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Adult Safeguarding Inequalities in Northern Ireland: An Exploratory Study

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Abstract

Whilst studies of child welfare inequalities have identified the impact of socio-economic deprivation on child protection rates, little is known about how this relates to intervention with adults who have care and support needs. This article examines the impact of area-level deprivation on adult safeguarding (AS) rates in Northern Ireland (NI). Routinely gathered statistics for community AS referrals (2015–2017) were linked to area-level deprivation across NI using service users' postcode. The relationship between deprivation and the screening, investigation and safeguarding planning stages of intervention was examined. Our analysis identified a clear social gradient in relation to AS referrals; the higher the level of deprivation, the higher the rates of AS screening and protection plans. Findings for investigations showed more variability. Further research is needed to explore the factors associated with areas of high deprivation that shape AS social work responses. To our knowledge, this is the first time AS rates have been explored in relation to deprivation. The study findings, that structural factors play a significant role in AS interventions, will help to determine how and where social work interventions are best focused, helping to shape policy and AS theory.

Keywords: adult abuse, inequality, quantitative methods, structural interventions

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Introduction

In their seminal work on the relationship between poverty, child abuse and neglect, Bywaters *et al.* (2016) raised awareness of the impact of poverty on child maltreatment, seeking to frame this as a public issue. They argue that poverty should not only be seen as an underlying, contextual factor, but as a pervasive feature of families' everyday lives, which has a direct influence on relationships between parents and children, contributing to clearly identified child welfare inequalities.

Identifying and exploring child welfare inequalities engages the concept of the 'social gradient in health', a phenomenon in which individuals with lower socio-economic status have poorer health outcomes and reduced life expectancy, compared to individuals in higher socio-economic groups. As applied to social work, a strong social gradient can be found in rates of family and childcare social work intervention in each of the four UK nations. Each step increase in deprivation is accompanied by an increase in children's chances of being on a child protection register or registered as a looked-after child (CWIP, 2017). Given the significance of the relationship between deprivation and child welfare, it is important to consider adult safeguarding (AS) in the context of welfare inequalities. The problem of 'avoidable social inequality' (Bywaters *et al.*, 2016) has a fundamental impact on individuals across their life course and therefore is likely also to be a pervasive feature in the context of adult social care (Hood *et al.*, 2022) and, more specifically, in the lives of adults at risk. This article seeks to draw attention to the impact of area-level deprivation on AS interventions in Northern Ireland (NI). Exploring these potential links is important in helping to inform AS policy and service provision, whilst also shaping the emerging conceptual framework which underpins AS. Before introducing the empirical study, an overview of AS is provided by way of context.

AS: definitions and frameworks

Abuse of adults with care and support needs is an increasing problem given the demographics of an ageing society and the trend towards care in the community. Across the UK, AS policy, legislation and service provision have evolved differently in each of the four Nations (Montgomery *et al.*, 2016). In NI (one of the four UK nations), the current framework for intervention, the 'Adult Safeguarding in Northern Ireland: Prevention and Protection in Partnership' (DHSSPS, 2015), (soon to be replaced by an Adult Protection Bill) stipulates the central role of social work in safeguarding adults. The NI policy identifies two groups of adults who are subject to AS procedures. The more generic definition of an 'Adult at risk of harm' refers to a person aged eighteen or over,

whose exposure to harm through abuse, exploitation or neglect may be increased by their: a) personal characteristics and/or b) life circumstances' (DHSSPS, 2015, p. 10). More specifically, when the risk of harm is imminent, 'an "Adult in need of protection" refers to a person aged eighteen or over, whose exposure to harm through abuse, exploitation or neglect may be increased by their: a) personal characteristics and/or b) life circumstances, and c) who is unable to protect their own well-being, property, assets, rights or other interests; and d) where the action or inaction of another person or persons is causing, or is likely to cause, him/her to be harmed' (DHSSPS, 2015, p. 10).

These definitions take into account of the multifaceted, interconnected life circumstances and personal characteristics which may increase risk of harm (DHSSPS, 2015). Multiple abuse typologies have been identified including physical (including medication mismanagement), sexual, psychological, financial and institutional abuse, and neglect. Where an adult is deemed to be at risk and in need of protection, a six-stage investigation process is followed, progressing through stages of: screening, investigation and assessment, implementation and protection planning, monitoring and reviewing, and closure.

