence of EHC plans in EYFS and Key Stage 1: Sunderland and England (2018/19

Special Educational Need and Disability	Early Years Foundation Stage				Key Stage 1			
	Sunderland		England		Sunderland		England	
	Number	%	Number	%	Number	%	Number	%
Autism Spectrum Disorder	20	41.67	3,996	33.94	71	54.20	9,555	34.09
Hearing Impairment	1	2.08	394	3.35	6	4.58	786	2.80
Moderate Learning Difficulty	1	2.08	534	4.54	3	2.29	1,553	5.54
Multi-Sensory Impairment	-	-	72	0.61	1	0.76	135	0.48
Other Difficulty/Disability	2	4.17	426	3.62	2	1.53	866	3.09
Physical Disability	4	8.33	836	7.10	6	4.58	1,739	6.20
Profound & Multiple Learning Difficulty	7	14.58	966	8.21	8	6.11	1,596	5.69
Severe Learning Difficulty	10	20.83	1,570	13.34	15	11.45	3,637	12.98
Social, Emotional and Mental Health	-	-	254	2.16	5	3.82	1,775	6.33
Specific Learning Difficulty	-	-	326	2.77	2	1.53	601	2.14
Speech, Language and Communications Needs	3	6.25	2,199	18.68	12	9.16	5,441	19.41
Visual Impairment	-	-	199	1.69	-	-	343	1.22
Total	**48**	**100**	**11,772**	**100**	**131**	**100**	**28,027**	**100**

Note. Data excludes nursery schools, independent schools, general hospital schools and pupil referral units. '-' denotes zero values.

Source: Sunderland School Census and National School Census

Due to the limited amount of data, it was not possible to reliably and statistically analyse the proportions of children with EHCPs in EYFS using a chi-square goodness of fit test.

The proportions of KS1 children with EHC plans in Sunderland were compared against the national equivalent proportions using a chi-square goodness of fit analysis. However, to meet the statistical assumptions for the analysis to run correctly, HI, VI and MSI were collapsed into one overall SEN group (reducing the categories of SEN examined from 12 to 10). Results revealed Sunderland has significantly different proportions of EHC plans in KS1 compared to national, χ^2 (9) 30.52, p <.001. To establish which types of SEN were different, follow-up binomial tests with Bonferroni corrections were run and identified that KS1 children with EHC plans in Sunderland had:

significantly higher rates for:

- ASD (+26 cases)

and significantly lower rates for:

- SLCN (-13 cases) (p <.005 in each instance).

These values presented above and in Figure 14 overleaf represent the difference between the observed Sunderland figures and the expected national figures. It is recommended that these figures should be used as a guide only and should not be used as a quota.

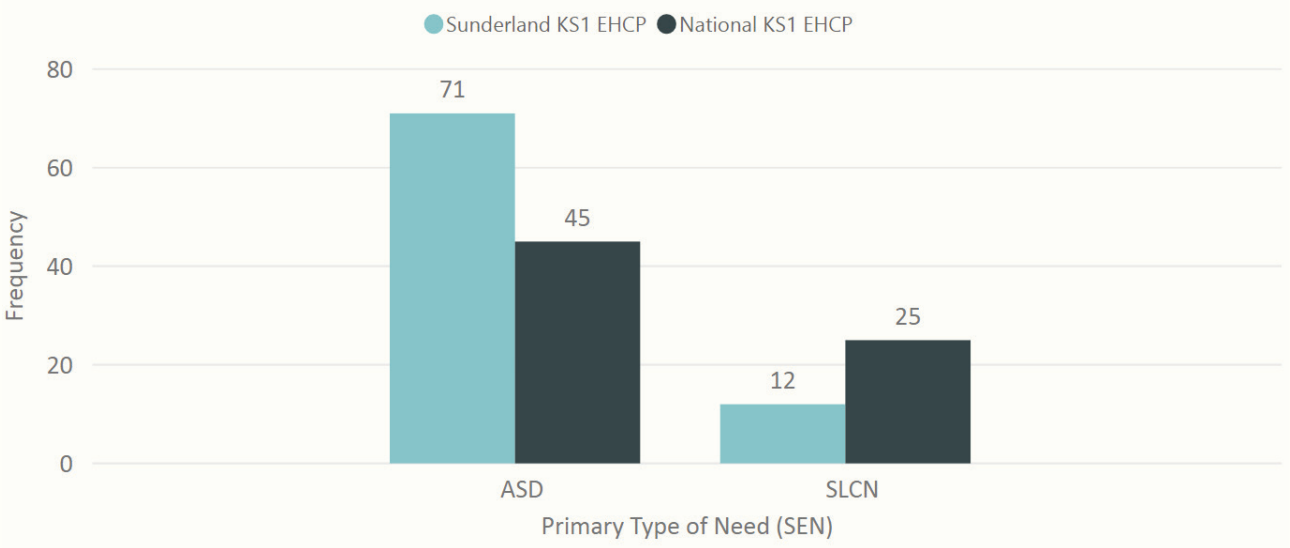

Figure: 14. Incidence of primary type of need in Sunderland that is significantly different from the national equivalent: Children in KS1 designated with an EHC plan (2018/19)

4.3.3.2. EHCPs in KS2 and KS3: Sunderland and England (2018/19)

Like the KS2 in designated SEN support above (see section 4.3.2.2.), KS2 children reflect the highest proportion of EHCPs across all key stages in Sunderland accounting for 34.20% overall. The four most prevalent types of SEN with EHCPs for KS2 children in Sunderland in 2018/19 were ASD (49.54%), SEMH (13.68%) and SLD (13.68%). Nationally the four most prevalent SEN types were ASD (28.77%), SLCN (16.91%), SEMH (13.22%) and SLD (11.98%). These values and those for the rest of SEN in Sunderland and national are presented in Table 8 below

