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# **Special Educational Needs and Disabilities within the English primary school system: What can disproportionalities by season of birth contribute to understanding processes behind attributions and (lack of) provisions?**

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## **Editorial note**

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## **Abstract**

This working paper uses de-identified National Pupil Database records spanning 2008 – 2018 (N children=6 million+) to map disproportionalities by birth season and gender in attributions of levels of Special Educational Needs and Disabilities (SENs) and ascriptions of SEND types. It also maps disparities in attribution to Reception children of an Early Years Foundation Stage Profile (EYFSP) 'Good Level of Development' and to Year 1 children the status of 'meeting expectations' in the Phonics Screening Check. It lays the foundation for more detailed work towards understanding the processes behind birth month disproportionalities in attributions of SENs, and implications of these for the function of the school and SEND systems.

Summer-born children, particularly boys, are much more likely to be attributed both 'higher' and 'lower'-level SEND by the end of their primary school career, and there are also stark inequalities in the types of SEND ascribed to boys and girls born across the year. Alongside this, there are extremely pronounced disparities by birth season and gender in EYFSP and Phonics screening assessments at the beginning of primary school.

In the context of findings here, previous research and theory, and indications of a widening over time in gaps between autumn-born girls and summer-born boys, this paper hypothesises that rigid, prescriptive 'expectations' and 'standards' within the primary education system result in summer-born children disproportionately being denoted with SEND: and that therefore to some extent the system produces – and then fails to meet – the needs of children with SEND. The current SEND system is characterised as riddled with 'nightmares' and 'dashed hopes' (House of Commons Education Committee, 2019); this paper begins to contribute to scrutinising the workings of the system overall and factors that produce inequalities, inefficiencies, insufficiencies.

Key words: Relative age effects, Special Educational Needs, Disability, Primary Education, Inequalities

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# 1. Introduction

There are many problems with provisions for children with Special Educational Needs and Disabilities (SEND) within the English school system (House of Commons Education Committee, 2019; House of Commons Education Committee, 2020; NAO, 2019; Special Needs Jungle, 2019). Using the National Pupil Database (NPD), which covers all children in state-funded education in England, this paper begins to scrutinise one long-documented but under-interpreted aspect of the system: stark disproportionalities in attributions of SENDs throughout primary school according to children's season of birth.

England operates a cohort-based schooling structure, where children born between September of one year and August of the next are entitled to enter school on the same date, and where the vast majority are then educated together in a year-group. Thus the last-born summer child within a cohort, who enters school at just-turned-four, is a year younger than the oldest autumn-born, who is turning five: and this 12-month range within year-group remains throughout compulsory education.

Research here updates and extends the descriptive empirical evidence on how relative age within cohort predicts attributions of and provisions for SENDs, for girls and boys. It also commences consideration of what disproportionalities suggest about the workings of the SEND system as embedded and entwined within the wider English primary school system. Early findings suggest that the systems produce vast inequities, and that this contributes to the malfunction of processes that are meant to serve children and their families.

## ***1.1 Provision for children with SEND: inefficiencies, insufficiencies, and inequalities***

As described by Hutchinson (2021), the past decade has seen attempted reform of SEND provision within the English education system, following schools regulator Ofsted's (2010) highly critical review, 'commissioned to evaluate how well the legislative framework and arrangements served children and young people who had special educational needs and/or disabilities.'

Ofsted found the system inefficient and unequal, and insufficient in providing for children's needs:

...effective identification and good-quality provision was not common...[with] widespread weaknesses in the quality of what was provided for children...evidence that the way the system is currently designed contributes to these problems... Children and young people with similar needs were not being treated equitably and

appropriately... additional provision was often not of good quality and did not lead to significantly better outcomes for the child... (p 6-7)

Ofsted's recommendations included, 'improving the quality of assessment' of SENDs, and 'ensuring that where additional support is provided, it is effective.' This, Ofsted suggested, 'could make the system better focused...and more effective in its use of necessarily limited resources' (p 8).

The Department for Education (DfE) followed these recommendations with a Green Paper, 'Support and Aspiration' (2011), stating an ambition for a 'radically different system,' which would bring 'a new approach to identifying SEN...to challenge a culture of low expectations for children with SEN and give them effective support to succeed' (p 16), and 'a system which works well for every child' (p 28).

The Green Paper detailed how, 'To provide the best opportunities for all children and young people, we must confront the weaknesses of our education system,' and that 'measures of school performance created perverse incentives to overidentify children as having SEN...these labels of SEN...have not led to the right support being put in place' (p 9). The DfE set out an intention 'to tackle the practice of over-identification by replacing the current SEN identification levels of School Action and School Action Plus with a new single school-based SEN category' (p 10).

This intention was enacted in 2014's Children and Families Act (2014a) and a new SEND Code of Practice (2014b): rather than school-administered, 'lower'-level attributions of SEND being split into two incremental categories (of 'School Action,' and 'School Action Plus'), a single 'Support' level replaced the pair from 2015. At the same time, children with Local Authority-administered, 'higher'-level SEND designations were transitioned from 'Statements' of SEN to 'Education and Healthcare Plans' (EHCPs), which were intended to address needs more holistically.

Save for the shifting of terminology and collapsing of school-level support categories, what else has happened post-2014? Has the system become 'better focussed' and 'more effective' Ofsted (2010); 'a system which works well for every child' (DfE, 2011)? The 2019 reports of the House of Commons Education Committee and the NAO, and the DfE's corresponding launch of a 'Major review into support for children with special educational needs' (DfE, 2019) – which has yet to report or to result in any action – very much suggest the opposite.

Lupton and Obolenskaya (2020) detail comprehensively how, rather than improving provision for children and families, the 2014 reforms appear not to have solved but potentially to have exacerbated problems within the SEND system. Lengthy waiting lists for assessment, enormous gaps in

provision, lack of specialist school places, and increasing numbers of families being forced to tribunal to secure statutory rights and education for their children through EHCPs are now rife. In the school year 2011-12, 69% of SEND tribunals were found in favour of the family and child, and this has risen to 95% in 2019-20 (Long et al 2021).

This context means that in many cases only families who can sustain the mental and financial resources to fight a system insistent on expelling their children and on actively resisting providing for them can access the right to statutory support. Correspondingly, it is unsurprising that increasing numbers of children with SEND receive no school-based educational at all (Long et al, 2021). Entirely contrary to the aims stated in the 2011 Green Paper, to banish 'the frustration, complexity and confrontation inherent in [2011's] system,' the structure is now riddled with 'confusion and sometimes unlawful practice, bureaucratic nightmares, buck-passing and a lack of accountability, strained resources and adversarial experiences, and ultimately dashed the hopes of many' (House of Commons Education Committee, 2019).

Alongside this, as envisioned by the DfE, the proportion of children with 'lower' levels of SEND attributed fell sharply from its peak in 2010 to a low in 2016, which may superficially be interpreted as suggesting that the postulated 'over-identification' which could lead to system inefficiency and insufficiency has been addressed to some extent. At the same time, however, despite enormous barriers to access, since 2017 there has been an increase in the proportion of children with 'higher'-level EHCP provision, administered and funded by the Local Authority (Long et al, 2021). What is more, the overall fall in numbers of children attributed 'lower'-level SEND masks inequalities by group, which are part of the story of 'over'- or 'under-identification,' and its implications: such disproportionalities by birth season (a key factor delineating inequalities here) are therefore mapped explicitly over time in this working paper.

Thus the past decade's reforms have not improved the experiences of children and families: the system remains insufficient, inefficient, and unequal. More and crucially, different, reform therefore seems necessary. This is why it is important to continue to examine from all angles the factors that play into and construct the SEND system: because, as a whole, it is characterised by 'nightmares' and 'dashed hopes' (ibid), and it is failing to serve the children it should be supporting.

## ***1.2 The wider context: the school system, testing and curriculum***

Attributions of and provisions for SEND do not exist in a vacuum, and the surrounding structures and context of the English primary school system are important to understanding and interpreting the functioning of the SEND system for young children. In its 2011 statements that 'measures of



school performance created perverse incentives to overidentify children as having SEN' and proposal that 'labels of SEN have...not led to the right support being put in place,' the DfE acknowledged the embedding and overlapping of components and their interplay with one another. But this aspect of the constructions of inequality, inefficiency and insufficiency within SEND provision has yet directly to be addressed.

Key to the primary school environment are the testing and aligned curriculum regimes increasingly driving education from the very start. These are entwined with the 'measures of school performance' identified by the DfE as creating 'perverse incentives,' and many academics and practitioners argue them to be one of the 'weaknesses of our education system' (DfE, 2011) (NEU, 2021; More than a score, online a, online b).

At age four/five, children enter school, and are quickly ascribed a binary judgement of having reached a 'good level of development' – or not – against criteria forming the Early Years Foundation Stage Profile, at the end of their reception year. At age five/six, children are 'screened' for phonics, and deemed to have met the 'expected standard' – or not. At age six/seven, they are assessed (currently in reading, writing, and maths) at the end of Key Stage 1. There is then a pause, before the end of Key Stage 2, when at ten/eleven children sit exams and are assessed once more by teachers (DfE, 2017).

All these judgements and assessments are against rigid top-down 'national standards' prescribed centrally and with no flexibility to account for birth month and age within year group. So for four years (soon to be five<sup>1</sup>) of their seven years of primary school, children (aged up to a year apart within cohort) are all measured at a set point within the academic year, and ascribed as having 'met expectations,' or not. The high-stakes nature of these tests and the accountability pressures surrounding them mean that they pervasively shape the curriculum, pedagogical practices, and everyday expectations and decisions about children within this structure of imposed 'standards' (Bradbury et al, 2021).

It has long been known that relatively younger children (summer-borns) are much less likely to be assessed as meeting these 'standards' throughout primary school, and that to a great extent this is simply because they are younger and have lived and developed for less time than their older autumn-born peers (Crawford et al, 2013; 2014). Most children's skills develop as they age, and gaps between summer-borns and autumn-borns are greatest in early primary school, when the proportional difference in months lived is widest. In 2009, after reviewing for the government's

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<sup>1</sup> The Reception Baseline Assessment on entry to school at four will result in 'a series of narrative statements to describe how each pupil performed on the assessment' <https://www.nfer.ac.uk/for-schools/participate-in-research/information-about-the-201920-reception-baseline-assessment-pilot>

Qualifications and Curriculum Authority the international evidence on month of birth effects, Sharp et al highlighted several strategies likely to mitigate relative age inequalities, including those in SEND identification. Recommendations included using age-standardised tests, or a flexible system of 'assessment when ready.' They also included ensuring 'that that the curriculum is appropriate for relatively younger children, especially in the early years of schooling' (Sharp et al, 2009, p2).

Quite the opposite has happened within primary education in England since Sharp et al made these recommendations. Instead, the rigid structure of 'expectations' which align with the chronology of the school year rather than with children's own age has continued to be extended downwards and to alter teaching and curriculum (Walker et al, 2014). The resultant stark disparities by birth month (and gender) in early reported 'attainment' at four/five and five/six are laid out once more within this paper, and this context will inform discussion of inequalities by birth season in attributions of and provisions for SENDs: considering the ways that the testing and curriculum regimes may feed into early SEND attributions, and how inequities here contribute to the insufficiencies and inefficiencies of the SEND system.

### ***1.3 Previous research quantifying relative age inequalities in attributions of SENDs using the National Pupil Database***

Previous research highlighting national system-level relative age disparities in England, and using the National Pupil Database, includes Crawford et al's (2007) study of the cohorts of children born in 1990-91 / 1991-92, and 1997-98 / 1998-1999. For the younger (9798, 9899) cohorts Crawford et al found for boys in their reception year (in 2003 / 2004) no difference by birth month in chances of being attributed either 'lower'<sup>2</sup> or 'higher'<sup>3</sup> levels of SEND. For girls, they found no difference by birth month in the chances of 'higher'-level SEND provision, but a difference for 'lower'-level: 'while only 3.3 per cent of September-born girls have a non-statemented special educational need, 5.3 per cent of August-born girls are similarly classified' (Table 5.1; p 31).

For the older (9091 / 9192) cohorts, Crawford et al examined attributions in Year 6 (2002 / 2003), and found at this time birth month differences across girls and boys for both 'lower' and 'higher'-level SEND. 11.3% of September-born girls were attributed lower-level SEND, compared to 19.4% of August-born girls, 20.5% of September-born boys, and 29.9% of August-born boys. 1.6% of September-born girls were attributed 'higher'-level SEND, compared to 2% of August-born girls, 4.2% of September-born boys, and 4.8% of August-born boys (p32, Table 5.2).

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<sup>2</sup> At this time, 'School Action' or 'School Action Plus'

<sup>3</sup> At this time, SEN with 'Statement'

Research by the Department for Education (2010) considered Year 2 children in 2009 (the cohort born in 2001-02), and found that August-born children were 90% more likely to be attributed any level of SEND than September-borns, and that proportional differences were more pronounced for girls – echoing Crawford et al's reporting of differences by gender. Examining Year 6 children also in 2009 (those born 1997-98), analyses found a smaller overall difference, of 60%, but that girls continued to experience the steepest birth month gradient. Focussing in only on children with 'higher'-level SEND<sup>4</sup> in Year 6, this research found that August-borns were 30% more likely than September-borns to have a Statement of SEN.

The Department for Education's research preceded the 2014 reforms, when information on SEND type ascribed began to be reported in the NPD for all children, as well as SEND level (which has been reported since the turn of the century). Pre-2015, information on SEND type was recorded only for children attributed 'School Action Plus' or 'Statement'-level SEND. Compared to all children in their cohort, the DfE found summer-borns in Year 2 (the 2001-02 cohort) more likely to be ascribed 'Moderate Learning Difficulty,' 'Specific Learning Difficulty,' 'Other' SEND, 'Speech, Language, and Communication Needs,' 'Severe Learning Difficulty,' 'Profound and Multiple Learning Difficulty,' 'Hearing Impairment,' and 'Behavioural, Emotional, and Social Development Needs.' For the 1997-98 cohort, in Year 6, 'Moderate Learning Difficulty,' 'Specific Learning Difficulty,' 'Other' SEND, 'Speech, Language, and Communication Needs,' and 'Severe Learning Difficulty,' continued to be the categories for which birth season disproportionalities in the same direction were more pronounced.

The Department for Education's analyses of propensity to ascription of each denoted type of SEND – as opposed to no or 'School Action' SEND – begin to beg consideration of the complexities inherent in untangling the processes of attribution with any SEND from the type of SEND ascribed to children. That children in the 2001-02 cohort were more likely in Year 2 to be attributed SEND with an accompanying ascription of 'Hearing Impairment,' for example, if they were summer-born, raises questions about directions of causality and ordering of processes. There is no obvious reason why summer-born children would be more likely to be d/Deaf than autumn-borns: so how do they come to be more likely to be ascribed? Similarly, there is no reason that summer-borns would be inherently more likely to have a 'Specific Learning Difficulty,' like dyslexia. What events, processes and decisions explains the patterns here?

Strand and Lindorf (2018) also examined the odds of groups of children being attributed different types of SEND: firstly, combing across cohorts all those in the NPD in Reception to Year 11 in 2016 (thus utilising the post-2014 period where type ascribed is reported for children attributed all levels

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<sup>4</sup> At this time, SEN with 'Statement'

of SEND). Summer-borns, and boys, were more likely to be attributed all types, compared to no SEND. Like the Department for Education's (2010) analyses, Strand and Lindorf's odds here combine the processes of attribution of any SEND (level) and SEND type. It is possible that a summer-born child is attributed 'Specific Learning Difficulties' and therefore 'low'-level SEND as a result of being tested for dyslexia, for example. But, in contrast, it is also possible that having been denoted as needing SEND support because they are relatively immature as a summer-born and they have not yet progressed to the same stage as their autumn-born peers, the child is consequentially more likely to be assessed for and ascribed dyslexia. As the authors note, 'It is important not to make strong inferences of cause and effect' (p52); pathways and events remain to be untangled.

Strand and Lindorf go on to explore disproportionate identification of summer-borns and boys with SEND ascribed as 'Moderate Learning Difficulty' and 'Social, Emotional, and Mental Health Difficulties.' Disproportionalities hold when considering only primary school children and when controlling for other factors. In contrast, their analyses find summer-born children are less likely than autumn-borns to be attributed 'Autistic Spectrum' conditions when the sample is restricted to the primary years: indicating that inequalities by birth season may vary over SEND type and stage of education.

Lastly, Strand and Lindorf examined the cumulative likelihood of children born in the 2003-04 cohort being attributed SEND with type ascribed as 'Moderate Learning Difficulty,' 'Social, Emotional, and Mental Health Difficulties', or 'Autistic Spectrum' conditions over the course of their primary career (2009-2015). As above, summer-borns and boys are more likely than autumn-borns to be identified with 'Moderate Learning Difficulty' at some point. However, once Early Years Foundation Stage Profile (EYFSP) scores in reception are accounted for, the birth month pattern reverses, and the pattern for boys is attenuated. The same holds for attribution of SEND ascribed with 'Social, Emotional, and Mental Health Difficulties': The EYFSP appears to mediate the relationship between birth month and this disproportionality. Summer-born children were less likely than autumn-borns to be attributed SEND ascribed 'Autistic Spectrum Disorder' – and even less likely once this probability was conditioned on EYFSP scores. The EYFSP therefore seems to play a part in channelling the relationships between relative age and SEND attributions.

Hutchinson's (2021) findings echo this aspect of Strand and Lindorf's work. Hutchinson explores disparities in attribution of 'lower' and 'higher'-level SEND in the post-Reception years (1-4) of primary school, for the cohort of children born in 2005-06, among those who were not already attributed prior to year 1 (in 2012). Focussing on level rather than type, and in line with previous work using the NPD, Hutchinson finds that summer-born children and boys are more likely than autumn-borns and girls to be

attributed SEND at either overall 'lower' or 'higher' level. Additionally, in line with Strand and Lindorf's analyses, Hutchinson finds that both birth month and gender disparities appear to be mediated through previous 'attainment' at age five in the EYFSP.

Existing national system-level research using the NPD has therefore consistently found large disproportionalities according to birth month in overall attributions of any SEND: that summer-born children are more likely than autumn-borns to be recorded with both 'lower'- and 'higher'-level needs. It has also found differences by gender and age/stage. In earlier cohorts (1997-98; 1998-99), disparities in the reception year are scant, but pronounced in Year 6 (1990-91; 1991-92 cohorts) (Crawford et al, 2007). Differences for the 2001-02 cohort in Year 2 are even more pronounced than those for the 1997-98 cohort in Year 6, when measured in the same calendar year, 2009 (Department for Education, 2010). What is not yet clear is whether this difference is due to age/stage effects, or cohort/period effects. By looking at multiple cohorts at the same time, the new descriptive analyses presented in this working paper begin a process of separating out patterns according to children's age and stage from those determined by cohort, period, and surrounding context.

When previous research has considered SEND type, either for children attributed 'higher'-level SEND (pre-2015; Department for Education, 2010) or for all children (post-2015; Strand and Lindorf, 2018), it has found consistently that summer-borns are more likely to be ascribed most types. However, as these studies consider the likelihood of being ascribed each SEND type as opposed to either no or 'lower'-level SEND, this combines disproportionalities by birth month in overall attribution with *any* SEND, and disparities by birth month in ascription (and provision for) different *types* of SEND. Therefore the new research in this working paper begins the process of disentangling these factors from one another.

Lastly, previous research using the NPD has found that controlling for EYFSP scores moderates or mediates the relationship between birth month (and gender) and SEND attribution (Strand and Lindorf, 2018; Hutchinson, 2021). As noted earlier, the EYFSP assessment is against rigid standards that are not age-standardised, and the curriculum for reception children is aligned with its expectations. This implicates the curriculum and assessments as instrumental in feeding into relative age disproportionalities in SEND attributions, and suggests that they continue to create the 'perverse incentives' the DfE in 2011 acknowledged and stated a wish to avoid.

## **2. The current analyses**

New descriptive analyses here therefore lay a foundation for more detailed work towards understanding the processes behind birth month (and gender) disproportionalities in attributions of SENDs, and implications of these for the function of the system overall. They update and extend previous system-level evidence using the National Pupil Database, mapping inequalities throughout primary school, and examining data for multiple cohorts from 2008 to 2018, thus making a first step towards disentangling cohort/period and age/stage effects. They consider disparities in the level of SEND support recorded, in timing of SEND attribution, and in type of SEND ascribed to children attributed different levels. Given indications that early assessments may play a part in channelling inequalities in SEND attribution, this paper also maps stratification by birth month and gender in 'attainment' in early primary school over the decade.

The following overriding questions are thus addressed through the empirical analyses:

1. What disproportionalities are there by birth season and gender in attribution / provision of each level of SEND support among primary school children?
2. What disproportionalities are there by birth season and gender in ascription of each type of recorded SEND among primary school children?
3. How do disproportionalities by birth season and gender in attributions / provision of levels of SEND support interplay with disproportionalities in ascriptions of types of SEND?
4. What inequalities are there by birth season and gender in 'attainment' in early primary school?

### **2.1 Data**

De-identified pupil-level data from the National Pupil Database, a census covering all children in England in state-funded education, are used in this paper. Data are accessed through the ONS Secure Research Service after application to and approval by the Department for Education. Eleven school year-group cohorts of children are considered: the earliest is those born between September 2002 and August 2003, whose information for their reception year was captured in January 2008; the latest, those born between September 2012 and August 2013, whose reception year spanned January 2018. The Spring Schools Census, Early Years Census, Early Years

Foundation Stage Profile results, and Phonics Screening Check results are used here. Within these records, children are allocated a unique anonymised identifier (Pupil Matching Reference) which allows linkage at the individual-level across datasets and years.

SEND level is recorded in the Spring Schools Census for all children in all years. 'Lower'-level SEND is defined in analyses here as children attributed needs at 'School Action' or 'School Action Plus'-level pre-2015, and at 'Support' level post-2015. These are children for whom decisions on attributions and provision are made largely by teachers, and administered at the school-level. Children with 'Statements' of SEN (pre-2015) or 'Education and Health Care Plans' (post-2015), as well as a very small number of children recorded as attending a special school but who have concurrent SEND recorded at the 'lower' level, are defined here as being attributed at the 'higher'-level. These are children whose attributions necessarily involve the judgements and decisions of, and administration by, parties outside of the school (including the Local Authority, and other professionals).<sup>5</sup>

As noted in the introduction, type of SEND was only ascribed to children at the 'School Action Plus' or 'Statement' levels before 2015, but from 2015, this information is reported for all children with any level of SEND recorded. Because this paper delineates between SEND levels when examining SEND type, only data from 2015 are used for these analyses. Hence, for example, as shown in Table 1, data on SEND type for children in Year 6 is available for the 2003-04, 2004-05, 2005-06, and 2006-07 cohorts.

Foundation Stage Profile results were available throughout the years for all cohorts. Phonics Screening Check results were available after introduction of the test, from 2012, for the 2005-06 cohort onwards. The overall N for each cohort shown in Table 1 represents all children born between September of the first year and August of the next, who form a school year-group (for example, children born from September 2002 to August 2003). It includes children who are present in the data at any point from January of their reception year to January of the last year for which there is information (Year 6 for the cohorts up to 0607; incrementally lower years for the cohorts thereafter).

Throughout the analyses in this paper, season of birth is categorised as follows: autumn= September, October, November; winter=December, January, February; spring=March, April, May; summer=June, July, August. Gender is recorded as a binary variable in each Spring School Census.

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<sup>5</sup> Note that there is some overlap in this delineation as, for example, a deaf child who has received LA provision since babyhood may be attributed 'lower'-level SEND.

## **2.2 A note on terminology and interpretation**

Because this paper uses aggregate de-identified national data as recorded in the NPD, the language of the NPD is largely mirrored throughout. This is for simplicity and transparency in reporting and interrogating the statistics and the information as it exists and is presented within the system. This is not to say that all terms used, particularly for SEND type, are unproblematic or uncontested, that they would be chosen for self-ascription by all of the children represented by the data or by their families, or that they directly or 'accurately' represent an 'objective' state.

It is also important to note that this paper discusses the data on children in terms both of 'attributions'/'ascriptions' and 'support'/'provisions.' This is because the information recorded in the NPD can convey that a child is assigned a level or type of SEND within their school and that this is reported in returns to the Department for Education, and / or that specialist provision is made (in some way and to some extent) for the child. It is not possible to distinguish these possibilities, and from the data it is not feasible to know anything about the quality or nature of support or provision. Though at times potential interpretations in one direction or the other are discussed in this paper, uncertainty always remains.