Whilst Cooper *et al.* (2018) highlight significant developments in AS policy and practice in the UK, they identify a limited evidence-base for effective interventions generally (Ash, 2015), and specifically in relation to the effectiveness of social work interventions (Moriarty and Manthorpe, 2016). Moreover, there has been limited progress in developing a theoretical framework for AS (Chan and Stum, 2020), with most theoretical developments adapting perspectives from other areas of family violence (Penhale, 2010). Of particular relevance to this study, ecological theories and lifecycle approaches have all been applied to AS (Johnson *et al.*, 2010). In relation to familial abuse, stress theories suggest that situational (internal) stressors and structural (external) stressors together influence the risk of violence (Gelles, 1987). The integrated ecological model has also been utilised to provide a framework through which risk, protective factors and associated issues, across multiple domains, are conceptualised (Melchiorre *et al.*, 2016). These integrated theories address the complex, multifaceted nature of adult abuse, seeking to align psychological, social, structural, cultural and psychological concepts in order to make sense of why abuse occurs.

Whilst the abuse of adults with care and support needs can be understood through analysis of micro-, meso- and macro-level factors, Penhale (2010) postulates that the focus of AS tends towards micro-level, individual factors to the extent that macro-level, structural factors are not fully accounted for (Penhale, 2010). Moreover, AS lacks a widely accepted theory or groups of theories, and those that exist have limited supportive empirical evidence (Penhale, 2010; Roberto and Teaster, 2017).

AS and welfare inequalities. What do we know?

The limited research exploring AS and welfare inequalities has tended to focus on the factors associated with the risk of elder abuse. Lachs and Berman (2011) conducted a longitudinal cohort study of elder abuse in the USA, identifying low income as one of the sociodemographic features significantly associated with experiencing abuse. A later US elder-abuse prevalence study (Acierno *et al.*, 2010) identified low social support and previous traumatic event exposure, as the most significant correlates to abuse. The seminal UK elder-abuse prevalence study (O'Keeffe *et al.*, 2007), identified lower levels of education and living in rented accommodation as key risk factors. Naughton *et al.* (2012), in their national prevalence study of elder abuse and neglect in Ireland, found a significant relationship between mistreatment and participant health, income and social support, concluding that social support as a risk factor, was one of the strongest predictive factors for abuse. Podnieks *et al.* (2010) in their 'worldwide environmental scan on elder abuse' explored the potential relationship between elder abuse and county healthcare, identifying poverty as a key factor which increased the risk of abuse. They conclude that rates of substantiated elder abuse correlated with population density and child poverty. In Canada, Channer *et al.* (2020) completed a nationwide neighbourhood analysis in which older adult vulnerability was found to differ considerably in urban, suburban and rural neighbourhoods, and was strongly correlated with low income. Eslami *et al.* (2016) investigated the lifetime prevalence of abuse amongst older people in seven European cities (including the UK). They found that the incidence of abuse was impacted by a range of factors including education levels, employment status and reliance on state benefits. The WHO (2022) include low income as an individual level characteristics which increases the risk of becoming a victim of elder abuse, and financial dependency as increasing the risk of becoming a perpetrator of abuse.

The broad concept of welfare inequality has also been recently applied to adult social care. For example, the analysis conducted by the Newcastle Adult Safeguarding Board (NASB, 2020) has revealed that the wards experiencing the highest levels of deprivation also had the highest levels of safeguarding adults concerns and enquiries. Likewise, in their examination of patterns of demand and provision for adult social care more broadly, Hood *et al.* (2022) found that although variation within local authorities was, to some extent, shaped by contextual factors such as deprivation and demographics, it was also subject to the effects of rationing and the impact of the self-funded market on levels of demand. Interestingly, they highlight that whilst the reasons for requiring adult social care provision are likely to be concentrated in areas of

higher deprivation, it was the more affluent local authorities that are more likely to assess people as requiring such provision.

In building on these empirical and theoretical insights, this article will now present the methods and findings from an exploratory study of the relationship between social deprivation and AS referrals in NI. In so doing, routinely gathered AS statistics will be linked to areas of deprivation across NI in order to meet the following aims:

1. To examine the relationship between area-level deprivation, AS referrals, investigations and safeguarding plans in NI.
2. To explore if area-level deprivation-based patterns of AS inequality vary in relation to service user gender and age.

Methods

Data sources

The secondary data used were Social Care Services Data (SOSCARE) obtained through an application process to the Honest Broker Service (HBS) in NI. The SOSCARE data obtained from the HBS included all entries made onto the SOSCARE system between 2015 and 2021 in relation to AS referrals, screenings, investigations and protection plans. The data were provided as separate SPSS datasets for each of the above social care interventions. Data on area-level deprivation decile, linked through the service user postcode, were provided in the screening module and then linked to the other intervention data through the unique SOSCARE ID.

Measures

Community AS interventions

This article focuses on cases where the safeguarding incident occurred in the community and excludes incidents in long-term care facilities such residential homes, nursing homes and long-term hospitals. Whilst inequality in safeguarding cases in residential areas is an important area of study, in order to control for variations in the population, different calculations for community and residential cases are required: in community settings we can use population estimates to control for population variation by area; in residential homes it makes more sense to use the number of places available per decile, to control for variations in different areas. As such, we have separated the residential and community cases and focus on the findings of the community analysis in this article,

with the intention of publishing the results for the residential analysis separately.

