

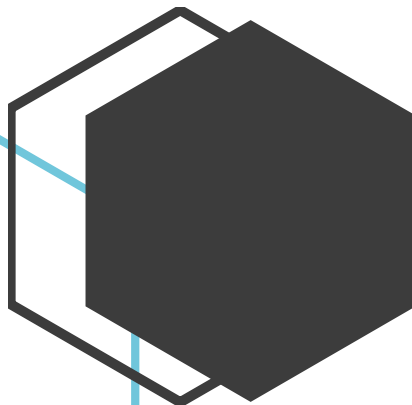


Housing and Children's Health and Social Care

A review of literature and suggestions for further research

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July 2020

This review assesses the evidence that the housing available to families in the United Kingdom influences children's health and wellbeing, and subsequent involvement in health and social care services. The evidence suggests UK housing policy undermines the care needs of children.



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1 Introduction and Background

This review assesses the evidence that the housing available to families in the United Kingdom influences children's health and wellbeing, and subsequent involvement in health and social care services. Firstly, the extent to which the UK is experiencing a *housing crisis* is identified and the numbers and experiences of families living in poor-quality, unsuitable accommodation and/or homeless outlined. Trends identified are briefly explained in the context of the wider housing market and government policy changes. Evidence that housing influences the physical and mental health, and safety of children, and consequently their involvement in health and social care services is presented. Gaps in this data, where more studies are needed, are highlighted. Findings are considered in the context that housing is complexly linked to socioeconomic circumstances and forms of oppression and marginalisation.

1.1. The Scale of The Problem: How many UK children experience housing deprivation?

The language and parameters used by researchers and statutory organisations in determining what makes housing a suitable home varies greatly. Governmental annual housing surveys, which interview a random sample of households provide the most extensive information about housing quality across the UK population. Housing is a devolved policy in the UK, therefore England, Scotland, Wales and Northern Ireland (NI) conduct surveys according to their distinct legislative framework. The criteria of what constitutes a *decent home* differs but generally covers hazards, disrepair, damp, overcrowding and heating. Housing unaffordability, although a form of housing deprivation, also lowers the standard of housing available to families thus its prevalence is discussed separately in section 1.3 (driving forces).

Between 9%-18% of households in the UK have a Category 1 hazard.

Housing surveys show that almost all parameters of housing deprivation have decreased in recent years, however the number of households in indecent accommodation still represents a large proportion of the population (National Statistics, 2018a; National Statistics, 2019b; National Statistics, 2019e; National Statistics, 2018b). Using the Housing Health and Safety Rating System (HHSRS), a legal framework for hazard identification in England and Wales, surveys found that 11% of households in England, 18% in Wales and 9% in NI had a Category 1 hazard (National Statistics, 2019b; National Statistics, 2018b; National Statistics, 2018a). A metric for hazards is not described in the Scottish House Condition Survey (National Statistics, 2019e). HHSRS is a method for identifying the severity of housing defects; Category 1 represents the most severe hazards, in which local authorities in England and Wales have a duty to action. However, for example, a hazard that has 100% risk of resulting in severe puncture wounds, fractured skull or severe burns would fall into Category 2 (Department for Communities and Local Government, 2013). Therefore, there is a strong argument for the analysis of Category 2 hazards when determining the suitability of a home, especially in households occupied by children.

Of all households, 19% in England, 8% in Northern Ireland and 41% in Scotland are considered indecent.

Aspects of housing quality are combined by each country to produce statutory guidelines. Over the last decade, the proportion of indecent housing has been recorded as decreasing in all UK countries, except Wales where data on the Welsh Housing Quality Standard is unavailable (National Statistics, 2018a; National Statistics, 2019b; National Statistics, 2019e). According to recent housing surveys, in England 19% (4.5 million) and in Northern Ireland 8% (61, 000) of dwellings do not meet the *Decent Homes Standard*



(DHS) (National Statistics, 2018a; National Statistics, 2019b). The number of homes failing to meet the *Scottish Housing Quality Standard* (SQHS) is much greater at 41% (National Statistics, 2019e). However, for housing to be considered 'decent' in England it must meet the following basic standards: no Category 1 hazards; a reasonable degree of thermal comfort; be in a reasonable state of repair; and have some modern facilities and services, whereas the SQHS is much more extensive, covering 55 elements of housing quality (National Statistics, 2019b; National Statistics, 2019e). The stark percentage difference highlights the inadequacies of the DHS and calls into question its validity to assess suitability of accommodation, particularly for children.

At least 25% of dwellings in Scotland, 12% in Wales, 11% in England and 7% in NI are fuel poor. Between 2-4% of households in the UK are overcrowded.

The 'reasonable thermal comfort' requirements in the DHS encompasses effective insulation and heating only. The number of homes in the UK that have central heating is increasing, as are median Standard Assessment Procedure (SAP) ratings, a more rigorous measure of energy efficiency than insulation alone (National Statistics, 2018a; National Statistics, 2019b; National Statistics, 2018b; National Statistics, 2019e). However, the efficiency of one's home or heating system contributes little to 'thermal comfort' if a household cannot pay their central heating bill. *Fuel poverty* is increasingly being recognised as a measure of housing deprivation, and national statistics are now published for each UK country. 25% of dwellings in Scotland, 12% in Wales, 11% in England and 7% in NI are estimated to be fuel poor (National Statistics, 2018a; National Statistics, 2019e; National Statistics, 2019a; National Statistics, 2019d). Again, the greater percentage in Scotland reflects a more generous metric. The use of the Low Income, High Costs indicator in England, Wales and NI has been criticised for halving the number of households considered fuel poor and for presenting energy efficiency as both the sole cause of and solution to fuel poverty, thus hiding the influence of austerity and the energy market (Middlemiss, 2017). Overcrowding is another factor not considered in the DHS; between 2-4% of households in the UK are overcrowded, however how disproportionately overcrowding impacts households with children must be investigated (National Statistics, 2018a; National Statistics, 2019b; National Statistics, 2019e).

How housing deprivation affects children, for how long, and in which areas of the UK needs analysis.