Table: 8. Prevalence of EHC plans in Key Stage 2 and 3: Sunderland and England (2018/19

Special Educational Need and Disability	Key Stage 2				Key Stage 3			
	Sunderland		England		Sunderland		England	
	Number	%	Number	%	Number	%	Number	%
Autism Spectrum Disorder	163	49.54	21,043	28.77	107	46.32	16,250	26.08
Hearing Impairment	4	1.22	1,823	2.49	2	0.87	1,515	2.43
Moderate Learning Difficulty	10	3.04	7,112	9.72	23	9.96	9,399	15.08
Multi-Sensory Impairment	-	-	243	0.33	-	-	145	0.23
Other Difficulty/Disability	2	0.61	2,011	2.75	7	3.03	1,661	2.67
Physical Disability	16	4.86	4,049	5.54	13	5.63	3,154	5.06
Profound & Multiple Learning Difficulty	7	2.13	3,059	4.18	1	0.43	1,838	2.95
Severe Learning Difficulty	45	13.68	8,760	11.98	16	6.93	6,347	10.18
Social, Emotional and Mental Health	45	13.68	9,668	13.22	43	18.61	10,411	16.71
Specific Learning Difficulty	3	0.91	2,052	2.81	1	0.43	2,731	4.38
Speech, Language and Communications Needs	31	9.42	12,371	16.91	17	7.36	7,995	12.83
Visual Impairment	3	0.91	946	1.29	1	0.43	872	1.40
Total	**329**	**100**	**73,137**	**100**	**231**	**100**	**62,318**	**100**

Note. Data excludes nursery schools, independent schools, general hospital schools and pupil referral units. '-' denotes zero values.

Source: Sunderland School Census and National School Census

The proportions of KS2 children with EHC plans in Sunderland were compared to national proportions using a chi-square analysis. MSI was excluded from the analysis as there were no cases in Sunderland for KS2. The analysis revealed Sunderland has significantly different proportions of EHC plans in KS2 compared to the national, χ^2 (10) 91.75, p <.001. Follow-up tests were run to establish which types of SEN were different and found that compared to national, Sunderland had:

significantly higher rates for:

- ASD (+68 cases)

and significantly lower rates of:

- SLCN (-25 cases)
- MLD (-22 cases) (p <.0042 in each instance).

These values presented above and in Figure 15 below represent the difference between the *observed* Sunderland figures and the *expected* national equivalent figures and should be used as a guide only.

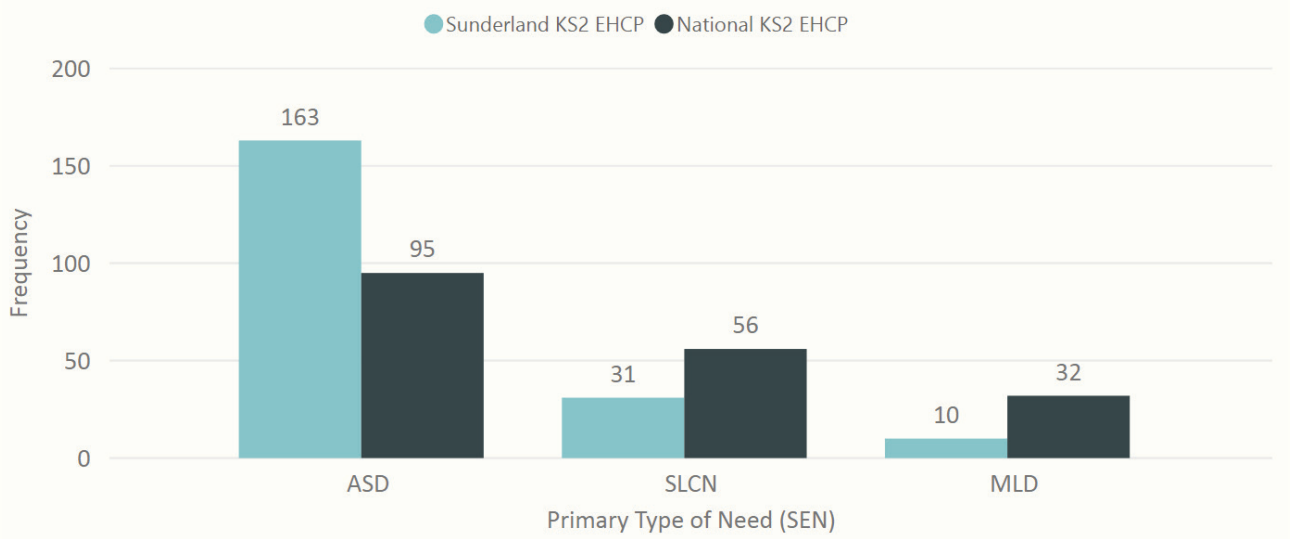

Figure: 15. Incidence of primary type of need in Sunderland that is significantly different from the national equivalent: Children in KS2 designated with an EHC plan (2018/19)

For KS3 children with EHCPs, the most prevalent types of SEN were ASD (46.32%), SEMH (18.61%), MLD (9.96%) and SLCN (7.36%). Whereas nationally, these were ASD (26.08%), SEMH (16.71%), MLD (15.08%) and SLCN (12.83%). The chi-square analysis was repeated with KS3 data and MSI was again excluded from the analysis as there were no cases in Sunderland for KS3. The results from the analysis found Sunderland has significantly different proportions of EHC plans in KS3 compared to national, χ^2 (10) 65.79, p <.001. Follow-up tests revealed that Sunderland had:

significantly higher rates for:

- ASD (+47 cases)

and significantly lower rates of:

SpLD (-9 cases) (p <.0042 in each instance).