The three levels of AS community interventions measured in this study were defined as follows:

1. Screening—in this initial stage, a social worker, acting in the capacity of a designated adult protection officer, will screen the AS referral to identify any immediate risk to the adult, clarify basic facts about the allegation and determine if the threshold for intervention under the AS policy has been reached. Where the threshold is not met alternative courses of action are explored. It should be noted that the referral stage was not included in this data as postcode information was only available for those cases that progressed to the screening stage.
2. Investigation—a social services investigation seeks to assess the risk of harm or serious harm, the impact of that harm, and determine if this has led to abuse. The investigation should reflect the wishes of the adult victim
3. Safeguarding planning—following the investigation, a case conference is convened at which a decision is made, based on the balance of probabilities, as to whether the harm occurred, and the level of harm. An ongoing protection plan for the adult with associated roles and responsibilities for implementation is agreed (DHSSPS, 2015).

Where a crime has been committed, the screening process determines the need for a joint agency investigation involving police and social services, and will initiate that investigation.

Deprivation measures

Area-level deprivation was measured using the NI Multiple Deprivation Measure (NIMDM; NISRA, 2010). This is an area-based measure that assesses seven different domains of deprivation; health; income; employment; education skills and training; proximity to services; living environment; and crime and disorder. The key geography for the NIMDM is Super Output Area (SOA)-NI is divided into 890 SOAs with an average population of around 2,100 people. NIMDM scores are ranked from 1 to 890, with 1 being the most deprived and 890 the least deprived. This is then divided into deprivation deciles.

Area-level deprivation decile was linked to the SOSCARE data through the postcode for each service user. The NIMDM 2010, rather than the more recent NIMDM 2017, was used for all addresses as it covered the majority of the time period selected for analysis.

Adult demographics

Adult demographics included gender (Male/Female) and adult age (sixteen to thirty-nine years, forty to sixty-four years and sixty-five years and over). Age groups were based on the broad age bands used by the NI Statistics and Research Agency (NISRA) to produce population estimates by SOA, age and gender (NISRA, 2020). Other demographic variables, whilst available within the dataset, were not included in this analysis because of their lack of availability at a population level, disaggregated by deprivation decile. These variables will, however, be used in further analysis based on individual level data. Equally, whilst examination of difference at an HSCT level would have been of interest, small data counts once disaggregated at the deprivation/quintile level within HSCTs prevented this.

Data quality, geographical coverage and study time period

Whilst SOSCARE has been the main recording system for statutory social care in NI since 1985, migration to alternative platforms, which began in 2012, affects the geographical coverage and availability of data over time. The delivery of health and social care (HSC) in NI is managed through five geographically distinct integrated Health and Social Care Trusts (HSCT). The Belfast HSCT (BHSCT) was the first of NI's five HSCTs to move to alternative systems and, as such, their AS data have never been recorded on SOSCARE. To date, only two HSCTs continue to use SOSCARE.

There have also been significant problems in producing reliable data in relation to AS activity. The regional Vulnerable Adult SOSCARE module, on which this analysis is based, was first launched in 2010–2011 with the intention that SOSCARE would provide the means to report on the existing data requirements and meet developing service needs. However, as highlighted by the NI Adult Safeguarding Partnership (NIASP, 2019), the success of this electronic solution varied across HSCTs and the move across electronic systems posed challenges. As a result, NIASP note that the regional AS data return to the DoH remains a manual collection for most of the HSCTs at present.

In light of this, there are sometimes quite substantial data differences between the figures accessed through the HBS and those reported in official HSCT returns to DoH. Supplementary Table S1 presents the differences between the HBS referral data and the numbers of referrals reported in official statistics (excluding the BHSCT). Whilst the 2015–2017 time period has the most reliable coverage, it should be noted that the data recorded on the SOSCARE system tended to be consistently lower than those reported in annual HSCT returns, with differences ranging from 17 per cent in 2015–2016 to 26 per cent in 2016–2017.

These differences, unsurprisingly, became more substantial over time as different HSCTs transferred to different systems. There were also significant discrepancies in relation to those HSCTs that continued to use SOSCARE during 2017/2018–2020/2021. As such, the time period 2015–2017 was selected for analysis as it coincided with the introduction of the NI Adults Safeguarding Policy (DHSSPS, 2015), and because these data offer the widest geographical, and most reliable, coverage.

In linking the data, not all SOSCARE cases could be matched with an NI MDM deprivation decile, gender or age categories. However, 'missing' data were minimal across categories and intervention stages, ranging from 0.1 per cent to 1.7 per cent for age and gender and 3.0 per cent to 4.1 per cent for deprivation. (Supplementary Table S2 provides an overview of the sample by gender, age and deprivation, as well as missing data.)