Housing surveys provide a snapshot of housing quality in a particular year and show that a significant proportion of the UK population live in unsuitable or unsafe households. Although overall UK data suggests trends towards improvements in housing quality, regional analysis is necessary. Notably, statistics above show NI has markedly lower levels of all elements of housing deprivation despite much greater overall deprivation (Abel, Barclay and Payne, 2016). This provides an opportunity to separate the effects of housing inequality from the wider socioeconomic context. Additionally, a study by Hackett (2018) looked at housing in the north of England, and found that although the proportion of homes deemed indecent is only slightly above the England average, it was well above comparable regions of London and the South East. Furthermore, government analysis of housing surveys alone does not take into account the greater health and safety requirements of children, nor does it show how long families experience housing deprivation. A study by Barnes *et al.* (2008) analysed data from the Family and Children's Study, which interviewed the same families annually between 1999-2008. It found that of children in the UK, 24% experienced overcrowding, 23% poor state of repair and 13% inadequate heating, in their homes, for at least one year (Barnes, Butt and Tomaszewski, 2008). To ascertain how many children today are experiencing poor-housing, and for how long, a similar, longitudinal study is necessary. This research



should overcome shortcomings of government analysis by setting standards of housing deprivation according to the specific health and wellbeing needs of children.

On Christmas day 2019, 135,000 children were living in temporary accommodation. The number of statutory homeless families has risen by 51% since 2014.

Homelessness is considered housing deprivation in its most extreme form. Although much media attention focusses on rough sleeping, how children and families experience homelessness does not fit this narrative – this is because local authorities have a duty to accommodate families that present as homeless in *temporary accommodation*. On Christmas Day 2019, over 135,000 children were estimated to be in temporary accommodation (Shelter, 2019). The number of *statutory homeless* families in the UK has risen by 51% since 2014, and astoundingly as much as 385% and 242% in the North West and West Midlands respectively (Shelter, 2019; Shelter, 2018f). These statistics are based on analysis of official UK data (Office for National Statistics, 2019). However, it is important to note that this crisis is not unique to the UK – homelessness is increasing in almost every EU country – and children find themselves repeatedly at the frontline (FEANTSA, 2018). A study by the Children's Commissioner (2019a) looked at the experiences of children placed into temporary accommodation in England. It found that between 2017-2018, families were placed in a range of accommodation, including office block conversions, shipping containers and B&Bs, at an estimated cost of £1 billion to English local authorities. B&Bs are often used by councils as *emergency accommodation*, with intent for rehousing families within the 6-week legal limit (The Homelessness (Suitability of Accommodation) Order, 2003). The Children's Commissioner (2019a) found that 2,420 families were living in B&Bs – a third of these had been there for more than 6 weeks. Qualitative research looking at the experiences of families in these types of accommodation is explored in detail in the next section, however there is little to no evidence quantifying the conditions of temporary accommodation across the UK.

In 2017 there were at least 92,000 children sofa-surfing.

Official UK statistics on temporary accommodation are alarming, but they may only touch the surface of the total numbers of children that could be considered homeless, or at risk of becoming homeless. Households finding it difficult to make ends meet for their housing payments amount to 375,000 children teetering on the edge of homelessness (Children's Commissioner, 2019a). Moreover, it is very difficult to quantify the numbers of children who have not presented as homeless to local authorities but do not have a permanent home – are staying with friends, relatives or in cars – termed *hidden homelessness*. The Children's Commissioner (2019a) estimated that between 2016-17 there were 92,000 children sofa-surfing. Furthermore, Crisis Homeless Monitors in England, Scotland, Wales and NI found that 1.3%, 0.8%, 1.0% and 1.0% of households, respectively, contained additional couples or lone parent families or 'concealed families' (Fitzpatrick *et al.*, 2019a; Fitzpatrick *et al.*, 2020; Fitzpatrick *et al.*, 2019b; Fitzpatrick *et al.*, 2017).

Many families fall through the gaps in homelessness statistics.

Certain families do not have a right to accommodation from local authority housing departments, and as a result fall through the gaps in homelessness statistics. Firstly, families that have no recourse to public funds (due to immigration status) are not rehoused by housing departments. Secondly, families regarded as 'intentionally homeless' under the *Housing Act (1996a)*, are not rehoused by housing departments, but may be provided accommodation by children's services under the *Children Act (1989)*. Statutory bodies are not required to record families housed in this way, therefore there is no data to shine a light on these



families. Another study found that mothers who choose to live apart from their children, often to protect them at times of crisis, were labelled as 'single' by housing departments, and thus ineligible for family housing (Bimpson, Reeve and Parr, 2020). These women are often discharged from housing duty and therefore are not represented in statutory homelessness statistics. It is also important to note the impact of the criminal justice system on changes to children's housing situations – only 5% of children remain in their family home when their mother goes to prison (Corston, 2007).

Housing deprivation most severely affects single mothers, disabled children and BME families.

Across the last 20 years, studies have shown that housing disadvantage is heightened in groups of people who already experience inequality. Firstly, single-parent families make up 63% of families in temporary accommodation and 90% of single-parent households are led by women, thus statutory homelessness can be assumed to disproportionately affect women (Shelter, 2018b; National Statistics, 2019c). In addition, the majority of homes of families with disabled children are indecent (Beresford and Rhodes, 2008; Beresford and Oldman, 2002). One study by Emerson and Hatton (2007) found that disabled children were worse off in 13 measures of housing condition and more likely to be in temporary accommodation. More Black and Minority Ethnic (BME) families experience housing deprivation than their White British counterparts (de Noronha, 2015). Likewise, data from the early 2000s shows that BME households make up 22% of statutory homeless families but just 7% of the total population (Shelter, 2004b). Government surveys should be altered to allow for more detailed analysis of housing conditions in comparison to gender, disability and ethnicity.

Statistics show that a considerable number of children are living in poor-quality housing and/or are homeless. However, many children, affected by housing deprivation, may be falling through the gaps in the data. Statutory measures of housing standards used in surveys conducted by government departments, particularly in England, do not go far enough to quantify how many families are living in housing which is unsafe or unsuitable for children.

Research Gaps:

- How many children live in poor-housing, in specific areas, and for how long, using a metric designed with the health and safety requirements of children in mind.
- The number of children in fuel poverty.
- The extent to which overcrowding disproportionately affects children.
- Quantitative data of the conditions of UK temporary accommodation.
- How many children are rehoused by children's services, and the quality of accommodation provided.
- The numbers of homeless parents labelled as 'single' by local authorities and the effect this has on family reunification.
- More detailed analysis of housing deprivation by gender, disability and ethnicity.

