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The prevalence and types of special educational needs in Irish immersion primary schools in the Republic of Ireland

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ABSTRACT

Little research exists in relation to the prevalence of special educational needs (SEN) in immersion education throughout the world. Parents are often dissuaded by educational professionals against this form of education and bilingualism for their child if they present with SEN. Nevertheless, some parents still choose to educate their child with SEN through a second language. This study investigated the prevalence and types of special educational needs in Irish immersion primary schools in the Republic of Ireland (RoI). The aim was to establish, (a) the prevalence rate of SEN in these schools for the academic school year 2017/2018, (b) the types of SEN in these schools and their frequency, and (c) how these SEN were distributed by class groupings. A stratified random sample (20%, N = 29) was selected from all Irish immersion primary schools in the RoI (N = 145). These schools completed an anonymous online questionnaire and the data gathered was analysed descriptively and statistically using SPSS. The key findings of the research were that the SEN of pupils in these schools has changed over the last decade.

KEYWORDS

Immersion education; Irish immersion education; special educational needs; prevalence; second language learning; bilingualism

Introduction

This study focuses on children with special educational needs (SEN) in the Republic of Ireland (RoI) who are being educated through Irish as a second language in Irish immersion schools. Parents choose to send their child to an Irish immersion school to learn through Irish rather than English, the majority language of the community. In some instances, parents know that their child has a diagnosis of SEN before they send their child to be immersed in the Irish language. In other cases, the child is identified with SEN when enrolled in the school. In Irish immersion schools, all curriculum subjects are taught through the medium of Irish, except for English. For example, a lesson on 'measurement' in mathematics, is taught through Irish, the focus of the lesson is on the subject content (measurement), rather than the teaching of Irish itself (Cummins 2009). Early total immersion programmes are provided by these schools to those living outside of Gaeltacht areas. 'The term "Gaeltacht" is used to denote those areas in Ireland where the Irish language is, or was until the recent past, the main spoken language of a substantial number of the local population' (Údarás na Gaeltachta, 2017). The present research does not include Gaeltacht schools. In the Irish immersion schools in the RoI, pupils receive up to two

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school years' total immersion in the Irish language, before they commence English as a curriculum subject (Department of Education and Skills (DES) 2015; National Council for Curriculum and Assessment (NCCA) 2015). At the time of the present study (academic year 2017/2018) there were 145 Irish immersion primary schools in the RoI (Gaeloideachas Teoranta 2017).

The suitability of immersion education and/or bilingualism for students with SEN is often questioned (Kay-Raining Bird, Genesee, and Verhoeven 2016). In some countries parents have no option but to immerse their child in a new language in school, as their home language is not the language of instruction of the school (Jegathessan 2011; Kay-Raining Bird, Lamond, and Holden 2012; Kremer-Sadlik 2005). Parents of children with SEN have often been advised against bilingualism/immersion education for their child and have been recommended that they should only use the majority language of the community with their child (Kremer-Sadlik 2005; Yu 2013, 2016). This advice is given as educational professionals, such as, educational psychologists and speech and language therapists feel that bilingualism/learning through a second language can confuse a child with language/communication difficulties, place an added burden on them, and slow their rate of language acquisition (Beauchamp and MacLeod 2017; Hampton et al. 2017; Ijalba 2016; Jegathessan 2011; Kay-Raining Bird, Lamond, and Holden 2012; Yu 2013, 2016). These negative opinions have caused fear and anxiety amongst parents regarding the suitability of immersion education/bilingualism for their child with SEN. For example, in the study by Kay-Raining Bird, Lamond, and Holden (2012), 78% of parents (N = 49) were fearful that they would confuse their child by using two languages at home or thought that learning two languages is too hard for their child. Fears such as these, have led to some parents deciding to expose their child to only one language (Hampton et al. 2017).

Irish language exemptions in the RoI

In the RoI, students in English-medium primary and post-primary schools may access an exemption from studying the subject of Irish due to their SEN (see DES, 2019a, 2019b, *for further details*). The criteria for allocating exemptions is based on the country in which the child received their education up to 12 years of age, their SEN, and whether their parent is a foreign diplomat living/working in the RoI (DES, 2019a, 2019b). Before the implementation of these circulars, exemptions from studying Irish were granted in primary schools under Circular 12/96 (DES 1996) and in post-primary school under Circular M10/94 (DES, 1994). Under Circular 12/96, for the academic school year 2016/2017, there were 5,385 pupils enrolled in primary schools with an Irish exemption. The most common reason cited for this exemption being granted was a learning difficulty (N = 4,167 or 77.8% of all exemptions) (see DES, 2018, for further details).

The international prevalence of special educational needs (SEN) in primary schools

International prevalence rates for SEN vary from country to country. This variation often occurs due to differences in classification systems (Powell 2010). Currently, there is no universally accepted system of classification throughout the world. It is important to be cognisant of this fact when reviewing and comparing SEN prevalence rates as often one is not always comparing like with like. Generally, classification systems are implemented by

countries for the distribution of additional educational resources for pupils with SEN, nevertheless, the criteria for this often varies from country to country (Norwich 2008, 55). Consequently, this can cause inaccuracies when making comparisons. A considerable variation can be seen in the statistics generated for Europe by the European Agency for Special Needs and Inclusive Education (EASNIE 2016). The data generated by the agency includes 30 European countries and shows that the percentage of pupils in formal education with SEN (see EASNIE 2016 for classification details) ranges from 1.11% in Sweden to 17.47% in Scotland, United Kingdom. The average rate for all countries is 4.53% (see Figure 1 for further details). It is important to evaluate the rates outlined in Figure 1 with caution, as they may differ due to the type of data supplied by each country for analysis. Some countries supply figures based on the number of pupils receiving additional supports and others on the number of pupils with a diagnosis but not necessarily getting additional supports.