**Table 1: Information available for each cohort of children in state-funded mainstream and special schools in the National Pupil Database extracts used in this paper**

Cohort: years born and overall N	Jan of Year R	SEND level in pre-school	SEND level in Year R	SEND level in Year 1	SEND level in Year 2	SEND level in Year 3	SEND level in Year 4	SEND level in Year 5	SEND level in Year 6	SEND type in Year R	SEND type in Year 1	SEND type in Year 2	SEND type in Year 3	SEND type in Year 4	SEND type in Year 5	SEND type in Year 6	FSP results	Phonics results
0203 (n=593,633)	2008		Yes	Yes	Yes	Yes	Yes	Yes	Yes								Yes	
0304 (n=611,948)	2009	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes							Yes	Yes	
0405 (n=626,550)	2010	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes						Yes	Yes	Yes	
0506 (n=642,161)	2011	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes					Yes	Yes	Yes	Yes	Yes
0607 (n=664,731)	2012	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				Yes	Yes	Yes	Yes	Yes	Yes
0708 (n=685,623)	2013	Yes	Yes	Yes	Yes	Yes	Yes	Yes				Yes	Yes	Yes	Yes		Yes	Yes
0809 (n=676,058)	2014	Yes	Yes	Yes	Yes	Yes	Yes				Yes	Yes	Yes	Yes			Yes	Yes
0910 (n=681,858)	2015	Yes	Yes	Yes	Yes	Yes				Yes	Yes	Yes	Yes				Yes	Yes
1011 (n=686,077)	2016	Yes	Yes	Yes	Yes					Yes	Yes	Yes					Yes	Yes
1112 (n=678,214)	2017	Yes	Yes	Yes						Yes	Yes						Yes	Yes
1213 (n=644,671)	2018	Yes	Yes							Yes							Yes	

### **3. Results**

#### ***3.1 Disproportionalities in ever being attributed 'lower'-level / 'higher'-level SEND during primary school***

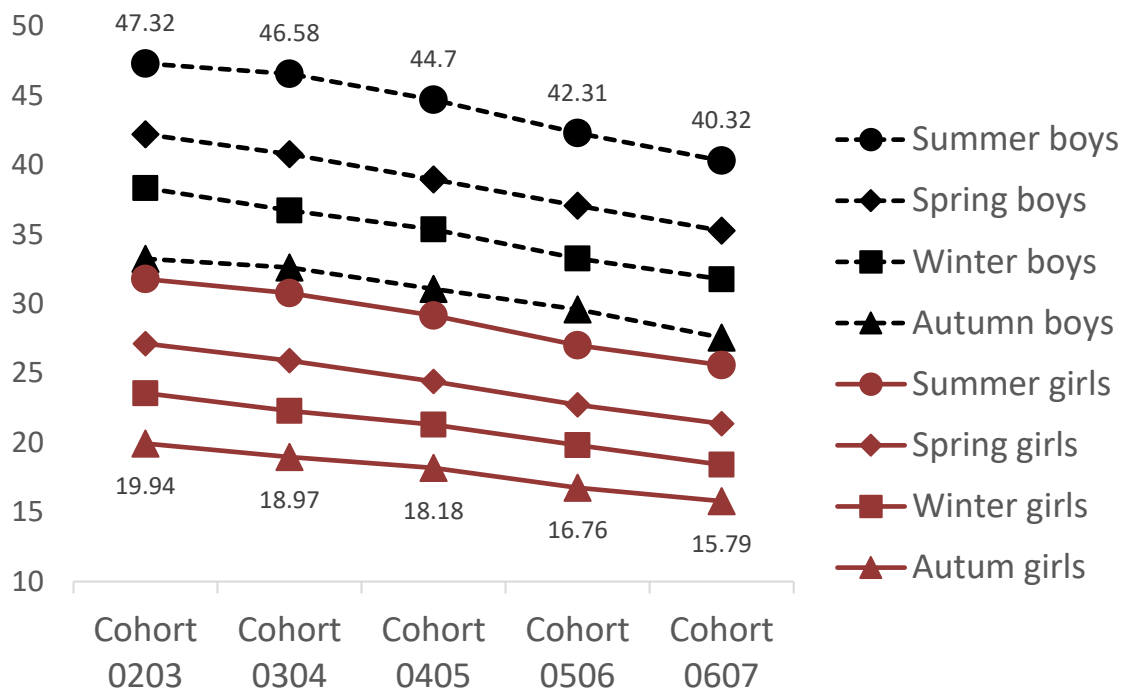
Table 1 showed that the cohorts of children born in 0203, 0304, 0405, 0506, and 0607 have full information in the data available for this paper on their trajectories through primary school, from Reception to Year 6. Therefore Figure 1a examines patterns of ever being attributed 'lower'-level SEND during primary school for these cohorts. This covers children who were in Reception in January 2008 and subsequently in Year 6 in January 2014 (the 0203 cohort) through to those in Reception in January 2012 and in Year 6 in January 2018 (the 0607 cohort).

A substantial proportion of children are attributed 'lower'-level SEND at some point during their primary years, and this remains the case despite a decrease with recency of cohort. Figure 1a shows a clear stratification regardless of overall proportions, where, in each cohort, summer-born boys are the most likely to be attributed 'lower'-level SEND at some point in their primary career (47.3% in the 0203 cohort, falling to 40.3% in the 0607 cohort), and autumn-born girls are the least likely (19.9% in the 0203 cohort; 15.8% in the 0607 cohort).

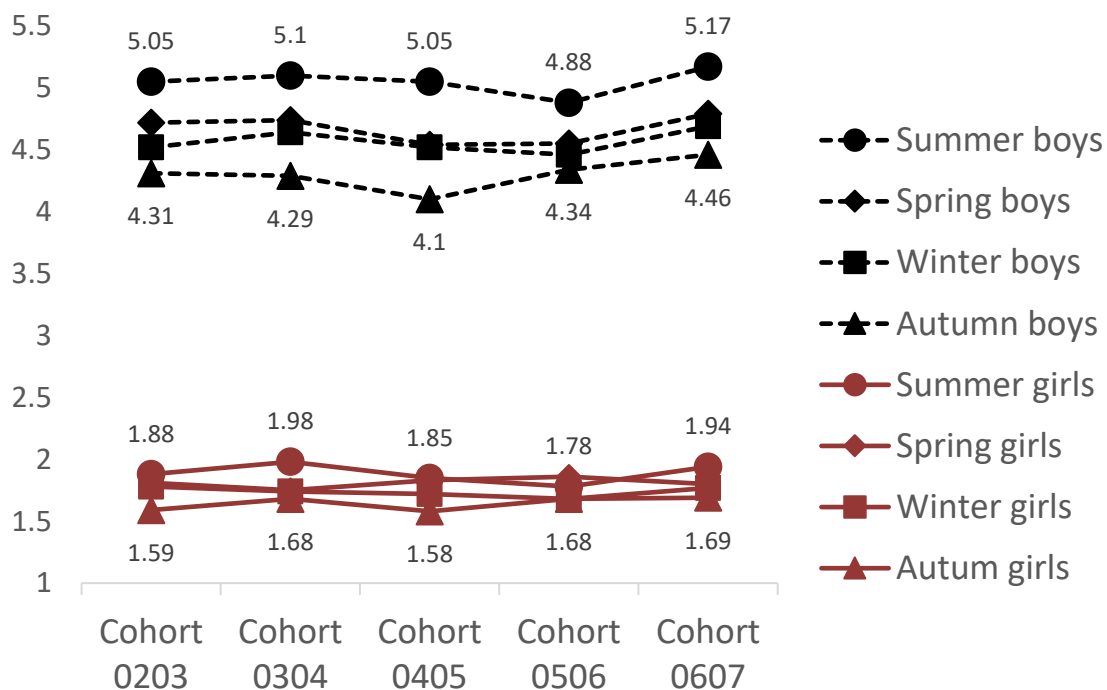
Far fewer children are attributed 'higher'-level SEND during their primary years, as Figure 1b, below, shows. But again, there is delineation by birth season and gender: in all cohorts, summer-born boys are most likely. 5.2% are attributed at the 'higher'-level during their primary career in the last, 0607 cohort, compared to 4.5% of autumn-born boys, 1.9% of summer-born girls, and 1.7% of autumn-born girls.

So disproportionalities according to relative age engendered by the structure of the school year-group system are not only reflected in decisions about and administrations of 'lower'-level SEND attributions, made largely within schools. The year-group structure also feeds out of the school system itself: into processes which result in children being allocated 'higher'-level statutory provision through a statement or an EHCP by the Local Authority.

**Figure 1a: Proportions of girls and boys born in each season ever attributed 'lower'-level SEND during their primary years (Reception – Year 6)**



**Figure 1b: Proportions of girls and boys born in each season ever attributed 'higher'-level SEND during their primary years (Reception – Year 6)**



Cohort 0203 N=593,633; Cohort 0304 N=611,948; Cohort 0405 N=626,550; Cohort 0506 N=642,161; Cohort 0607 N=664,731. Source: National Pupil Database, Spring School Censuses, 2008-2018.

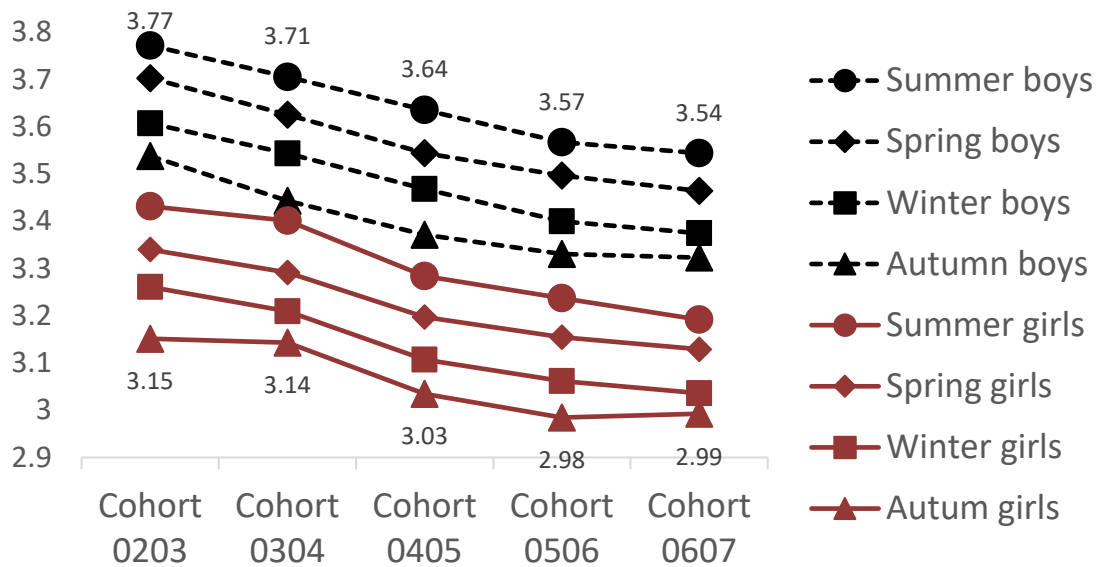
### **3.2 Disproportionalities in number of years of attribution with 'lower'-level / 'higher'-level SEND during primary school**

Again, the cohorts with full primary school histories in the data available are used to explore which children are attributed each level of SEND for the longest duration within the years from Reception to Year 6. On average, a summer-born boy in the 0203 cohort was recorded with 'lower'-level SEND for 3.8 of the 7 primary years, compared to 3.2 years for an autumn-born girl (Figure 2a). Overall duration falls with recency of cohort, but the delineation by birth season and gender remains stable, corresponding to the stratification in chances of ever being attributed at the 'lower'-level. Relatively younger children and boys are more likely both to receive a 'lower'-level attribution and to be attributed in more years of primary school: in the most recent 0607 cohort, number of years for summer-born boys averaged 3.5, compared to 3 for autumn-born girls.

The pattern is reversed when years of attribution with 'higher'-level SEND is considered (Figure 2b, below). While Figure 1b showed that summer-born children are most likely to be attributed 'higher'-level SEND at some point during their primary school career, among *those who are* attributed at some point, summer-borns receive this attribution and support for fewer years than autumn-borns.

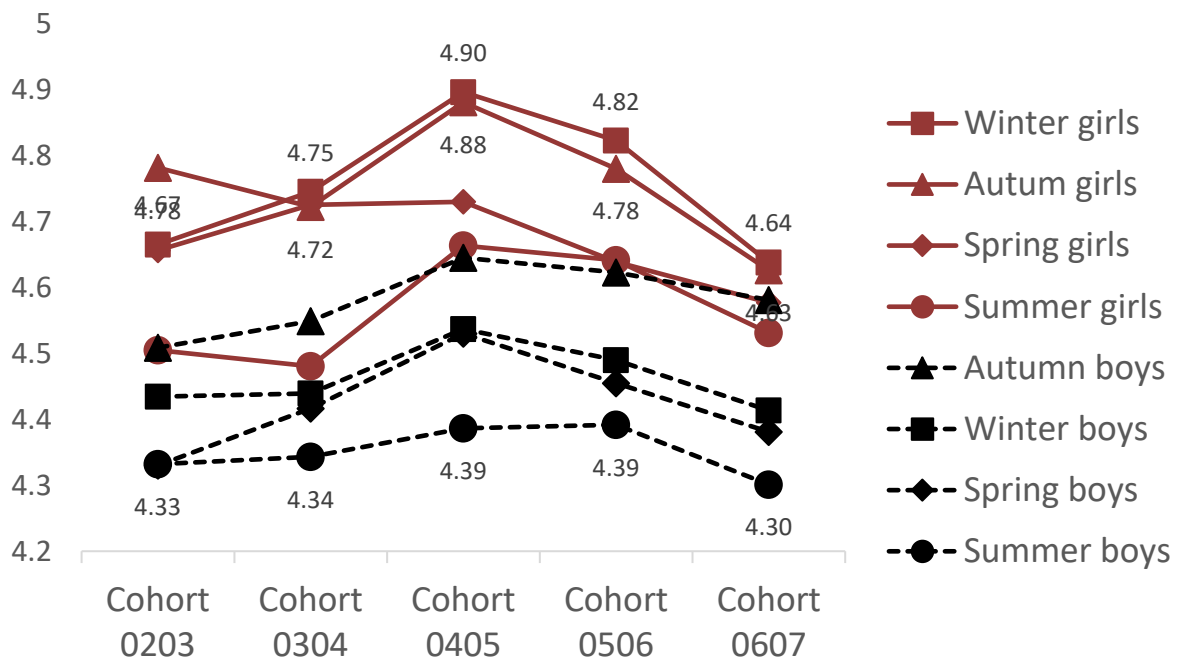
The next section considers timing of attribution, and unpicks further these coexisting patterns.

**Figure 2a: Average number of years attributed 'lower'-level SEND, for girls and boys born in each season who were ever attributed 'lower'-level SEND during their primary years**



Cohort 0203 N=197,069; Cohort 0304 N=195,693; Cohort 0405 N=191,258; Cohort 0506 N=184,629; Cohort 0607 N= 180,642. Source: National Pupil Database, Spring School Censuses, 2008-2018.

**Figure 2b: Average number of years attributed 'higher'-level SEND, for girls and boys born in each season who were ever attributed 'higher'-level SEND during their primary years**



Cohort 0203 N=19,241; Cohort 0304 N=19,930; Cohort 0405 N=19,838; Cohort 0506 N=20,372; Cohort 0607 N=22,018. Source: National Pupil Database, Spring School Censuses, 2008-2018.

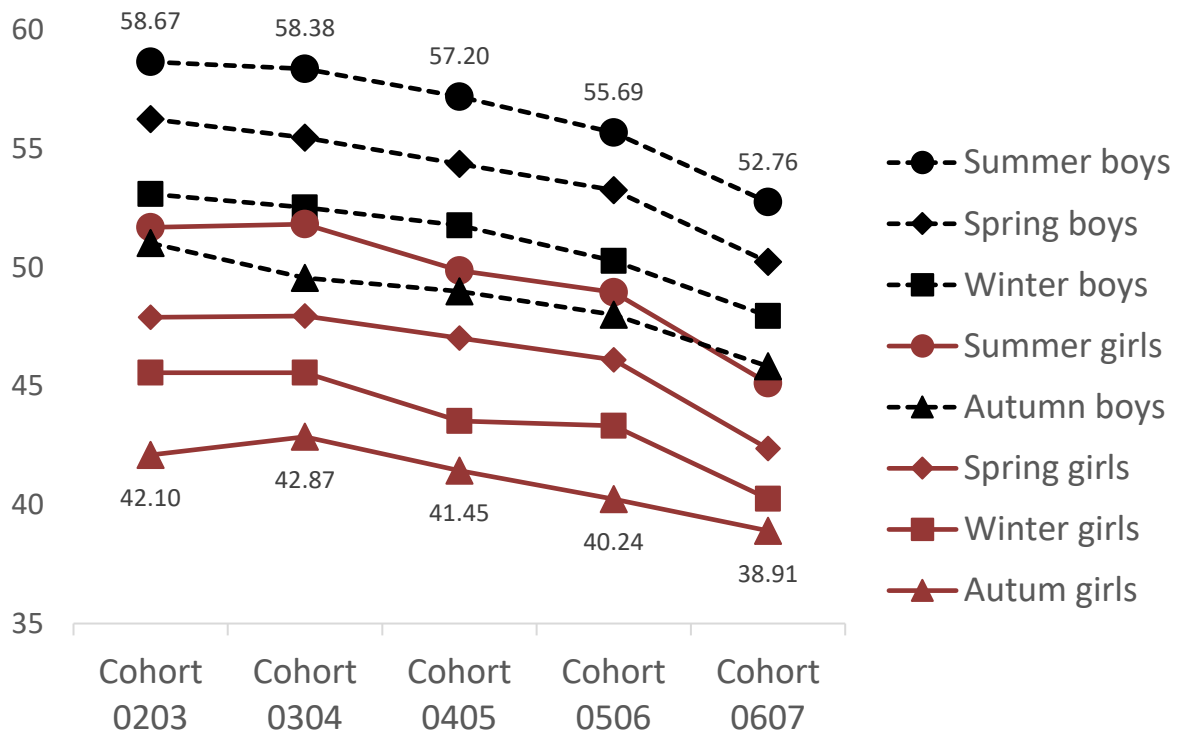
### ***3.3 Differences in timing of attributions of 'lower'-level and 'higher'-level SEND, for girls and boys born in each season.***

Congruent with the patterns above, describing number of years attributed 'lower'-level SEND, Figure 3a and 3b, below, show that summer-born boys are least likely only to be attributed at the 'lower'-level in years 3 and above (the junior stage) and most likely to be attributed in both their infant (Reception – Year 2) and junior years, throughout their primary career. Autumn-born girls, in contrast, are most likely among those children ever denoted with 'lower'-level SEND to receive no attribution until their junior years, when they are older.

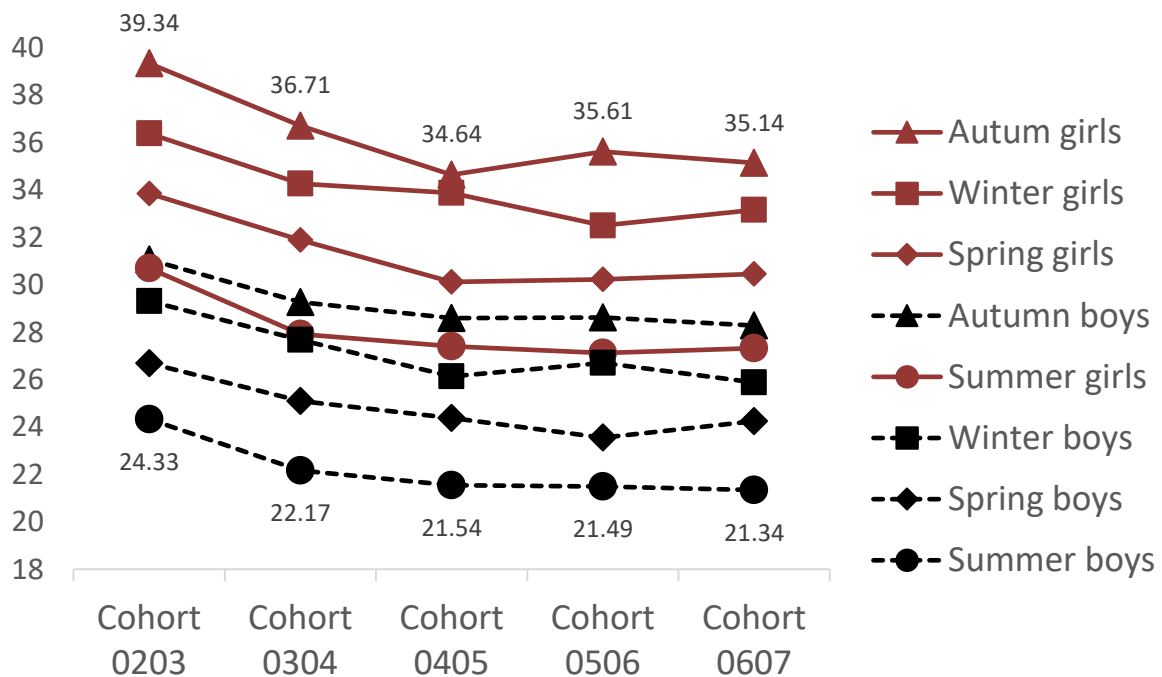
Reversing this pattern, Figure 4a and Figure 4b show that, among those who receive 'higher'-level provision at some point during their primary years, summer-born boys are least likely to be attributed 'higher'-level SEND at the earlier stage, and most likely not to be supported at this level until key stage 2.

So Figure 4b reiterates that, while they receive 'lower'-level attributions of SEND at an earlier stage, and for longer, summer-born children, particularly boys, receive statutory 'higher'-level diagnoses and support involving agencies outside of the school at a later point and for less time during their primary careers.