1.2 Family Experiences

Documenting the experiences of children living in unstable, unsafe and unsuitable homes is vital to understand how housing influences their health and wellbeing. Few studies have explored the lived experiences of families living in poor-quality accommodation, outside of statutory homelessness. Two studies by Shelter (2006b; 2006a) reveal the experiences of children living in homes with problems such as



damp and mould, lack of heating and rat infestation. Many families described how these issues had negatively impacted their children's mental and physical health, sleep, education and family relationships. The story of one ten-year old boy living in a damp and mouldy home summarises how a simple housing defect can have a cascade of knock-on effects; he experienced frequent illness, and thus his education suffered from time off school (Shelter, 2006b). In addition, the damp made his clothes smell, for which he was bullied so severely for that he required the support of a child psychologist. Another study by Shelter (2005a) evidenced similar impacts of overcrowding on family relationships, asthma, and prevalence of depression and anxiety. A study looking specifically at the lived experience of families living in housing with hazards and their experience of the HHSRS system would greatly enrich this research area. Moreover, family experiences of fuel poverty have uncovered how parents have to make frequent trade-offs between health, food, heating and washing and how this perpetuates fear and anxiety within their family units (Longhurst and Hargreaves, 2019; Middlemiss *et al.*, 2018).

Housing deprivation is intrinsically intertwined with poverty. A landmark study from Croucher *et al.*, (2017) looked at this relationship through the experience of 72 participants across their lifetimes. It found that whilst housing had the potential to alleviate poverty, it more often than not exacerbated it. There was a discrepancy between the housing needs of participants and what was available; limited social housing caused people to resort to unaffordable and unstable private rental sector properties. Some participants felt they needed to take the first rental properties available, despite their quality or suitability. Cost of rent, particularly for private properties was a significant barrier to economic mobility – people on low income did not experience a conventional housing ladder. Some participants lived with extended family to cover rent, whilst certain parents reported living separately, solely to receive housing benefit. On the other hand, those who had bought their properties, some through Right to Buy, found themselves unable to keep up with the additional costs of 'making a home'. Moreover, Croucher *et al.*, (2017) found that stability of housing was difficult to maintain during life changes, such as relationship breakdown. Further housing insecurity stemmed from short-term leases and frequent delays or changes to housing benefit payments. Research investigating the extent to which the issues described in this study affect children is needed.

There is a relatively comprehensive collection of family experiences of statutory homelessness over the last 20 years, mainly recorded by Shelter. This review has collated common themes from reports of both emergency and temporary accommodation over this period. Families frequently described being displaced from their local area, away from support networks, education and employment (Shelter, 2004a; Children's Commissioner, 2019a). Consequently, the distance to both school and work caused unwieldy financial and time constraints (Children's Commissioner, 2019a; Shelter, 2017). Limited space in accommodation was stressed repeatedly, including the sharing of beds; parents and children reported that overcrowding led to extreme strain on family relationships (Shelter, 2015; Shelter, 2004a; Shelter, 2019; Shelter, 2016; Shelter, 2017). The physical condition and cleanliness of buildings, including infestation, was depicted as extremely unsuitable, particularly for children (Children's Commissioner, 2019a; Shelter, 2004a; Shelter, 2017; Shelter, 2015; Shelter, 2016; Communities and Local Government, 2008). In emergency accommodation, families felt that the facilities needed to live a normal life, including cooking and clothes-washing facilities, were not present (Shelter, 2015; Shelter, 2016; Shelter, 2017). Furthermore, families often had no clear idea of when they might move housing, making their unacceptable situations seem indefinite (Shelter, 2004a; Shelter, 2019; Children's Commissioner, 2019a).

The complete dearth of safety and security of hostels, B&Bs and temporary accommodation neighbourhoods was reported extensively across studies, including children's close proximity to drug



dealers, sex workers and vulnerable adults with substance misuse problems (Children's Commissioner, 2019a). In the most extreme cases, families described receiving death threats from other residents, finding used needles in bathrooms, child sexual harassment, racism and children witnessing domestic abuse (Children's Commissioner, 2019a; Shelter, 2015; Shelter, 2004a; Shelter, 2016; Shelter, 2017; Communities and Local Government, 2008). One ten-year old boy described life in a B&B as 'worse than being in a real-life horror film' (Shelter, 2019). These conditions left children unable to play, or even go to the toilet on their own (Children's Commissioner, 2019a; Shelter, 2019; Shelter, 2017; Shelter, 2015; Shelter, 2016).

Families' accounts of their experiences of statutory homelessness also reveal how accommodation impacts on the mental and physical health, and education of children. Children felt that they were stigmatised for being homeless and therefore socially isolated from people at school, including friends (Children's Commissioner, 2019a; Shelter, 2016; Shelter, 2004a; Shelter, 2015). One mother described her son as 'becoming a recluse', and a child stated that they were 'bullied for what they are' (Shelter, 2016; Children's Commissioner, 2019a). The most severe reports of effects on children's mental health include a six-year old developing a nervous tick and another child 'hitting his head on the wall, biting himself, ripping his hair out' (Shelter, 2015). Some families described developmental regression including wetting the bed, speech impairment, and inability to progress from crawling to walking (Shelter, 2015). Additionally, reports of sleep dysfunction were widespread (Shelter, 2015; Shelter, 2019; Shelter, 2016; Shelter, 2017). Further impacts of poor temporary accommodation on physical health included breathing problems and severe eczema (Shelter, 2015; Shelter, 2004a). Moreover, for numerous reasons, parents stated that their children's 'school work really suffered' (Shelter, 2015).

These accounts of temporary accommodation illustrate housing problems at their most extreme, however the same issues pervade through all elements of poor housing. In all these studies a general feeling that housing deprivation is a barrier to both children's personal growth and effective parenting persists; a constrained housing system constrains people's abilities to be *good enough parents*. Furthermore, outcomes of poverty and helplessness were often misunderstood by communities and local authorities as symbolic of poor parenting. A study by Bimpson *et al.*, (2020) described the experiences of homeless mothers and concluded that 'aspects of social policy are not just failing to meet the needs of homeless mothers but are in conflict, undermining women's capacity to access housing and maintain their family'. Thus, support services were accused of 'perpetuating cycles of trauma and poverty'.

It is important to consider whose stories might not be represented in the experiences of families in poor housing. Firstly, no UK study to date has collected experiences of family hidden homelessness. There are obvious barriers to this research, however a study by Robinson and Coward (2003) looked at the experiences of single people sofa-surfing so the prospect is not implausible. Furthermore, housing may be acting as a medium in which people are marginalised or oppressed. However, to what extent existing inequalities, for example in relation to race, gender and disability, intersect with and are potentially exacerbated by housing deprivation is not comprehensively explored in the above qualitative studies. Although family homelessness disproportionately affects single mothers, as previously evidenced, very few studies look at how homelessness is influenced by female inequality. Bimpson *et al.*, (2020) responded to this gap in evidence by looking at the maternal experiences of homeless women – this paper is 'a starting point for a much needed research focus on homeless mothers'. Furthermore, homelessness has been identified to interact with sexual and gender identity, but there are no studies looking at how LGBT+ people experience family homelessness (Matthews, Poyner and Kjellgren, 2019).