These values presented above and in Figure 16 overleaf represent the difference between the *observed* Sunderland figures and the *expected* national equivalent figures and should be used as a guide only.

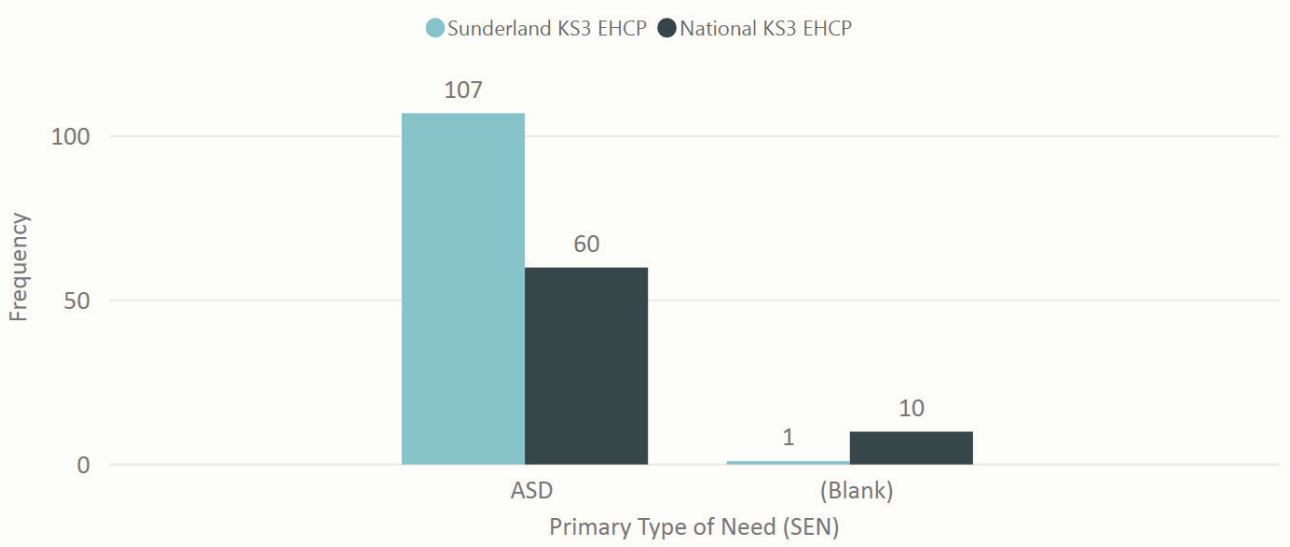

Figure: 16. Incidence of primary type of need in Sunderland that is significantly different from the national equivalent: Children in KS3 designated with an EHC plan (2018/19)

4.3.3.3. EHCPs in KS4 and KS5: Sunderland and England (2018/19)

The most prevalent SEN in KS4 children with EHC plans in Sunderland were ASD (40%), SEMH (25.88%), MLD (11.18%) and SLD (6.47%) (see Table 9 below). Nationally the most prevalent SEN are similar (with the replacement of SLD with SLCN) however they represent different proportions, ASD (24.96%), SEMH (17.58%), MLD (16.70% and SLCN (12.23%).

Table: 9. Prevalence of EHC plans in Key Stage 4 and 5: Sunderland and England (2018/19

Special Educational Need and Disability	Key Stage 4				Key Stage 5			
	Sunderland		England		Sunderland		England	
	Number	%	Number	%	Number	%	Number	%
Autism Spectrum Disorder	68	40.00	10,132	24.96	31	58.49	4,972	27.02
Hearing Impairment	7	4.12	946	2.33	-	-	400	2.17
Moderate Learning Difficulty	19	11.18	6,779	16.70	4	7.55	2,811	15.28
Multi-Sensory Impairment	-	-	88	0.22	-	-	66	0.36
Other Difficulty/Disability	4	2.35	855	2.11	1	1.89	256	1.39
Physical Disability	7	4.12	1,966	4.84	-	-	999	5.43
Profound & Multiple Learning Difficulty	-	-	1,062	2.62	-	-	1,357	7.37
Severe Learning Difficulty	11	6.47	3,968	9.78	3	5.66	4,841	26.31
Social, Emotional and Mental Health	44	25.88	7,136	17.58	10	18.87	753	4.09
Specific Learning Difficulty	3	1.76	2,097	5.17	-	-	396	2.15
Speech, Language and Communications Needs	6	3.53	4,963	12.23	4	7.55	1,233	6.70
Visual Impairment	1	0.59	600	1.48	-	-	318	1.73
Total	**170**	**100**	**40,592**	**100**	**53**	**100**	**18,402**	**100**

Note. Data excludes nursery schools, independent schools, general hospital schools and pupil referral units. '-' denotes zero values.

Source: Sunderland School Census and National School Census

A chi-square analysis was run to compare distributions of SEN with EHCPs in Sunderland with the national equivalent. MSI and PMLD were excluded from the analysis as there were no identified cases in KS4 children with EHCPs in Sunderland. Additionally, to meet the statistical assumptions for the analysis to run correctly, HI and VI were collapsed into one overall SEN group (reducing the categories of SEN examined from 10 to 9). The chi-square goodness of fit analysis revealed Sunderland has significantly different proportions KS4 children with an EHCP compared to national, χ^2 (8) 40.67, p <.001. Follow-up tests revealed that compared to national figures, Sunderland had:

significantly higher rates for:

- ASD (+26 cases)

and significantly lower rates for:

- SpLD (-15 cases) (p <.0042 in each instance).

These values presented above and in Figure 17 below represent the difference between the *observed* Sunderland figures and the *expected* national equivalent figures and should be used as a guide only.