**Figure 3a: Proportions of girls and boys born in each season attributed 'lower'-level SEND at both the infant and junior stage of their primary years, among those ever attributed**

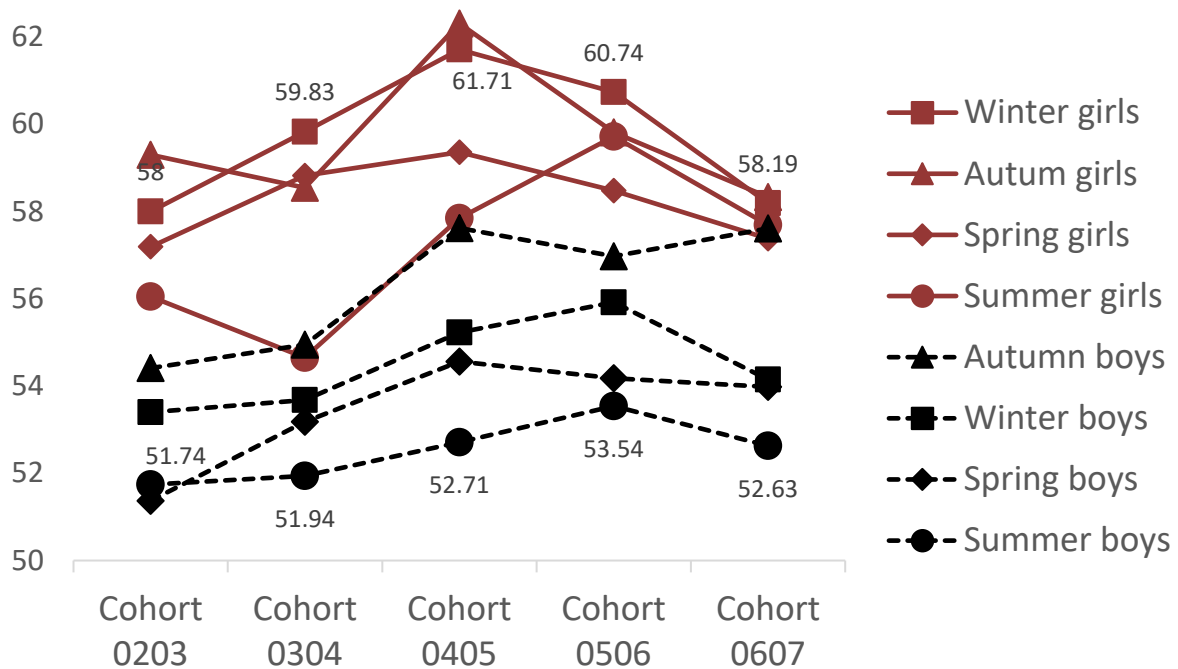


**Figure 3b: Proportions of girls and boys born in each season attributed 'lower'-level SEND at only the junior stage of their primary years, among those ever attributed**

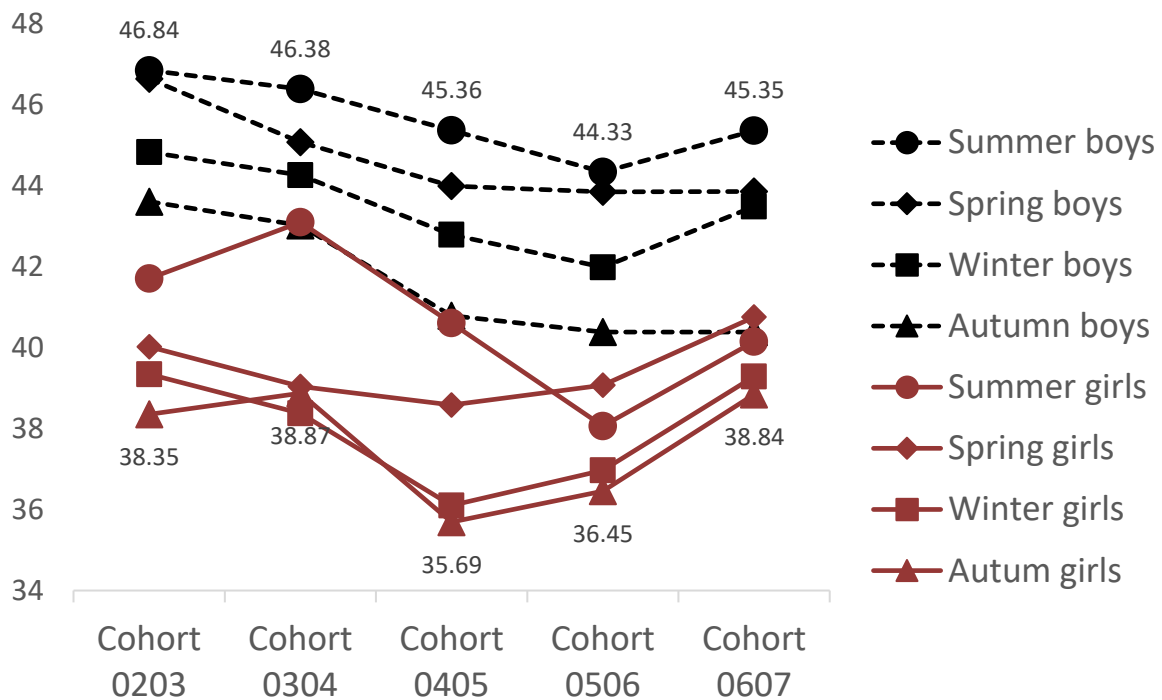


Cohort 0203 N=197,069; Cohort 0304 N=195,693; Cohort 0405 N=191,258; Cohort 0506 N=184,629; Cohort 0607 N= 180,642. Source: National Pupil Database, Spring School Censuses, 2008-2018.

**Figure 4a: Proportions of girls and boys born in each season attributed 'higher'-level SEND at both the infant and junior stage of their primary years, among those ever attributed**



**Figure 4b: Proportions of girls and boys born in each season attributed 'higher'-level SEND at only the junior stage of their primary years, among those ever attributed**



Cohort 0203 N=19,241; Cohort 0304 N=19,930; Cohort 0405 N=19,838; Cohort 0506 N=20,372; Cohort 0607 N=22,018. Source: National Pupil Database, Spring School Censuses, 2008-2018.



### ***3.4 Disproportionalities in patterns of attribution of 'lower'-level / 'higher'-level SEND for girls and boys born in each season in each primary year-group.***

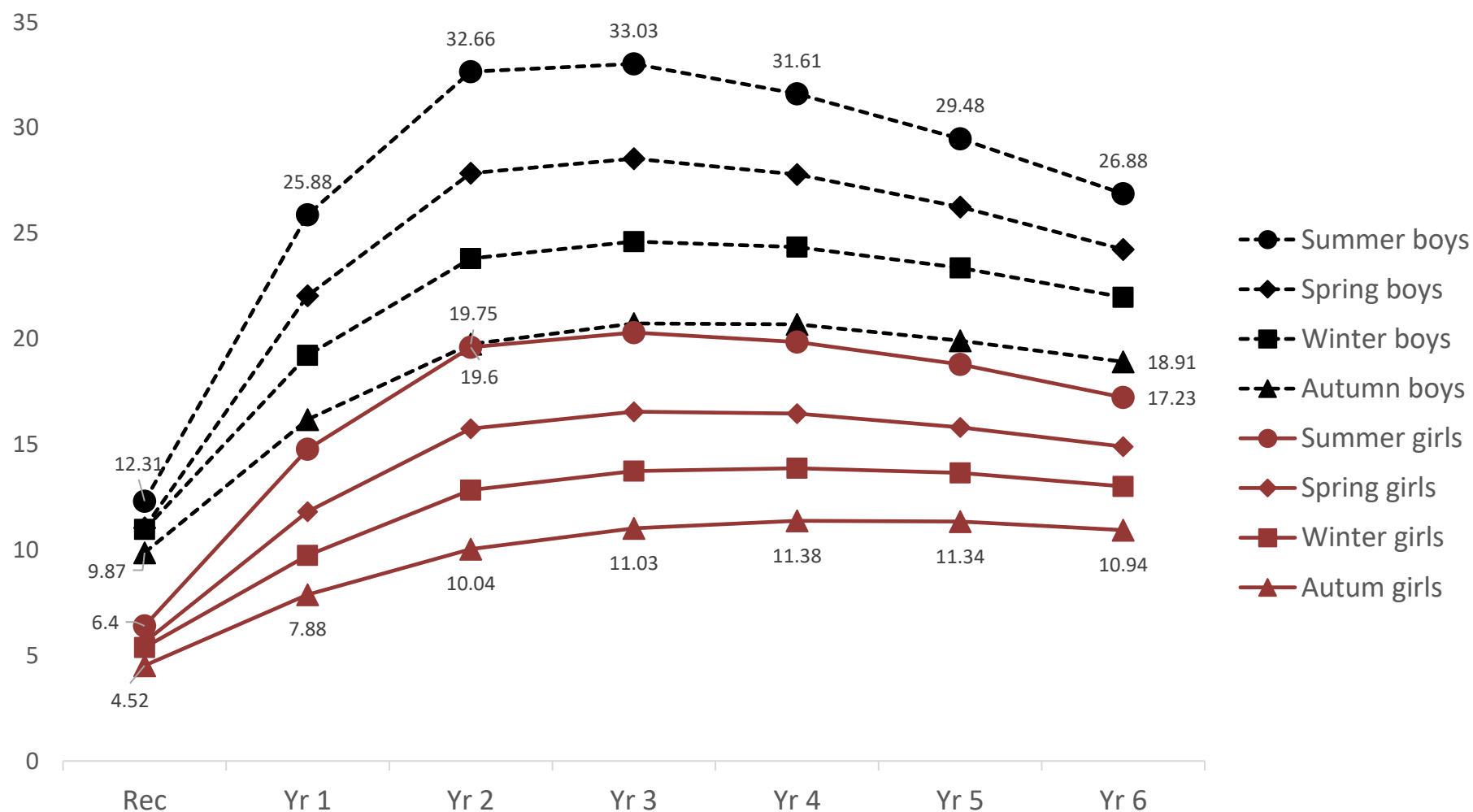
Figure 5 and Figure 6 show, for the most recent (0607) and earliest (0203) cohorts with available longitudinal data, the proportion of boys and girls born in each season attributed with 'lower'-level SEND in every year throughout primary school. In both cohorts, disproportionalities by birth month and gender are already present in the reception year: 4.5% of autumn-born girls in the 0203 cohort are attributed 'lower'-level SEND in reception in 2008, compared to 6.4% of summer-born girls, 9.9% of autumn-born boys, and 12.3% of summer-born boys. In the 0607 cohort, who are in reception in 2012, gaps are slightly wider: 4.7% of autumn-born girls are attributed 'lower'-level SEND, compared to 7.4% of summer-born girls, 9.9% of autumn-born boys, and 14.3% of summer-born boys.

The percentage point gap between autumn-born girls and summer-born boys peaks for the 0203 cohort (Figure 5) when they are in year two, and 10% of autumn-born girls are attributed 'lower'-level SEND, compared to 32.66% of summer-born boys. By year six, though the proportion of summer-born boys attributed has fallen, a large gap still remains, with 10.9% of autumn-born girls attributed 'lower'-level SEND in year six in 2014, and 26.9% of summer-born boys.

For the most recent, 0607 cohort (Figure 6), the gap also peaks in year two (with a more drastic fall to year three, due to the 2014/15 reforms). 7.9% of autumn-born girls were attributed with 'lower'-level SEND at this time, compared to 27% of summer-born boys. By the time this cohort are in year six, in 2018, 8.5% of autumn-born girls are attributed at the 'lower'-level, compared to 21.5% of summer-born boys.

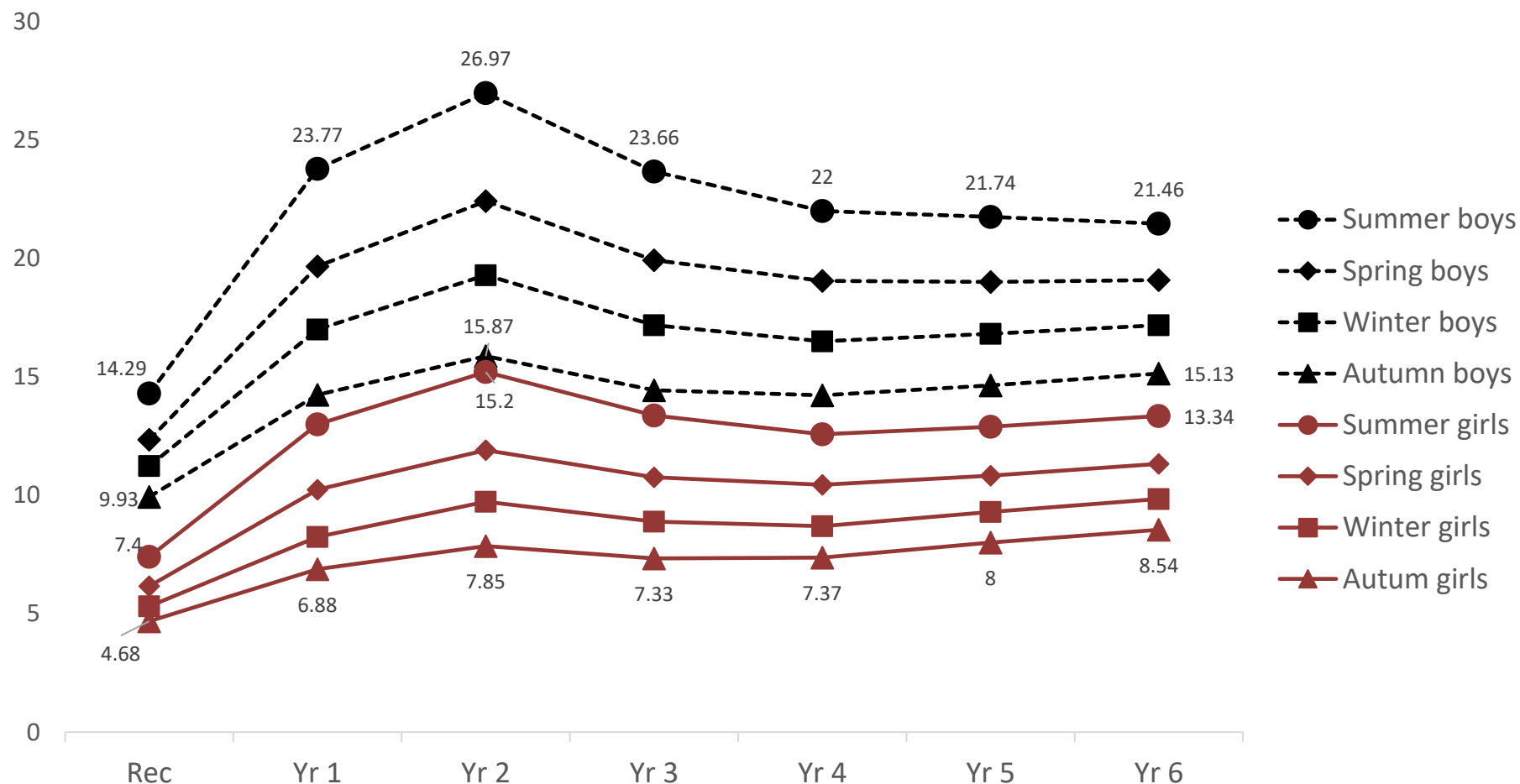
Annex A compares gaps in year two and year six across all cohorts.

**Figure 5: Proportions of girls and boys born in each season attributed 'lower'-level SEND during each year of primary school: cohort born 0203, who entered reception in 2008**



Rec N=547,277; Yr 1 N=552,970; Yr 2 N=554,206; Yr 3 N=554,127; Yr 4 N=554,762; Yr 5 N=554,716; Yr 6 N=556,200. Source: National Pupil Database, Spring School Censuses 2008-2014.

**Figure 6: Proportions of girls and boys born in each season attributed 'lower'-level SEND during each year of primary school: cohort born 0607, who entered reception in 2012**



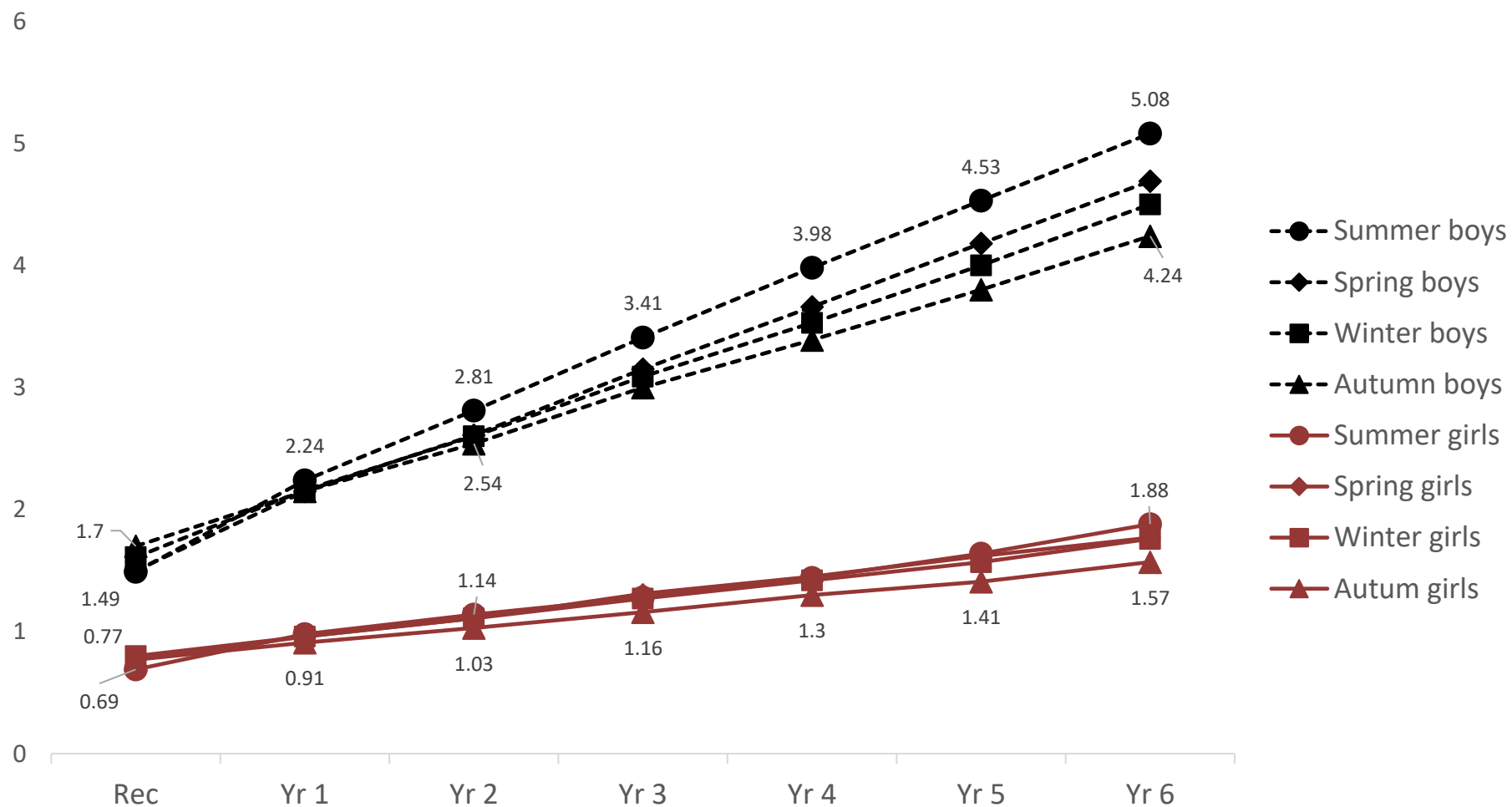
Rec N= 611,191; Yr 1 N=615,944; Yr 2 N= 618,197; Yr 3 N= 618,897; Yr 4 N= 621,085; Yr 5 N= 621,942; Yr 6 N= 621,922. Source: National Pupil Database, Spring School Censuses 2012-2018.

Figure 7 and Figure 8 map, for the 0203 and 0607 cohorts, patterns throughout primary school by gender and birth month in attributions of 'higher'-level SEND. While by year six the stratification follows the same ordering as patterns for 'lower'-level SEND, with summer-born boys most likely at this stage, and autumn-born girls least likely, there are three key differences between trajectories of 'lower'-level and 'higher'-level attribution within the cohorts.

Firstly, while the birth month and gender gap peaks for 'lower'-level attributions at year two, it grows steadily throughout primary school for 'higher'-level attributions. Secondly, gender is more instrumental in the gap in 'higher'-level attributions than birth season – though birth season stratification also remains.

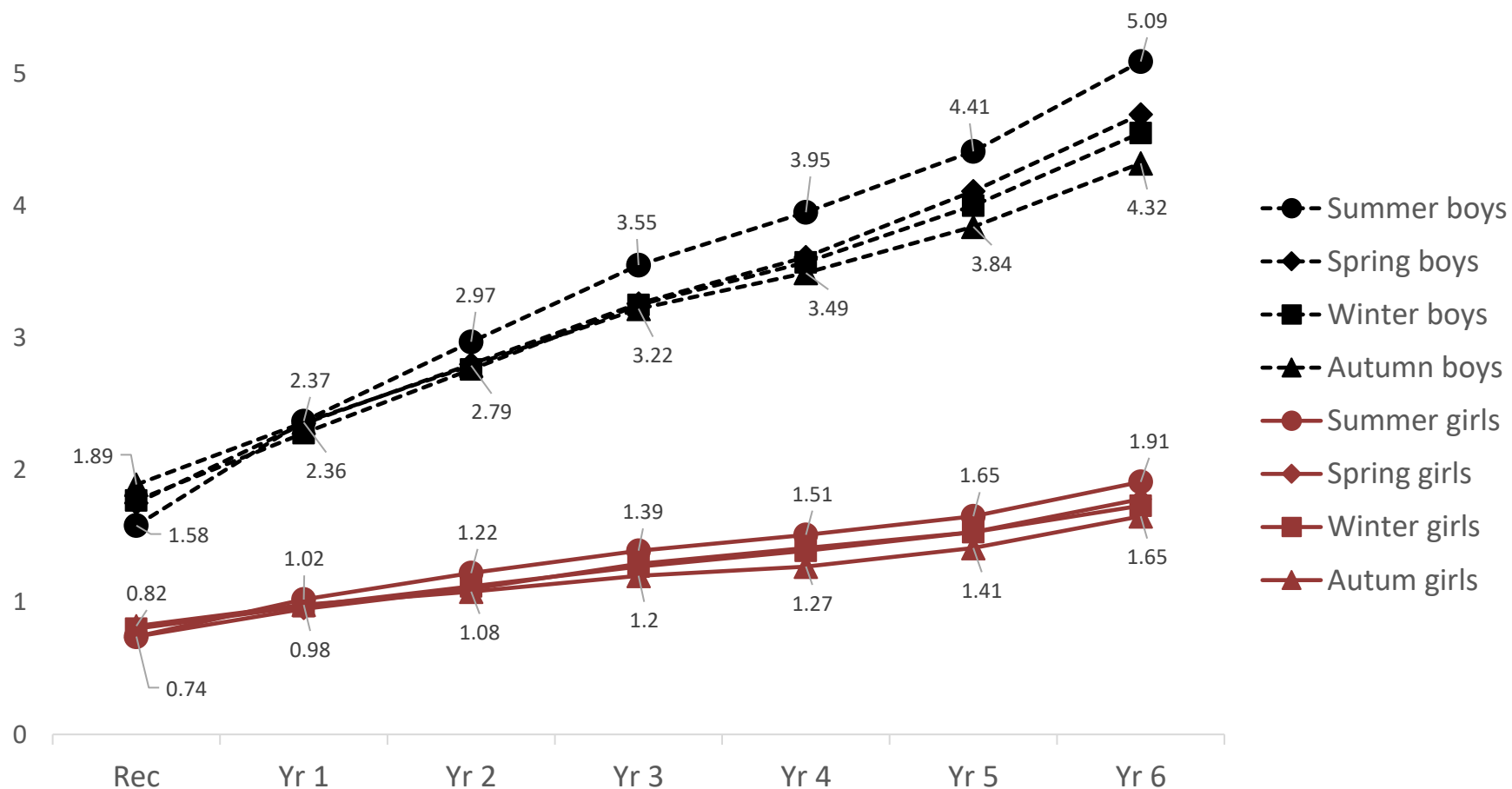
Thirdly, while the season of birth ordering where summer-borns are most likely and autumn-borns least likely to be attributed 'lower'-level SEND is present throughout primary school, from the reception year, for 'higher'-level SEND, the pattern is reversed in the reception year. Autumn-born children are more likely than summer-borns to already have provision for 'higher'-level SEND in the January of their first year of school.

**Figure 7: Proportions of girls and boys born in each season attributed 'higher'-level SEND during each year of primary school: cohort born 0203, who entered reception in 2008**



Rec N=547,277; Yr 1 N=552,970; Yr 2 N=554,206; Yr 3 N=554,127; Yr 4 N=554,762; Yr 5 N=554,716; Yr 6 N=556,200. Source: National Pupil Database, Spring School Censuses 2008-2014.

**Figure 8: Proportions of girls and boys born in each season attributed 'higher'-level SEND during each year of primary school: cohort born 0607, who entered reception in 2012**



Rec N= 611,191; Yr 1 N=615,944; Yr 2 N= 618,197; Yr 3 N= 618,897; Yr 4 N= 621,085; Yr 5 N= 621,942; Yr 6 N= 621,922.  
 Source: National Pupil Database, Spring School Censuses 2012-2018.