Studies looking at the housing experiences of families with disabled children revealed that the majority of homes did not meet their needs (Beresford and Oldman, 2002; Beresford and Rhodes, 2008). Families reported that children with both physical and non-physical disability suffered losses to their wellbeing and development as result of their housing. Similar housing anxieties, including around short-term leases, were present, and added an extra dimension to an already challenging housing situation (Satsangi *et al.*, 2018). Furthermore, the experiences of multiple homeless, disabled parents and children show the unsuitability of temporary accommodation to their needs, including people resorting to using bed pans in their rooms because of access issues to toilets (Shelter, 2015; Shelter, 2004a; Shelter, 2016; Shelter, 2017).

Family experiences also highlight how ethnicity can increase the complexity of housing deprivation. Families from ethnic minorities cited factors which limited their housing choice including 'no-go' areas where racial harassment was rife and the need to be near appropriate cultural infrastructure, such as schools and places of worship (Shelter, 2004b). Moreover, several homeless families have reported that temporary accommodation neighbourhoods had high incidence of racism (Communities and Local Government, 2008; Shelter, 2004a). Parents from ethnic minorities described how housing deprivation made parenting more difficult, particularly in cases of single mothers (Barn, Ladino and Rogers, 2006). Furthermore, BME families with disabled children are extremely likely to be living in unfit homes (Beresford, 2007). Multiple studies have identified that barriers to accessing information and support services (notably language) hinder BME families from receiving housing support for their disabled children (Russell, 2003; Fazil *et al.*, 2002). More research exploring how families' housing situations influence and potentially perpetuate oppression is needed.

Research Gaps:

- Experiences of poor-quality accommodation, including reporting hazards and the HHSRS system.
- How housing affordability affects children.
- Family experiences of homelessness outside of temporary accommodation or *hidden homelessness*.
- How gender and racial inequality are intertwined with housing deprivation, particularly family homelessness.

1.3 Driving Forces

Housing costs for low-income families are increasing faster than the population average.

Wider changes to the economy and government policy undoubtedly influence children's housing situations. Across the EU structural factors, related to the housing market and welfare systems, have the greatest influence on family homelessness (Baptista *et al.*, 2017). The discrepancy between housing needs of children and what is available to them is primarily driven by an increased cost of housing relative to household income. In the UK, housing costs have increased at a faster rate than income, with lower-income households with children hit the hardest. Between 2002-03 and 2016-17, housing costs for families with incomes in the lowest fifth of the population increased by 47% - this is three times greater than the population average (Cribb, Norris Keiller and Waters, 2018). In consequence, after housing costs, a third of children in the UK are in poverty (Cribb, Norris Keiller and Waters, 2018). The complex interplay between structural factors, including a shift of families into the private rental sector, rising rental costs in private and



social sectors, a lack of social housing, stagnant earnings and changes to welfare benefits, is responsible to a large extent for children's housing deprivation (see below).

Many childhoods are spent in insecure and unaffordable private rental properties.

Low-income families, most greatly affected by housing deprivation, rent their homes from the social and private rental sector (Croucher *et al.*, 2017). Furthermore, the fraction of low- and middle-income families in the UK that live in private rental properties has increased greatly over the last two decades (Cribb, Norris Keiller and Waters, 2018). On average private rental housing costs are much greater than that of social or owner-occupied housing, therefore this tenure shift towards private rentals has contributed to increased housing costs for families (Cribb, Norris Keiller and Waters, 2018). Private rental costs are also increasing at an alarming rate - Shelter (2018e) reported that between 2011-2017 private rents grew 60% faster than wages in England. The private rental sector is volatile – it was not designed to provide permanent housing for children (Shelter, 2013). As described in the previous section, the rising costs of rent has muted the housing ladder; saving to buy a house whilst renting is an impossibility for many families, and thus many childhoods are spent in private rented homes (Croucher *et al.*, 2017).

The UK has a severe lack of affordable, social homes for families.

The propensity for low-income families to move to private rental homes, with more unaffordable rents, is attributed in part to the lack of affordable social housing. Since the introduction of Right to Buy in 1979, the proportion of people living in social housing has halved (Adam *et al.*, 2015; National Statistics, 2020). Decades of social housing being sold off under Right to Buy without new investment to replenish stock have made it increasingly difficult for families to access social housing. In all tenures, demand for housing that is good-quality, affordable and stable greatly outweighs supply; in 2018, one million households across the country were waiting for a social home (Shelter, 2018c). To meet this demand the rate of housebuilding needs to vastly increase; Crisis estimates that 380,000 homes need to be built a year for the next 15 years, of which over 100,000 need to be socially rented (Bramley, 2018). Shelter estimates that before 2040 3.1 million social homes need to be built to solve the UK housing crisis (Shelter, 2018a). It is important to note that the majority of these homes need to be in England and that the Scottish Government is currently on target to establish a widely respected, affordable housing programme (Fitzpatrick *et al.*, 2019b). Fig.1. below illustrates how the housing market has changed over the last 100 years, and what the upward trajectory of house building would need to look like to give families access to the homes they greatly need.

Earnings and LHA rates do not match housing costs, pushing families into homelessness.

Naturally, falling earnings and changes to the amount of welfare support available to families are largely responsible for diverging housing costs and income. In recent times, earnings have been falling, particularly for those between 30-39 years of age (Fitzpatrick *et al.*, 2019a). Despite working, people simply cannot keep up with housing costs; this is reflected by the fact that 55% of statutory homeless families in England are in employment (Shelter, 2018d). In 2011 Local Housing Allowance (LHA) rates were capped and then subsequently frozen in 2016. These welfare reforms meant that LHA was no longer fit for purpose - the amount of housing benefit available does not reflect housing market changes (Policy in Practice, 2017). Analysis by Shelter found that in '97% of areas in England, the LHA rate does not cover rents for a two-bedroom home at the 30th percentile' and 'in one in three areas the LHA rate does not even cover