The most prevalent categories of SEN

In England, autism spectrum disorder (ASD) is the most frequently reported subgroup of SEN in primary schools (28.7%, n = 19,171). Speech, language, and communication needs are listed second (25.2%, n = 16,857), social and emotional mental health (11.4%, n = 7,623) is third, moderate learning difficulty (8.6%, n = 5,739) is fourth, and physical disability (7.3%, n = 4,908) is fifth (Department for Education 2018). The other SEN reported include hearing impairments (3.8%, n = 2,543), other difficulties (3.8%, n = 2,559), severe learning difficulty (3.5%, n = 2,370), specific learning difficulties (3.4%, n = 2,266), and visual impairments (1.8%, n = 1,198). When the breakdown of SEN is analysed in Wales, which has a slightly smaller population than the RoI, it is evident that, speech, language and communication needs are most prevalent (21.18%, n = 4,619), ASD is second (19.48%, n = 4,248), behavioural, emotional, and social is third (12.67%, n = 2,763) and severe learning difficulties is fourth (10.50%, n = 2,291) (Department for Education 2018). In Wales, only 1.4% of pupils with SEN being reported to have dyslexia (Department for Education 2018).

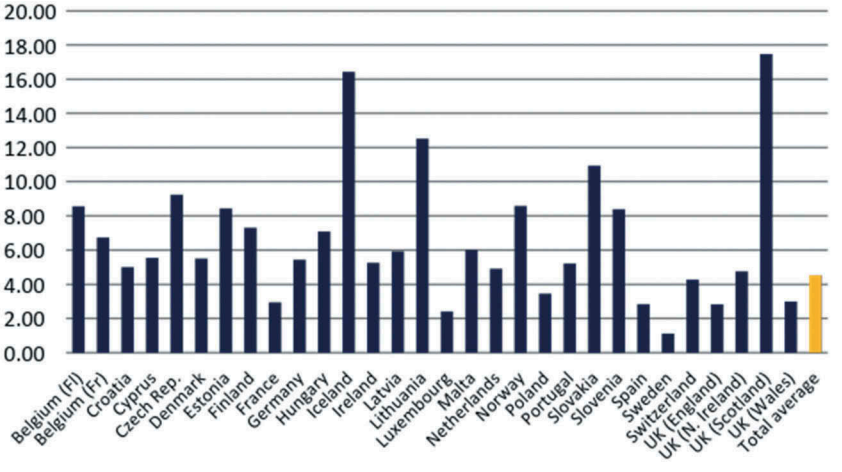

Figure 1. The percentage of pupils in Europe with an official decision of SEN, based on the enrolled school population (%) (From EASNIE, 2016, p.29).

When the distribution of SEN is analysed by age in England the prevalence of SEN increases with age (Department for Education 2018). As pupils attending state funded primary, post-primary, and special schools reach the age of 14 and 15 years old the rates stabilise. It has also been found that specific learning difficulties, such as, dyslexia are more prevalent in pupils attending post-primary school (26% of 15-year olds) than primary school pupils (10.74% of 7-year olds). The number of pupils presenting with moderate learning difficulties and social emotional/mental health problems is also higher in post-primary school. In contrast, ASD is the most prevalent SEN across ages 4 to 17, with this highest rate evident at age 4 (36.2%, Department for Education 2018). Also, speech, language and communication needs are more frequently reported in younger children. From the age of three onwards, the number of pupils reported for this category decrease gradually. Over half of three-year olds (62.8%) reported to have a SEN were diagnosed with speech, language and communication needs. Whilst this reduced to 14.5% at 10 years of age, and 8.4% by the age of 15.

SEN prevalence by socio-economic status (SES)

Statistics for the academic school year 2016/2017 show that pupils with a statement of SEN (30.9%) in the UK are more likely to be entitled to free school meals than pupils without a statement (11.5%) (Department for Education 2018). This means that these children predominantly come from low income families or families receiving income support from the Government. In the RoI, schools located in areas of low SES are included under an additional educational supports programme run by the Department of Education (see Department of Education and Skills 2017, for further details). Schools in these areas are divided into two bands, DEIS[1] band one and DEIS band two, with schools in band one getting extra supports. For 9-year-old pupils, a prevalence rate of 7.4% was established for DEIS band two schools and 12.1% for band one schools (Cosgrove et al. 2014). While post-primary pupils (1st year) are one and a half times more likely to be reported with SEN in a school in a designated area of low SES (Cosgrove et al. 2018). In England (Department for Education 2018), the USA (Morgan et al. 2017) and Australia (McLeod and McKinnon 2007) it has also been found that children from areas of low SES are disproportionately represented with SEN.

Prevalence of SEN in all primary schools in the RoI

As is evident in Figure 1 above, the EASNIE (2016) have generated a prevalence rate of 5% for Ireland. This rate is much lower than that of 27.8% (n = 2,381) estimated by Cosgrove et al. (2014) for 9-year old pupils with SEN in primary schools, which was generated through the analysis of data gathered for the Growing Up in Ireland (GUI) study (Department of Health, 2010). An earlier study by Banks and McCoy (2011) generated a rate of 25%. The data analysed comprised of teacher and parental reports and teacher ratings of pupils using the Strengths and Difficulties Questionnaire (Goodman 1997). For the academic year 2017–2018, the five most frequently reported sub-groups in receipt of additional supports were children with specific speech and language disorder (SSLD, 25.90%), autism spectrum disorder (ASD, 22.59%), emotional/behavioural disturbances (EBD, 17%), physical disabilities (15.68%), and multiple disabilities (7.91%) (National Council of Special Education (NCSE) 2017).

