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Neighbourhood deprivation and access to early intervention and support for families of children with intellectual and developmental disabilities

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Abstract

Ensuring families of children with intellectual and/or developmental disabilities (e.g., developmental delay, intellectual disability, autism) can access early intervention and support is important. Current research indicates there are family-level socioeconomic disparities of access to early intervention and support, however, there is limited evidence on the relationship between neighbourhood-level socioeconomic deprivation and access to support. Therefore, the aim of this study was to examine the relationship between neighbourhood deprivation and families' access to and unmet need for early intervention and support. We collected cross-sectional data using a survey of 673 parental caregivers of young children with suspected or diagnosed intellectual and/or developmental disabilities in the UK. Multiple regression models were fitted for three early intervention and support outcome variables: access to early intervention; access to services across education, health, social care, and other sectors; and unmet need for services. Each regression model included a neighbourhood deprivation variable based on the index of multiple deprivation and five control variables: family-level economic deprivation, country, caregivers' educational level, developmental disability diagnosis, and informal support sources. Neighbourhood deprivation was a significant independent predictor of access to services, but neighbourhood deprivation was not a significant predictor of access to early intervention or unmet need for services. Families living in the most deprived neighbourhoods accessed fewer services than other families. Socioeconomic disparities of access to early intervention and support, at both a neighbourhood and family level, exist for families of young children with suspected or diagnosed intellectual and/or developmental disabilities in the UK. Future research should focus on policy and other interventions aimed at addressing

socioeconomic disparities at the neighbourhood and family level, to ensure equitable access to early intervention and support.

INTRODUCTION

Early intervention and support is a broad term encompassing a range of supports aimed at promoting optimal child development, including interventions designed to improve child and/or family outcomes, and contact with support services across sectors, such as education, health and social care during early childhood (Sapiets et al., 2021). Early intervention and support can improve a range of outcomes for children with intellectual and/or developmental disabilities (e.g., developmental delay, intellectual disability, autism), including behavioural, educational and social outcomes (Smythe et al., 2021), with long-term positive effects (Estes et al., 2015). Furthermore, early intervention and support can reduce parental stress and enhance family quality of life (Cutress & Muncer, 2014). However, there are disparities in access to and considerable levels of unmet need for early intervention and support in families of children with intellectual and developmental disabilities (Sapiets et al., 2021, 2022, 2023).

Family socioeconomic factors, such as lower levels of parental educational attainment and income poverty, are associated with lower rates of access to early intervention and support (Pickard & Brooke, 2016; Sapiets et al., 2023). Higher rates of intellectual and developmental disabilities have been found among children living in more deprived neighbourhoods (Emerson, 2012; Li et al., 2014). Furthermore, children with intellectual disabilities living in more deprived areas are at greater risk of poorer developmental outcomes compared to children in less deprived neighbourhoods (Siddiqua et al., 2020). This highlights the importance of early intervention and support for children with intellectual disabilities living in deprived neighbourhoods. However, existing research examining socioeconomic factors and access to early intervention and support has focused primarily on family-level measures of socioeconomic deprivation (Khetani et al., 2017; Sapiets et al., 2023) rather than measures at a neighbourhood level. To our knowledge, there is no research exploring the relationship between neighbourhood deprivation and access to early intervention and support for families of children with intellectual and developmental disabilities.

Neighbourhood deprivation refers to the relative deprivation of small geographic areas across several deprivation domains, including income, employment, education, health, crime, housing and services, and living environment (Noble et al., 2006, 2019). As living in neighbourhoods with increased deprivation is linked to poorer individual outcomes, such as health outcomes (Office for National Statistics, 2022), it is possible neighbourhood deprivation may also impact access to early intervention and support. To determine the most appropriate investments for reducing inequalities of access to support, it is important to determine if there is a relationship between neighbourhood deprivation and access to early intervention and support.