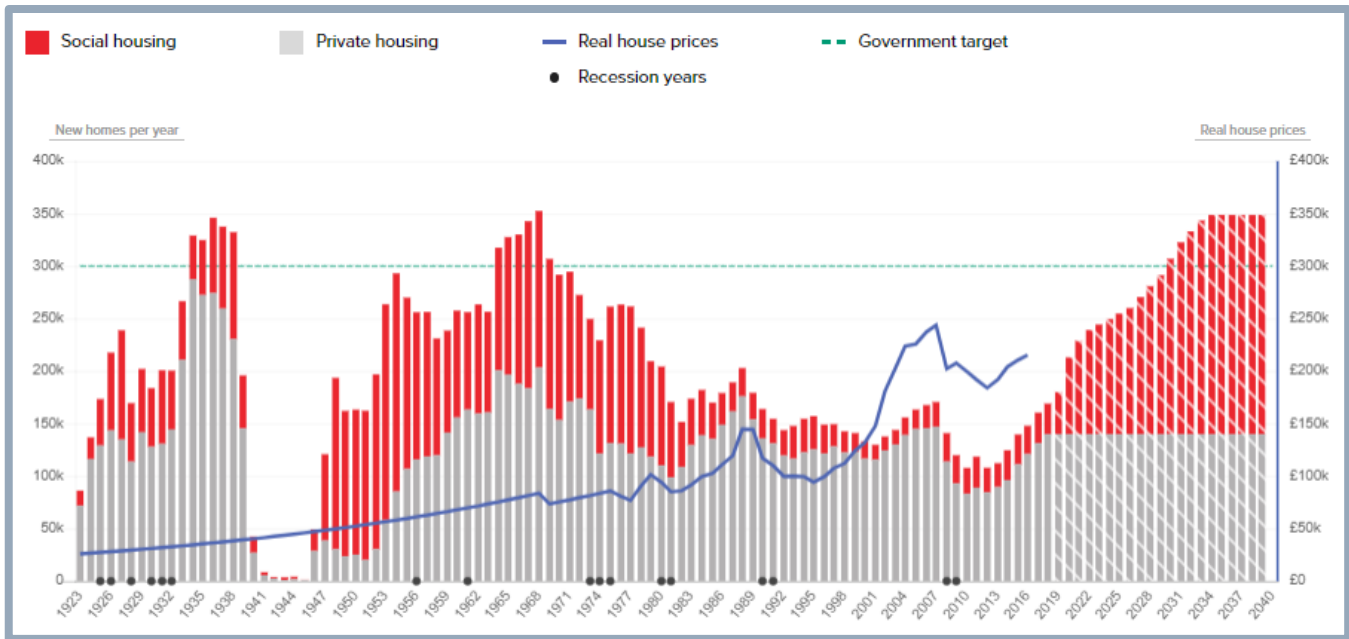


Figure 1. The history of housing prices and stock in the UK and Shelter recommendations to build 3.1 million social homes by 2040. This graph is as presented in Shelter (2018a).

rent for a two-bedroom home at the bottom 10% of the local market' (Kleynhans and Weekes, 2019). Benefit caps designed to incentivise employment instead increase the proportion of income which is lost to housing to the detriment of children's welfare (Policy in Practice, 2017; Hardy and Gillespie, 2016). Notably, in 2020 LHA rates have increased for the first time in 5 years. As Universal Credit is rolled out, further financial strain will be put on families; the Children's Commissioner (2019a) found that the five week delay between applying for and receiving Universal Credit 'pushes 70% of families from cash surplus to cash shortfall'. Importantly, single female parents are an excluded economic group, disproportionately affected by welfare reforms, such as benefit caps, as their childcare responsibilities often prevent them from entering employment (Hudson-Sharp *et al.*, 2018; Baptista *et al.*, 2017). The evidence is clear: the choice of UK government to limit the funds available to families for housing pushes children into the worst accommodation and homelessness.

UK policy is driving large numbers of children into housing deprivation.

Despite gaps and limitations data clearly suggests that children are experiencing poor-housing and/or homelessness on a large scale in the UK, with national policy on housing and welfare as the principle driving force. The UK housing system is a 'risky combination of low pay, high housing costs, small rental sector and a limited housing safety net' (Houston *et al.*, 2014). Personal, subjective accounts discussed highlight that children's health and safety is being compromised by their housing. The next two sections delve deeper into research, to discuss whether there is concrete, objective evidence for the relationship of housing to children's safety, health, and development and therefore the demand on children's health and social care services.

2 Housing and Children's Health and Wellbeing

Subjective accounts of family experiences of housing deprivation have identified several ways in which housing can influence children's health, safety, and wellbeing. This section aims to build on this by assessing to what extent there is empirical evidence that housing – in isolation of other factors – influences children's health and development. This section primarily draws on findings from research in economically developed, English-speaking countries such as the UK, US, Canada, Ireland and Australia, but covers only health problems relevant to UK housing stock. In recent times, several reviews have cited broad relationships between housing deprivation and poor health (Bonney, 2007; British Medical Association, 2003; Gibson *et al.*, 2011; Krieger and Higgins, 2002); a few have focused specifically on outcomes in childhood (Clair, 2019; Mansfield *et al.*, 2013; Dunn, 2020). Although community plays a part in the public health impacts of housing, broader neighbourhood problems are not given full consideration in this review (Bonney, 2007). For detailed analysis of the relationship between neighbourhood environment and health see Cohen *et al.*, (2003).

2.1 Accidental Physical Injury

Young children spend the majority of their time at home, are naturally curious but lack the experience to recognise risk, thus housing should be designed with their safety in mind. In Europe, accidental injury in the home is the leading cause of death in children under 5 (Sengoelge, Hasselberg and Laflamme, 2010). However, hospitalisations and deaths from unintentional injury should not be treated as chance events; the majority of child deaths from accidental injury are preventable (Rimsza *et al.*, 2002). Analysis of 26 European countries by Sengoelge *et al.* (2014; 2013) showed that child mortality is significantly correlated with 'country-level housing strain' and that the relationship between income inequality and child deaths could be mediated by alleviating housing pressure. At neighbourhood and individual level poor-quality housing has been related to increased risk of childhood injury (O'Campo *et al.*, 2000; Dal Santo *et al.*, 2004). A study by Keall *et al.*, (2008) found that each home hazard increased the risk of injury occurrence by 22%. Notably, higher paediatric injury rates among older buildings, rental properties and apartment blocks have been evidenced (Shenassa, Stubbendick and Brown, 2004; Lyons *et al.*, 2006). Additionally, living in a cold home also reduces dexterity, and thus increases risk of injury (Geddes *et al.*, 2011). An assessment of the conditions of and accidental child injury rate in UK emergency and temporary accommodation is needed.