SEN prevalence in Irish-immersion schools

In the RoI, two known studies using quantitative questionnaires have been conducted to ascertain the prevalence of SEN in Irish immersion schools (Barrett 2016; Barrett, Kinsella, and Prendeville 2019; Nic Gabhann 2008). In the earlier study by Nic Gabhann (2008) a quantitative questionnaire was completed by 63 (47.7%) primary Irish immersion schools and an overall prevalence rate of 7.9% was established for children enrolled in these schools (N = 12,829) with low incidence SEN. Unfortunately, the more recent study by Barrett, Kinsella, and Prendeville (2019), which involved 76 schools completing a quantitative questionnaire fails to provide an overall prevalence rate for comparison, however the most frequently reported categories of SEN from this study are discussed below.

As is evident in Figure 2, there has been a change in the most frequently reported subgroups in Irish immersion schools in the RoI over time (Barrett, 2016; Barrett, Kinsella, and Prendeville 2019; Nic Gabhann 2008). Nevertheless, both studies established specific learning difficulties (dyslexia) as the most frequently reported SEN. ASD which is listed as the 2nd most prevalent subgroup by Barrett, Kinsella, and Prendeville (2019) was previously listed as 9th by Nic Gabhann (2008). Developmental co-ordination delay (dyspraxia[2]) moved from 6th (2008) to 3rd (2016). Emotional behavioural disturbance (EBD) previously listed 7th (2008), moved to 4th (2016), and attention deficit hyperactivity disorder (ADHD) listed 14th (2008) moved to 5th (2016). When assessing these findings, it is important to be mindful of the limitations of these studies, such as the low response rate of participants, the lack of parental input, and the implausibility of some survey answers, due to a misinterpretation of translations within the questions.

Materials and methods

An online questionnaire was used in this study to provide a cross-sectional analysis of the prevalence and types of SEN in Irish immersion schools in the RoI. Hence, a 'snap shot' is provided of the selected population for the academic school year 2017–2018 (Cohen, Manion, and Morrison 2013; Robson and McCartan 2016). The benefit of this method is that it allows for replication of this study in the future and to assess whether any changes have occurred within this population (Cohen, Manion, and Morrison 2013). Participant anonymity was protected by using a school identification code and no personal details of participants were collected when submitting completed responses (Sue and Ritter 2007; Wright 2005). School staff completing the questionnaire could do so from any location and over a period of time. Each school had its own personal link, enabling them to log in and out of the questionnaire until it was completed. The data were analysed statistically and descriptively using SPSS.

Construction of the questionnaire

The questionnaire was divided into three sections and included both multiple choice and open-ended questions. The design incorporated some adaptations from previous research in this area, this allowed for the comparison of research findings (Cosgrove et al. 2014; NCSE, 2016, 2017; Ní Chinnéide 2009; Travers et al. 2010; Ware, Butler, Robertson, O'Donnell, & Gould, 2011). General background information on the person (principal or special education teacher) completing the questionnaire, (such as their