Statistical analysis

The SOSCARE data were accessed remotely on a secure online platform and analysed using SSPSS V29 and Microsoft Excel. As data for each AS intervention and multiple deprivation decile were provided in separate datasets, these were merged, duplicates were removed, and the data were cleaned to conduct the analysis. Cross-tabulations of year and deprivation decile were used to produce frequencies of each adult who experienced each of the three levels of intervention within each of the study years. These frequencies were then used to calculate rates per 10,000 in the NI population aged above twenty-six years for the overall NI population by deprivation decile (the unit of analysis) excluding the BHSCT, as well as rates per 10,000 for age and gender.

As deprivation statistics are not disaggregated by HSCT, this required combining deprivation statistics disaggregated by SOA and Local Government Districts (NISRA, 2010) and with population estimates for 2015–2017 available at the same levels of geography, disaggregated by gender and broad age bands (NISRA, 2020). Population data at the SOA level were averaged across the three years in relation to total population, gender and age band. Deprivation ranks for each SOA (1–890) were used to assign deciles (e.g. 1–89 = Decile 1, 90–179 = Decile 2, etc) and HSCTs were aggregated from the twenty-six Local Government Districts using a look-up table (NISRA, 2016). Population estimates by decile were then calculated across the total NI population with the total for the BHSCT subtracted to give estimates by total population, age and gender for the four remaining HSCTs.

Rates per 10,000 were also used to calculate various measures of absolute and relative inequality by deprivation decile (the unit of analysis):

- The Relative Ratio of Inequality (RRI)—a relative measure of inequality based on the number in decile 1 divided by the number in decile 10.
- The Slope Index of Inequality (SII)—an absolute inequality measure that represents the absolute difference between the top and bottom decile whilst accounting for the variation in the entire distribution using regression modelling. The calculation requires ranking the data according to deprivation decile and cumulative population proportion and fitting a regression line to these ranked values (Low and Low, 2004). This study used MDM deciles as the indicator of deprivation and the child population aged zero to nineteen years in each decile for each year.
- The Relative Index of Inequality (RII)—a relative measure of inequality that is based on the SII. The RII is calculated by dividing the SII by the mean level of the intervention in the population (e.g. average number of screen across all deciles). It is presented as the per cent by which the most deprived decile is higher than the NI average for that intervention.

Each of the measures listed above has different strengths and weaknesses. The RRI is based on a crude ratio, and although easy to explain and understand, it only takes into account the highest and lowest deciles and does not consider variation in the other deciles. The SII and RII are also frequently used to quantify absolute and relative inequality. They are based on data about the whole population, rather than just the extremes and use regression analysis to take into account inequalities across the scale (Scottish Government, 2022). As the SII is an absolute measure, it is sensitive to changes in the mean level or frequency of the outcome being studied.

From the point of view of monitoring health inequalities and evaluating policy interventions, estimating both relative and absolute differences is recommended as relative differences may increase whilst absolute differences decrease if the frequency of the health problem declines (Regidor, 2004). The statistics for each of these measures were calculated in relation to community screening and safeguarding planning and are presented in Table 1 in the results. Community investigations were not included as these measures are only applicable to data that are broadly linear and, as is discussed further in the results, community investigations rates by decile were non-linear.

Ethics

Ethical approval for the study was provided by Queen's University Belfast ethics committee in 2021. The data were accessed securely via

Table 1. Absolute and relative measures of inequality for community screening and safeguarding planning.

Inequality measure	Screening	Planning
SII	30.01	11.81
RII as per cent of NI average	42.4	37.1
RRI	2.11	1.56

the Health Data Research UK Secure e-Research Platform, and all guidance and processes were followed to ensure there were no data security breaches when handling the data and when presenting outputs. All outputs were approved by the HBS before being made publicly available.

Results

In total, there were 4,184 community screenings, 938 investigations and 1,984 AS plans included within the final analysis of 2015–2017 data. Graphical representations of the rates per 10,000 by deprivation decile are presented within this results section for each of the three levels of intervention (Figures 1–3). Rates per 10,000 disaggregated by gender and age group within each level of intervention are available in the Supplementary Materials (Supplementary Figures S1–S6) and are briefly summarised within the text. These are presented using quintiles due to small numbers in some categories. Rates per 10,000 for safeguarding concerns identified at screening and perpetrator type identified at the investigation stage are also presented in the Supplementary Materials (Supplementary Figures S7–S8) and are briefly discussed within the text.

For comparative purposes, the rates for all three levels of intervention are presented in Figure 4, together with the SII, RRI and RII calculations for the community screening and safeguarding planning variables (Table 1).

Community screening

Despite a slightly higher screening rate in decile 2 compared to decile 1, the data showed a clear linear pattern with the rate of AS screening decreasing as area-level deprivation decreased. Comparing the most and least deprived categories, we can see that community screening rates were 2.11 times as high in decile 1 than in decile 10. This same pattern was apparent for both gender and age (see Supplementary Figures S1–S2) with screening rates for females and those aged sixty-five years and over being consistently higher across deciles.