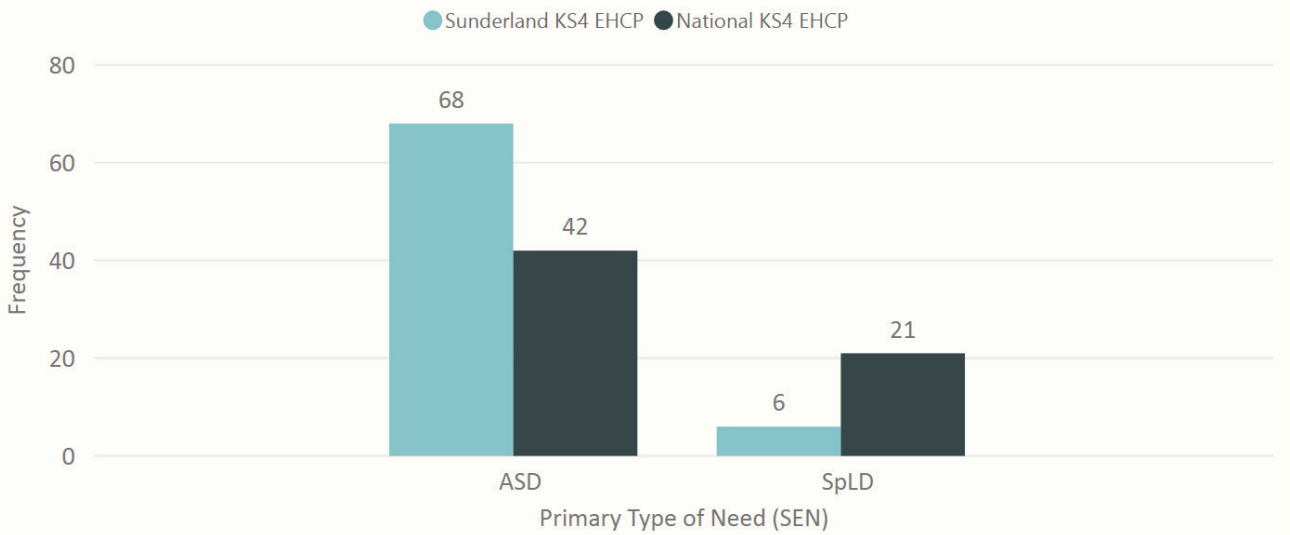

Figure: 17. Incidence of primary type of need in Sunderland that is significantly different from the national equivalent: Children in KS4 designated with an EHC plan (2018/19)

Of all key stages in Sunderland, KS5 had the fewest number of children with SEN and EHCPs with ASD (58.49%) and SEMH (18.87%) being the most prevalent types of SEN. Nationally these SEN groups were different with ASD (27.02%), SLD (26.31%) and MLD (15.28%). Due to the limited amount of Sunderland data, it was not possible to reliably and statistically analyse the proportions of children with EHCPs for KS5 using a chi-square goodness of fit test.

4.4. Comparing the gender differences among SEN population in Sunderland and England (2018/19)

This section focuses on the prevalence of SEN among girls and boys within Sunderland in 2018/19 and compares the gender differences with overall national trends.

4.4.1. Percentage of boys and girls with a primary type of need (SEN support and EHCPs) in Sunderland (2018/19)

According to the latest statistical release (DfE, 2018c), the prevalence of Special Education Needs in males is higher than females for both SEN support and EHCPlans. To examine whether this is true of Sunderland, a chi-square test of association (χ^2) was carried out to determine whether there was a significant association between gender and the thirteen categories of SEN. Like the chi-square goodness of fit test used in previous sections, the analysis for association compares 'observed frequency' of a variable against the 'expected frequency' (Fisher, Marshall and Mitchell, 2011). The values for males and females with SEN in Sunderland are given in Table 10 below.

Table: 10. Number and percentage of primary types of need in Sunderland by Gender (2018/19)

Special Educational Need and Disability	Sunderland					
	Girls		Boys		Total Number	Total %
	Number	%	Number	%		
Autism Spectrum Disorder	241	20.12	957	79.88	1,198	100
Hearing Impairment	57	50.89	55	49.11	112	100
Moderate Learning Difficulty	589	39.88	888	60.12	1,477	100
Multi-Sensory Impairment	5	45.45	6	54.55	11	100
Other Difficulty/Disability	72	33.96	140	66.04	212	100
Physical Disability	84	47.73	92	52.27	176	100
Profound & Multiple Learning Difficulty	13	30.23	30	69.77	43	100
SEN support but no assessed type of need	30	46.15	35	53.85	65	100
Severe Learning Difficulty	68	34.69	128	65.31	196	100
Social, Emotional and Mental Health	375	27.65	981	72.35	1,356	100
Specific Learning Difficulty	174	42.86	232	57.14	406	100
Speech, Language and Communications Needs	416	32.12	879	67.88	1,295	100
Visual Impairment	17	30.36	39	69.64	56	100
Total	**2,141**		**4,462**		**6,603**	

Note. Data included children aged 5-18 and excludes children enrolled in nursery schools, independent schools, general hospital schools and pupil referral units.

Source: Sunderland School Census and National School Census

A chi-square test for association was carried out to investigate the association between gender and categories of SEN (SEN support and EHCP) in Sunderland for 5-18 years. The results for Sunderland indicated an overall significant association between gender and types of SEN, χ^2 (12) 185.53, p <.001. As described previously, the chi-square test is an 'omnibus test' meaning it can only compare overall associations and requires follow-up analysis comparing SEN numbers in each gender separately to determine specific associations. These were carried out and revealed that amongst:

Sunderland boys with SEN, there were significantly higher rates of:

- ASD
- SEMH

and significantly lower rates of:

- MLD
- SpLD
- HI
- PD (p <.05 in each case).