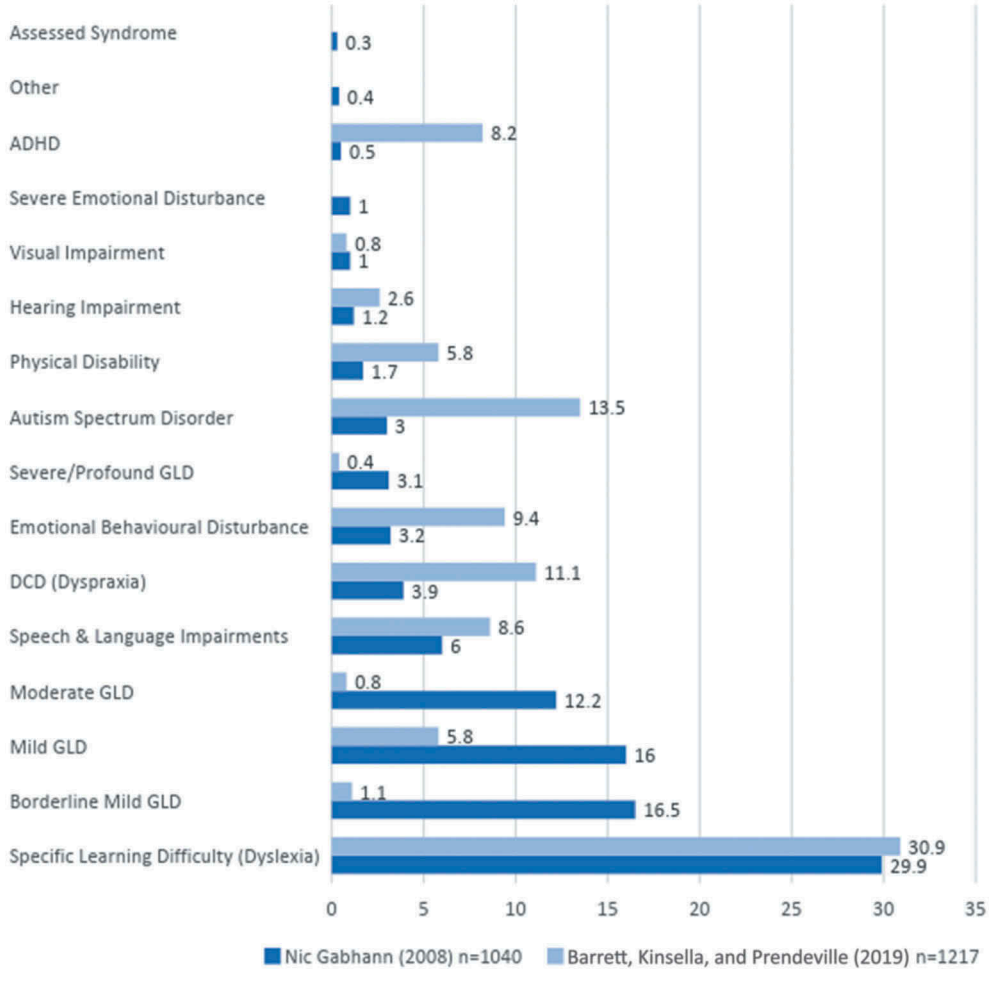

Figure 2. A comparison of the most frequently reported sub-groups of SEN in the studies by Nic Gabhann (2008) and Barrett (2016).

position in the school and level of teaching experience), and general information regarding the school was collected. For example, the number of teachers employed in the school, the number of pupils enrolled in the school, and whether the school was situated in an area of socio-economic disadvantage. The prevalence rates of pupils with SEN in Irish immersion schools was also assessed in relation to an overall prevalence rate and by category of SEN. The terminology of this question was adapted from the previous research (Barrett 2016; Barrett, Kinsella, and Prendeville 2019; Ní Chinnéide 2009; Nic Gabhann 2008).

Participant profiles

Proportionate stratified random sampling was utilised to select 20% (n = 29) of Irish immersion schools in the RoI for participation. This method of sampling allowed for greater precision than random sampling, as it guarded against the under- or over-

representations of school types within the sample (Robson and McCartan 2016). Furthermore, it allowed for the analysis of results within each stratum independently. Firstly, the entire school sample was divided into strata based on their location, type of school, and the numbers of pupils enrolled. As shown in Table 1, schools were divided into eight strata containing (1) schools in disadvantaged areas, DEIS schools, (2) schools with special classes, (3) urban schools with teaching principals (<203 pupils), (4) urban schools with one or two streams per class grouping (203–410 pupils), (5) urban schools with two or three streams (>410 pupils), (6) small town schools with teaching principals (<203 pupils), (7) small town schools with one or two streams per class group (203–410 pupils), and (8) small town schools with two or three streams (>410 pupils). Once divided into strata, schools were listed numerically. Starting at the top of the list (number one), every fifth school was selected to participate in the study. This form of probability sampling gave each school an equal opportunity of being selected within their stratum (Robson and McCartan 2016). If a selected school decided against participating, the researcher then returned to the list of schools for that stratum and invited the next school on the list to participate. This process was repeated until the quota of schools for each stratum was reached, or until there were no more schools to invite.

Sample size

There were 7,494 pupils (n = 3,683 boys, n = 3,756 girls) enrolled in the Irish immersion schools that took part in this study (see Figure 3). There was no statistical significance between the number of boys and girls included in the study (correlation score: 0.98334). The smallest school that participated had 31 pupils enrolled and the biggest school had 540 pupils (mean; 258.41). The smallest number of boys in a school (n = 17) is slightly higher than that for girls (n = 12). The maximum number of girls in a school studied (n = 248; mean 129.52) was slightly higher than that for boys (n = 240; mean 125.45). The

Table 1. The representative sample of Irish-medium schools in the Republic of Ireland selected for this study.

	Number of Schools	Representative Sample
DEIS Schools (schools located in areas of low socio-economic status, see Department of Education and Skills 2017 for criteria)	15	3
Schools with special classes	4	1
Urban (City) Schools With Teaching Principal (<203 students)	7	1
Urban (City) Schools with 1/2 Streams (203–410 Pupils)	21	4
Urban (City) Schools with 2/3 Streams (>410 pupils)	13	3
Small Town Schools With Teaching Principal (<203 pupils)	30	6
Small Town Schools with 1/2 Streams (203–410 pupils)	44	9
Small Town Schools with 2/3 Streams (>411pupils)	11	2
Total	145	29

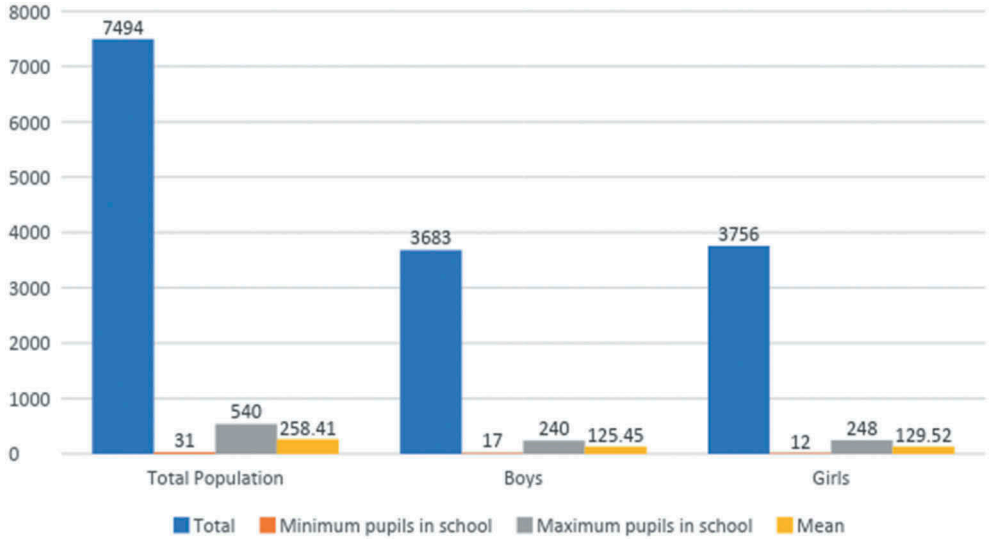

Figure 3. The number of pupils enrolled in schools participating in this research.

mean enrolment for schools was 258.41 pupils. In total 29 school principals, 294 mainstream class teachers, 83 full-time special education teachers, 23 part-time SETs, 2 special class teachers, and 68 special needs assistants (SNA) were employed in the sample studied.