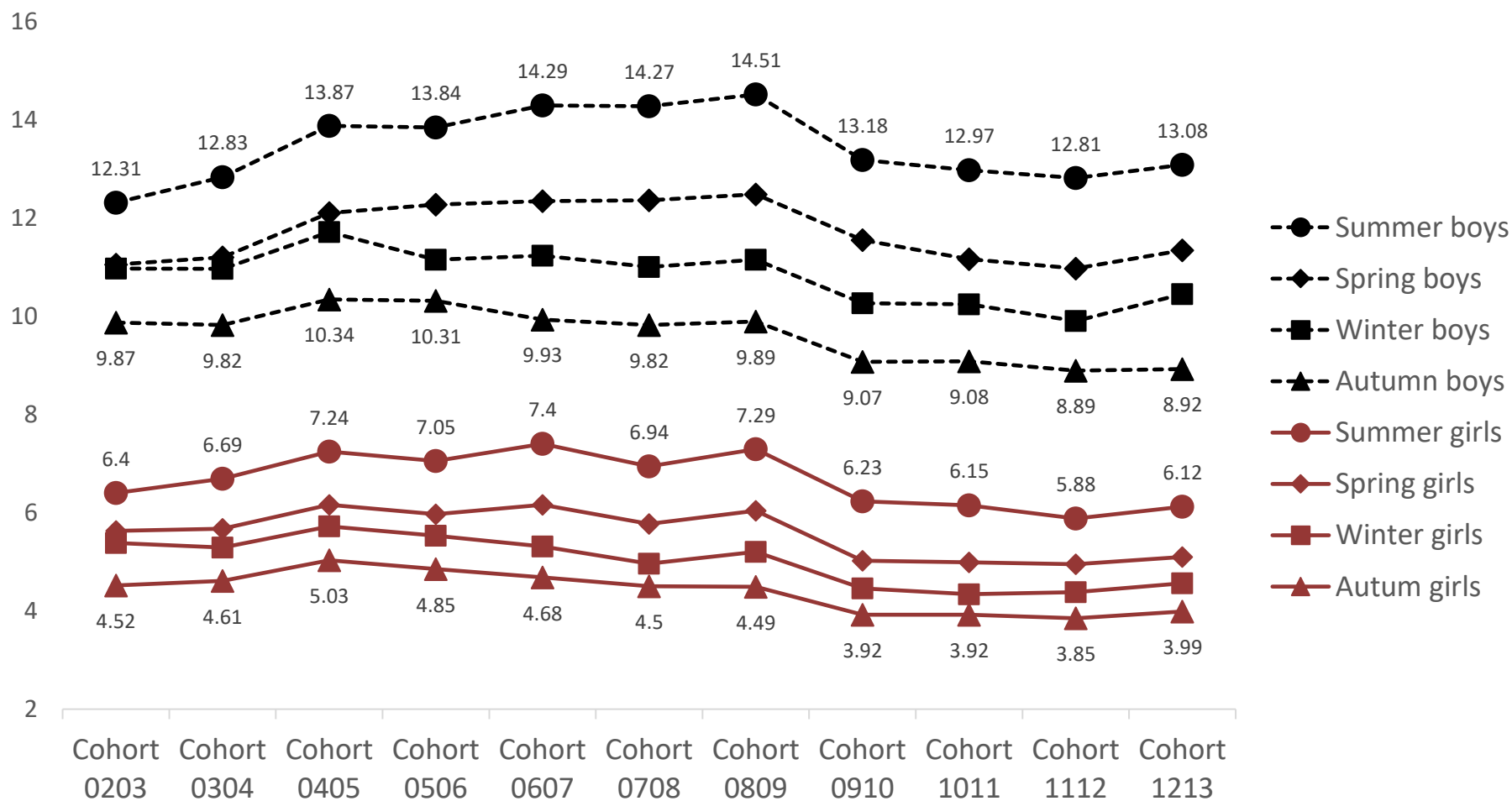
Figure 9 and Figure 10 show that this patterning holds across all cohorts: summer-born children are most likely to be attributed 'lower'-level SEND in their reception year, and least likely to receive support and provision at the 'higher'-level on entry to school. Figure 10 also shows an overall rise over time in the proportion of children already attributed 'higher'-level SEND at January of reception.

Figure 11 shows that the disproportionate tendency of summer-born children to be least likely to attributed with 'higher'-level SEND at this point reflects what has happened before school entry. Among children in the reception year who attended pre-school (for whom there is therefore data in the NPD at the earlier stage<sup>6</sup>), autumn-borns are more likely than summer-borns to already have SEND attribution (at either level) before entry to school. As autumn-born children are up to a year older than summer-borns when they enter reception, and as they are also entitled to more pre-school before reception, this disproportionality is likely to result simply from being in the system for longer.

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<sup>6</sup> If a child did not attend funded pre-school they do not appear in the NPD, which covers children in state-funded education, and therefore information on whether they were attributed SEND before the reception year is not available.

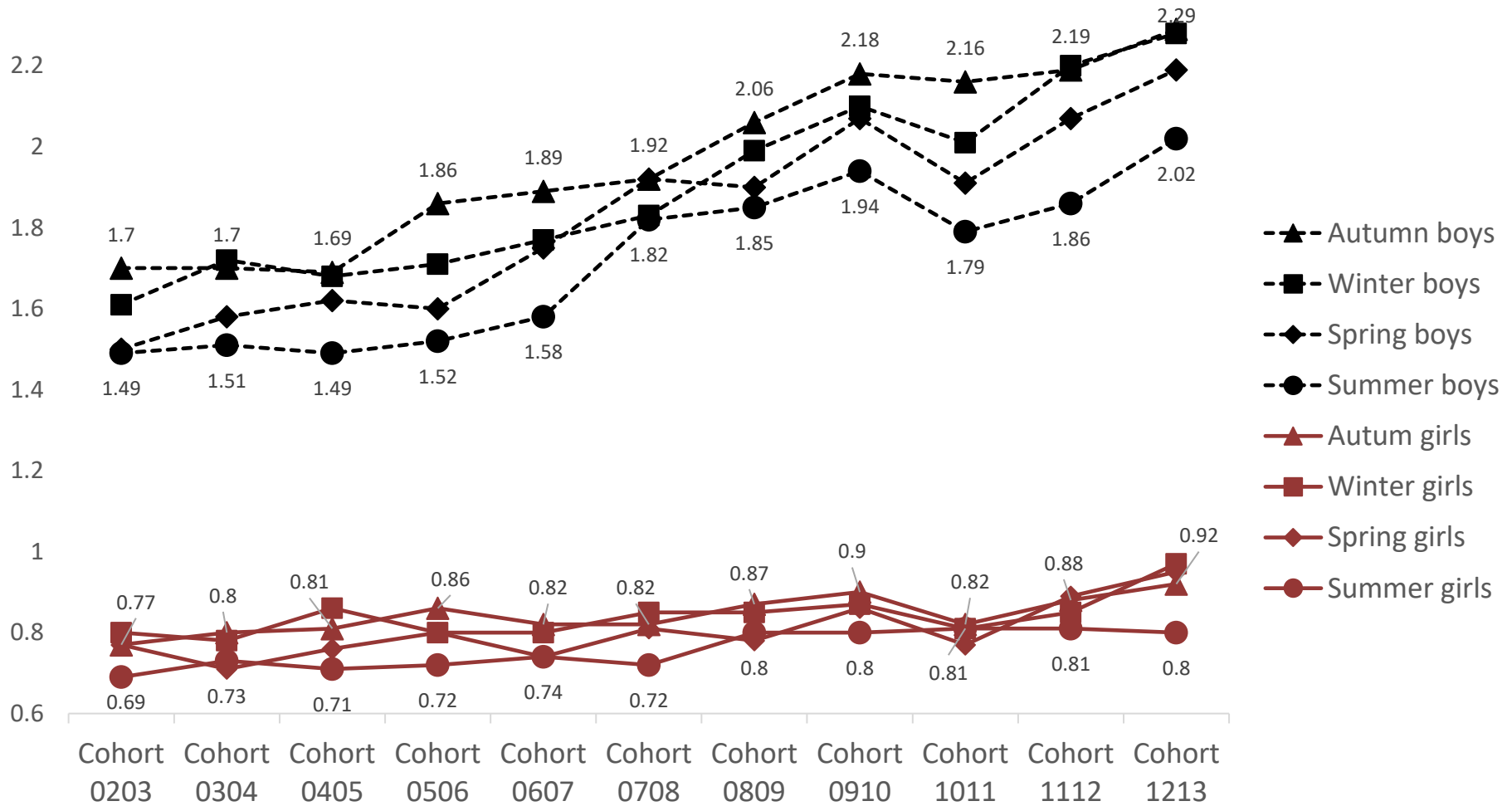
**Figure 9: Proportions of girls and boys born in each season attributed 'lower'-level SEND in January of their reception year: cohorts born 0203 (reception 2008) to 1213 (reception 2018)**



Cohort 0203 N=547,277; Cohort 0304 N=563,874; Cohort 0405 N=576,770; Cohort 0506 N=589,532; Cohort 0607 N= 611,191; Cohort 0708 N= 635,135; Cohort 0809 N= 632,870; Cohort 0910 N= 646,933; Cohort 1011 N= 661,282; Cohort 1112 N=662,882; Cohort 1213 N=644,671. Source: National Pupil Database, Spring School Censuses, 2008-2018.

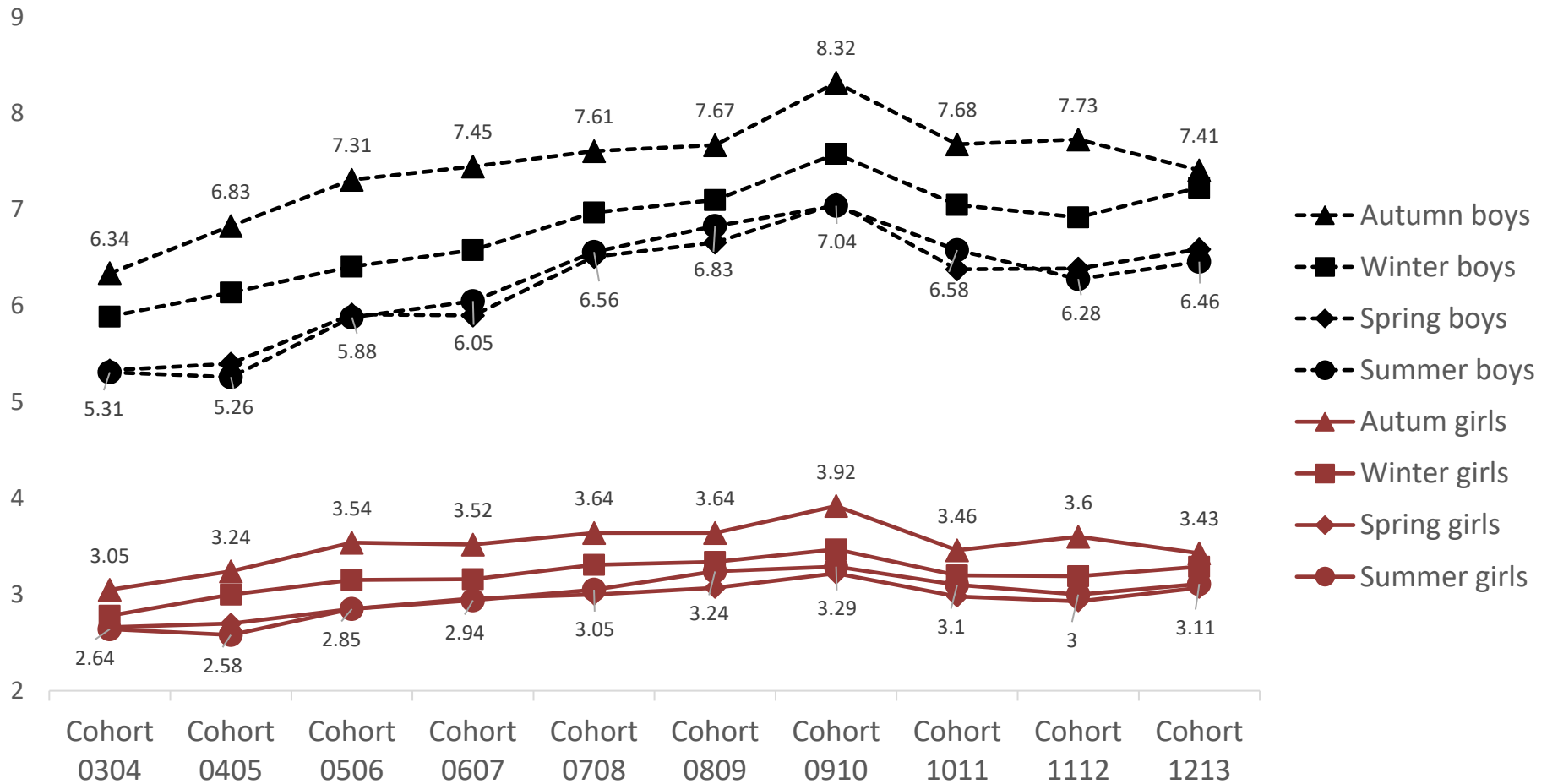


**Figure 10: Proportions of girls and boys born in each season attributed 'higher'-level SEND in January of their reception year: cohorts born 0203 (reception 2008) to 1213 (reception 2018)**



Cohort 0203 N=547,277; Cohort 0304 N=563,874; Cohort 0405 N=576,770; Cohort 0506 N=589,532; Cohort 0607 N= 611,191; Cohort 0708 N= 635,135; Cohort 0809 N= 632,870; Cohort 0910 N= 646,933; Cohort 1011 N= 661,282; Cohort 1112 N=662,882; Cohort 1213 N=644,671. Source: National Pupil Database, Spring School Censuses, 2008-2018,

**Figure 11: Proportions of girls and boys born in each season attributed any SEND during pre-school, prior to their reception year: cohorts born 0203 (reception 2008) to 1213 (reception 2018)**



Cohort 0304 N=563,874; Cohort 0405 N=576,770; Cohort 0506 N=589,532; Cohort 0607 N= 611,191; Cohort 0708 N= 635,135; Cohort 0809 N= 632,870; Cohort 0910 N= 646,933; Cohort 1011 N= 661,282; Cohort 1112 N=662,882; Cohort 1213 N=644,671. Source: National Pupil Database, Spring School Censuses, 2008-2018; Early Years Censuses 2008-2018. Base is all children present in the reception year.

### ***3.5 Disproportionalities in ascription with different types of SEND: among all children, children with 'lower'-level attributions, and children with 'higher'-level attributions.***

Information on type of SEND ascribed was reported in the NPD for all children with any SEND level recorded from January 2015. Table 1 showed the cohorts who have information at each year of education. For example, the cohorts born in 0910, 1011, 1112, and 1213, who were in reception between 2015 and 2018, have information at this school year stage. The cohorts born in 0304, 0405, 0506, and 0607, who were in Year 6 between 2015 and 2018, have information at this stage.

After checking that pooling information from different cohorts did not obscure any changes in patterns by birth season or gender, and that disparities according to these factors are consistent across cohorts, data for each set of four cohorts with information were combined to produce adequate sample sizes. The information in each Figure below (12 to 27) therefore represents the average for each birth month / gender subgroup, across the four cohorts for whom information is available.

The NPD records information on 'primary' SEND type and 'secondary' SEND type. Many children attributed a 'primary' type are not attributed a 'secondary' type – for example, only 15% of the 1213 cohort of children with SEND attributed in Reception in 2018 have a 'secondary' type recorded. Primary type is therefore the focus here.

To ensure adequate samples sizes for breakdowns by birth month and gender, smaller categories of SEND that have a physical and / or sensory component are collapsed into one overriding category, as described in Table 2. Again, checks indicate that this does not obscure differences between the more detailed types. The 'Other' and 'No specialist assessment of type of need' NPD categories are also collapsed into one 'Not known' category, for parsimony.

This results in eight types: 'Not known;' 'Moderate Learning Difficulty;' 'Specific learning difficulty;' 'Speech, language, and communication needs;' 'Social, emotional and mental health difficulties;' 'Physical and/or sensory condition;' 'Severe learning difficulty;' 'Autistic Spectrum.' Table 2 outlines how each original type is defined in the DfE's SEND Code of Practice (2014), and shows varying levels of specificity for different categories, as well as some overlap in definitions.

**Table 2: Categorisation of SEND type (my italics in DfE definition / description)**

Category in the NPD	DfE definition / description of type in 2014 SEND Code of Practice (p 97-8)	(New, collapsed) category used in analyses here
'OTH' ('Other difficulty / disorder')	-	'Not known'
'NSA' ('SEN support but no specialist assessment of type of need')	-	
'MLD' ('Moderate learning difficulty')	"Support for learning difficulties may be required when children and young people <i>learn at a slower pace</i> than their peers, even with appropriate differentiation. Learning difficulties cover a wide range of needs, including moderate learning difficulties (MLD)."	'Moderate learning difficulty'
'SpLD' ('Specific learning difficulty')	"Specific learning difficulties (SpLD), affect one or more specific aspects of learning. This encompasses a <i>range of conditions</i> such as <i>dyslexia, dyscalculia</i> and <i>dyspraxia</i> ."	'Specific learning difficulty'
'SLCN' ('Speech, language and communication needs')	"Children and young people with speech, language and communication needs (SLCN) have <i>difficulty in communicating</i> with others. This may be because they have difficulty <i>saying</i> what they want to, <i>understanding</i> what is being said to them or they do not understand or use <i>social rules of communication</i> . The profile for <i>every child with SLCN is different</i> and their <i>needs may change</i> over time. They may have difficulty with one, some or all of the different aspects of speech, language or social communication at different times of their lives."	'Speech, language and communication needs'
'SEMH' ('Social emotional and mental health difficulties')	"Children and young people may experience a <i>wide range of social and emotional difficulties which manifest themselves in many ways</i> . These may include becoming <i>withdrawn</i> or <i>isolated</i> , as well as displaying <i>challenging, disruptive</i> or <i>disturbing behaviour</i> . These behaviours may reflect underlying <i>mental health difficulties</i> such as <i>anxiety</i> or <i>depression</i> , <i>self-harming</i> , <i>substance misuse</i> , <i>eating disorders</i> or <i>physical symptoms that are medically unexplained</i> . Other children and young people may have disorders such as <i>attention deficit disorder</i> , <i>attention deficit hyperactive disorder</i> or <i>attachment disorder</i> ."	'Social, emotional, and mental health difficulties'

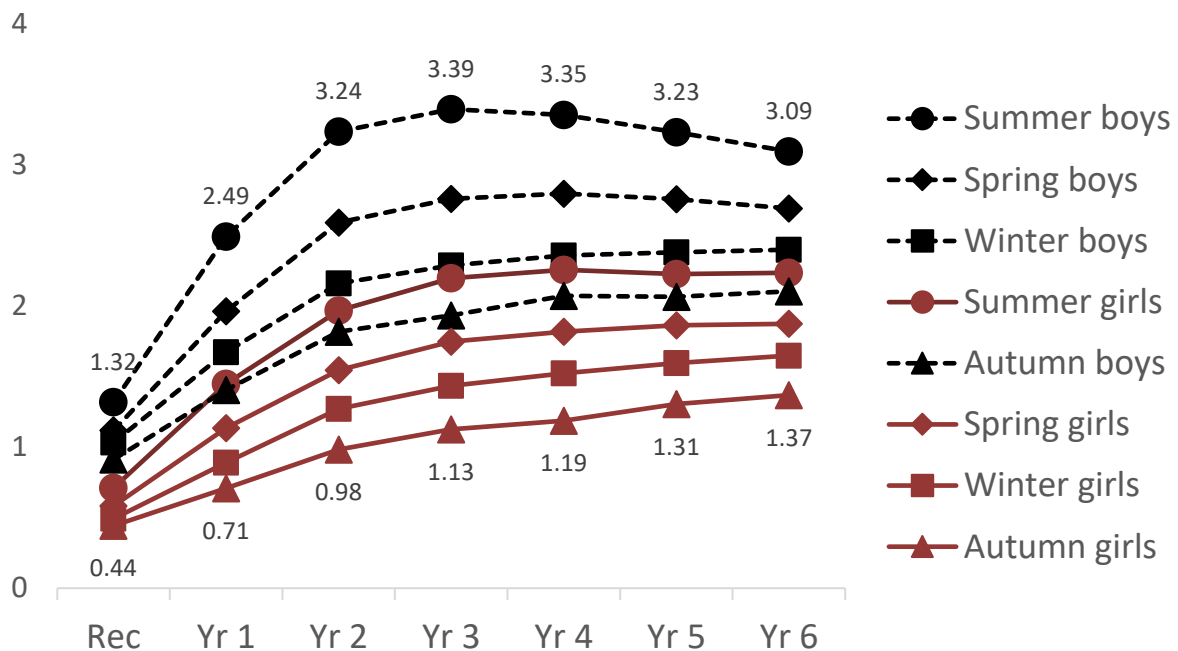
'HI' ('Hearing impairment')	"Some children and young people require special educational provision because they have a <i>disability</i> which prevents or hinders them from making use of the educational facilities generally provided. These difficulties can be <i>age related</i> and may <i>fluctuate</i> over time. Many children and young people with... <i>hearing impairment (HI)</i> ...will require specialist support and/or equipment to access their learning, or habilitation support."	'Physical and/or sensory condition'
'MSI' ('Multi-sensory impairment')	"Children and young people with an MSI have a <i>combination of vision and hearing difficulties.</i> "	
'PD' ('Physical disability')	"Some children and young people with a <i>physical disability</i> (PD) require additional ongoing support and equipment to access all the opportunities available to their peers."	
'PMLD' (Profound and multiple learning disability')	"Support for learning difficulties may be required when children and young people <i>learn at a slower pace</i> than their peers, even with appropriate differentiation. Learning difficulties cover a wide range of needs ... through to profound and multiple learning difficulties (PMLD), where children are likely to have <i>severe and complex learning difficulties as well as a physical disability or sensory impairment.</i> "	
'VI' (Visual impairment')	Some children and young people require special educational provision because they have a <i>disability</i> which prevents or hinders them from making use of the educational facilities generally provided. These difficulties can be age related and may fluctuate over time. Many children and young people with <i>vision impairment (VI)</i> ... will require specialist support and/or equipment to access their learning, or habilitation support.	
'SLD' ('Severe learning difficulty')	"Support for learning difficulties may be required when children and young people <i>learn at a slower pace</i> than their peers, even with appropriate differentiation. Learning difficulties cover a wide range of needs, including ... <i>severe learning difficulties (SLD)</i> , where children are likely to <i>need support in all areas of the curriculum and associated difficulties with mobility and communication</i> "	'Severe learning difficulty'
'ASD' ('Autistic Spectrum Disorder')	"Children and young people with ASD, including <i>Asperger's Syndrome</i> and <i>Autism</i> , are likely to have particular difficulties with <i>social interaction</i> . They may also experience difficulties with <i>language, communication and imagination</i> , which can impact on how they relate to others."	'Autistic Spectrum'

### ***3.5.1 Disproportionalities in ascription with different types of SEND, as opposed to no SEND, among all children***

Figure 12 to Figure 19 show the proportion of all girls and boys born in each season attributed SEND with each type ascription in each school year-group. As children progress through school, an increasing proportion are attributed SEND with types 'Moderate Learning Difficulties' (Figure 13), 'Social, Emotional, and Mental Health Difficulties' (Figure 16), and 'Autistic Spectrum' conditions (Figure 19). Attributions with types 'Not known' (Figure 12), 'Physical and / or Sensory' (Figure 17), and 'Severe Learning Difficulty' (Figure 18) follow a flatter trajectory after a rise in the early years of school, and attributions of SEND with 'Speech Language and Communications Needs' (Figure 15) fall as children age.

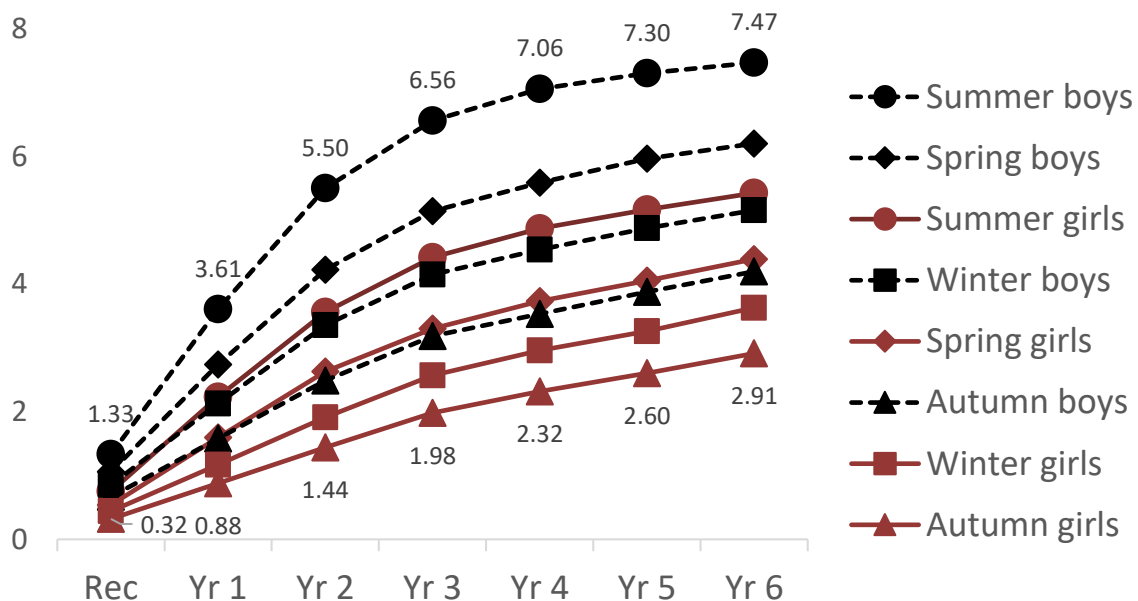
Despite these differences in prevalence across year-groups, summer-born children, particularly boys, are most likely at each age to be attributed SEND ascribed with each of these types. The exception to this pattern is for SEND ascribed with type 'Autistic Spectrum.' Summer-born boys are less likely than autumn-born boys to be ascribed in their infant years, but by year six, the disproportionality has reversed, and summer-born boys are more likely (Figure 19).