The current study aimed to examine the relationship between neighbourhood deprivation and access to early intervention and support for families of young children with suspected or diagnosed intellectual and developmental disabilities in the UK. In the UK, while a diagnosis of an intellectual and/or developmental disability is required to access some services involved in early intervention and support (e.g., specialist services), most services for families of children aged 0–6 years are available without a formal diagnosis (e.g., early years or family services). However, previous research indicated receiving a diagnosis is associated with increased access to early intervention and support, and economic disparities exist in diagnosis receipt (Sapiets et al., 2021). Therefore, the study also included children undergoing an intellectual and/or developmental disability assessment (or awaiting an assessment).

METHODS

We analysed cross-sectional data obtained from a survey conducted between 2018 and 2019 to investigate families' access to early intervention and support (Sapiets et al., 2022). Ethical approval was granted by the University of Warwick's Humanities and Social Sciences Research Ethics Committee (reference 57/17–18).

Participants

Of the total 673 survey participants (Sapiets et al., 2022), the current sample consisted of 544 families (80.8% of the total sample) for whom we had neighbourhood deprivation data, making them eligible for inclusion in the analyses (see Table 1 for participant characteristics). Among

TABLE 1 Characteristics of participants with neighbourhood deprivation data.

Participant characteristics [reference group] (N = 544)	Total N (%) or mean (SD)	Range
Caregiver employment [≥1 caregiver in employment]	445 (82.6)	
Income poverty [≤ poverty line]	316 (65.3)	
Subjective poverty [managing financially]	457 (84.9)	
Financial hardship [would struggle to raise money]	322 (59.9)	
Family economic deprivation composite	1.5 (1.1)	0–4
Neighbourhood deprivation[a] decile	5.4 (3.0)	1–10
Neighbourhood deprivation[a] dichotomy [≥3 deciles]	407 (74.8)	
Access to early intervention [no access]	441 (81.2)	
Access to services	14.8 (5.8)	0–32
Unmet need for services	3.2 (3.2)	0–17

[a]Neighbourhood deprivation was measured using the index of multiple deprivation (IMD), a multidimensional measure of deprivation which relatively ranks small areas in the UK into deciles (1–10) based on their deprivation. Neighbourhood deprivation was examined in two ways. First, as decile (1–10 ranking, where 1 represented the most deprived neighbourhoods and 10 represented the least deprived neighbourhoods). Second, as dichotomy, which divided participants into two groups: families that lived in neighbourhoods with an IMD decile of 1 or 2, representing the most deprived 20% of neighbourhoods, versus the remainder.

participants in the current sample, the majority lived in England (N = 400, 73.5%), followed by Northern Ireland (N = 62, 11.4%), Wales (N = 55, 10.1%) and Scotland (N = 27, 5.0%). The majority of respondent parental caregivers were the child's biological mother (N = 494, 90.8%), and 455 (84.9%) reported their ethnicity was White British/English/Welsh/Scottish/Northern Irish. In comparison to the whole population census data for England and Wales in 2011 (Office for National Statistics, 2018), our sample had an overrepresentation of parental caregivers identifying their ethnicity group as White and an underrepresentation of those identifying their ethnicity group as Asian, Black, Mixed/Multiple and other ethnicity groups (Sapiets et al., 2022).

Regarding the children, the majority were male (N = 383, 70.8%) and the mean age was 4.7 years (SD = 1.5, range = 0.1–6.9). Among the children who had received a diagnosis of at least one intellectual and/or developmental disability (N = 451, 82.9%) (participants could select multiple labels), most were diagnosed with autism (N = 417, 76.7%), followed by

intellectual disability (N = 268, 49.3%), developmental delay (N = 267, 49.1%), social communication disorder (N = 169, 31.1%), attention deficit hyperactivity disorder (N = 101, 18.6%), dyspraxia (N = 95, 17.5%), Down syndrome (N = 45, 8.3%), cerebral palsy (N = 25, 4.6%), Fragile X (N = 7, 1.3%) and/or Williams syndrome (N = 4, 0.7%). Additionally, 93 children (17.1%) were suspected to have an intellectual and/or developmental disability but had not received a diagnosis. We considered a child to have a suspected intellectual and/or developmental disability if the parental caregiver indicated that a professional had told them their child might have an intellectual and/or developmental disability and was currently undergoing (or awaiting) an assessment.