Sunderland girls with SEN, there were significantly higher rates of:

- MLD
- SpLD
- HI
- PD

and significantly lower rates of:

- ASD
- SEMH (p <.05 in each case).

These prevalence rates are shown below in Figure 18.

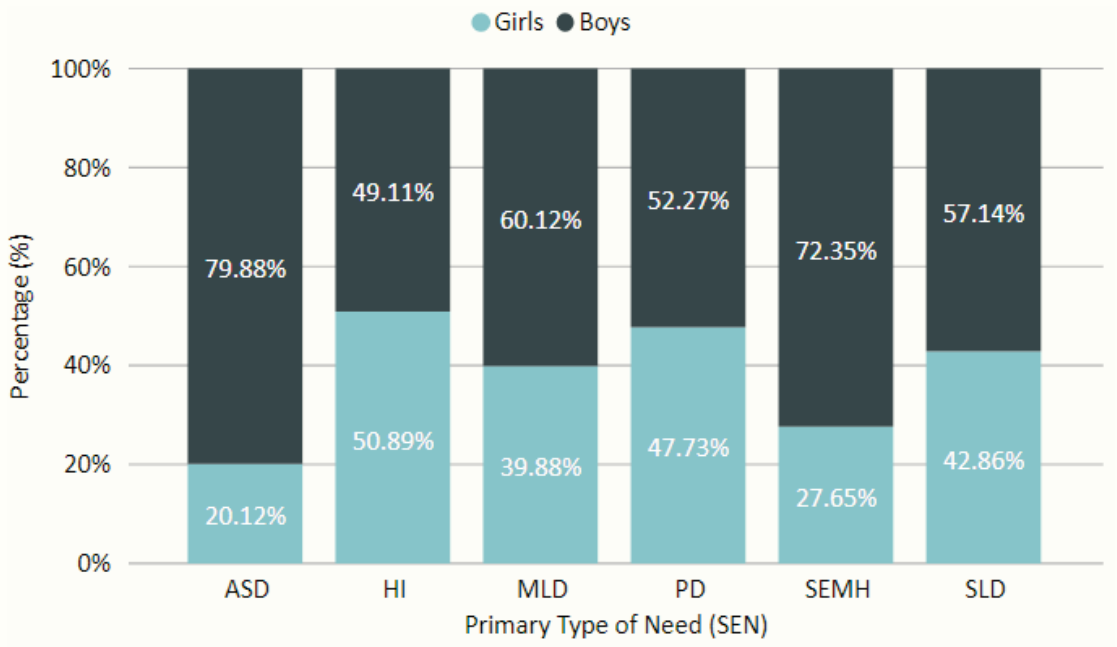

Figure: 18. Number and percentage of primary types of need in Sunderland by Gender (2018/19)

4.4.2. Comparing gender differences across SEN support and EHCPs: Sunderland and England (2018/19)

The rates of SEN for each gender were compared to the national rates to determine whether SEN in Sunderland was significantly different. To make valid comparisons between Sunderland and England, only comparable data from Sunderland in 2018/19 were used. This meant single and dual registered children were included in calculations (n = 5,536). In contrast, children attending nursery schools, general hospital schools, independent schools and pupil referral units were excluded (n = 222) as they were not included in the national dataset. This meant the final sample was of 5,314 children for SEN support and 962 for children designated with EHCPs. The number and percentage values for boys and girls aged 5-18 with SEN support and EHCPs in Sunderland and England are given in Tables 11 and 12 below.

4.4.2.1. SEN support in girls and boys: Sunderland and England (2018/19)

The most prevalent types of primary need designated SEN support for girls in Sunderland were MLD (31.03%), SLCN (21.19%), SEMH (18.74%) and SpLD (9.29%). Nationally these were the same types of need but in a different order, MLD (27.53%), SLCN (19.96%), SpLD (17.25%) and SEMH (14.40%) (DfE, 2018a). These values for Sunderland and England are presented in Table 11 below.

Table: 11. Comparison of SEN support by gender: Sunderland and England (2018/19

Special Educational Need and Disability	Sunderland				England			
	Girls		Boys		Girls		Boys	
	Number	%	Number	%	Number	%	Number	%
Autism Spectrum Disorder	137	7.62	525	14.93	11,475	3.52	42,071	6.93
Hearing Impairment	43	2.39	44	1.25	7,878	2.42	7,998	1.32
Moderate Learning Difficulty	558	31.03	837	23.81	89,695	27.53	134,495	22.16
Multi-Sensory Impairment	4	0.22	6	0.17	725	0.22	1,546	0.25
Other Difficulty/Disability	62	3.45	128	3.64	18,238	5.60	28,961	4.77
Physical Disability	62	3.45	61	1.73	9,200	2.82	12,789	2.11
Profound & Multiple Learning Difficulty	1	0.06	3	0.09	342	0.10	595	0.10
SEN support but no assessed type of need	26	1.45	34	0.97	14,882	4.57	23,787	3.92
Severe Learning Difficulty	6	0.33	14	0.40	1,161	0.36	2,027	0.33
Social, Emotional and Mental Health	337	18.74	804	22.87	46,916	14.40	116,718	19.23
Specific Learning Difficulty	167	9.29	227	6.46	56,192	17.25	83,269	13.72
Speech, Language and Communications Needs	381	21.19	798	22.70	65,040	19.96	147,748	24.34
Visual Impairment	14	0.78	35	1.00	4,046	1.24	4,965	0.82
Total	**1,798**	**100**	**3,516**	**100**	**325,790**	**100**	**606,969**	**100**

Note. Data excludes nursery schools, independent schools, general hospital schools and pupil referral units.