Results

The overall prevalence of SEN in Irish immersion schools

An overall prevalence rate of 9.40% (n = 705) was generated for this sample (N = 7,494 pupils enrolled). As shown in Figure 4, when the prevalence of SEN in schools is analysed by school type, schools in areas of low socio-economic status (SES) reported a lower prevalence rate (6.35%) of pupils with SEN than the other school types.

When the overall prevalence rate is analysed by category of SEN, dyslexia (26.52%) is the most frequently reported sub-group, ASD (14.18%) is second, developmental co-ordination disorder (dyspraxia, 14.04%) third, emotional and/or behavioural difficulties (EBD, 8.93%) fourth, and SSLD (7.37%) fifth (see Figure 5). Other SEN listed include; assessed syndromes[3] (4.53%), mild general learning disabilities (GLD) (4.53%), physical impairments (3.4%), hearing impairments (1.98%), moderate GLD (1.84%), multiple disabilities (1.7%), visual impairment (1.56%), and severe emotional disturbance (1.13%).

Prevalence rates by class-groupings

When the five most frequently reported sub-groups are analysed by class (see Figure 6), dyslexia (n = 201) is least prevalent in the junior classes with no cases reported (age 4–5). For this category, the number of cases reported increases significantly year by year from first class (age 6–7, 10.78%, n = 11) to fifth class (age 10–11, 35.61%, n = 52). We then see a decrease in the prevalence of this category in sixth class (age 11–12, 28.05%, n = 39). The

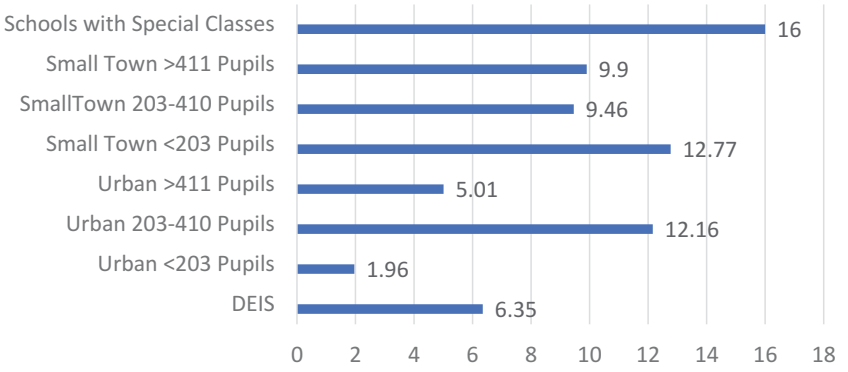

Figure 4. The percentage of SEN prevalence by school size and location.

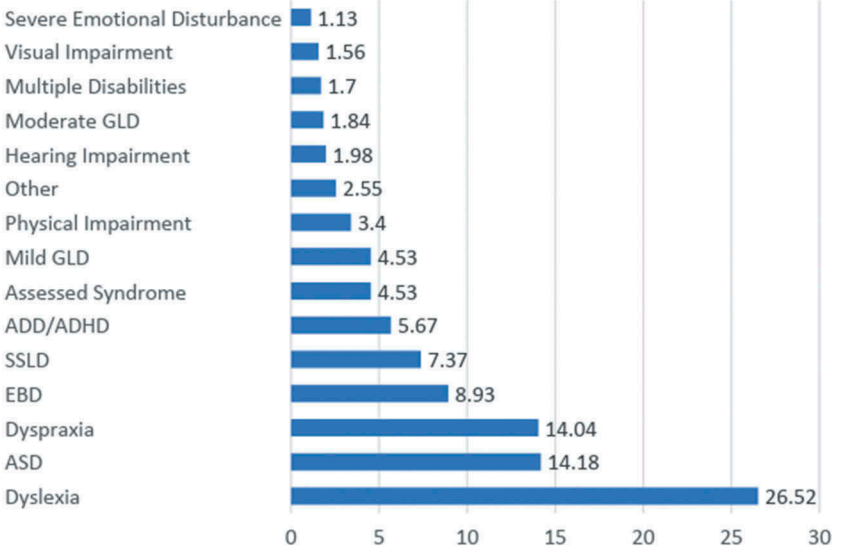

Figure 5. The prevalence of SEN in IM schools by category (N = 705).

lack of formal early identification and intervention may be due to several factors, such as, giving pupils starting immersion education a 'settling in period' to develop their first and second language abilities, or the lack of appropriate assessments through the medium of Irish to screen for dyslexia. For the second most frequently reported sub-group of developmental co-ordination delay (dyspraxia, n = 104), there is a relatively equal distribution of pupils in the middle classes (1st class, age 6–7, 11.76%, n = 12 to 6th class, age 11–12, 17.26%, n = 24). More pupils are reported with this condition in sixth class (17.26%, n = 24) than in senior infants (16.92%, n = 11) and no pupils were reported in junior infants. The prevalence of ASD (n = 97) is highest in junior infants (21.42%, n = 6). Also, EBD is most prevalent in the junior classes (junior infants, 14%, n = 4 to 1st, 21.56%, n = 22) with the distribution of EBD among the senior classes (2nd – 6th class) being lower (9.57% (n = 9) in 2nd class and 6.72% (n = 11) in 4th class, to 7.19% (n = 10) in 6th class).