Measures

Access to early intervention

Access to early intervention was a dichotomous variable which identified whether the participant had or had not accessed an intervention. We asked participants if they had accessed any interventions in the preceding 12 months, including interventions supporting their child's development and/or supporting them as parental caregivers. Participants who responded 'yes' were asked to list any interventions received in a free-text response box. We coded responses based on a pre-specified definition of early intervention, which included a packaged intervention or multi-sessional support programme, unless explicitly covered in the measure of access to services described below (Sapiets et al., 2022, 2023).

Access to services

Access to services was a count of the number of services (up to 49) participants had accessed in the preceding 12 months. Services were presented as three groups: 27 key professionals across education, health and social care (e.g., school staff, general medical practitioner, social worker), 10 additional health specialists (e.g., neurologist, ophthalmologist) and 12 other support services (e.g., parent groups, children's centres) (Sapiets et al., 2022, 2023).

Unmet need for services

We asked participants who reported they *had not* accessed support from any of the 27 key professionals if they *had* wanted support from that professional. If the participant

responded 'yes', we identified it as an unmet need (i.e., support not accessed but wanted). Unmet need for services was a count of the number of key professionals (up to 27) a participant wanted support from but had not accessed in the preceding 12 months (Sapiets et al., 2022, 2023).

Neighbourhood deprivation

We measured neighbourhood deprivation using the index of multiple deprivation (IMD), a multidimensional measure of deprivation in small areas in the UK. Small areas, also described as lower-layer super output areas and data zones, are of relatively even size and have an approximate population of 410–1600 (IJpelaar et al., 2019; Noble et al., 2019; Scottish Government, 2016; Statistics for Wales, 2019). The IMD quantifies neighbourhood deprivation across seven deprivation domains (income, employment, education, health, crime, housing and services, and living environment) and small areas are ranked into deciles (1–10) based on their relative deprivation (Noble et al., 2006; Noble et al., 2019). We linked participants' data to IMD deciles using postal/zip codes provided by participants.

We examined neighbourhood deprivation in two ways. First, as neighbourhood deprivation decile (IMD 1–10 ranking, where 1 represented the most deprived neighbourhoods and 10 represented the least deprived neighbourhoods) to explore the influence of increasing/decreasing neighbourhood deprivation on access outcomes. Second, as neighbourhood deprivation dichotomy, which divided participants into two groups: families that lived in neighbourhoods with an IMD decile of 1 or 2 (representing the most deprived 20% of neighbourhoods) versus the remainder, to explore the influence of living in the most deprived neighbourhoods compared to other neighbourhoods on access outcomes.

Control variables

To account for known variation due to family-level deprivation, we included a composite measure of four indicators of family economic deprivation. The deprivation indicators were: caregiver unemployment (at least one caregiver in employment/no caregiver in employment), income poverty (equivalised income above the poverty line/equivalised income below the poverty line, using the modified Organisation for Economic Co-operation and Development scale, with poverty defined as income below 60% of the median equivalised income in 2018; Office for National Statistics, 2019; Organisation for Economic Co-

operation and Development, n.d.), subjective poverty (managing financially/not managing financially), and financial hardship (could raise £2000 in a hypothetical emergency/would struggle to raise the money; see Sapiets et al., 2022, 2023). We combined these dichotomous variables (caregiver employment, income poverty, subjective poverty, financial hardship) to provide a count of family economic deprivation indicators (0–4), with higher scores indicating higher family economic deprivation. Participants with missing data on two or more of the contributing variables were not included in the composite.