**Figure 12: Proportions of all girls and boys born in each season attributed SEND with type 'Not known' in each school year-group**



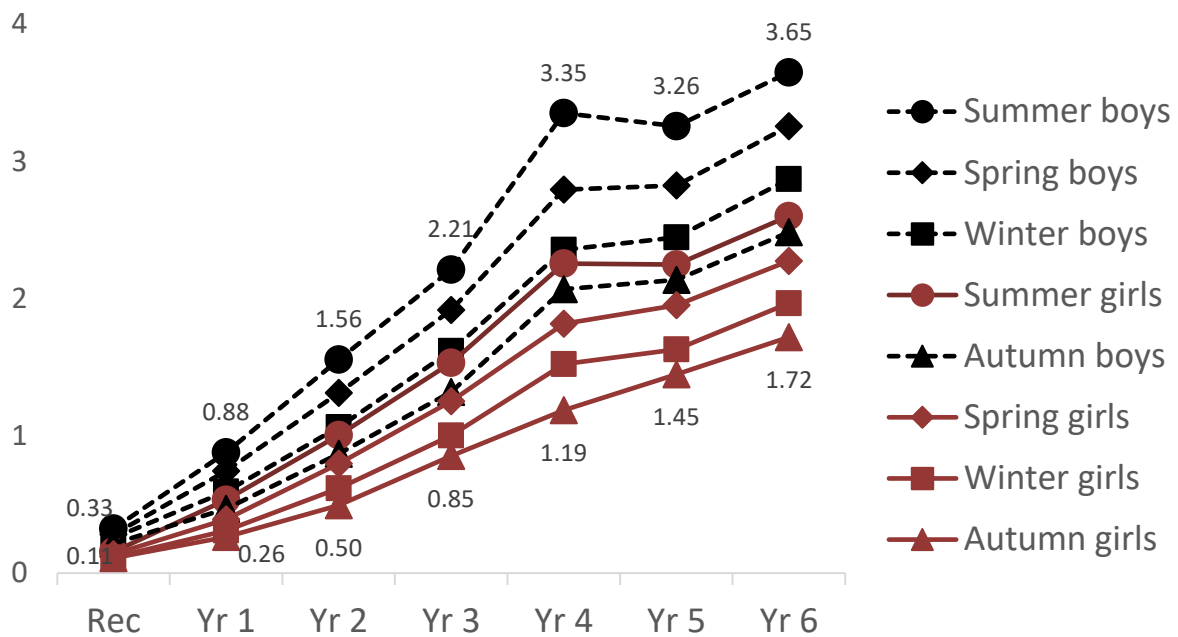
Reception total N across four cohorts included=2,615,768; Yr 1 N=2,629,690; Yr 2 N=2,612,328; Yr 3 N=2,563,949; Yr 4 N=2,510,501; Yr 5 N=2,454,763; Yr 6 N=2,385,531. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 13: Proportions of all girls and boys born in each season attributed SEND with type 'Moderate Learning Difficulties' in each school year-group**



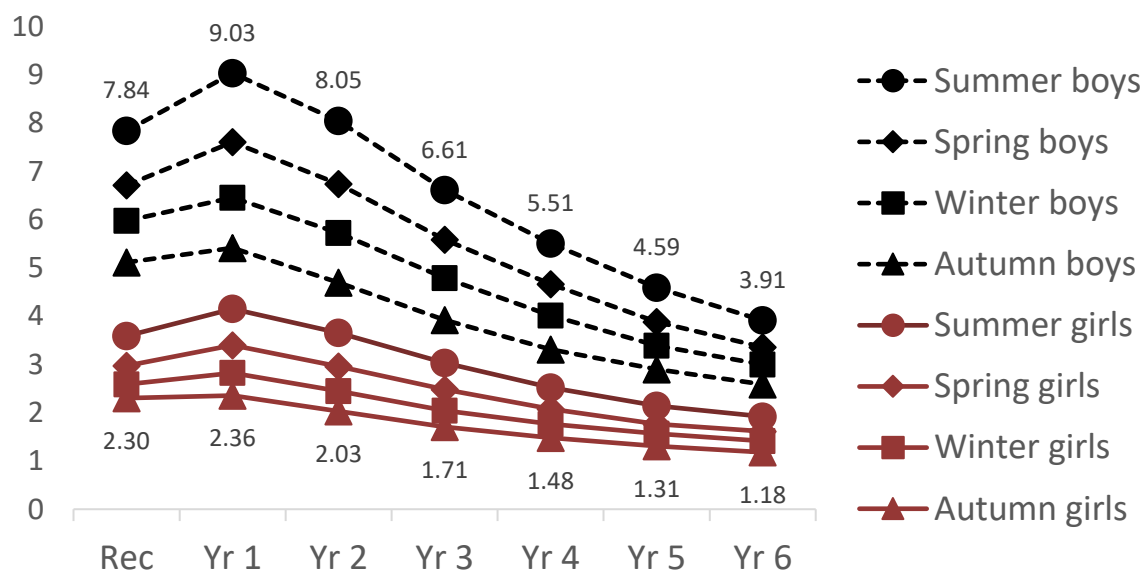
Reception total N across four cohorts included=2,615,768; Yr 1 N=2,629,690; Yr 2 N=2,612,328; Yr 3 N=2,563,949; Yr 4 N=2,510,501; Yr 5 N=2,454,763; Yr 6 N=2,385,531. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 14: Proportions of all girls and boys born in each season attributed SEND with type 'Specific Learning Difficulties' in each school year-group**



Reception total N across four cohorts included=2,615,768; Yr 1 N=2,629,690; Yr 2 N=2,612,328; Yr 3 N=2,563,949; Yr 4 N=2,510,501; Yr 5 N=2,454,763; Yr 6 N=2,385,531. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

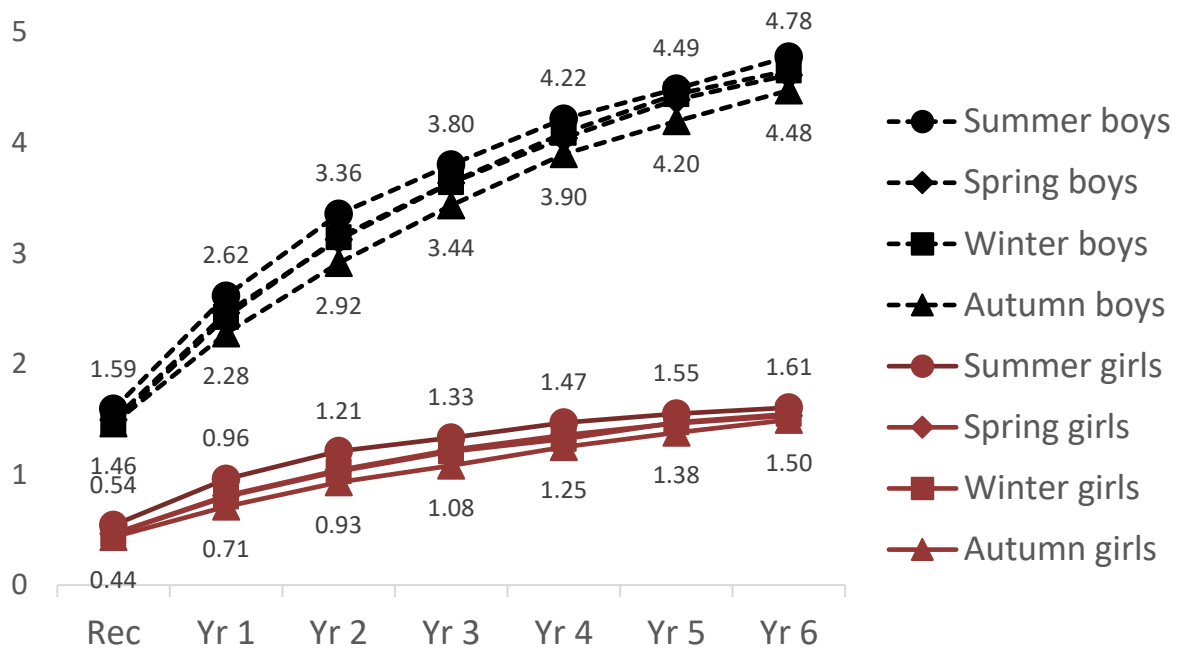
**Figure 15: Proportions of all girls and boys born in each season attributed SEND with type 'Speech, Language and Communication Needs' in each school year-group**



Reception total N across four cohorts included=2,615,768; Yr 1 N=2,629,690; Yr 2 N=2,612,328; Yr 3 N=2,563,949; Yr 4 N=2,510,501; Yr 5 N=2,454,763; Yr 6 N=2,385,531. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

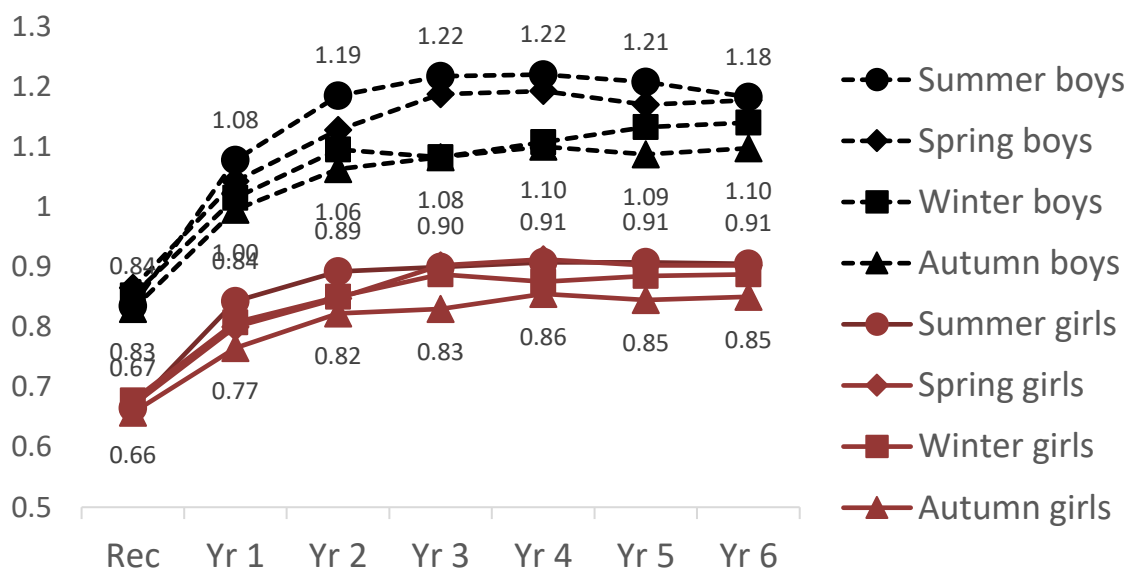


**Figure 16: Proportions of all girls and boys born in each season attributed SEND with type 'Social, Emotional and Mental Health Difficulties' in each school year-group**



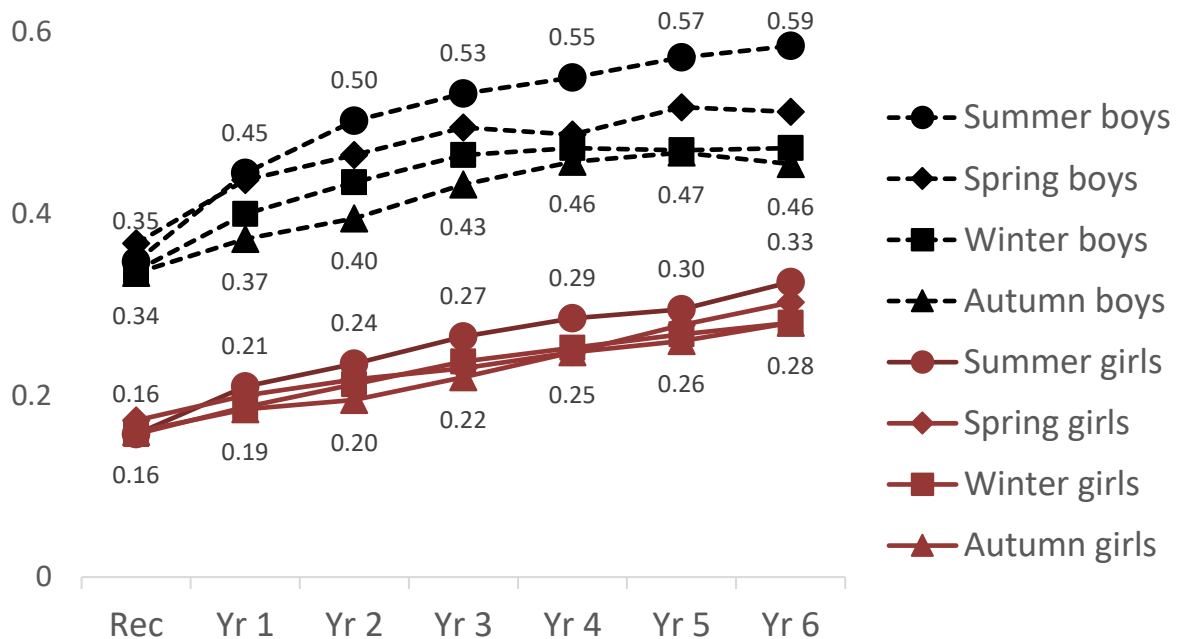
Reception total N across four cohorts included=2,615,768; Yr 1 N=2,629,690; Yr 2 N=2,612,328; Yr 3 N=2,563,949; Yr 4 N=2,510,501; Yr 5 N=2,454,763; Yr 6 N=2,385,531. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 17: Proportions of all girls and boys born in each season attributed SEND with type 'Physical and / or Sensory Condition' in each school year-group**



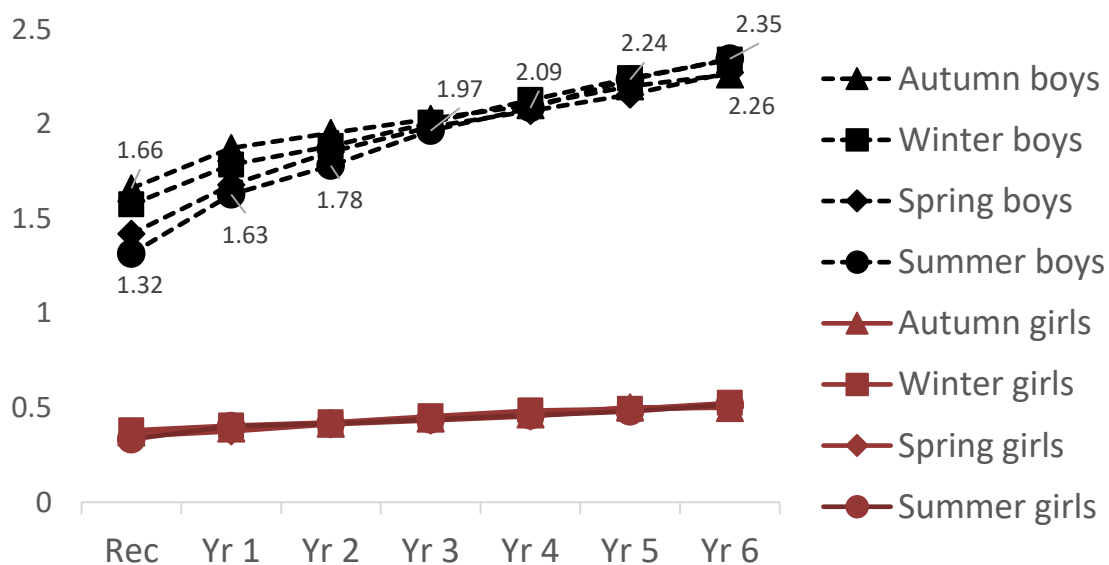
Reception total N across four cohorts included=2,615,768; Yr 1 N=2,629,690; Yr 2 N=2,612,328; Yr 3 N=2,563,949; Yr 4 N=2,510,501; Yr 5 N=2,454,763; Yr 6 N=2,385,531. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 18: Proportions of all girls and boys born in each season attributed SEND with type 'Severe Learning Difficulty' in each school year-group**



Reception total N across four cohorts included=2,615,768; Yr 1 N=2,629,690; Yr 2 N=2,612,328; Yr 3 N=2,563,949; Yr 4 N=2,510,501; Yr 5 N=2,454,763; Yr 6 N=2,385,531. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 19: Proportions of all girls and boys born in each season attributed SEND with type 'Autistic Spectrum' in each school year-group**



Reception total N across four cohorts included=2,615,768; Yr 1 N=2,629,690; Yr 2 N=2,612,328; Yr 3 N=2,563,949; Yr 4 N=2,510,501; Yr 5 N=2,454,763; Yr 6 N=2,385,531. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

### **3.5.2 Disproportionalities in ascription with different types of SEND among children attributed 'lower'-level SEND**

Figure 20 to Figure 27 show the proportion of all girls and boys born in each season attributed SEND with each type ascribed in each school year-group, among only those recorded with SEND at the lower-level. This begins to pick apart inequalities in attribution of any SEND from ascription of SEND type, by highlighting the differences in ascriptions by birth month and gender when only children with 'lower'-level SEND support recorded are considered.

Among children attributed 'lower'-level SEND, increasing proportions are ascribed 'Moderate Learning Difficulties' through the years of primary school (Figure 21). Increasing proportions are also ascribed 'Specific Learning Difficulties' (Figure 22) and 'Social, Emotional and Mental Health Difficulties' (Figure 24). The proportion of children with 'lower'-level SEND ascribed as 'Speech, Language, and Communication needs' falls drastically from Reception to Year 6 (Figure 23), and the proportion of children ascribed 'Physical and / or Sensory Conditions' also falls (Figure 25). Note that this does not indicate a drop off in absolute numbers of children recorded with physical or sensory needs throughout primary school: rather it reflects an increase in attribution of SEND with other ascriptions as time goes by, making the share of children at the 'lower'-level ascribed with 'Physical and /or Sensory Conditions' proportionally smaller but not fewer in absolute numbers.

Among children with 'lower'-level SEND attributions, in all primary school year-groups, summer-born children, particularly girls, are most likely to be ascribed with a type 'Not known' (Figure 20) or 'Moderate Learning Difficulties' (Figure 21): the least specific categories, according to the DfE's guidance (Table 2).

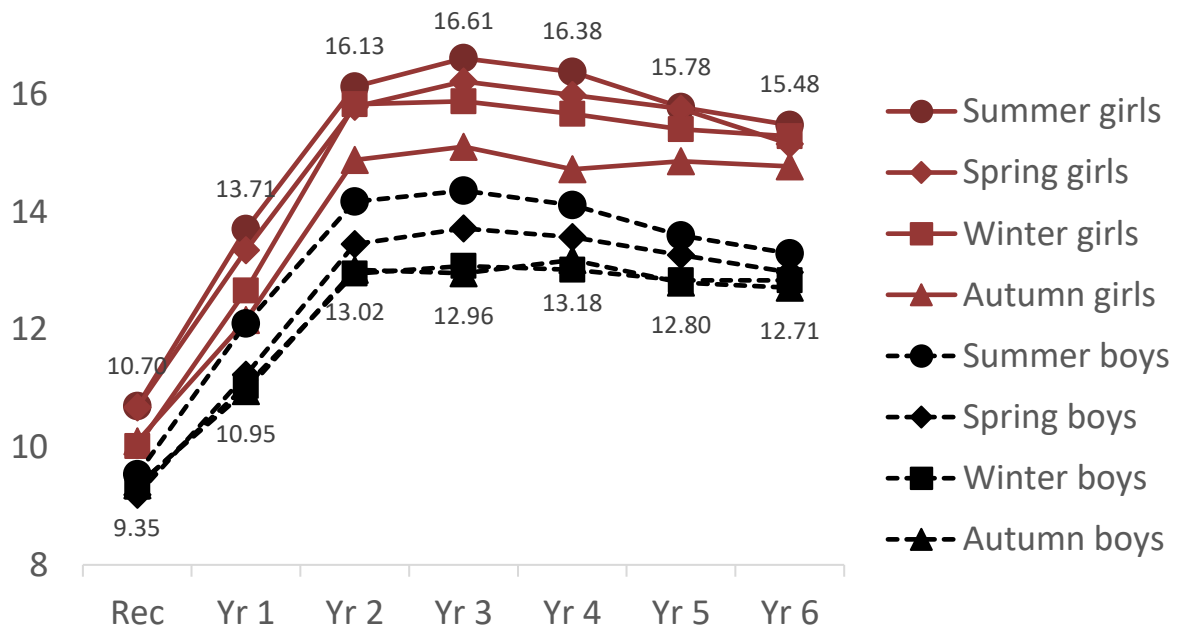
Summer-born boys are the most likely among those with 'lower'-level SEND attributed in every year-group to be ascribed 'Speech, language, and communication needs' (Figure 23), but least likely to be ascribed 'Physical and / or sensory conditions' (Figure 25). The interrelationships between SEND attributions and types remain properly to be untangled, but inverse patterns such as this begin very tentatively to raise the possibility that summer-born boys may be underdiagnosed with sensory conditions such as hearing loss, and instead ascribed the more general 'Speech, Language, and Communication Needs.'

Autumn-born children, particularly boys, are the most likely among those with 'lower'-level SEND attributions to be ascribed both 'Social, Emotional, and Mental Health' (which includes conditions that are outside of the school,

such as ADD and ADHD) (Table 24), and 'Autistic Spectrum' conditions (Figure 27), which, again, involve external assessment.

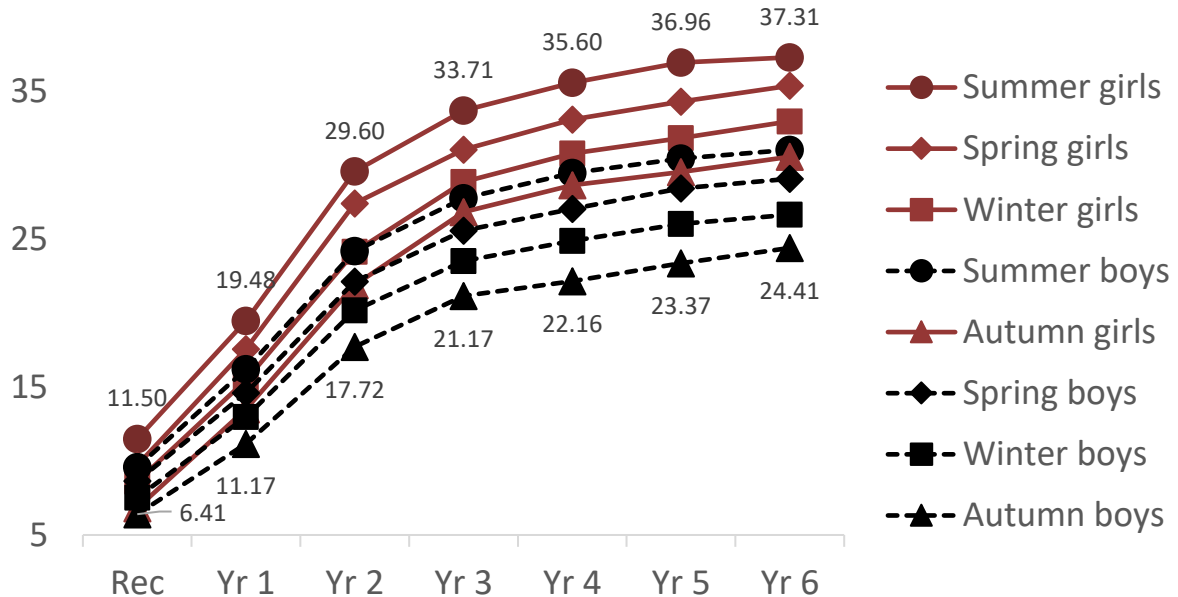
There is much more scrutiny and analysis to be continued of relationships here and of their implications, but what is indicated with certainty is that, among those children attributed 'lower'-level SEND, there are striking differences by characteristic in SEND type ascribed: and if type ascribed in the NPD reflects to any extent the nature of support provided to children, there are therefore large differences in the treatment of and provision for children with 'lower'-level SEND attributed, depending on birth month and gender. This may impact both children's experiences during school and their later outcomes.