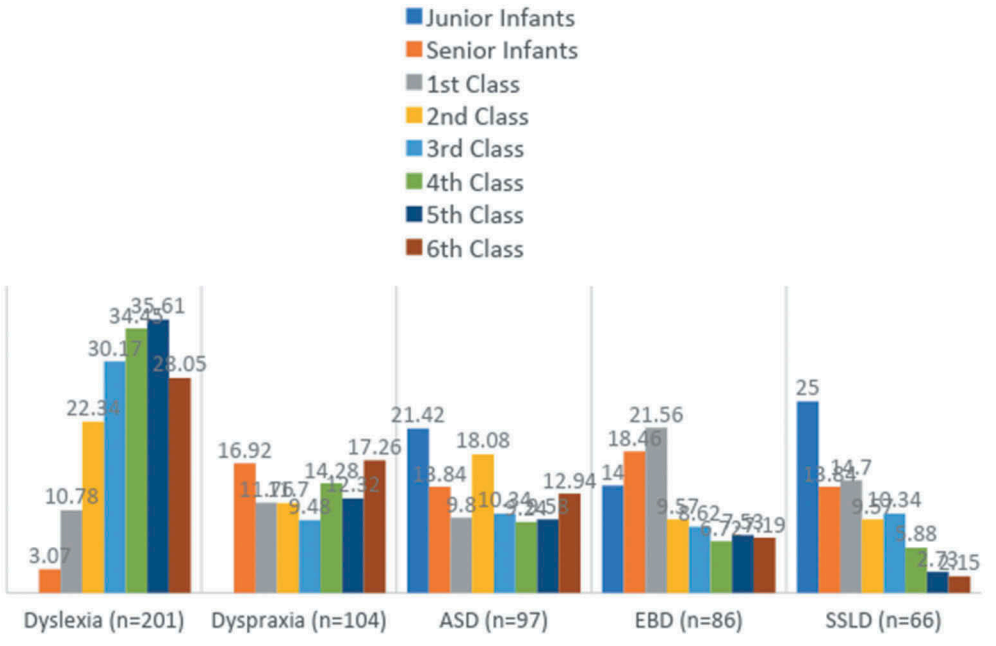

Figure 6. Comparison of the distribution of the five most reported sub-groups of SEN across class groupings.

SSLD most prevalent in junior infants to 1st class, with a prevalence rate of 25% (n = 7) for junior infants. Much lower rates for this category are reported in the senior classes, with 2.73% (n = 4) reported for 5th class, and 2.15% (n = 3) for 6th class.

Discussion

Overall prevalence rate

A prevalence rate of 9.4% (n = 705) was generated for Irish immersion schools in the present study. When compared to national statistics for all primary schools in the RoI this figure is much lower, with rates of 27.8% and 25% reported for all schools (Banks and McCoy 2011; Cosgrove et al. 2014). There are differences in the methodology and categories of SEN listed in the present study and that of Cosgrove et al. (2014) this needs to be taken into consideration when making comparisons. For example, the categories of EBD and ADHD are combined in the data in the Cosgrove et al. (2014) study, whilst the co-morbidity of SEN was not analysed in the present study. In comparison to previous research in Irish immersion schools the overall prevalence rate (9.40%, N = 705) generated for this sample is higher than that of 7.9% quoted in earlier research (Nic Gabhann 2008). The rate by Nic Gabhann (2008) came from a larger sample (N = 12,829) however in this study, the cohort of 7,494 is sufficient to ensure statistical significance. Thus, the comparison in prevalence rates cannot be attributed to the number of responses alone. Therefore, it can be suggested that there has been an increase in the prevalence of SEN in Irish immersion schools in the RoI over the last decade. This could be due to advances in diagnostic materials, and/or the broadening of SEN categories.

Interestingly there was a lower rate of pupils reported in Irish immersion DEIS schools with SEN than in all primary DEIS schools in the RoI. This finding contrasts with both the findings of national and international research, which state that children in areas of low SES are disproportionately represented with SEN (Banks et al., 2011; Department for Education 2018). The schools located in the DEIS band two areas in the present study, had a prevalence rate of SEN at 5.8%, and 6.8%. These rates for the DEIS band two schools, are lower than the rate of 7.4% previously established for all DEIS band two schools (Cosgrove et al. 2014). The prevalence rate for the DEIS band one school in this study (6.74%) is lower than that of 12.1% proposed for all band one schools (Cosgrove et al. 2014), however this may be because the co-morbidity of disorders has not been calculated in the present study. It is also important to note that the study by Cosgrove et al. (2014) only assessed the prevalence of SEN in 9-year old children in primary schools, whereas this study incorporated all classes.