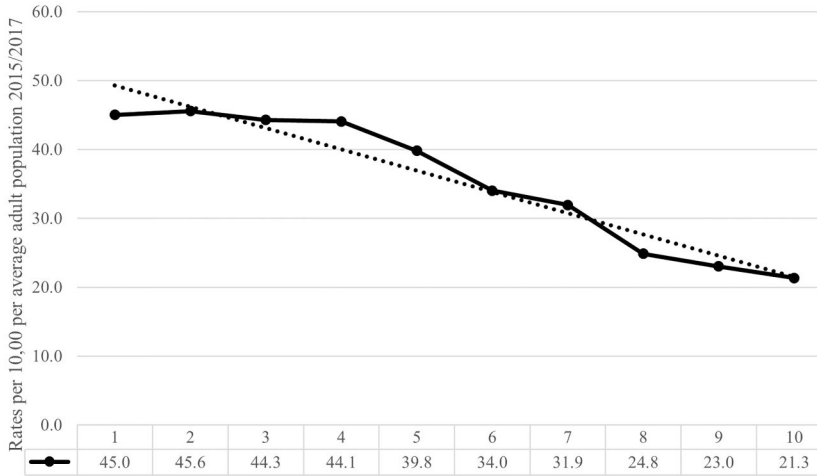


Figure 1: Rate of community screens per 10,000 average adult population, by decile (2015–2017).

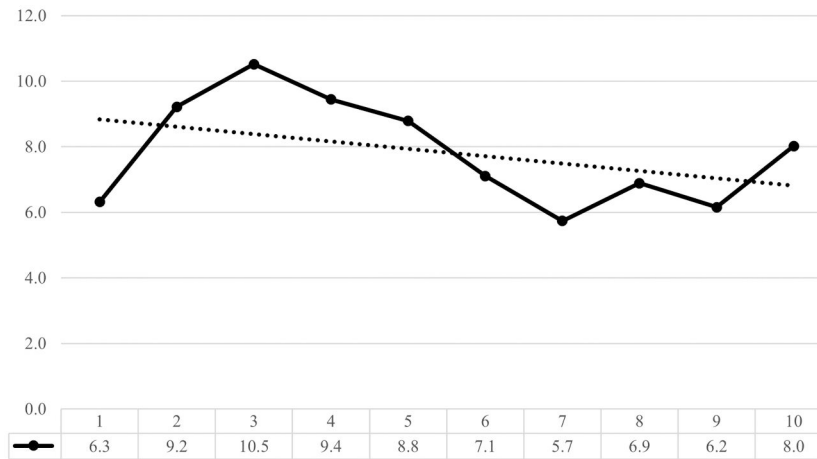
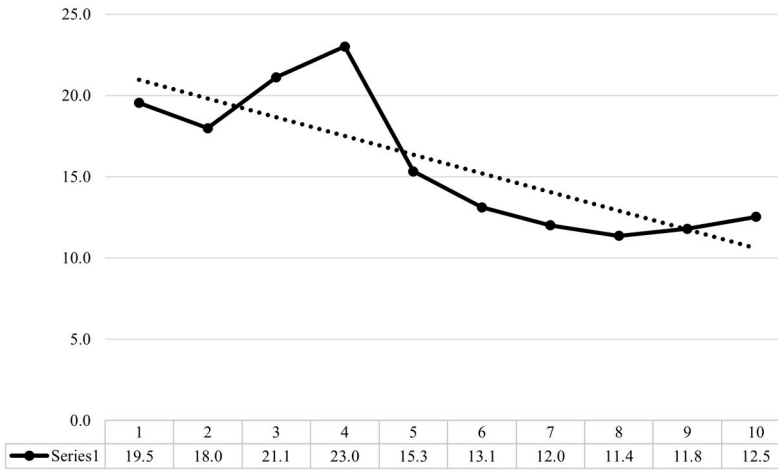


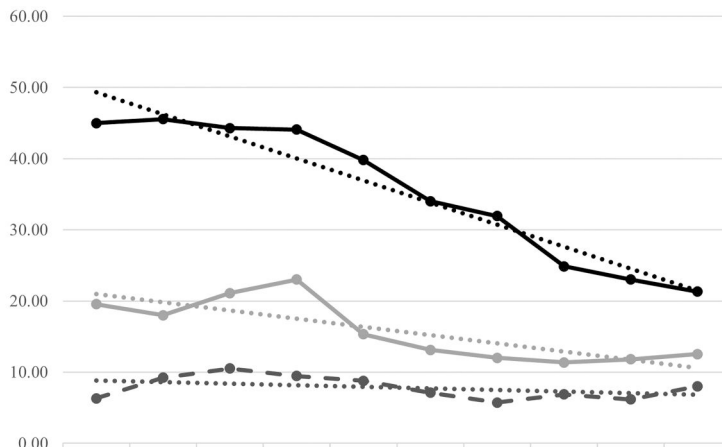
Figure 2: Rate of community investigations per 10,000 average adult population by decile (2015–2017).