**Figure 20: Proportions of girls and boys born in each season ascribed SEND with type 'Not known' in each school year-group: among children with 'lower'-level SEND attributions only**



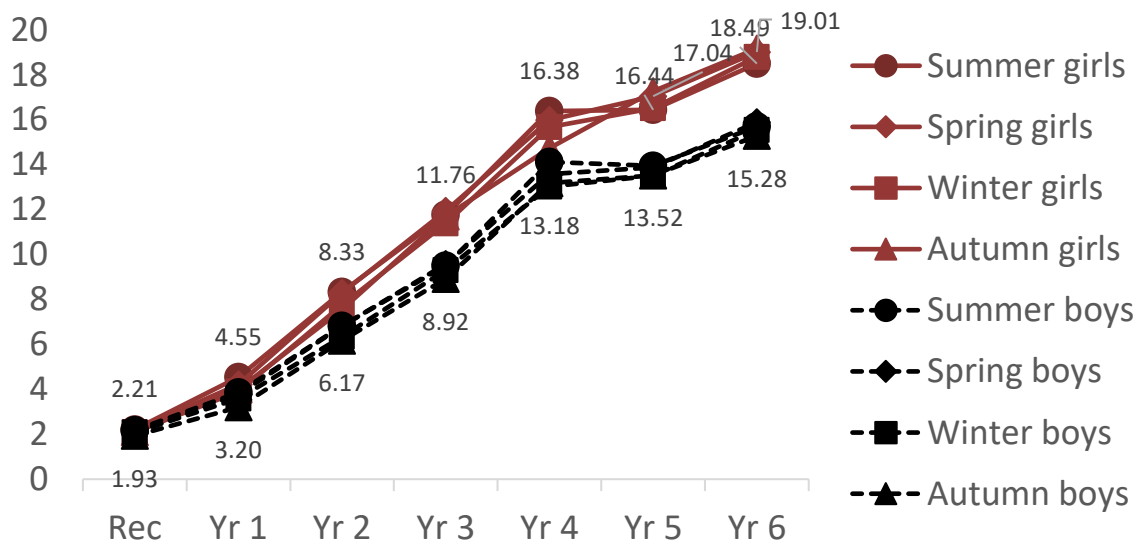
Reception total N across four cohorts included= 206,628; Yr 1 N= 295,435; Yr 2 N= 341,163; Yr 3 N= 357,047; Yr 4 N= 361,262; Yr 5 N= 359,479; Yr 6 N= 355,378. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 21: Proportions of girls and boys born in each season ascribed SEND with type 'Moderate Learning Difficulties' in each school year-group: among children with 'lower'-level SEND attributions only**



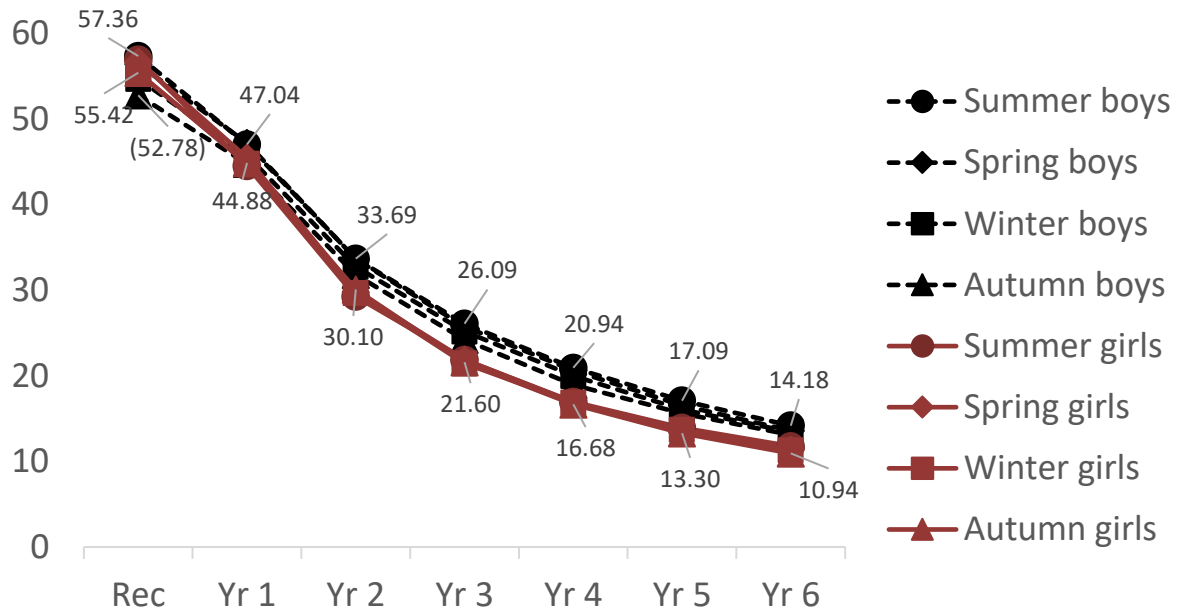
Reception total N across four cohorts included= 206,628; Yr 1 N= 295,435; Yr 2 N= 341,163; Yr 3 N= 357,047; Yr 4 N= 361,262; Yr 5 N= 359,479; Yr 6 N= 355,378. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 22: Proportions of girls and boys born in each season ascribed SEND with type 'Specific Learning Difficulties' in each school year-group: among children with 'lower'-level SEND attributions only**



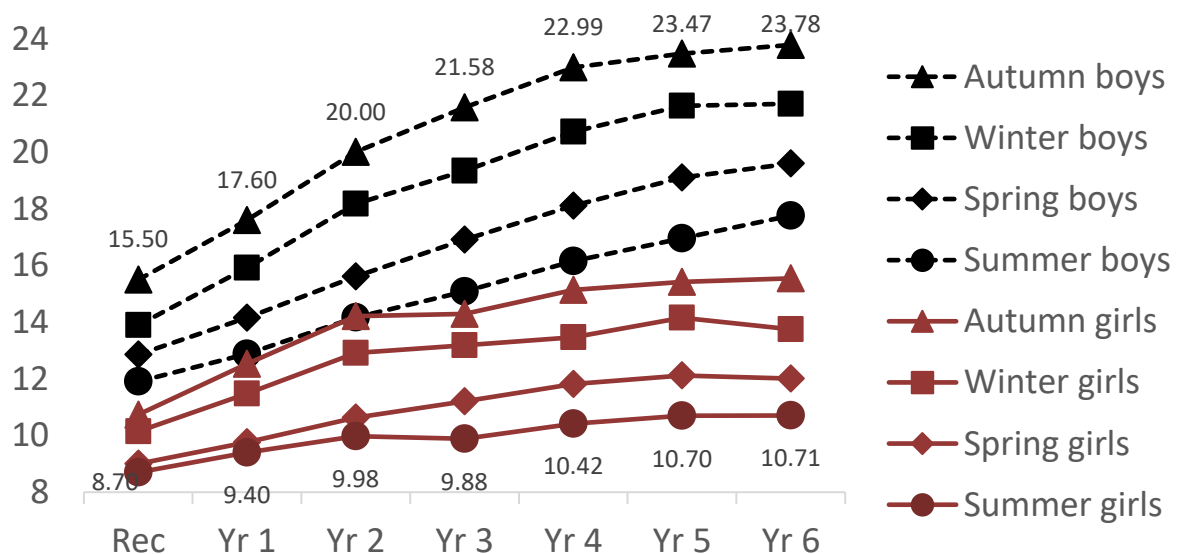
Reception total N across four cohorts included= 206,628; Yr 1 N= 295,435; Yr 2 N= 341,163; Yr 3 N= 357,047; Yr 4 N= 361,262; Yr 5 N= 359,479; Yr 6 N= 355,378. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 23: Proportions of girls and boys born in each season ascribed SEND with type 'Speech, Language and Communication Needs' in each school year-group: among children with 'lower'-level SEND attributions only**



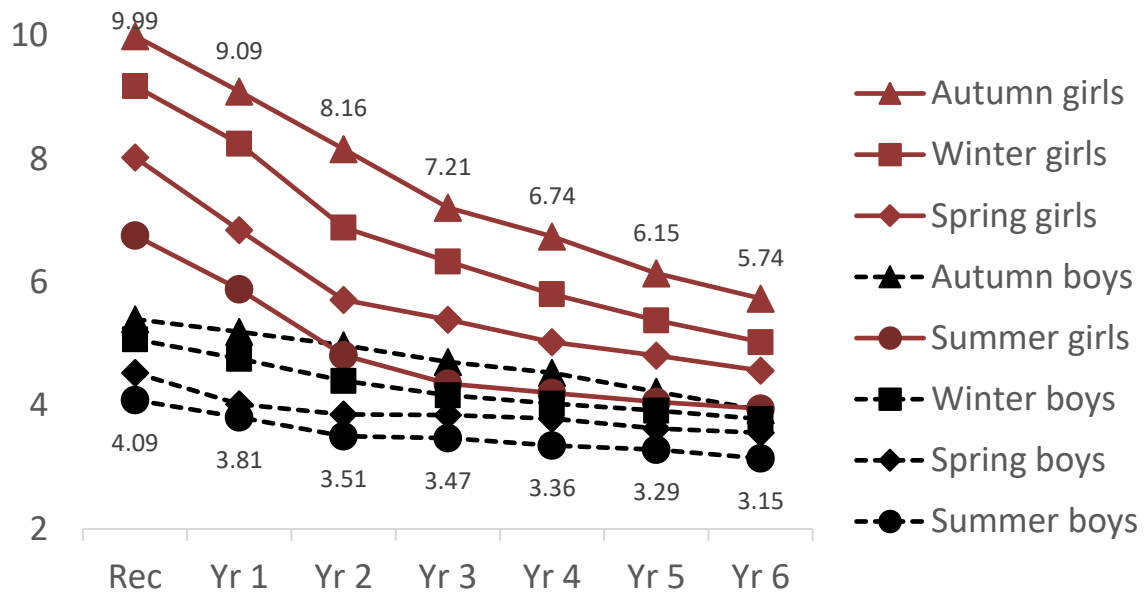
Reception total N across four cohorts included= 206,628; Yr 1 N= 295,435; Yr 2 N= 341,163; Yr 3 N= 357,047; Yr 4 N= 361,262; Yr 5 N= 359,479; Yr 6 N= 355,378. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 24: Proportions of girls and boys born in each season ascribed SEND with type 'Social, Emotional and Mental Health Difficulties' in each school year-group: among children with 'lower'-level SEND attributions only**



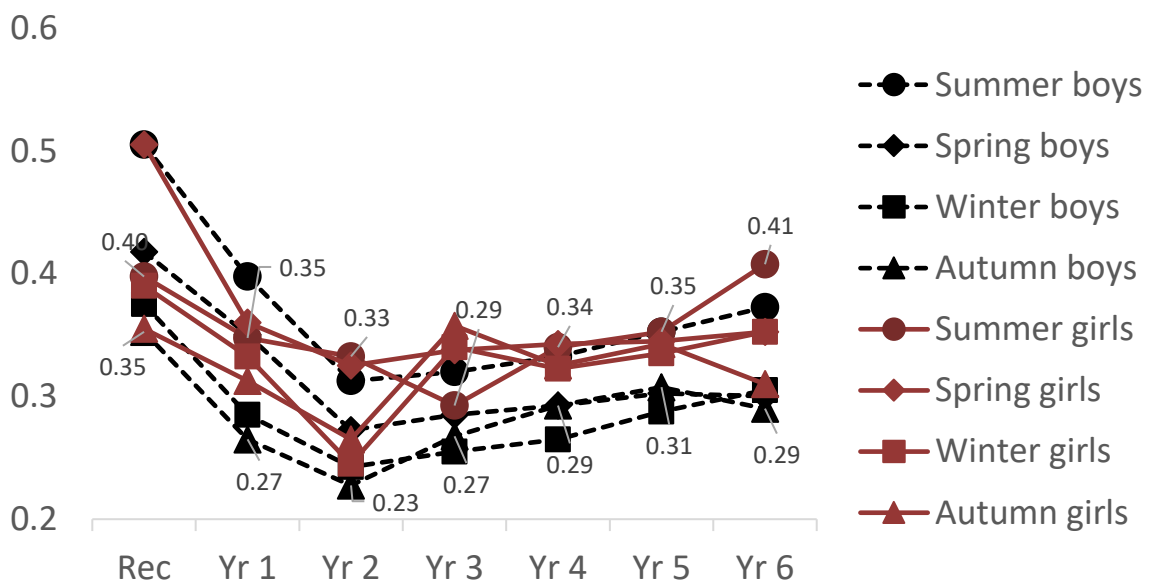
Reception total N across four cohorts included= 206,628; Yr 1 N= 295,435; Yr 2 N= 341,163; Yr 3 N= 357,047; Yr 4 N= 361,262; Yr 5 N= 359,479; Yr 6 N= 355,378. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 25: Proportions of girls and boys born in each season ascribed SEND with type 'Physical and / or Sensory' in each school year-group: among children with 'lower'-level SEND attributions only**



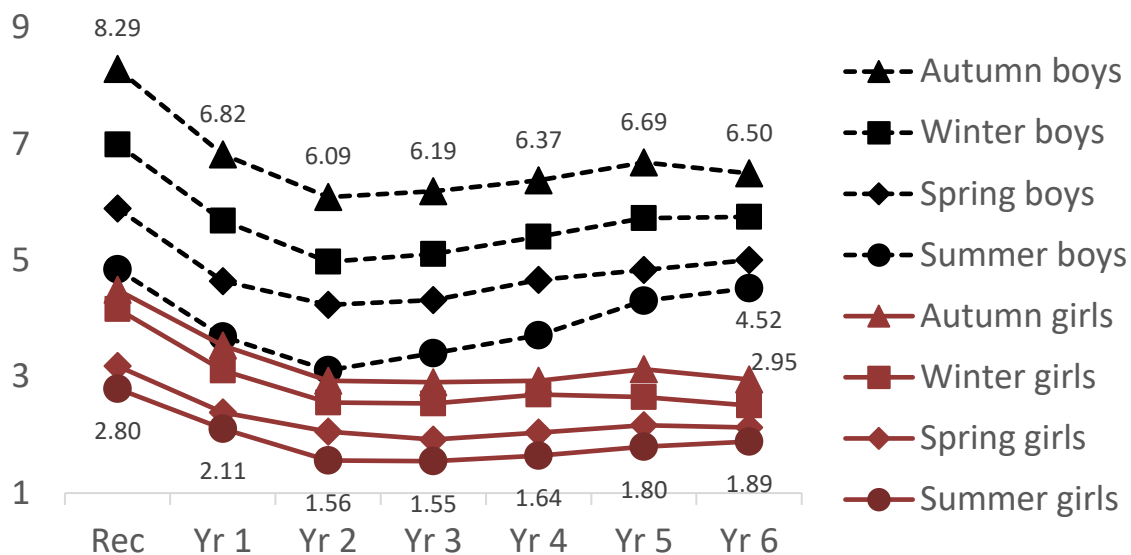
Reception total N across four cohorts included= 206,628; Yr 1 N= 295,435; Yr 2 N= 341,163; Yr 3 N= 357,047; Yr 4 N= 361,262; Yr 5 N= 359,479; Yr 6 N= 355,378. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 26: Proportions of girls and boys born in each season ascribed SEND with type 'Severe Learning Difficulties' in each school year-group: among children with 'lower'-level SEND attributions only**



Reception total N across four cohorts included= 206,628; Yr 1 N= 295,435; Yr 2 N= 341,163; Yr 3 N= 357,047; Yr 4 N= 361,262; Yr 5 N= 359,479; Yr 6 N= 355,378. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 27: Proportions of girls and boys born in each season ascribed SEND with type 'Autistic Spectrum' in each school year-group: among children with 'lower'-level SEND attributions only**



Reception total N across four cohorts included= 206,628; Yr 1 N= 295,435; Yr 2 N= 341,163; Yr 3 N= 357,047; Yr 4 N= 361,262; Yr 5 N= 359,479; Yr 6 N= 355,378. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

### 3.5.3 Disproportionalities in ascription with different types of SEND among children attributed 'higher'-level SEND

Children attributed 'higher'-level SEND have been through a process of assessment and decision-making outside of the school environment, resulting in award of a statutory Education and Health Care Plan (ECHP, previously a Statement of SEN), specifying their needs and the support that should be provided. Figure 28 to 35 outline birth-season and gender disproportionalities in the type of SEND ascribed among only those children with SEND attributed and provided for at this 'higher' level.

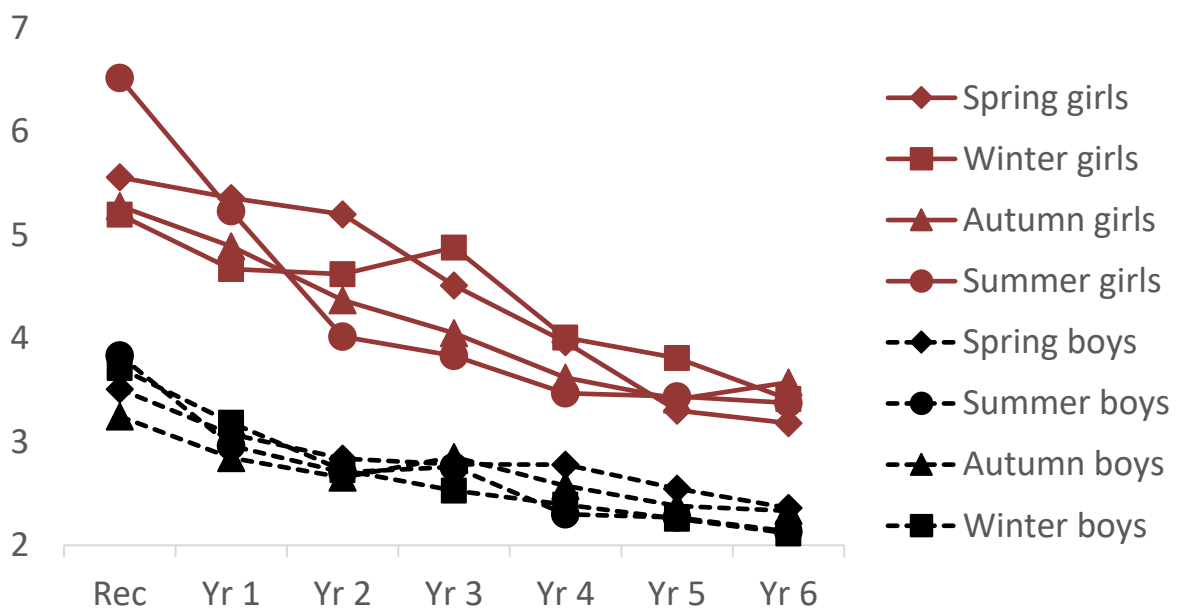
The clearest patterns here include a tendency of autumn-born boys to be least likely in all years of primary school to be attributed 'higher'-level SEND ascribed 'Specific Learning Difficulties' (Figure 22) or 'Moderate Learning Difficulties' (Figure 21) but, in contrast, disproportionately likely to be ascribed 'Social, Emotional, and Mental Health Needs' (Figure 24) and 'Autistic Spectrum' conditions (Figure 27). Summer-born children, especially girls, are disproportionately unlikely to be attributed 'higher'-level SEND for 'Autistic Spectrum' conditions (Figure 27) and 'Physical and / or Sensory conditions' (Figure 25) each year, and disproportionately likely to be attributed 'higher'-level SEND with 'Moderate Learning Difficulties' (Figure 21).



The proportion of boys born in all months with 'higher'-level SEND ascribed as 'Speech, Language and Communication Needs' falls through the school years from a high in year one, while the proportion of girls rises through the mid-primary years before falling. In every year, however, summer-born children are most likely to be attributed 'higher'-level SEND with 'Speech, Language, and Communication Needs,' though in reception it is the summer-born boys who are most likely, and by year six, the summer-born girls (Figure 23).

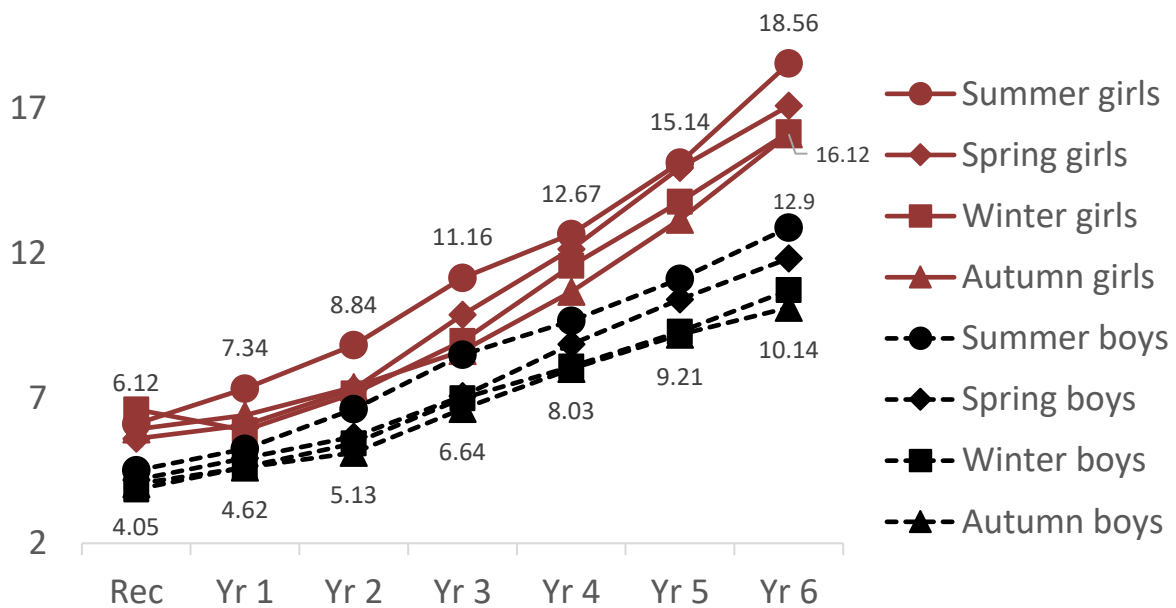
That some disproportionalities by birth month remain when considering only those children who have an established EHCP, administered by the Local Authority, after assessment involving professionals outside of the school environment, raises questions about equity of support, accuracy of diagnoses, and processes of referral – assuming the categories of type reported in the NPD bear some correspondence to the nature of provision made and support for children born in different months.