Prevalence rate by category of SEN

When the SEN of pupils in Irish immersion schools is compared to the figures for pupils diagnosed and in receipt of additional support for all primary schools in the RoI (NCSE 2016), it is evident that there is a difference in the most frequently reported sub-groups (see Figure 7). It is reported that SSLD is the most frequently reported sub-group for all primary schools (25.90%, n = 7,437). This category is listed fifth in all studies on Irish immersion schools only, with a rate of 7.37% in the present study (Barrett, Kinsella, and Prendeville 2019; Nic Gabhann 2008). Similarly, ASD is listed second (22.59%, n = 6,487) in all primary schools (NCSE 2016) and in this study. However, the prevalence rate is lower in the findings of this research (14.18%). EBD is listed third (17%, n = 5074) in all primary schools (NCSE 2016), and fourth in the present study (8.93%). More pupils are presenting in all primary schools with physical disabilities (NCSE 2016, 15.68%, n = 4,504) than in Irish immersion schools in this study (3.4%). This is also the case when the percentage of pupils

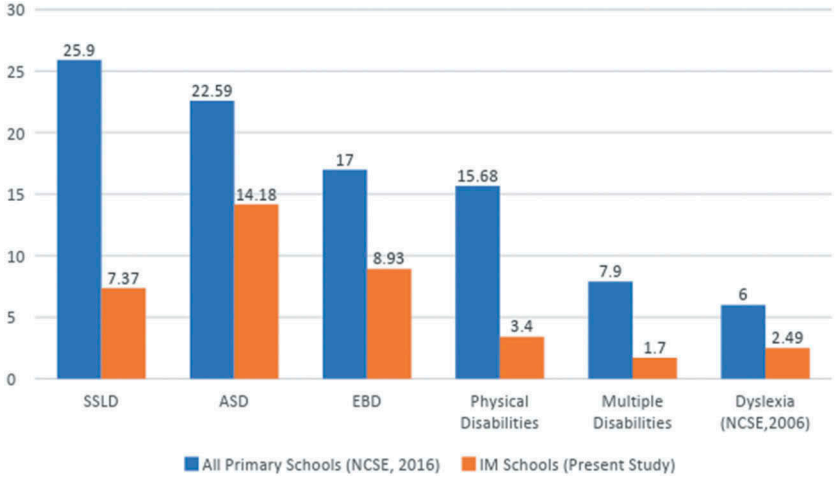

Figure 7. A comparison of the SEN prevalence rates in Irish immersion (IM) schools and all primary schools in the RoI.

with multiple disabilities is compared. There is 1.7% of pupils in Irish immersion schools presenting with multiple disabilities and 7.91% (n = 2,272) in all primary schools.

It is evident that as per the earlier studies on Irish immersion schools in the RoI (Barrett 2016; Barrett, Kinsella, and Prendeville 2019; Nic Gabhann 2008), dyslexia is still the most frequently reported subgroup of SEN. This finding is important as most often students with this category of SEN are offered or seek an exemption from the study of Irish. Hence, it is interesting to see that so many students with dyslexia are attending Irish immersion education. However, the results of the present study show that this rate (26.52%) is slightly lower than that of 29.9% and 30.9% previously established (Barrett 2016; Barrett, Kinsella, and Prendeville 2019; Nic Gabhann 2008). Speech and language disorders remain listed as the fifth most prevalent group as per previous studies. Findings of the present study state that like those of Barrett, Kinsella, and Prendeville (2019) there has been an increase in the number of pupils presenting with developmental co-ordination delay (dyspraxia). ASD is also listed second in the present study (14.18%) as it was in the earlier study by Barrett et al. (13.5%, 2019), however it was listed as ninth (3%) in for the academic school year 2007–2008 (Nic Gabhann 2008). EBD which is listed fourth in the present study (8.93%) and that of Barrett et al. (2019, 9.4%), was previously listed seventh (3.20%) in the study ten years ago by Nic Gabhann (2008). The number of pupils with attention deficit disorder (ADD)/attention deficit hyperactivity disorder (ADHD) has also risen over this time, from 14th (0.5%, Nic Gabhann 2008) to sixth (Barrett, Kinsella, and Prendeville 2019, 8.2%; Present study, 5.67%). There has been a decrease in the percentages of pupils presenting with borderline mild general learning disabilities (GLD), mild GLD, and moderate GLD over the last decade. It is therefore clear that the needs of pupils in Irish immersion schools in the RoI have changed over the last decade. With conditions such as ASD, developmental co-ordination delay (dyspraxia), EBD, and ADHD becoming more prevalent and the number of pupils with GLD decreasing. There is a positive correlation between the findings of the present study and those of Barrett, Kinsella, and Prendeville (2019) for the top eight most frequently reported sub-groups of SEN (see Figure 8). The findings of the earlier study by Nic Gabhann (2008) show no correlation with the results of this study or that of Barrett, Kinsella, and Prendeville (2019), in relation to groups of dyspraxia, ASD, mild/moderate GLD, and ADD/ADHD. The timeframe between the studies, advances in child diagnosis, and a deeper understanding of the definition of SEN categories may be a factor for the lack of correlation in this instance.