Source: Sunderland School Census and National School Census

The chi-square goodness of fit analysis revealed the proportions of girls with SEN support in Sunderland were statistically different from the national equivalent, χ^2 (12) 244.09, p <.001. Binomial post hoc tests with Bonferroni corrections revealed that when compared to the national, Sunderland had:

significantly higher rates of girls designated SEN support with:

- SEMH (+78 cases)
- ASD (+74 cases)
- MLD (+63 cases)

and significantly lower rates of girls designated SEN support with:

- SpLD (-143 cases)
- NSA (-56 cases)
- OTH (-39 cases) (p <.0038 in each instance).

These values presented above and in Figure 19 below represent the difference between the observed Sunderland figures and the expected national equivalent figures and should be used as a guide only.

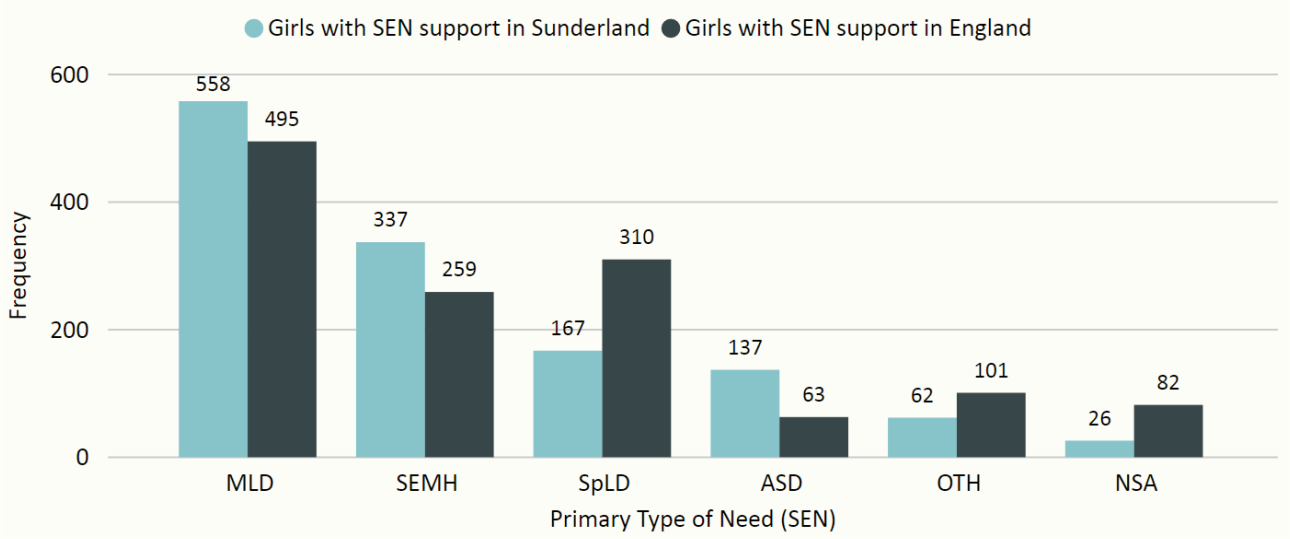

Figure: 19. Incidence of primary type of need in Sunderland that is significantly different from the national equivalent: Girls designated SEN support (2018/19)

For boys, the most prevalent types of primary need in Sunderland designated SEN support were MLD (23.81%), SEMH (22.87%), SLCN (22.70%) and ASD (14.93%) (see Table 11). Nationally three of the types of need were the same, with SpLD replacing ASD as the fourth most prevalent, SLCN (24.34%), MLD (22.16%), SEMH (19.32%) and SpLD (13.72%) (DfE, 2018a). A chi-square goodness of fit analysis revealed Sunderland had statistically different proportions of males with SEN support compared to the national equivalent, χ^2 (12) 585.31 p <.001. Follow-up tests found that Sunderland had:

significantly higher rates of males designated

- SEN with:
- ASD (+281 cases)
- SEMH (+128 cases)

and significantly lower rates of males designated SEN with:

- SpLD (-255 cases)
- NSA (-104 cases) (p <.0042 in each instance).

These values presented above and in Figure 20 overleaf represent the difference between the *observed* Sunderland figures and the *expected* national equivalent figures and should be used as a guide only.