Research showing the effects of housing interventions on childhood injury is mixed, however significant inverse correlations between smoke alarms, set hot water temperature, window guards and child morbidity and mortality have been demonstrated (Towner and Ward, 1998; DiGiuseppi *et al.*, 2010; Spiegel and Lindaman, 1977; Turner *et al.*, 2011). Further research should be in the form of randomised control trials which analyse individual elements of multifactorial housing improvement (Turner *et al.*, 2011). Research which examines paediatric injury risk along UK legislative framework is severely lacking. Shields *et al.*, (2019) developed their own hazard inspection framework and compared it to US legislation in prevention of childhood injury – UK research should compare HHSRS to a more child-appropriate system. Furthermore, research investigating socioeconomic barriers to household repair is needed – for instance,



to what extent lack of affordable housing decreases leverage over landlords and forces families to accept unsafe housing conditions.

Research Gaps:

- Conditions of UK temporary accommodation and child injury rate.
- Randomised control trials of the effects of housing improvement on child injury rate.
- Paediatric injury risk alongside UK legislative framework, and the development of a more child-appropriate system for injury prevention.
- Socioeconomic barriers to household repair.

2.2 Infectious Disease

Cold temperatures make people more susceptible to infection, however there is limited quantitative evidence linking lack of home warmth to childhood infection rates. Damp conditions are the ideal environment for growth of bacteria and viruses, and there is some evidence linking damp and mouldy housing to children's respiratory infection (Fisk, Eliseeva and Mendell, 2010; Koskinen *et al.*, 1999; Polyzois, Polyzois and Wells, 2020). Overcrowding is associated with increased risk of numerous infectious diseases and children are both disproportionately affected by overcrowding and consequent infectious disease (Baker *et al.*, 2013). There is widespread research showing a relationship between overcrowding and *Helicobacter pylori* infection, which is known to cause gastric problems in adulthood, but has also been related to growth delay in childhood (Fall *et al.*, 1997; Rajindrajith, Devanarayana and de Silva, 2009; Webb *et al.*, 1994; Patel *et al.*, 1994; Perri *et al.*, 1997). Furthermore, there is a significant relationship between overcrowding and life-threatening, meningococcal infections (Baker *et al.*, 2000; Stanwell-Smith *et al.*, 1994; Jones *et al.*, 1997). In April 2020, New Policy Institute found that UK areas with high levels of overcrowding also had the most confirmed COVID-19 cases (Kenway and Holden, 2020). Ethnic minorities and people living in deprived areas are also dying at much higher rates from COVID-19 (Barr *et al.*, 2020; Public Health England, 2020). Analysis of how housing deprivation and the spread of COVID-19 relate is needed in the coming months and years. Homelessness has been related to self-reported symptoms of infectious disease but there is a paucity of quantitative data (Weinreb *et al.*, 1998). Moreover, residential mobility is known to decrease rate of vaccinations, thus the impact of moves on vaccine uptake in homeless families is in need of investigation (Pearce *et al.*, 2008).

Research Gaps:

- Cold housing, fuel poverty and infectious disease.
- The influence of housing deprivation on the spread of COVID-19.
- Homelessness and infectious disease.
- Homelessness and vaccine uptake.

2.3 Respiratory Problems

There is evidence that cold, damp, moisture and mould in the home have a negative impact on child respiratory health, including wheezing and cough (Bornehag *et al.*, 2005; Andriessen, Brunekreef and Roemer, 1998; Koskinen *et al.*, 1999; Peat, Dickerson and Li, 1998; Emenius *et al.*, 2004; Blackman *et al.*, 2001; Barnes, Butt and Tomaszewski, 2008). Certain housing conditions, including lack of insulation, are related to damp and subsequent respiratory problems – this relationship is strongest for children under 7



(Keall *et al.*, 2012). Similarly, asthma has been shown to correlate with damp in current and previous homes – it is estimated that children who live in damp homes are a third more likely to be suffering from asthma (Williamson *et al.*, 1997; Fisk, Eliseeva and Mendell, 2010; Venn *et al.*, 2003; Polyzois, Polyzois and Wells, 2020; Fisk, Lei-Gomez and Mendell, 2007). An increased growth of allergenic mould, dust mites and cockroaches could provide the mechanism for this relationship (Polyzois, Polyzois and Wells, 2020; Rosenstreich *et al.*, 1997). An analysis of how many UK children with asthma live in housing containing asthma triggers is needed. A few studies have found positive effects of housing interventions, including improved heating and ventilation, on childhood asthma symptoms (Somerville *et al.*, 2000; Wu and Takaro, 2007; Free *et al.*, 2010; Woodfine *et al.*, 2011; Howden-Chapman *et al.*, 2008; Hopton and Hunt, 1996). However, most conclusions are based on subjective measures of asthma, and the current evidence is not sufficient to implement housing intervention into clinical practice (Beasley, Semprini and Mitchell, 2015). Additionally, asthma is significantly more prevalent among homeless children in the US, but the relationship is yet to be examined in the UK (Weinreb *et al.*, 1998; Berti, Zylbert and Rolnitzky, 2001; McLean *et al.*, 2004; Grant *et al.*, 2007). Again, there is an increased public health imperative for this research in relation to the COVID-19 outbreak.

Research Gaps:

- Numbers of children with asthma living in poor-quality accommodation or homeless and their health outcomes.
- Clinical validity of housing intervention as a treatment for asthma in children.

2.4 Parenting and Child Maltreatment

Housing insecurity, unaffordability, residential mobility, overcrowding, and homelessness have been correlated to an increased risk or occurrence of child maltreatment, however studies cited are largely outdated and not-UK based (Warren and Font, 2015; Burton, Blair and Crown, 1998; Dong *et al.*, 2005; Sidebotham, Heron and Golding, 2002; Marcal, 2018; Cant *et al.*, 2019). There has been almost no published research on the relationship between housing and either the occurrence of child maltreatment or the responses of child protection services in the last twenty years and the area requires much expansion.