To account for potential variation due to the UK country where families resided, we included country (England/Wales/Scotland/Northern Ireland) as three dummy variables: Wales (Wales/other UK countries), Scotland (Scotland/other UK countries) and Northern Ireland (Northern Ireland/other UK countries).

Additionally, we included three control variables previously found to be significant predictors of at least two of the outcomes (access to early intervention, access to services, unmet need for services; Sapiets et al., 2023). These variables were: caregivers' educational level (at least one caregiver educated to degree level or higher/no caregiver educated to degree level), developmental disability diagnosis (at least one diagnosed intellectual or developmental disability/no diagnosis) and informal support sources (count of up to 12 informal support sources accessed in the preceding 12 months, for example, partner, friends, other parents, based on the Family Support Scale; Dunst et al., 1984; Sapiets et al., 2023).

Analysis

We used IBM® SPSS® software to fit two regression models for each of the three outcome variables: binary logistic regression for access to early intervention (binary variable), multiple linear regression for access to services (count variable, distributed normally) and negative binomial regression for unmet need for services (count variable, overdistribution). We fitted two versions of each model using one of the neighbourhood deprivation variables (IMD decile or IMD dichotomy) and the five control variables: family-level economic deprivation, country, caregivers' educational level, developmental disability diagnosis and informal support sources.

Participants with missing data were excluded from analyses, including participants with missing data on neighbourhood deprivation ($N = 129$, 19.2%), caregiver educational level ($N = 16$, 2.4%), family economic deprivation ($N = 11$, 1.6%) and access to early intervention ($N = 1$, 0.1%). Overall, 521 participants were included in

analyses for intervention access and 522 participants were included in analyses for access to services and unmet need for services.

RESULTS

Table 2 reports the results of the binary logistic regression models for access to early intervention. Neighbourhood deprivation was not a significant independent predictor of access to early intervention, either as IMD decile or IMD dichotomy. Country, caregivers' educational level and developmental disability diagnosis were significant independent predictors of access to early intervention. Families living in Scotland, families with one or more caregiver educated to degree level or higher, and families of children who had received a developmental disability diagnosis were more likely to access an intervention.

Table 3 illustrates the results of the multiple linear regression models for access to services. Neighbourhood deprivation was a significant independent predictor of access to services as IMD dichotomy ($b = -1.346$, $p = .022$) but not IMD decile. Families living in the 20% most deprived neighbourhoods accessed fewer services compared to other families. Developmental disability diagnosis and informal support sources were also significant independent predictors of access to services. Increased access to services was found for families of children who had received a developmental disability diagnosis and families who had accessed a higher number of informal support sources.

Table 4 depicts the results of the negative binomial regression models for unmet need for services. Neighbourhood deprivation was not a significant independent predictor of unmet need for services, either as IMD decile or IMD dichotomy. Family economic deprivation and informal support sources were significant independent predictors of unmet need for services. Increased unmet need for services was found in families with higher family economic deprivation and families who had accessed fewer informal support sources.

TABLE 2 Binary logistic regression of access to early intervention.

Predictor variables [reference group]	Binary logistic regression			
	B	Sig.	OR	95% CI for OR
Model 1 (N = 521)				
Neighbourhood deprivation[a] decile	0.034	.436	1.035	0.949–1.129
Family economic deprivation	0.088	.450	1.092	0.869–1.373
Caregivers' educational level [≥1 caregiver educated to degree level or higher]	−0.786	.003*	0.456	0.269–0.772
Developmental disability diagnosis [no diagnosis]	0.952	.024*	2.590	1.135–5.913
Informal support sources	0.064	.188	1.066	0.969–1.173
Country [Wales]	−0.427	.330	0.652	0.276–1.541
Country [Scotland]	0.994	.027*	2.702	1.120–6.519
Country [Northern Ireland]	−0.765	.083	0.466	0.196–1.106
Model 2 (N = 521)				
Neighbourhood deprivation[a] dichotomy [≥3 deciles]	−0.174	.568	0.840	0.462–1.528
Family economic deprivation	0.076	.507	1.079	0.863–1.349
Caregivers' educational level [≥1 caregiver educated to degree level or higher]	−0.802	.003*	0.448	0.266–0.756
Developmental disability diagnosis [no diagnosis]	0.971	.021*	2.640	1.158–6.020
Informal support sources	0.065	.185	1.067	0.970–1.173
Country [Wales]	−0.423	.335	0.655	0.278–1.547
Country [Scotland]	0.975	.030*	2.652	1.099–6.398
Country [Northern Ireland]	−0.748	.089	0.473	0.200–1.122