Physical abuse was the most common safeguarding concern reported at the screening stage, follow by financial abuse, psychological/emotional abuse, neglect, sexual abuse and then misuse of medication (see Supplementary Figure S7). All followed the same pattern with rates decreasing as deprivation decreased, with rates in quintile 1 typically being 2–3 times higher than those in quintile 5. The exception was medication misuse, where rates were almost twice as high in quintile 5, than in quintile 1.



	1	2	3	4	5	6	7	8	9	10
Series1	19.5	18.0	21.1	23.0	15.3	13.1	12.0	11.4	11.8	12.5

Figure 3: Rate of community adult protection plans per 10,000 average adult population, by decile (2015–2017).



	1	2	3	4	5	6	7	8	9	10
screening	45.01	45.56	44.28	44.08	39.79	34.02	31.93	24.85	23.01	21.33
investigation	6.32	9.22	10.52	9.44	8.79	7.11	5.73	6.89	6.16	8.02
plans	19.54	17.99	21.12	23.01	15.33	13.11	12.01	11.36	11.80	12.53

Figure 4: Rate of community screens, investigations and adult protection plans per 10,000 average adult population, by decile (2015–2017).

Community investigations

As mentioned previously, community investigation data were non-linear. Although it was apparent that decile 1 had the lowest rate and decile 10 had one of the higher rates, there was considerable variability in

between. The pattern of decreasing intervention seen in other stages of the process appeared to hold for deciles 3–7, but the least and most deprived deciles moved in different directions, showing increases between deciles 1–3 and deciles 7–10 rather than decreasing. This same pattern was apparent for both gender and age (see Supplementary Figures S3–S4) with investigation rates for females and those aged sixty-five years and over rising between quintiles 1 and 2, decreasing from quintiles 2–4 and slightly increasing from quintiles 4–5. Data for those aged sixteen to forty-nine years and forty to sixty-four years showed more of a downward linear trend, although rates increased slightly for both groups between quintiles 4–5.

The relationship between the perpetrator and the alleged victim identified at the investigation stage was categorised as either 'formal' or 'informal'. The formal category included: health care staff, domiciliary workers, Trust staff, non-Trust staff, persons in a position of authority and paid carers. The 'informal' category was the largest and included: family members, friends or acquaintances, strangers and other service users. Investigations with a 'formal' perpetrator followed the same pattern as in Figure 2, rising between quintiles 1–2, decreasing between quintiles 2–4, and then rising again between quintiles 4–5 (see Supplementary Figure S8). Overall, the rates in quintile 1 and quintile 5 were very similar. Investigations with an 'informal' perpetrator also increased between quintiles 1–2, decreased between quintiles 2–4 and then remained steady between quintiles 4–5. Overall, the rates in quintiles 4 and 5 were lower than any other quintiles.

Community safeguarding plans

Despite increasing rates of safeguarding plans in deciles 2–4, the data showed a broadly linear pattern with the rate of safeguarding plans tending to decrease as area-level deprivation decreased, although the data trended upwards slightly again in deciles 8–10. Comparing the most and least deprived categories, we can see that community safeguarding planning rates were roughly 1.56 times higher in decile 1 than in decile 10. Rates by gender showed a sharp increase between quintiles 1 and 2, decreasing sharply at quintile 3 and then remaining stable between quintiles 3 and 5 (see Supplementary Figure S5). In contrast, rates for males were similar between quintiles 1 and 2, decreasing across quintiles 2–4 and then rising slightly between quintiles 4–5. Rates for those aged sixty-five years and over and forty to sixty-four years were similar to those for females, rising between quintiles 1 and 2 and then declining (see Supplementary Figure S6).

Inequality measures

Figure 4 shows the rates for the three levels of intervention together. Rates for screening and safeguarding plans have similar trajectories with the gap between the two narrowing as deprivation decreases. Equally, whilst formal investigation has the lowest rates of all intervention stages, the gap between screening and investigation narrows substantially as deprivation decreases. This is examined further in Figure 5 which shows how the percentage of investigations to screenings changes with deprivation, rising from 24 per cent in quintile 1 compared to 46 per cent in quintile 5. Although less stark, Figure 5 also shows that the percentage of screening to safeguarding plans is higher in quintile 1 than in quintile 5 (55 per cent vs 42 per cent), although there is considerable fluctuation across quintiles.

Table 1 supports what was observed in Figures 1–4. As indicated previously, the ratio between the top and bottom deciles was 2.11 for screening and 1.56 for planning. Taking the rates across all the deciles into account, the absolute difference between Decile 1 and Decile 10 as measured by the SII was 30.01 per 10,000 for screening and 11.81 per 10,000 for planning. Using the RII, rates in Decile 1 were 42.4 per cent higher than the NI average for screening and 37.1 per cent higher for planning.