Beyond the indirect relationship between poverty and both factors, there are two major explanations for a direct relationship between housing deprivation and child maltreatment: 1, poor quality housing is an environment with inherent child maltreatment risk and 2, substandard or unaffordable housing or homelessness contributes to both parents' capacity to meet their children's basic needs and adds to their stress (Warren and Font, 2015). Firstly, living in inadequate or unsuitable housing is widely considered to be an example of child maltreatment, termed environmental neglect (Mennen *et al.*, 2010; NSPCC, undated). Earlier research found that homelessness and residential mobility were strongly related to abuse in childhood, and could also be a factor in concealing it as families move from one local authority to another (Dong *et al.*, 2005; Burton, Blair and Crown, 1998). Being homeless and, for example, staying in insecure accommodation, in vehicles or in statutory accommodation in close proximity to vulnerable adults pose fundamental child maltreatment risks (Commissioner's Office, 2019). Beyond the experiences of families presented above, there is little to no research examining the existence of child maltreatment within statutory homelessness and the limited capacity of homeless parents to protect their children from these situations. An exploration of how UK housing departments place homeless families in



accommodation in contradiction to the priorities which children's services might have for family stability, security and supportive relationships would be particularly valuable. In addition, it is important to note the complex relationship between domestic violence and housing insecurity. It has become widely accepted that witnessing domestic abuse as a child is a form of maltreatment with significant short and long term health consequences trauma (Mayock, Bretherton and Baptista, 2016; Meltzer et al., 2009; Gilroy et al., 2016), but also that service responses to domestic violence and abuse can result in further trauma (Humphreys and Absler, 2011; Stanley, 2011).

The environment that surrounds human beings undoubtedly influences their behaviour and the home is the primary parenting environment. Thus, the relationship of housing environment to parenting behaviour, and subsequent child maltreatment risk, is a significant issue. Few studies have considered the direct relationship between housing and parenting. Warren and Font (2015) found a statistically significant relationship between housing instability and risk of child abuse and neglect; they suggested this was driven in part by maternal stress. Homelessness has also been related to changes in parenting behaviours (Perlman et al., 2012; Gewirtz et al., 2009). Further research shows that housing instability is coupled with increased prevalence of depression and general anxiety disorder among mothers, even when controlling for domestic violence and poverty (Suglia, Duarte and Sandel, 2011). Housing instability and homelessness are arguably housing deprivation in its most extreme form and therefore are likely to have the most substantial impact on parental stress and mental health, including maladaptive coping behaviours such as substance abuse or domestic violence. Independent of housing, these factors of parental behaviour are known to have a substantial impact on child maltreatment risk (De Bellis et al., 2001; Stith et al., 2009).

The relationship between housing affordability and child maltreatment is less clear (Warren and Font, 2015). However, there is sufficient evidence of the relationship of economic hardship to child maltreatment (see for example the special of Children and Youth Services Review on the economic causes and consequences of child maltreatment, Slack et al., 2016). It is likely that housing affordability is one way in which poverty is interwoven in child abuse and needs further exploration.

Research examining the relationship of housing conditions to child maltreatment is scarce. Although no study has explored the relationship specifically, overcrowding has been correlated to increased incidence of child sexual abuse in Australia, possibly through adverse parental supervision and unusual sleeping arrangements (Cant et al., 2019). Furthermore, it has been suggested that lack of personal space in overcrowded housing limits parental capabilities (Evans, Wells and Moch, 2003). It is important to note the cascade of effects of parenting stress and child maltreatment on health. On one hand, neglect, abuse and parental psychological distress significantly impacts the cognitive, emotional and social development of children and on the other hand, appropriate parenting is predictive of childhood resilience; developmental issues are explored further in the following sections (Hildyard and Wolfe, 2002; Margolin and Gordis, 2000; Mensah and Kiernan, 2010; Smith, 2004). Much more research is needed to discern the potential for problematic housing to cause and perpetuate parental stress and to limit parents' capacity to meet their children's needs, with consequent damage to their children's health.

Research Gaps:

- Does UK temporary accommodation pose a fundamental child maltreatment risk?
- Housing affordability and child maltreatment risk.
- Housing condition and child maltreatment risk.



2.5 Physical Development

Overcrowding and homelessness are related to impairments in physical development, although research is largely outdated. Montgomery *et al.*, (1997) found a graded association between overcrowding and height in 7-year olds, with children in the most overcrowded housing having the shortest stature. Homeless children also have lower average height than their permanently housed peers, probably through lack of nutrition (Fierman *et al.*, 1991). In addition, children born into homelessness have lower birth weights, longer hospital stays and more often need critical care (Richards, Merrill and Baksh, 2011; Stein, Lu and Gelberg, 2000). The first few days of life are vital for health across a lifetime; these birth outcomes correlate with higher incidences of reduced growth and impaired development (Hack, Klein and Taylor, 1995). Conversely, receiving US housing subsidies has been associated with increased growth (Meyers *et al.*, 1995). Moreover, in their study 'Generation squalor', Shelter (2005b) shared reports from medical professionals of what they termed 'buggy babies'; infants who spent most of their time lying down in prams, because of poor housing conditions, and as a result had permanently flattened skulls. De Bock *et al.*, (2017) suggests that scientific community has not given full consideration to the influence of everyday care environment on the development of *deformational plagiocephaly* (asymmetric skull flattening). Moreover, research investigating the effects of home environment on motor development, for example progression from crawling to walking, is limited and inclusive (Abbott and Bartlett, 1999; Abbott *et al.*, 2000). However, the size of home outdoor space has been associated with more outdoor play (Spurrier *et al.*, 2008) and movement-play is essential for neuro-motor development, including balance, posture and coordination (Archer and Siraj, 2015). Furthermore, a recent study by Liao *et al.*, (2019) found a positive association of 'residential surrounding green spaces' and psychomotor development. The importance of home outdoor space on physical development is in need of exploration.

Research Gaps:

- Greater analysis of the effect of housing deprivation on growth and motor development.
- Poor-housing and deformational plagiocephaly ("buggy babies").

2.6 Cognitive Development

Cognition encompasses the processing of all inputs and outputs in the brain. It is the way humans interpret their environment and its healthy development is essential for awareness, perception, reasoning, language, memory and judgement. Children's brains undergo extensive change at multiple levels (molecular, synaptic, cellular, circuit, region and system) modulated by a variety of environmental stimuli in a process known as neuroplasticity (Kolb and Gibb, 2011). However, most studies focus on social and academic measures as proxies for cognitive development. A child's home is one of the primary physical environments for play and learning, and thus part of the ecological context for cognitive development. Thus, analysis of how housing environment influences cognitive development in early life is crucial.