Abbreviations: CI, confidence interval; IMD, index of multiple deprivation; OR, odds ratio.

*p = <.05.[a]Neighbourhood deprivation was measured using the index of multiple deprivation, a multidimensional measure of deprivation which relatively ranks small areas in the UK into deciles (1–10) based on their deprivation. Neighbourhood deprivation was examined in two ways. First, as decile (1–10 ranking, where 1 represented the most deprived neighbourhoods and 10 represented the least deprived neighbourhoods). Second, as dichotomy, which divided participants into two groups: families that lived in neighbourhoods with an IMD decile of 1 or 2, representing the most deprived 20% of neighbourhoods, versus the remainder.

TABLE 3 Multiple linear regression of access to services.

Predictor variables [reference group]	Multiple linear regression			
	B	Sig.	*β*	95% CI for *B*
Model 1 (*N* = 522)				
Neighbourhood deprivation[a] decile	0.162	.069	0.083	−0.013–0.337
Family economic deprivation	0.254	.287	0.050	−0.214–0.721
Caregivers' educational level [≥1 caregiver educated to degree level or higher]	−0.239	.653	−0.021	−1.280–0.803
Developmental disability diagnosis [no diagnosis]	3.997	<.001**	0.260	2.731–5.262
Informal support sources	0.410	<.001**	0.173	0.209–0.611
Country [Wales]	−0.505	.524	−0.027	−2.063–1.053
Country [Scotland]	−0.284	.794	−0.011	−2.417–1.849
Country [Northern Ireland]	−0.541	.482	−0.030	−2.048–0.967
Model 2 (*N* = 522)				
Neighbourhood deprivation[a] dichotomy [≥3 deciles]	−1.346	.022*	−0.101	−2.495– −0.197
Family economic deprivation	0.246	.292	0.049	−0.213–0.706
Caregivers' educational level [≥1 caregiver educated to degree level or higher]	−0.230	.662	−0.020	−1.260–0.801
Developmental disability diagnosis [no diagnosis]	4.060	<.001**	0.265	2.799–5.322
Informal support sources	0.412	<.001**	0.174	0.212–0.613
Country [Wales]	−0.480	.545	−0.026	−2.035–1.075
Country [Scotland]	−0.170	.875	−0.007	−2.299–1.959
Country [Northern Ireland]	−0.614	.423	−0.034	−2.118–0.890

Abbreviations: CI, confidence interval; IMD, index of multiple deprivation.

*p = <.05. **p = <.001. [a]Neighbourhood deprivation was measured using the index of multiple deprivation (IMD), a multidimensional measure of deprivation which relatively ranks small areas in the UK into deciles (1–10) based on their deprivation. Neighbourhood deprivation was examined in two ways. First, as decile (1–10 ranking, where 1 represented the most deprived neighbourhoods and 10 represented the least deprived neighbourhoods). Second, as dichotomy, which divided participants into two groups: families that lived in neighbourhoods with an IMD decile of 1 or 2, representing the most deprived 20% of neighbourhoods, versus the remainder.

DISCUSSION

Based on our analysis of cross-sectional UK survey data, we found a significant association between neighbourhood deprivation and access to services in the early years, after controlling for other key variables including family level economic deprivation. Families living in the most deprived neighbourhoods accessed fewer services compared to families living in less deprived neighbourhoods.