Discussion

This article presents the findings of a study linking routinely gathered AS statistics to SOA across NI in order to identify the relationship between patterns of referrals and deprivation, service provision and

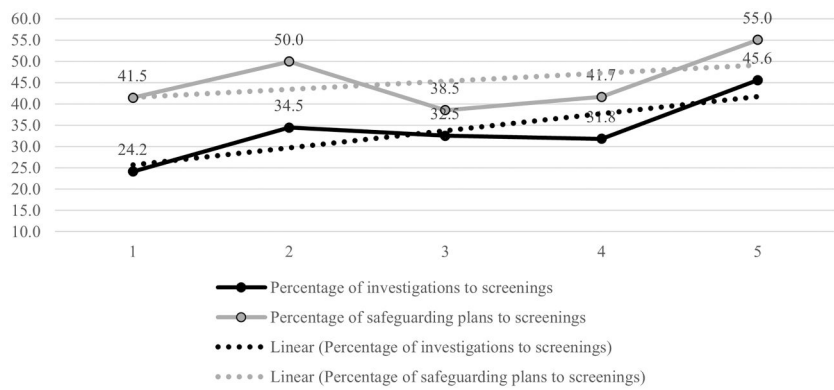


Figure 5: Percentage of screening to investigations and screenings to plans by deprivation quintile (2015–2017).

outcomes. The findings identified a clear social gradient in relation to AS; the higher the level of deprivation, the higher the rates of cases screened under AS procedures. Likewise, in terms of protection plans, individuals living in the areas of highest deprivation were more likely to be subject to an AS protection plan than those individuals living in areas of low deprivation. Moreover, the same social gradient was evident across both genders and in relation to sixty-five years and over, as well as abuse types identified at the screening stage, with the exception of medication misuse.

The results also indicated that community investigations did not follow the same pattern, with considerable variation across the dataset. For referrals of individuals aged sixty-four and under, there was a largely consistent social gradient in investigations; however, individuals aged sixty-five years and over were less likely to progress through screening to investigation stages if living in an area of high deprivation. Overall, the proportion of investigations to screenings was 24 per cent in the 20 per cent most deprived areas, compared to 46 per cent in the 20 per cent least deprived areas. The lower number of investigations relative to protection plans can be explained by the fact that investigations are usually time limited, but plans may span a much longer period of time, sometimes years; therefore, the number of plans to investigations in any given year is likely to be higher. This was particularly true of individuals aged sixty-five years and over.

These findings are in keeping with the limited UK research examining adult social care and deprivation: areas experiencing the highest levels of deprivation in NI also experienced the highest demand in terms of safeguarding cases requiring screening, a finding also identified by research conducted by the Newcastle Adult Safeguarding Board (NASB, 2021). Similarly, various studies have identified socio-economic disadvantage as a core factor increasing the risk of elder abuse (Podnieks *et al.*, 2010; Eslami *et al.*, 2016; Channer *et al.*, 2020; WHO, 2022). Podnieks *et al.* (2010) also suggest that higher rates of referral in more deprived areas might relate to higher social service activity and a greater level of scrutiny. In an AS context, more affluent families are also more likely to pay for their own care, whilst less affluent families are more likely to be reliant on statutory provision, thus bringing them into contact with social services system at higher rates.

Similarly, as identified in Hood *et al.*'s (2022) analysis of adult social care, our findings point to differential responses, with those in more deprived areas less likely to receive a formal investigative response than those in less deprived areas. As suggested by Hood *et al.* (2022), this may reflect some form of rationing whereby HSCTs or local service providers, who serve a more deprived population, seek to manage higher levels of demand within the resources available to them whilst those operating in less deprived areas have more resources relative to demand

and so are more ready to deploy protective interventions. Termed the 'inverse intervention law', this pattern, whereby those living in neighbourhoods with equivalent levels of deprivation receive a differential response depending on the overall level of local authority deprivation, is one that has been frequently observed in in children's social care data (Webb *et al.* 2020; Hood *et al.*, 2022). Whilst variation within and between HSCTs could not be investigated within this analysis, it is an important area for further study in the area of AS.

These findings should also be understood in the context of wider environmental factors. Within NI, data on adult and children's social care spending are presented together, thus making it difficult to access specific funding data on adult social care provision (Appleby *et al.*, 2022). However, we do know that financial pressures associated with the coronavirus disease (Covid) pandemic have exacerbated an already pressured social care system. Some indication of this pressure is seen in significant underfunding in the HSC sector in the period 2011–2015, with annual funding uplifts falling short of the increases required to meet unavoidable service pressures, increasing demand, inflationary rises and necessary service improvements (Northern Ireland Confederation for Health and Social Care, 2023). These longstanding issues have been compounded by the additional needs of an ageing population, increasing prevalence of chronic illness and disability and pressure on unpaid carers (Zhang *et al.*, 2023). As noted, the impact of these issues may be felt disproportionately in areas of high deprivation, for example, limiting the opportunity for individuals living in these areas to be offered comprehensive AS interventions.