**Figure 20: Proportions of girls and boys born in each season ascribed SEND with type 'Not known' in each school year-group: among children with 'higher'-level SEND attributions only**



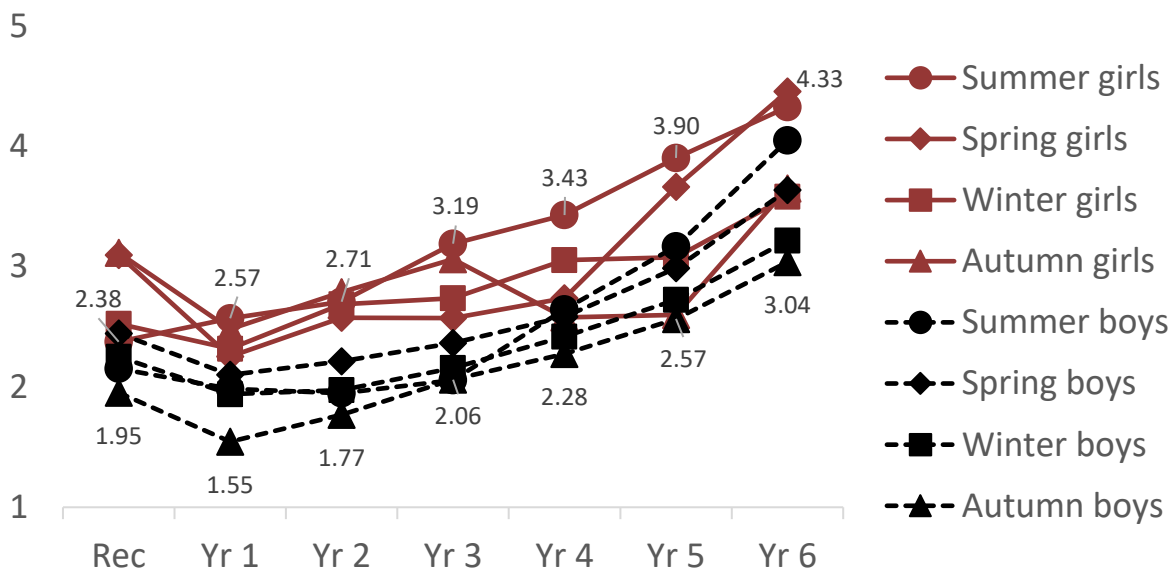
Reception total N across four cohorts included= 38,559; Yr 1 N= 49,624; Yr 2 N= 56,488; Yr 3 N= 62,285; Yr 4 N= 66,102; Yr 5 N= 70,155; Yr 6 N= 75,476. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 21: Proportions of girls and boys born in each season ascribed SEND with type 'Moderate Learning Difficulties' in each school year-group: among children with 'higher'-level SEND attributions only**



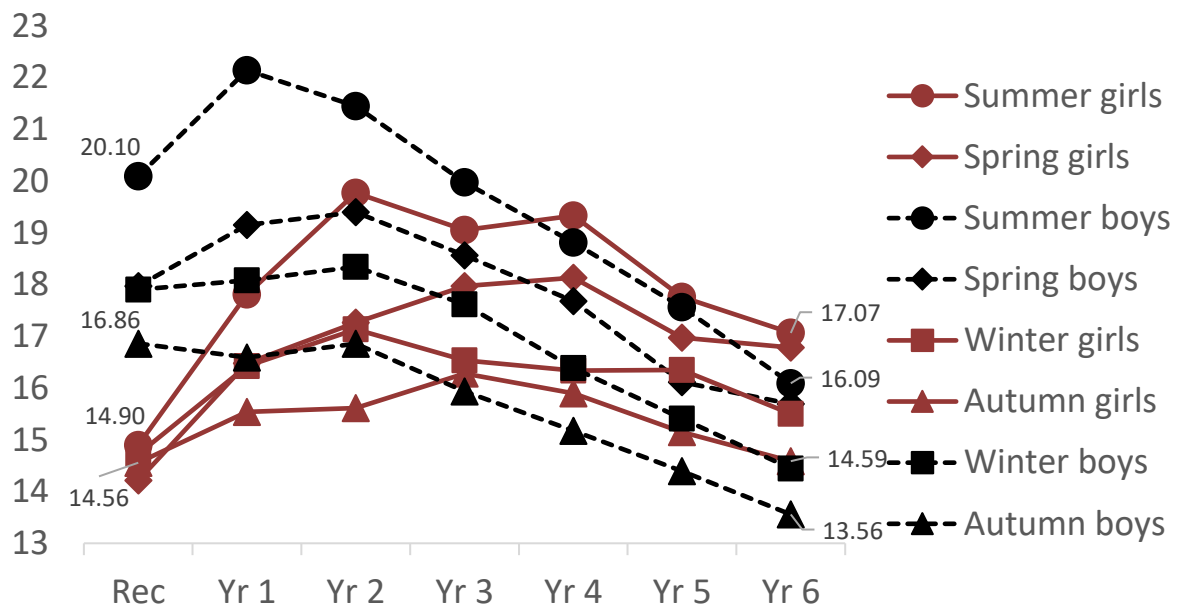
Reception total N across four cohorts included= 38,559; Yr 1 N= 49,624; Yr 2 N= 56,488; Yr 3 N= 62,285; Yr 4 N= 66,102; Yr 5 N= 70,155; Yr 6 N= 75,476. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 22: Proportions of girls and boys born in each season ascribed SEND with type 'Specific Learning Difficulties' in each school year-group: among children with 'higher'-level SEND attributions only**



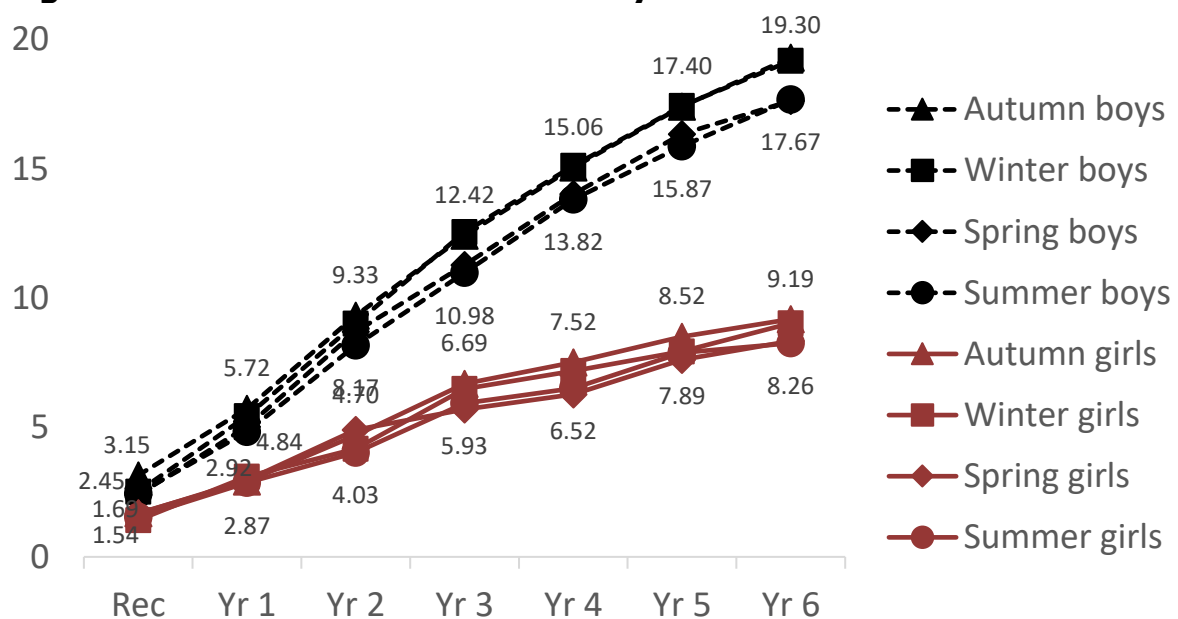
Reception total N across four cohorts included= 38,559; Yr 1 N= 49,624; Yr 2 N= 56,488; Yr 3 N= 62,285; Yr 4 N= 66,102; Yr 5 N= 70,155; Yr 6 N= 75,476. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 23: Proportions of girls and boys born in each season ascribed SEND with type 'Speech, Language and Communication Needs' in each school year-group: among children with 'higher'-level SEND attributions only**



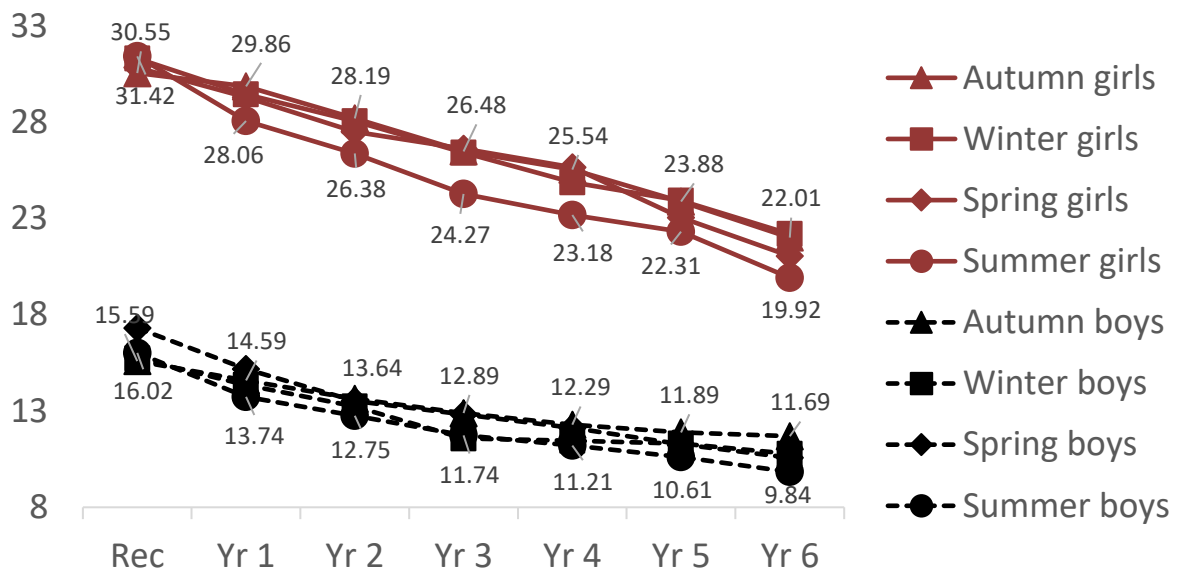
Reception total N across four cohorts included= 38,559; Yr 1 N= 49,624; Yr 2 N= 56,488; Yr 3 N= 62,285; Yr 4 N= 66,102; Yr 5 N= 70,155; Yr 6 N= 75,476. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 24: Proportions of girls and boys born in each season ascribed SEND with type 'Social, Emotional and Mental Health Difficulties' in each school year-group: among children with 'higher'-level SEND attributions only**



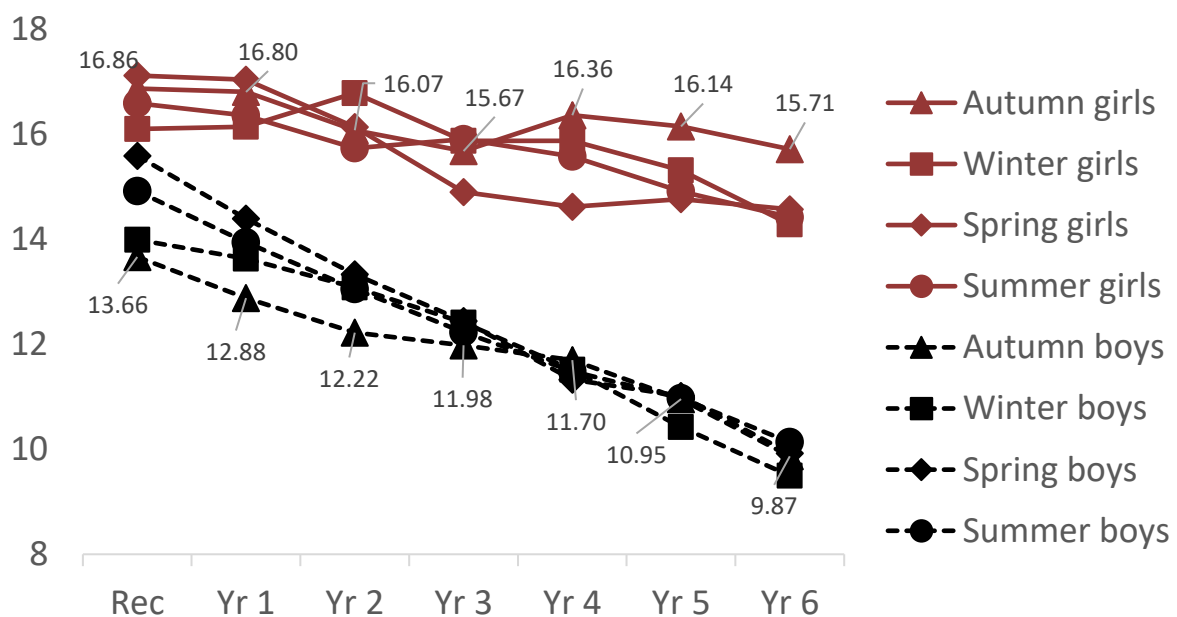
Reception total N across four cohorts included= 38,559; Yr 1 N= 49,624; Yr 2 N= 56,488; Yr 3 N= 62,285; Yr 4 N= 66,102; Yr 5 N= 70,155; Yr 6 N= 75,476. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 25: Proportions of girls and boys born in each season ascribed SEND with type 'Physical and / or Sensory Conditions' in each school year-group: among children with 'higher'-level SEND attributions only**



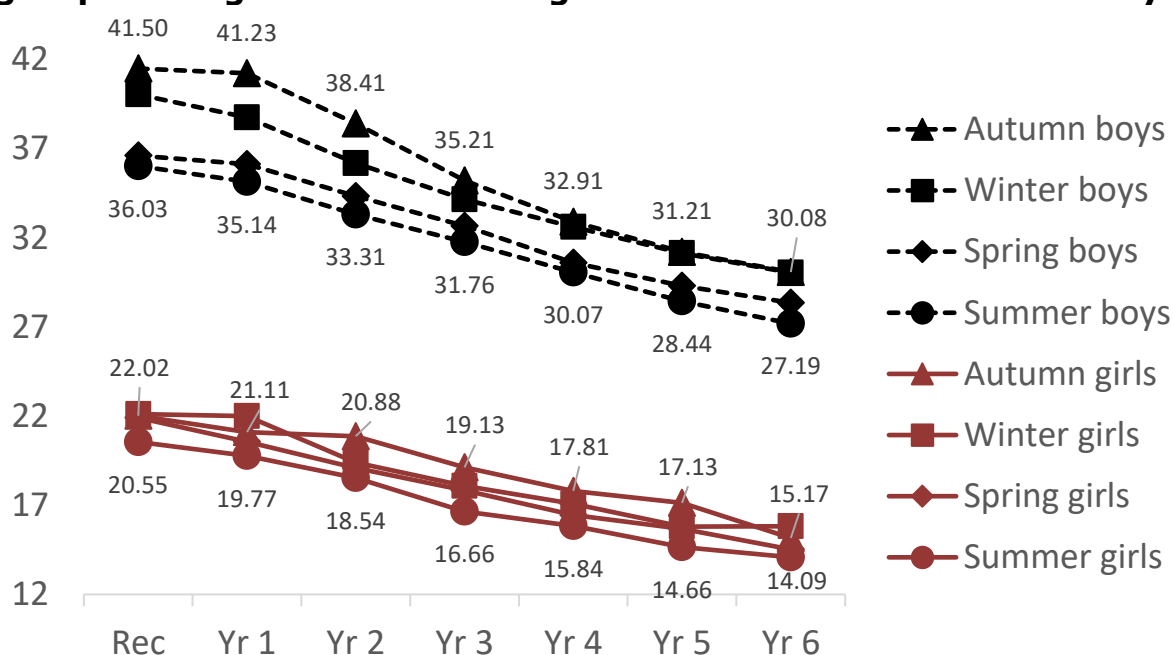
Reception total N across four cohorts included= 38,559; Yr 1 N= 49,624; Yr 2 N= 56,488; Yr 3 N= 62,285; Yr 4 N= 66,102; Yr 5 N= 70,155; Yr 6 N= 75,476. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 26: Proportions of girls and boys born in each season ascribed SEND with type 'Severe Learning Difficulties' in each school year-group: among children with 'higher'-level SEND attributions only**



Reception total N across four cohorts included= 38,559; Yr 1 N= 49,624; Yr 2 N= 56,488; Yr 3 N= 62,285; Yr 4 N= 66,102; Yr 5 N= 70,155; Yr 6 N= 75,476. Source: National Pupil Database, Spring School Censuses, 2015-2018. Note: children in each year-group at Jan 2015, 2016, 2017, 2018 are pooled.

**Figure 27: Proportions of girls and boys born in each season ascribed SEND with type 'Autistic Spectrum' in each school year-group: among children with 'higher'-level SEND attributions only**



Reception total N across four cohorts included= 38,559; Yr 1 N= 49,624; Yr 2 N= 56,488; Yr 3 N= 62,285; Yr 4 N= 66,102; Yr 5 N= 70,155; Yr 6 N= 75,476. Source: National Pupil Database, Spring School Censuses, 2008-2018.

#### 4. Assessments in early primary school: Disproportionalities in EYFSP and Phonics results by season of birth and gender

The introduction to this paper discussed evidence that the frequent testing and aligned curriculum regimes drive and shape education in primary schools, and described how relative age is a key delineator of early 'attainment.' It also highlighted recent research by Hutchinson (2021) and Strand and Lindorf (2018) which suggests that Early Years Foundation Stage Profile (EYFSP) scores mediate and moderate associations between birth season and SEND attributions. Figure 5 and Figure 6 in this paper show that the gap between summer-born boys and autumn-born girls attributed 'lower'-level SEND widens in the infant years of primary school, when most assessments fall, then narrows during the junior years, when only Key Stage 2 assessments occur at the very end of Year 6.

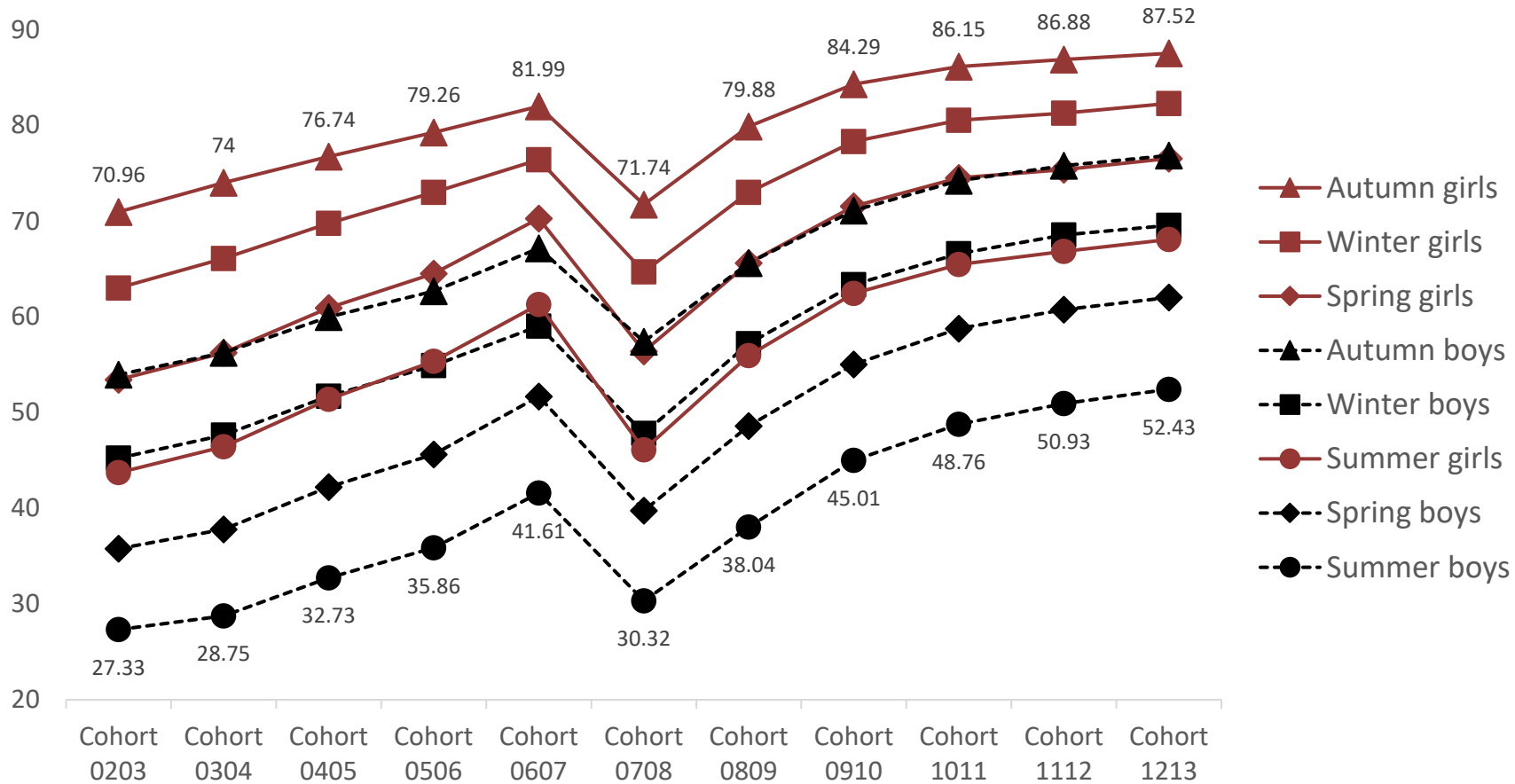
Thus Figure 28, below, shows the proportion of girls and boys born in each birth season attributed a 'Good Level of Development' ('GLD') – the key measure across years in the Early Years Foundation Stage Profile (EYFSP), a teacher assessment administered at the end of the Reception Year. Despite changes to the EYFSP's criteria and aligned curriculum (indicated by the discontinuity between the 0607 and 0708 cohorts), and overall

inflation of scores, there is a consistent, clear stratification, where autumn-born girls are most likely to be attributed a 'GLD', and summer-born boys least likely.

The overall shape of this stratification by birth season and gender reflects and inverts many of the disproportionalities in SEND attribution shown throughout this paper, including the proportion of girls and boys born in each season ever attributed 'lower'-level SEND during primary school (Figure 1a); the proportion ever attributed 'higher'-level SEND (Figure 1b); the average number of years throughout primary school girls and boys born in each season are attributed 'lower'-level SEND (Table 2a); the proportion of girls and boys born in each season attributed 'higher'-level SEND only at the later stage of primary school (Figure 4b); the proportion of girls and boys born in each season attributed 'lower'-level SEND in each primary school year (Figure 5 and Figure 6); and the proportion of girls and boys born in each season attributed 'lower'-level SEND in their reception year (Figure 9). It also mirrors stratification in the proportion of girls and boys born in each season attributed 'lower'-level SEND only at the later stage of primary school (Figure 3b).

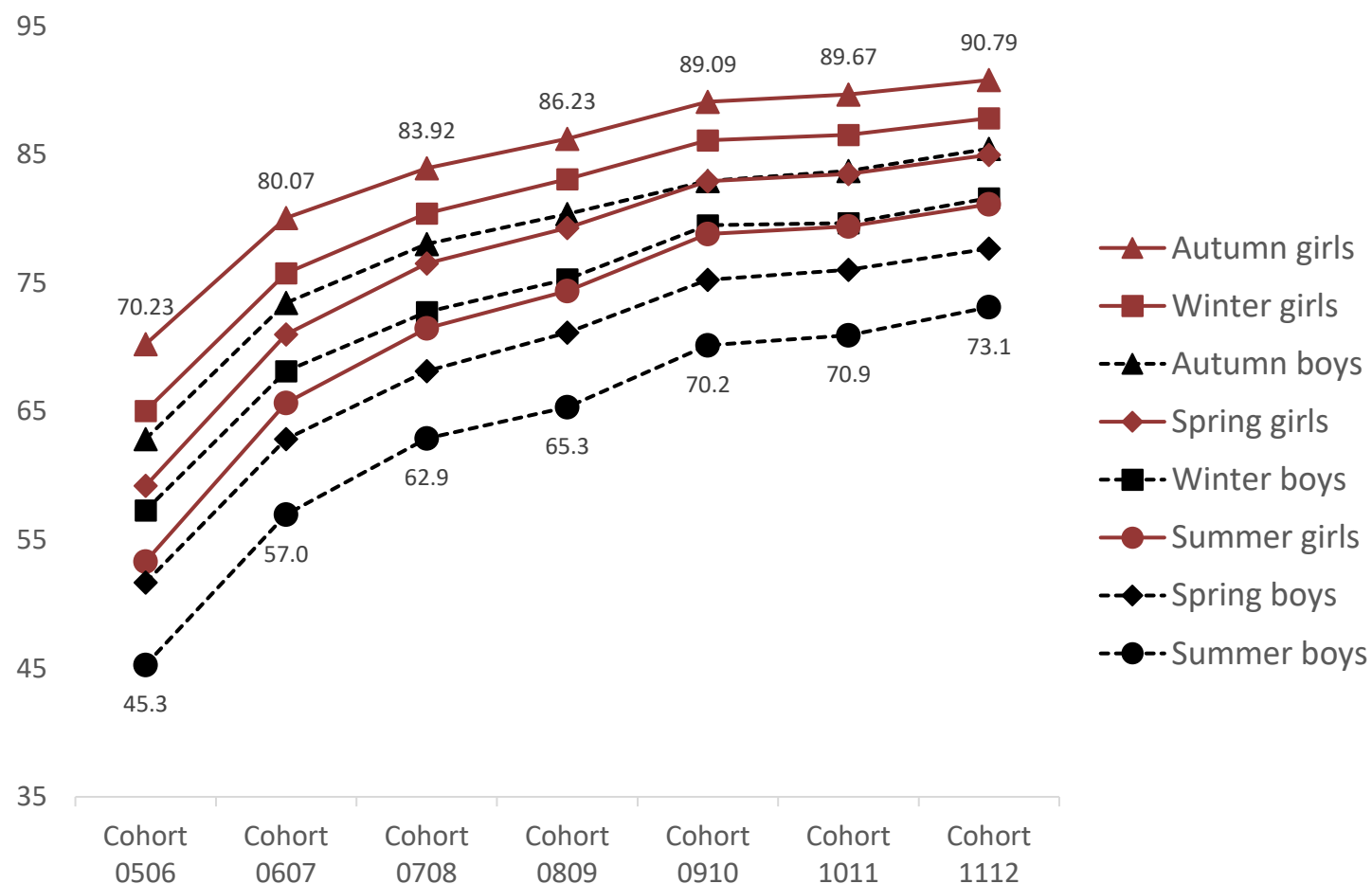
Figure 29 shows the same stratification in denotation of meeting the 'expected standard' in Year 1's Phonics Screening Check.