Limited funding and subsequent limited availability (or lack of) services in deprived neighbourhoods may explain why families living in the most deprived neighbourhoods accessed fewer services. In an analysis of the trends in spending on children's and young peoples' services in England between 2010 and 2015, Webb and Bywaters (2018) found funding for services decreased most significantly in the most deprived neighbourhoods. This may be due to the implementation of austerity policies, which have had the biggest impact on the most deprived areas in terms of public funding cuts at the local authority level (Bailey et al., 2015; Hastings et al., 2015). Webb and Bywaters (2018) suggest institutional rationing mechanisms, defined as 'an unintentional, systemic bias against fully addressing the needs of deprived neighbourhoods in service planning and resource allocation' (Hastings, 2009, p. 2910), may explain why resources have been directed away from the poorest neighbourhoods. Furthermore, children lack political leverage to demand services to meet their needs (Webb & Bywaters, 2018). Funding cuts may have impacted services that support children with intellectual and developmental disabilities and their families (e.g., educational psychology, speech and language therapy, services for special educational needs) in deprived neighbourhoods, such as service closure or reduced service provision (British Academy of Childhood Disability & British Association of Community of Child Health, 2014).

In addition to limited funding and service provision in deprived neighbourhoods, families living in the most

TABLE 4 Negative binomial regression of unmet need for services.

Predictor variables [reference group]	Negative binomial regression			
	B	**Sig.**	**RR**	**95% CI for RR**
Model 1 (N = 522)				
Neighbourhood deprivation[a] decile	0.021	.263	1.021	0.984–1.060
Family economic deprivation	0.163	<.001**	1.177	1.067–1.297
Caregivers' educational level [≥1 caregiver educated to degree level or higher]	0.206	.067	1.229	0.986–1.532
Developmental disability diagnosis [no diagnosis]	0.100	.464	1.105	0.846–1.443
Informal support sources	−0.056	.011*	0.946	0.906–0.987
Country [Wales]	−0.027	.872	0.973	0.702–1.351
Country [Scotland]	−0.027	.907	0.973	0.616–1.538
Country [Northern Ireland]	−0.245	.145	0.783	0.563–1.088
Model 2 (N = 522)				
Neighbourhood deprivation[a] dichotomy [≥3 deciles]	0.166	.190	1.180	0.921–1.512
Family economic deprivation	0.162	<.001**	1.175	1.067–1.295
Caregivers' educational level [≥1 caregiver educated to degree level or higher]	0.203	.071	1.225	0.983–1.527
Developmental disability diagnosis [no diagnosis]	0.094	.488	1.099	0.842–1.435
Informal support sources	−0.055	.012*	0.946	0.906–0.988
Country [Wales]	−0.033	.846	0.968	0.697–1.343
Country [Scotland]	−0.056	.811	0.946	0.600–1.492
Country [Northern Ireland]	−0.247	.142	0.781	0.562–1.086

Abbreviations: CI, confidence interval; IMD, index of multiple deprivation, RR, Rate Ratio. Dispersion parameter = 1.

*p = <.05. **p = ≤ .001.

[a]Neighbourhood deprivation was measured using the index of multiple deprivation (IMD), a multidimensional measure of deprivation which relatively ranks small areas in the UK into deciles (1–10) based on their deprivation. Neighbourhood deprivation was examined in two ways. First, as decile (1–10 ranking, where 1 represented the most deprived neighbourhoods and 10 represented the least deprived neighbourhoods). Second, as dichotomy, which divided participants into two groups: families that lived in neighbourhoods with an IMD decile of 1 or 2, representing the most deprived 20% of neighbourhoods, versus the remainder.

deprived neighbourhoods may face additional barriers when trying to access support. For example, they may need to travel to access services (related to financial and time resources), have limited awareness of available services and how to access them (related to a lack of accessible information), or lack the knowledge/skills to advocate on behalf of their child and family (e.g., Arundell et al., 2020; Chinn & Abraham, 2016; Sapiets et al., 2021; Welterlin & LaRue, 2007). Yet, family level measures of deprivation included as control variables (family economic deprivation and caregivers' educational level) were not significantly associated with access to services. This may reflect the social safety net and provision of universally-free services in the UK.