Conclusion

The findings of the present study contribute to the limited research available regarding the prevalence and types of SEN in Irish immersion schools and immersion schools internationally. Consequently, the findings are important as they may have implications for other forms of immersion education outside of Ireland. For example, there are likely to be parallels between Irish immersion schools and immersion programmes in Scotland, Wales, Spain, Canada, and New Zealand to mention a few. It is important for teachers in all schools, regardless of the language of instruction to be aware of the prevalence and types of SEN that pupils are presenting with, so that they can educate themselves as to how best to meet the needs of their pupils. Research has suggested that children with SEN are encouraged against bilingualism against immersion education. Through a comparison of

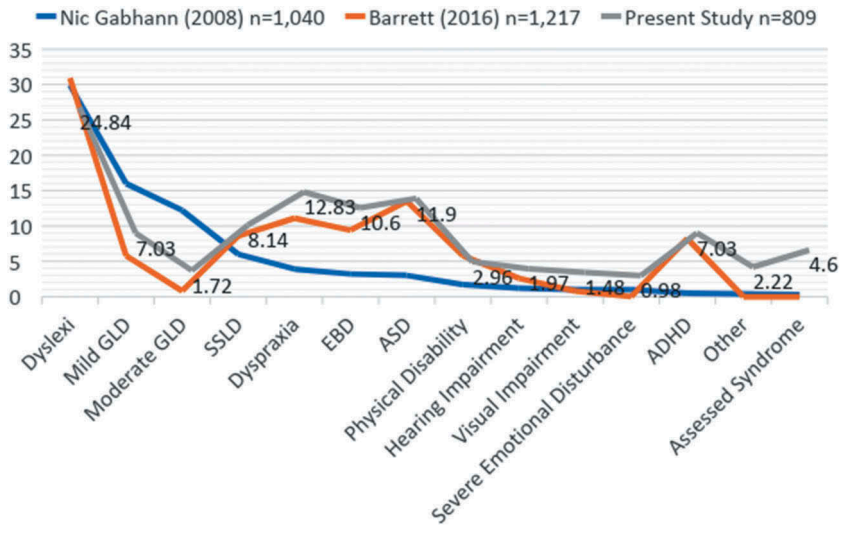

Figure 8. A comparison of the distribution of SEN sub-groups in research by Nic Gabhann (2008), Barrett, Kinsella, and Prendeville (2019), and the present study.

prevalence rates, it appears that this is the case, with less students with SEN enrolled in Irish immersion schools than English-medium schools. Nevertheless, it is important to note that, children with SEN are being educated through Irish as a second language even though they may be entitled to an exemption from studying Irish as a subject if they attended an English-medium school. Nevertheless, it is encouraging to see that the findings of the present study suggest that there has been an increase in the number of students with SEN attending Irish immersion schools over the last decade. Nationally, the findings are significant as they reinforce those of the study by Barrett, Kinsella, and Prendeville (2019) that suggest that there has been a change in the needs of pupils in Irish immersion schools since the study by Nic Gabhann (2008). Furthermore, the findings of the present study contribute new data to this area with the prevalence rates being analysed by class and categories of SEN. No known study has been conducted previously which provides this breakdown of SEN in Irish immersion schools or immersion schools internationally.

The findings of the present study have implications for SEN policy and practice in Irish immersion education. With an increase in SEN prevalence in these schools over the last decade, it is recommended that teachers in these schools undertake continuous professional development in this area. Studies in the United States of America on special education provision in immersion schools suggest, that immersion education teachers need education in the areas of: (i) bilingualism, (ii) the transfer of skills across languages, (iii) exposure to second languages and, (iv) teaching strategies for pupils with SEN to equip them to better meet the needs of these pupils (Paneque and Rodríguez 2009; Rodriquez, 2005). Unfortunately, at the present time there are no specific courses for teachers in the RoI on SEN provision in immersion education. The development and implementation of such a course would reduce misconceptions regarding first and second language development (Paneque and Rodríguez 2009) and

the disproportionate referral of children learning through a second language for assessment of SEN (Artiles et al. 2010). The findings of the present study also show that most SEN diagnosis occur in the senior classes. It is recommended that practices in early identification of learning difficulties are further developed in schools to ensure the inclusion of all pupils. The development of standardised educational psychology assessments through the medium of Irish are required to ensure an earlier identification of dyslexia in children in Irish immersion schools.

Areas of future research

Future research would be beneficial into SEN prevalence by gender in Irish immersion schools and also in relation to the co-morbidity of SEN. A comparison of the academic attainments of pupils with SEN in Irish immersion schools and those with the same category of SEN in English-medium schools would be beneficial. Studies on the prevalence rates of SEN in other forms of immersion education would allow for a comparison of findings.

Limitations

When reviewing the research findings of this study, it is important to be cognisant of the limitations of the study. There are also some methodological considerations which should be considered if this research is to be replicated again at a later stage. The prevalence rate for SEN sub-groups would benefit from being analysed in terms of distribution by gender. The co-morbidity of SEN among pupils in Irish immersion schools would benefit from investigation. Replication of the survey research with the schools that participated in this research in the future would be beneficial as some of the schools were only newly established and did not have a full range of classes. A proportionate randomised stratified sample of schools was chosen for the questionnaires rather than a total population sample. Obtaining completed samples from the total Irish immersion school population would provide a more comprehensive overview. Furthermore, only three DEIS schools (schools located in areas of socio-economic disadvantage) were included in the present study, this is a limitation when comparing the prevalence of SEN in these schools with those in other studies.

Notes

1. Schools located in an area of socio-economic disadvantage participate in the 'Delivering Equality of Opportunity in School (DEIS)' programme. Within this programme they receive a range of additional resources, such as, additional teaching staff, funding, access to literacy and numeracy programmes (DES, 2017).
2. Developmental co-ordination delay is often used interchangeably with dyspraxia in the Republic of Ireland (RoI). In the RoI, the term dyspraxia, 'refers to children who have motor difficulties plus difficulties with: speech, organisation, planning, sequencing, working memory and various other psychological, emotional and social problems' (Dyspraxia Ireland 2020).
3. The category of assessed syndromes includes Down Syndrome, Fragile X, Prader Willi Syndrome, Rett Syndrome, Tourette Syndrome, Turners Syndrome, Usher Syndrome, and Williams Syndrome (National Council for Special Education, 2020).

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