**Figure 28: Proportions of girls and boys born in each season denoted as reaching a 'Good Level of Development' in the Early Years Foundation Stage Profile, at the end of Reception**



Cohort 0203 N= 548,118; Cohort 0304 N= 564,354; Cohort 0405 N= 578,114; Cohort 0506 N= 590,129; Cohort 0607 N= 611,862; Cohort 0708 N= 636,986; Cohort 0809 N= 634,759; Cohort 0910 N= 648,142; Cohort 1011 N= 661,593; Cohort 1112 N= 661,434; Cohort 1213 N= 637,733. Source: National Pupil Database, Spring School Census 2008-2018, Early Years Foundation Stage Profile results 2008-2018.

**Figure 29: Proportions of girls and boys born in each season denoted as having met the 'expected standard' in the Phonics Screening Check, and the end of Year 1**



Cohort 0506 N= 592,859; Cohort 0607 N= 613,112; Cohort 0708 N= 639,630; Cohort 0809 N= 638,134; Cohort 0910 N= 652,443; Cohort 1011 N= 665,200; Cohort 1112 N= 660,165. Source: National Pupil Database, Phonics Screening Check results 2012-2018.



## **5. Summary, discussion, and next steps**

### **5.1 Summary of findings**

Descriptive analyses in this working paper map disproportionalities according to birth season in attributions to girls and boys of different levels and types of SEND. They also examine by birth-season and gender inequalities in assessment results in early primary school. The top-line findings are as follows.

Compared to autumn-born children, summer-born children are:

- Much more likely to be attributed 'lower'-level SEND at some point during their primary school career.
- More likely to be attributed 'lower'-level SEND for more years during primary school.
- More likely to be attributed 'lower'-level SEND in each respective primary school year.
- Most likely to be attributed 'higher'-level SEND by the end of their primary school career.

However, summer-born children are:

- More likely, among those attributed 'higher'-level SEND, to be supported at this level for fewer years during primary school, and from a later stage.
- Less likely to be attributed 'higher'-level SEND in the reception year, or in the pre-school years.

Summer-born children are more likely to be attributed most types of SEND in every year of primary school, compared to no SEND. The exception to this is ascription with 'Autistic Spectrum' conditions, which are more likely for autumn-born boys in the infant years.

Among only those children with 'lower'-level, school-administered SEND attributions, summer-borns are:

- More likely to be ascribed types 'Not known,' 'Moderate Learning Difficulties,' and 'Speech Language and Communication Needs.'
- Less likely to be ascribed types 'Social, Emotional, and Mental Health Difficulties,' 'Physical and / or Sensory Conditions,' and 'Autistic Spectrum' conditions.

Even among only those children with 'higher'-level, local authority-administered statutory SEND provisions, summer-borns are still:

- More likely to be ascribed types 'Not known,' 'Moderate Learning Difficulties,' 'Speech, Language and Communication Needs.'
- Less likely to be ascribed types 'Social, Emotional and Mental Health Difficulties,' 'Physical and / or Sensory Conditions' 'Autistic Spectrum' conditions.

In terms of assessments in early primary school, summer-born children are:

- Much less likely to be attributed a 'Good Level of Development' in the Early Years Foundation Stage Profile, in the reception year.
- Much less likely to be deemed to have 'passed' the Phonics Screening Check, in Year 1.

## **5.2 Discussion**

The language and approach of the Department for Education as outlined in the introduction to this paper (Department for Education, 2011) assume that the origin of special educational needs and disabilities lies wholly within the child, and that children with SEND can therefore accurately be 'identified,' if the SEND system works well. It does not allow for nor acknowledge ways in which the school system itself may produce or construct SEND, or some SENDs.

However, the patterns outlined here by birth month (and gender) describe a stratification of disproportionalities that implicate the structure and workings of the wider education system as engendering and / or assigning need. Along with previous research and analyses (including Sharp et al, 2009; Bradbury et al, 2021) these patterns begin to suggest that the school system itself, fuelled by early testing against non-age-standardised national criteria, constructs some relatively younger children as having SEND: because they are not yet old enough to access the curriculum or to meet prematurely 'expected standards.' Given SEND system insufficiency and inefficiency which positions children and families within a 'nightmare' of 'confusion' (House of Commons Education Committee, 2019) and given that increasing number of children denoted with SEND are provided for outside of the mainstream system, and others cannot access school at all (Long et al, 2021) this suggests a SEND system entwined with an education system where interacting parts are at odds with one another.

Of course, the initial analyses presented in this paper are simply descriptives from which hypotheses are being built, informed by previous research and theory. These hypotheses will be developed and tested further in follow-up research, and the data as presented here cannot prove definitively that the education system itself, rather than catering appropriately children born across the year, necessarily produces over-attributions and potentially mis-attributions of 'special educational needs,' among children including summer-borns, which contribute to SEND system inadequacy: though it indicates the possibility. Particularly, the theory is supported by the pattern shown in Figure 5 and Figure 6: the summer-born boy / autumn-born girl disparity in 'lower'-level SEND attribution is at its height around the end of the infant years - during which most summative testing falls.

Returning to the previous literature provides further support for the hypothesis. As well as the findings of Strand & Lindorf (2018) and Hutchinson (2021) that the EYFSP appears to mediate and / or moderate disproportionalities by birth month in attribution with SEND, there are other tentative suggestions, when comparing findings here with previous work, of the instrumentality of early assessments and curriculum in the processes of attribution and construction of some SENDs.

Crawford et al (2007) examined boys in the reception year in 2003/04, and found at this time no difference by birth month in attribution of 'lower'-level SEND. This contrasts with the patterns described in Figure 9 in this paper, where there are differences by birth season for boys five years later, in all of the reception years from 2008 to 2018: in 2018, 8.9% of autumn-born boys were attributed 'lower'-level SEND, compared to 13.1% of summer-borns. The gap between autumn-born girls and summer-born boys has widened in the years covered by this working paper: from a 172% difference in 2008, to a 228% difference in 2018. The same is true of the gap in Year 2 (Annex A, Figure A1): a percentage point difference of 218% in 2008 rises to a 242% difference in 2018.

Crawford et al also found for children in year six in 2002 and 2003 that 1.6% of September-born girls were attributed 'higher'-level SEND, compared to 2% of August-born girls, 4.2% of September-born boys, and 4.8% of August-born boys. In the most recent (0607) cohort examined in the current working paper (Figure 8), who were in Year 6 in 2018, 1.65% of autumn-born girls were attributed 'higher'-level SEND, compared to 1.91% of summer-born girls, 4.32% of autumn-born boys, and 5.09% of summer-born boys. Thus the percentage difference between a September-born year six girl and August-born Year 6 boy in 2002/03 was 200%, while the percentage difference between an autumn-born year six girl and summer-born year six boy in 2018 is 208%. As the analyses here for 2018 combine September/October/November-borns, and June/July/August-borns, and as relative age disproportionalities are linear, the difference

between September-born girls and August-born boys will be greater still in 2018. This indicates that relative age disproportionalities in attribution of 'higher'-level SEND have grown in the years since Crawford et al's analyses.

In 2003/04, the Early Years Foundation Stage Profile assessment had only just been introduced, and the Phonics Screening Check was introduced later, in 2012. The possibility, then, is that by, through these assessments, making salient, reifying, and naming as 'good' – or not – or 'meeting standards' and 'expectations' – or not – those perennial and inevitable developmental differences between relatively older and younger children born in different months in the earliest primary years, stratification has been widened, and inequalities in SEND attribution made more pronounced. Teachers and schools are spending increasing portions of time serving the needs of the centralised assessment and accountability system (Bradbury et al, 2021; Walker et al, 2014), and delineating children according to its dictates, rather than working with individuals to ensure learning, progress, and inclusion.

In discussing the malfunctioning of the SEND system, a 'postcode lottery' is often highlighted, where disparities arise from inequitable treatment of children with the similar disabilities or needs (Hutchinson, 2021; Special Needs Jungle, 2021). What this working paper begins to argue is that it is not only arbitrariness and haphazard inconsistency that characterise the 'nightmare' and 'confusion' of the Kafkaesque system. Alongside these aspects is a structural creation of SEND within the context of the wider school and policy environment. Rigid prescriptive 'expectations' not suitable for relatively younger children result in these children being denoted with SEND, and then the system that has created these needs cannot or will not meet them. This is because inherently by the same conditions through which it creates some SEND, it is configured not to serve the children it attributes. It is configured instead to denote children as sufficient ('good,' 'meeting standards,' 'expected level') or deficient (not 'good,' not 'meeting standards' not at the 'expected level') (Bradbury et al, 2021). This, the evidence begins to suggest, may contribute to increasing numbers of children being forced from the mainstream system, as reflected in the rise of those with EHCPs and those being educated in Special Schools, as well as the rise in children not educated in school at all. The month of birth disproportionalities in children attributed 'higher'-level, Local Authority-administered SEND and different types of SEND also support this line of thinking: these disproportionalities should not exist if EHCPs were provided on the basis only of children's own 'inherent' needs and disabilities.

### **5.3 Continuing research**

This research will continue to explore the ways in which SENDs are constructed, and the implications of these processes for children's experiences and progress through school, and for the functioning of the

wider education and SEND systems. This will include unpicking in more detail trajectories of type attributed throughout primary school, and correspondences to assessments in the later primary years. It will also include analysing school and area-level differences, and expanding the scope of years covered forwards to the present day and backwards to meet earlier years of analyses (Crawford et al, 2007), to better understand how the introduction of assessments in early primary school interplayed with the widening of birth month gaps in attribution of SENDs.

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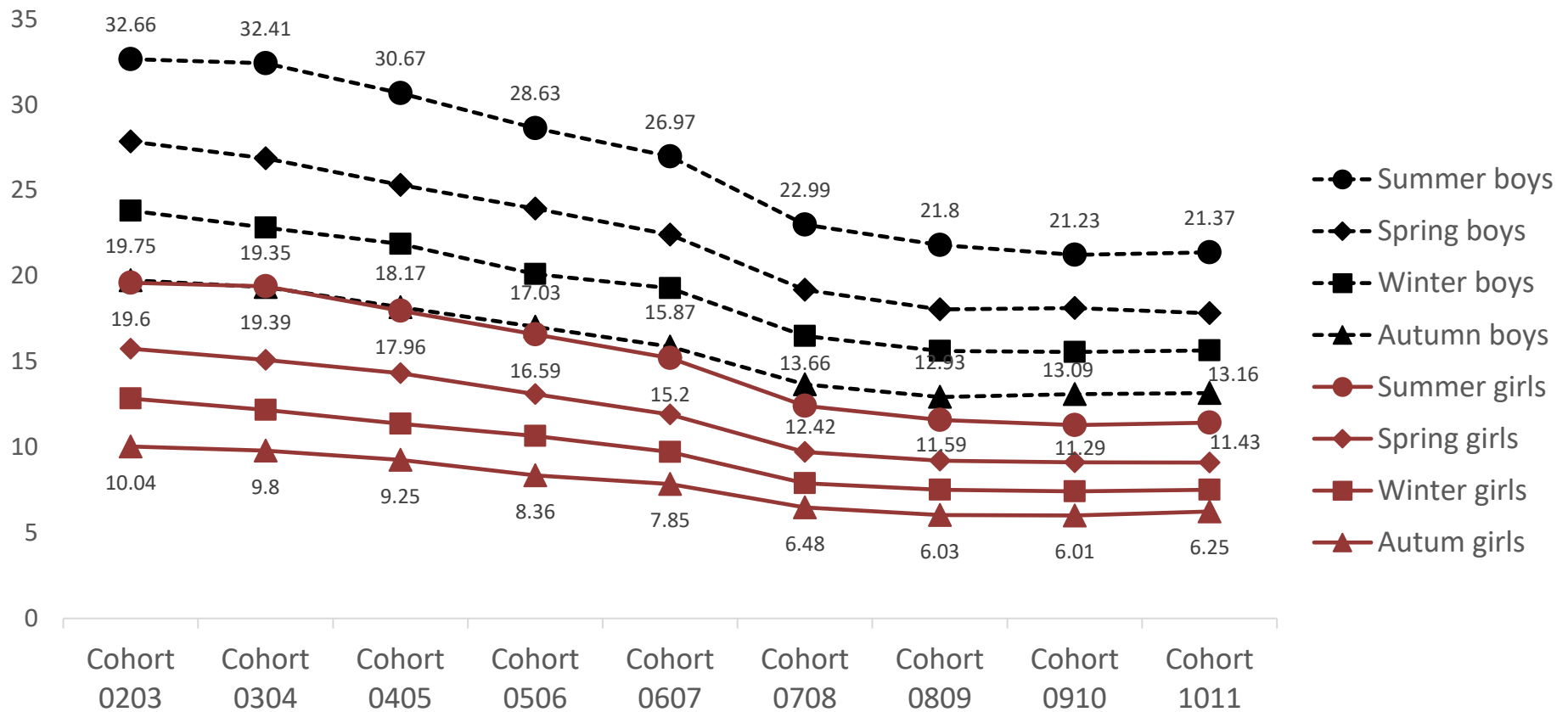
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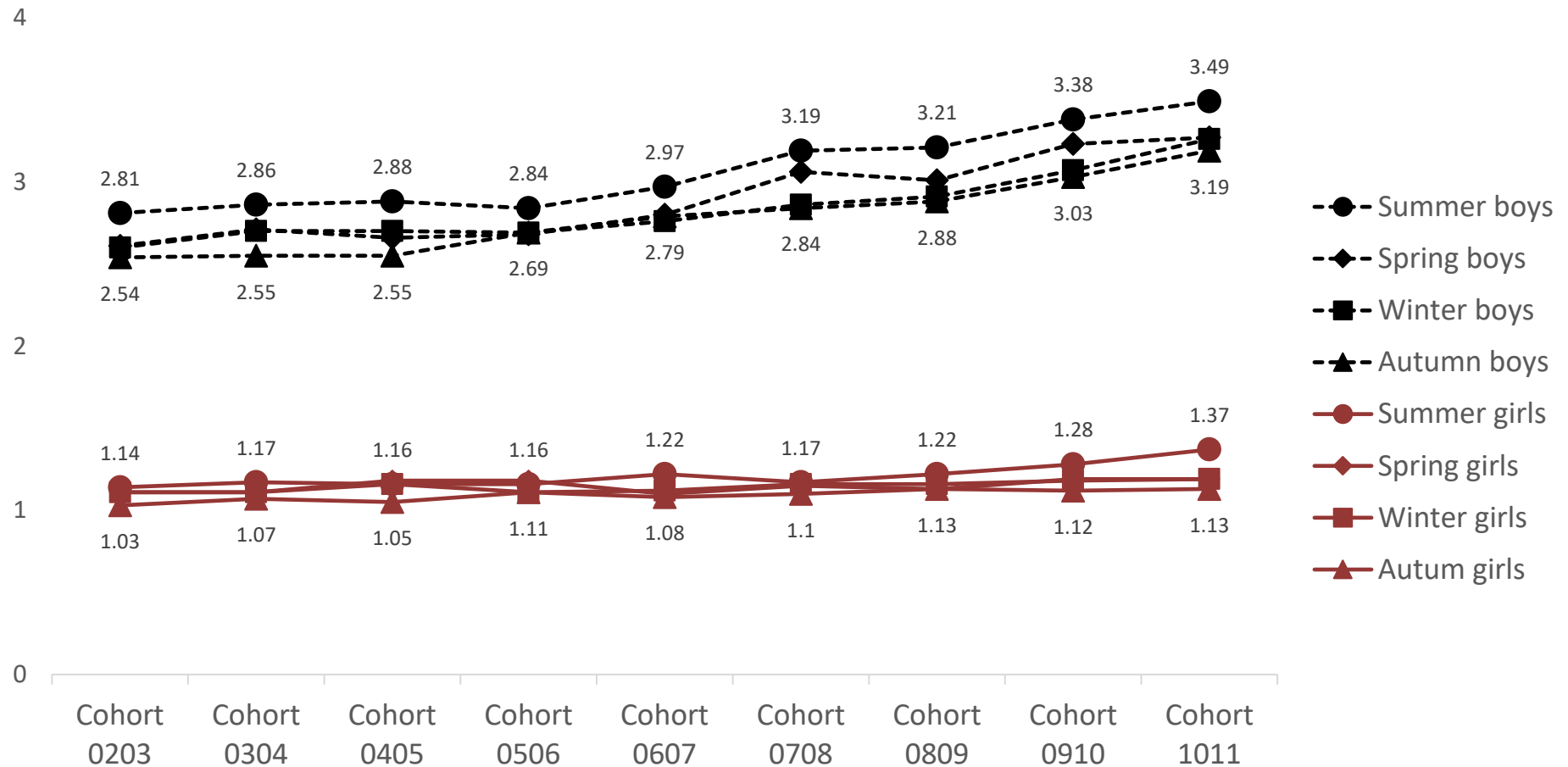
## Annex A

**Figure A1: Proportions of girls and boys born in each season attributed 'lower'-level SEND in year two: cohorts born 0203 (year two 2010) to 1011 (year two 2018)**



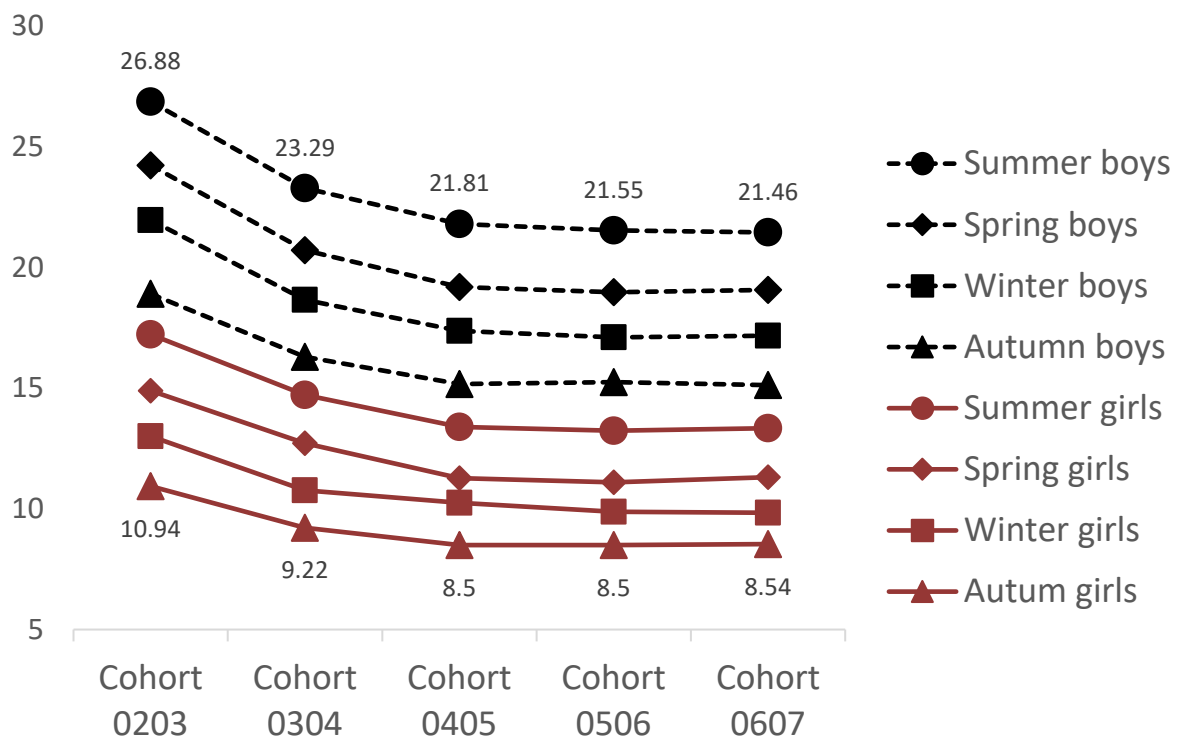
Cohort 0203 N= 554,206; Cohort 0304 N= 571,290; Cohort 0405 N= 584,175; Cohort 0506 N= 596,588; Cohort 0607 N= 618,197; Cohort 0708 N= 644,391; Cohort 0809 N= 643,299; Cohort 0910 N= 656,513; Cohort 1011 N= 668,125. Source: National Pupil Database, Spring School Censuses, 2010-2018.

**Figure A2: Proportions of girls and boys born in each season attributed 'higher'-level SEND in year two: cohorts born 0203 (year two 2010) to 1011 (year two 2018)**

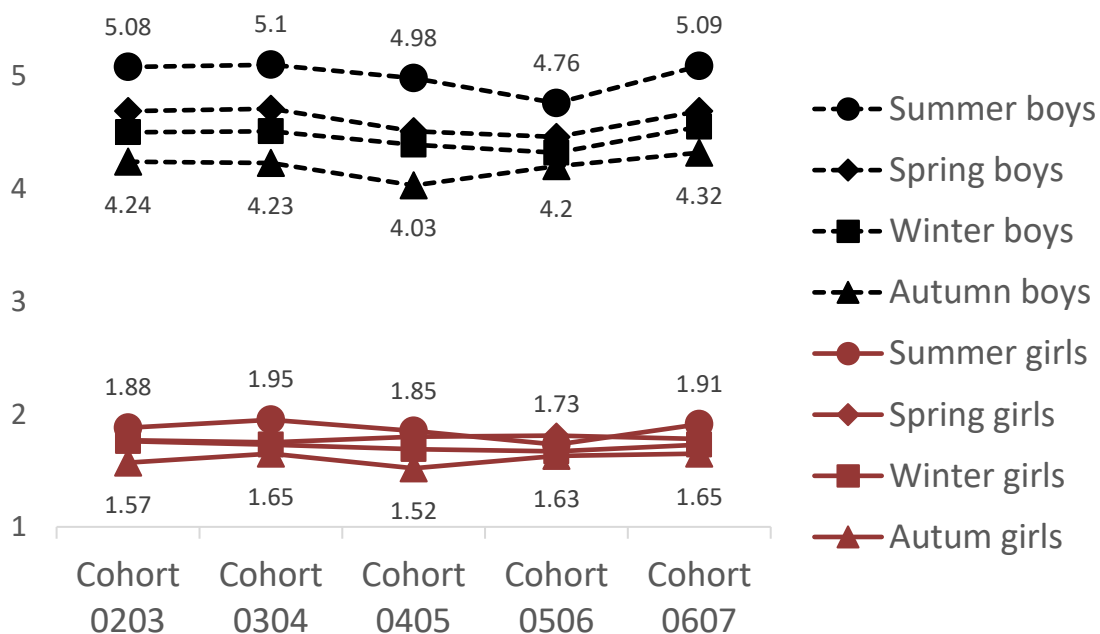


Cohort 0203 N= 554,206; Cohort 0304 N= 571,290; Cohort 0405 N= 584,175; Cohort 0506 N= 596,588; Cohort 0607 N= 618,197; Cohort 0708 N= 644,391; Cohort 0809 N= 643,299; Cohort 0910 N= 656,513; Cohort 1011 N= 668,125. Source: National Pupil Database, Spring School Censuses, 2010-2018.

**Figure A3: Proportions of girls and boys born in each season attributed 'lower'-level SEND in year six: cohorts born 0203 (year six 2014) to 0607 (year six 2018)**



**Figure A4: Proportions of girls and boys born in each season attributed 'higher'-level SEND in year six: cohorts born 0203 (year six 2014) to 0607 (year six 2018)**



Cohort 0203 N=556,200; Cohort 0304 N=574,064; Cohort 0405 N=587,817; Cohort 0506 N=601,728; Cohort 0607 N= 621,922. Source: National Pupil Database, Spring School Censuses, 2008-2018