While neighbourhood deprivation predicted access to services, it did not predict access to early intervention or unmet need for services. This suggests neighbourhood deprivation may not contribute unique variance to families' ability to access early intervention or their perceptions of unmet need for services. In contrast, family level measures of deprivation were significantly associated with these outcomes; families with one or more caregiver educated to degree level or higher were more likely to access an early intervention and families with higher family economic deprivation reported increased unmet need for services. The difference in findings for neighbourhood and family-level deprivation and the access outcomes explored in this study highlights the additional value of considering these as different constructs in research.

Implications

The findings of this study can inform future policy and practice regarding the provision of early intervention

and support. Furthermore, there are implications for future research on neighbourhood deprivation and access to early intervention and support. First, policymakers should consider continuing and increasing investment in the provision of universally-free services across health, education and social care in the UK. Ensuring families living in deprived neighbourhoods can access services should be a priority, such as by employing cross-government programmes targeting inequalities (see Ford et al., 2021). Additionally, reinvesting in the Sure Start programme, which brought together multiple services in a single community-based location (see Smith et al., 2018), might improve access to services for families living in the most deprived neighbourhoods. Exploring initiatives used in low- and middle-income countries to increase service capacity could also be beneficial, such as establishing small-scale multidisciplinary teams and providing early intervention and support by non-specialists (see Divan et al., 2015, 2019; Khan et al., 2018).

To address disparities of access to services for children with intellectual and developmental disabilities and their families, further research is needed to investigate the reasons for the association between neighbourhood deprivation and access to services. Future research should consider neighbourhood and family deprivation separately and clarify which construct is used.

Limitations

A key limitation of this study is the use of cross-sectional data, as it was not possible to ascertain causal relationships between the variables examined. However, the findings indicate there was a relationship between neighbourhood deprivation and access to services, at the time of the survey. Further longitudinal research examining access to early intervention and support across different time points would be beneficial.

As the data were collected prior to the Covid-19 pandemic, our findings may not accurately represent the current state of access to early intervention and support. Measures to limit the spread of Covid-19 had a considerable (and potentially long lasting) impact on service provision for children with intellectual and developmental disabilities and their families (British Academy of Childhood Disability, 2021). It is likely families of children with intellectual and developmental disabilities living in the most deprived areas were disproportionately impacted by these changes in services. Future research is needed to investigate access to services during and following the Covid-19 pandemic.

Using a count variable to measure access to services has limitations. This measure counted any service

accessed in the preceding 12 months as one and therefore did not capture the quality or intensity of the services accessed.

A final limitation of this study is the underrepresentation of participants from ethnic minorities in the sample, and this makes the findings of the study incomplete, especially considering people from ethnic minorities experience additional barriers to access (Robertson et al., 2019). A future study should seek to have a more representative sample.

Conclusion

Neighbourhood deprivation is related to access to services in the early years for families of young children with diagnosed or suspected intellectual and/or developmental disabilities in the UK, with families living in the most deprived neighbourhoods accessing fewer services. This highlights disparities of access to early support services among families experiencing socioeconomic deprivation at a neighbourhood level, which likely contributes to health and social inequalities faced by children with intellectual and developmental disabilities in the UK. Efforts to reduce socioeconomic disparities of access to early intervention and support at the neighbourhood and family level are needed.

ETHICS STATEMENT
Ethical approval was granted by the University of Warwick's Humanities and Social Sciences Research Ethics Committee (reference 57/17–18).

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