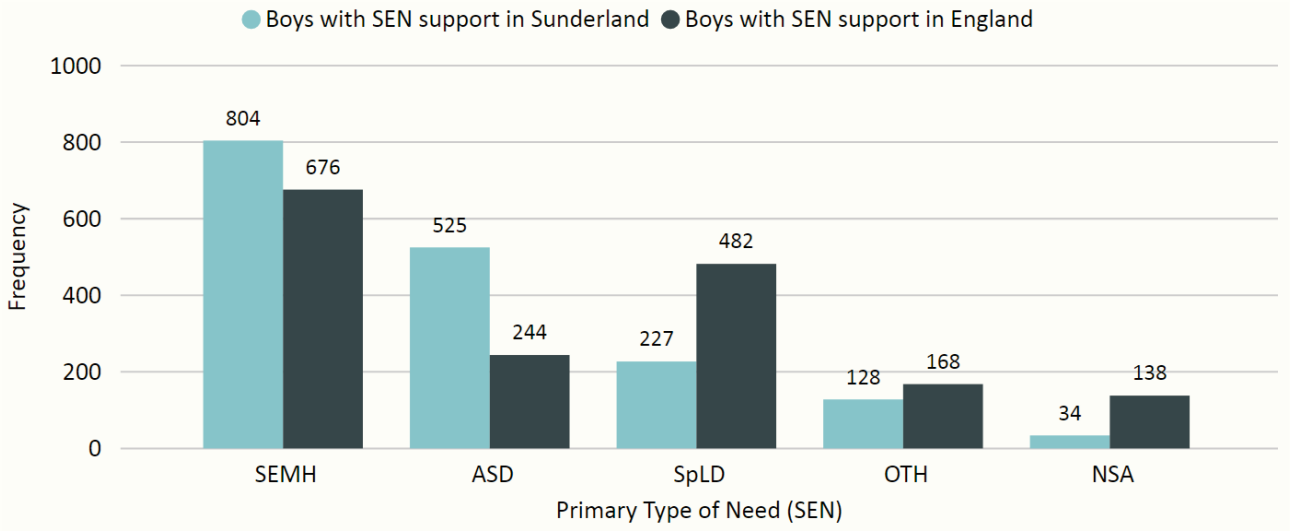

Figure: 20. Incidence of primary type of need in Sunderland that is significantly different from the national equivalent: Boys designated SEN support (2018/19)

4.4.2.2. EHCPs in girls and boys: Sunderland and England (2018/19)

The most prevalent types of primary need designated with an EHCPs for girls in Sunderland were ASD (36.67%), SLD (13.75%), MLD (10.42%) and SEMH (9.58%). Nationally the three most prevalent primary types of need were the same but with different proportions: ASD (17.19%), SLD (16.07%), MLD (15.86%) and SLCN (14.45%) (DfE, 2018a). These values for Sunderland and England are presented in Table 12 below.

Table: 12. Comparison of EHCPs by gender: Sunderland and England (2018/19)

Special Educational Need and Disability	Sunderland				England			
	Girls		Boys		Girls		Boys	
	Number	%	Number	%	Number	%	Number	%
Autism Spectrum Disorder	88	36.67	372	51.52	10,978	17.19	55,385	32.29
Hearing Impairment	12	5.00	8	1.11	2,636	4.13	3,234	1.89
Moderate Learning Difficulty	25	10.42	35	4.85	10,129	15.86	18,112	10.56
Multi-Sensory Impairment	1	0.42	-	-	311	0.49	438	0.26
Other Difficulty/Disability	7	2.92	11	1.52	2,184	3.42	3,904	2.28
Physical Disability	18	7.50	28	3.88	5,376	8.42	7,400	4.31
Profound & Multiple Learning Difficulty	7	2.92	16	2.22	4,368	6.84	5,664	3.30
Severe Learning Difficulty	33	13.75	67	9.28	10,259	16.07	19,233	11.21
Social, Emotional and Mental Health	23	9.58	124	17.17	4,494	7.04	25,529	14.88
Specific Learning Difficulty	3	1.25	6	0.83	2,440	3.82	5,778	3.37
Speech, Language and Communications Needs	21	8.75	52	7.20	9,226	14.45	25,027	14.59
Visual Impairment	2	0.83	3	0.42	1,458	2.28	1,821	1.06
Total	**240**	**100**	**722**	**100**	**63,859**	**100**	**171,525**	**100**

Note. Data excludes nursery schools, independent schools, general hospital schools and pupil referral units.

Source: Sunderland School Census and National School Census

The chi-square analysis was run for girls with EHCPs and found a statistical difference between Sunderland and national prevalence rates, χ^2 (11) 78.50, p <.001. However, post hoc tests with corrections revealed Sunderland only had statistically higher rates of girls with ASD (+74 cases) compared to national.

For boys with EHCPs, the most prevalent types of primary need in Sunderland were ASD reflecting over half of all SEN with 51.52%, followed by SEMH (17.17%), SLD (9.28%) and SLCN (7.20%). Nationally the most prevalent types of need were the same but were of different proportions and in a slightly different order, ASD (32.29%), SEMH (14.88%), SLCN (14.59%) and SLD (11.21%) (DfE, 2018a). A chi-square goodness of fit analysis revealed Sunderland had statistically different proportions of males with EHCPs compared to the national equivalent, χ^2 (10) 160.27, p <.001.

Follow up tests found that Sunderland had:

significantly higher rates of males designated SEN with:

- ASD (+138 cases)

and significantly lower rates of males designated SEN with:

- SLCN (-54)
- MLD (-41)
- SpLD (-18) (p <.001 in each instance).

These values presented above and in Figure 21 below represent the difference between the *observed* Sunderland figures and the *expected* national equivalent figures and should be used as a guide only.