A reflection on similarities and differences between AS inequalities and child welfare inequalities can also help to make sense of these findings. First, there are important differences in relation to child protection which need to be considered. Whilst statutory child protection investigations and interventions primarily involve concerns regarding neglect and maltreatment perpetrated by household members, AS interventions comprise concerns involving both family members/informal carers and those with formal responsibility for providing care and, as such, may not be 'involuntary' to the same extent as child protection concerns. Indeed, it is conceivable that, particularly in circumstances involving formal carers, family members may be actively seeking further investigation and the socio-economic status of the family may play a role in decisions to take such a case forward. Whilst rates of investigations for those involving formal and informal carers were very similar across deprivation quintiles, further research is required regarding the relationship between the alleged perpetrator and victim at the referral or screening phase to establish if this effects subsequent decision making.

Notwithstanding these differences, the analysis of child welfare inequalities can inform AS findings. Morris *et al.* (2018) found that to a large extent, families' material circumstances and neighbourhood conditions were not considered as core factors in decision making in child protection practice or service development. Moreover, parents living in poverty were also likely to be facing issues relating to employment, diet, heating and clothing, debt and housing conditions (Katz *et al.*, 2007). However, these issues were seldom considered relevant risk factors for children's lives (Katz *et al.*, 2007), and likewise, do not appear to be a focus of AS interventions. As the majority of perpetrators of abuse in this study had an 'informal' relationship with the victim, links between deprivation, stress and the availability of social support should be further explored to determine where interventions should best be focused.

Finally, in terms of conceptualising AS, the need to consider macro-level factors has already been identified (Roberto and Teaster, 2017). However, there is arguably limited understanding of the role of deprivation in influencing the risk of, and responses to, adult abuse. In particular, the relationship between situational (internal) stressors and structural (external) stressors and how they interact (Gelles, 1987; Penhale, 2010) should be further developed in light of the findings of this study.

Limitations

This study has a number of limitations. First, the current analysis does not cover all of NI HSC Trusts as a large urban HSCT did not use the SOSCARE system within AS recordings. Given that deprivation tends to be higher in large urban centres, it is likely that the relationship between area-based deprivation and AS would be stronger had these data been included. Secondly, as noted in the methodology, the migration of data to other platforms also significantly affected the availability of data for some of the other HSCTs at different time points. Whilst, ideally, it would have been preferable to follow trends for those HSCTs that remained on the SOSCARE system from 2015 to the present day, even accounting for the absence of data from the BHSCT, data on SOSCARE were lower than those reported in official statistics, with differences increasing substantially over time. This analysis is based on the most reliable data with the widest geographical coverage (2015–2017), as up-to-date figures could not reliably be included. As such, we cannot offer any data-based comparisons between the trends in the 2015–2017 period, compared to the current period. Nonetheless, as noted, the impact of Covid, coupled with resource constraints that have affected adult social care provision across the UK, would suggest that inequality related

to area-based deprivation is unlikely to have improved any in the intervening years and, in all likelihood, has worsened (Appleby *et al.*, 2022).

Thirdly, whilst the index of multiple deprivation is a valid area-level measure of deprivation, it can only provide information on the levels of deprivation within the neighbourhood in which the family resides and not the individual economic circumstances of the family itself. As such, the use of aggregate data can obscure important differences between subgroups and individuals ('ecological fallacy').

Conclusion

As far as we are aware, this is the first published study of its kind to report on the relationship between area-level deprivation and AS interventions. Despite the limitations discussed above, the findings identified a clear social gradient in relation to screening and planning for community-based AS referrals, with the findings relating to safeguarding investigations much more variable. In essence, if you live in an area with higher levels of deprivation, you are considerably more likely to be subject to an AS referral, and the progress of that referral in terms of investigation and levels of support may differ from those individuals living in areas of low deprivation.

These findings support the view that AS referrals are shaped by factors other than the dynamics of relationship between perpetration and victim. Thus, macro-level, structural factors are a significant feature of the multifaceted interconnected circumstances which may increase an adult's exposure to harm or their inability to protect themselves. However, it is not possible to predict on these factors alone who will be subject to an AS referral or the likely course of that referral. In order to understand the significance of these findings, further consideration is needed of the features and factors associated with areas of high deprivation that increases the risk of abuse or increases the rate of referral. At this stage, our interpretation of the role played by socio-economic factors is preliminary and will require further research and analysis.

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Supplementary material

Supplementary material is available at *British Journal of Social Work* online.

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