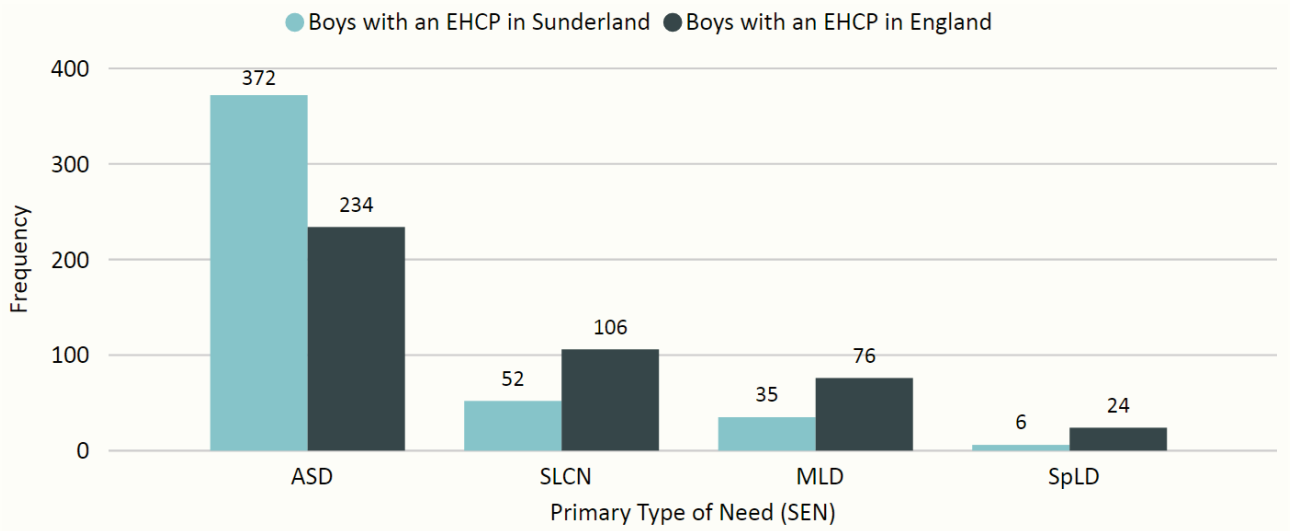

Figure: 21. Incidence of primary type of need in Sunderland that is significantly different from the national equivalent: Boys designated with an EHCP (2018/19)

5. Concluding Remarks

5. Concluding remarks

This research aimed to analyse the prevalence of SEN across the City of Sunderland through the examination of school census data from 2014-2019. The distribution of SEN was investigated across different groups and compared to the national 'average' to determine disproportionate rates of SEN that were significantly different in Sunderland compared to England.

It has been revealed that there are a disproportionate number of children with ASD in EYFS and KS1-4 in Sunderland compared to England and that the number is continuing to rise year on year. This will inevitably be creating pressure on the capacity of health services to identify, assess and diagnose promptly and potentially for schools to have the knowledge, skills and understanding to meet individual needs.

According to the school census, MLD is the most prevalent special educational need identified in Sunderland. As highlighted in the literature review, for many years, the inadequacies of MLD as a category have been reported with no useful definition, nor sufficiently evidenced assessment for identification. Consideration should be given as to whether the term 'learning disability' would be more useful; however, this would require national consultation due to implications for policy.

The data has shown SEMH needs have increased over the last five years and are currently the second most prevalent type of SEN recorded in Sunderland. This may be indicative of associated indicators that have been found to increase SEMH needs, such as childhood and adulthood mental health difficulties. Comparisons to national data revealed that Sunderland has significantly higher rates of girls and boys with SEMH designated SEN support and this is most likely attributed to the substantially higher rate found in KS3-4 children.

The analysis has also demonstrated that in Sunderland, there is a low prevalence of SpLD across all key stages. This could be due to SpLD not being identified or assessed, which would indicate a training need across the City or lower numbers of children who are neurodiverse. It could also be the case that the high rates of MLD and SEMH could be indicative of unidentified SpLD and would explain the unusually low rate of prevalence in this category. Given the analysis implying higher rates of ASD, MLD and SEMH, schools may require ongoing training of evidence-based approaches to effectively provide effective teaching, learning and enabling environments to ensure inclusive practice and Equality Act (2010) compliance.

The report provides a general comparative account of pupil characteristics that were examined in isolation of all possible demographics and as such, can only be used very generally. The limitations of the data analysis used in the report are that data were analysed at a strategic level and lack details of the specific identified Special Educational Needs of children. It is also important to note that while comparisons to national averages are useful, the constituent local authorities that make up the national average will vary. Some local authorities will naturally fall above, below or similar to the national rates and are not necessarily cause for concern. However, despite this, the data analysis provides a clear evidence base for local policy development allowing for cross-sectional planning of training requirements and service provision in preparation for meeting the many and varying needs of children in Sunderland. There needs to be confidence in the existence of well-functioning systems, processes and policies within Sunderland to ensure that children and families are supported promptly across the services.

6. Recommendations

6. Recommendations

It is advised that TfC and stakeholders in education, health and care services work collaboratively to inform self-evaluation, provision planning and training needs. The recommendations that follow are based solely on the data sets within this publication.

Recommendation 1: Due to the significantly higher rates of ASD in Sunderland among girls and boys there needs to be an audit of local services to ensure adequate support systems exist for caregivers and children with ASD, from early years to adulthood. TfC and stakeholders from education, health and social care should explore whether training needs to be provided for all staff to ensure evidence-based approaches are being consistently applied in practice.

Recommendation 2: For TfC to carry out a sample audit of children identified with MLD to understand the range of needs and to determine how they are being identified and assessed. This should be followed by Citywide training to develop a shared understanding of the identification and assessment of MLD.

Recommendation 3: Due to the high prevalence of SLCN in Sunderland in the early years, the process and reporting arrangements for the two-year progress check needs to be audited to ensure they are robust and timely in identifying and sharing concerns with multi-disciplinary teams.

Recommendation 4: As there continues to be a year-on-year increase in some types of SEN such as SEMH and ASD, it is advised that school census data is used by services to proactively forecast and plan for the diverse and holistic needs of children with SEN across multi-disciplinary teams.

Recommendation 5: In light of the low rates of SpLD in females and males, TfC should evaluate the effectiveness and impact of arrangements for identifying and assessing SpLD across the age phases. This will allow them to understand if the low prevalence is due to children not being identified.

Recommendation 6: There is a low prevalence of 'SEN support but no specialist assessment of type of need' (NSA) across all age ranges in Sunderland. This could be indicative of the fast processes in place from when a concern is raised about a child's learning when a child receives an assessment. However, it could also be indicative of hesitance surrounding SEN identification. It is not possible based on the current analysis of data within this report to determine which explanation reflects Sunderland.

National recommendation: National guidance is needed for schools to provide a reliable and evidence-based definition of MLD with clear identification, assessment and approaches to supporting this group of children. Consideration needs to be given to whether this classification should continue or whether 'learning disability' as diagnosed by health services would be more useful.

7. References

7. References

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