Evans *et al.*, (2005) reviewed research from the late 20th century on the relationship between physical environment and child development. Although outdated, the review claimed that overcrowding is related to a range of measures of cognition at various stages of child development. More current research, which correlates overcrowding to cognitive development, suggests that deficits are driven by responsiveness and language capabilities of parents (Evans *et al.*, 2009). Most recent research concerning cognitive development has focused on housing instability. Frequent moves in early childhood affect cognition and attention, but the family and economic circumstances in which the moves take



place has the greatest influence (Gambaro and Joshi, 2016; Beck, Buttaro and Lennon, 2016; Ziol-Guest and McKenna, 2014). Conversely, home ownership is associated with greater cognitive ability as measured by achievement in maths and literacy (Haurin, Parcel and Haurin, 2000; Haurin, Parcel and Haurin, 2002). Despite the fact that homelessness is the most severe form of housing instability there is limited research investigating its relationship to cognitive development, and the research that does exist is inconclusive (Rubin *et al.*, 1996; Rescorla, Parker and Stolley, 1991; Parks, Stevens and Spence, 2007; Garcia Coll *et al.*, 1998). Moreover, a chaotic home environment is associated with cognitive deficits, yet the extent to which housing instability is a factor in chaotic family environments has not been explored (Brody and Flor, 1997; Petrill *et al.*, 2004; Seidler and Ritchie, 2018).

Evans *et al.*, (2005) suggested negative effects of housing quality on social and academic ability – a relationship that appeared to increase with length of exposure. However, there is little to no research investigating the impacts of specific housing conditions and cognitive abilities, with one exception: lead poisoning. There is strong evidence that low-level lead exposure is related to deficits in intelligence, attention and executive function, including an inverse correlation to children's I.Q. (Needleman and Gatsonis, 1990; Canfield *et al.*, 2003; Chiodo, Jacobson and Jacobson, 2004). The effects of lead exposure in early childhood persist into adolescence – lead exposure is related to teenage deficits in cognitive performance, greater prevalence of reading disability, poorer literacy skills and worse performance in high school (Rosen, 1995; Needleman *et al.*, 1990). One study showed a high occurrence of lead toxicity among homeless children in the US, and related vocabulary problems (Parker *et al.*, 1991). These cognitive changes are thought to be driven by modifying neurotransmitter systems, including those implicated in learning and memory (Hubbs-Tait *et al.*, 2005).

Research Gaps:

- Homelessness and cognitive development.
- Specific housing conditions (excluding lead) and cognitive development.

2.7 Emotional Development and Mental Health

Both housing and mental health are described as phenomena in *crisis*, but the extent to which they are interrelated is largely unexplored, particularly in children. In recent times, the idea of resilience, “characterised by good outcomes in spite of serious threats to adaptation or development”, has come to the forefront of child psychology research (Masten, 2001). Hart and Blincow (2007) designated ‘good enough housing’ as a basic pillar of their Resilience Framework; the responsibility for nurturing resilience has been argued to not fall on the individual but within the structures of disadvantage (Hart *et al.*, 2016). Similarly, leaders in child psychiatric treatment identify ‘good housing’ as a protective factor, and ‘homelessness’ as a risk factor, in relation to mental health problems in childhood (CAMHS, 2008).

Although not intended to be systematic, Table 1. below, summarises primary research investigating the effects of housing problems on child emotional and behavioural outcomes and highlights where gaps in the data exist. Research suggests housing in general poor condition results in learned helplessness – or a sense of powerlessness which limits children's capacity to be successful in tasks (Evans, Saltzman and Cooperman, 2001; Rollings *et al.*, 2017). It is important to note, recent neuroscience research has transposed the idea of learned helplessness - it is not helplessness that is learnt but helpfulness (Maier and Seligman, 2016). Thus, housing environment may limit children's capacity to develop the emotional tools



to overcome disadvantage in their lives. There is limited research examining emotional effects of specific elements of housing quality. However, living in cold housing has been related to increased risk of multiple mental health issues in adolescence (Geddes *et al.*, 2011); warmth interventions have shown promise in improving adult mental health outcomes, but are yet to be explored in children (Thomson *et al.*, 2013). Moreover, few papers investigate overcrowding in the context of child psychological health, but notably one paper found that the negative emotional impact of overcrowding was moderated by housing type (Evans, Lercher and Kofler, 2002).

Table 1. Housing and child mental health research summary

Housing problem	Measures	Related to	Reference(s)
Poor overall quality	Range of measures e.g. structural quality, indoor climate, hazards, cleanliness, and privacy.	<ul style="list-style-type: none"> • Poor socioemotional health • Psychological distress • Learned helplessness • Internalising and externalising behaviour 	(Gifford and Lacombe, 2006; Evans, Saltzman and Cooperman, 2001; Rollings <i>et al.</i> , 2017)
Research Gaps:			
<ul style="list-style-type: none"> ■ How specific elements of housing quality (e.g. hazards) affect mental health outcomes. ■ The relationship of cold housing and fuel poverty to child emotional wellbeing. Do warmth interventions improve child mental health outcomes? 			
Instability	Numbers of moves	<ul style="list-style-type: none"> • Increased risk of depression • Emotional and behavioural problems • Internalising behaviour • Externalising behaviour • Attention problems 	(Gilman <i>et al.</i> , 2003; Simpson and Fowler, 1994; Rumbold <i>et al.</i> , 2012; Ziol-Guest and McKenna, 2014)
Research Gap:			
<ul style="list-style-type: none"> ■ How housing affordability affects child mental health. 			
Overcrowding	Number of persons per room	<ul style="list-style-type: none"> • Poor psychological health 	(Evans, Saegert and Harris, 2001; Evans, Lercher and Kofler, 2002)
Research Gap:			
<ul style="list-style-type: none"> ■ Much more research looking at overcrowding and mental health is needed. 			
Tenure	Homeownership	<ul style="list-style-type: none"> • Less emotional and behavioural problems 	(Boyle, 2002)
	Renting	<ul style="list-style-type: none"> • Poor subjective wellbeing 	(Rees and Bradshaw, 2018)
	Public housing	<ul style="list-style-type: none"> • Better mental health outcomes 	(Fenelon <i>et al.</i> , 2018)
Homelessness	Currently or previously been homeless and in temporary housing	<ul style="list-style-type: none"> • Psychosocial morbidity • Mental health problems • Internalising behaviours • Disruptive behaviour 	(Vostanis <i>et al.</i> , 1997; Vostanis, Grattan and Cumella, 1998; Gewirtz, Hart-Shegos and Medhanie, 2008; Waldron, Tobin and



McQuaid, 2001; Bassuk *et al.*, 1997; Buckner *et al.*, 1999; San Agustin *et al.*, 1999; Yu *et al.*, 2008; Park, Fertig and Allison, 2011)

Residential instability in early childhood has been strongly related to psychological impairments, including internalising behaviours by 9-years old and depression onset at 14-years old (Rumbold *et al.*, 2012; Gilman *et al.*, 2003). Similarly, there are numerous research papers, although with varied research integrity, that correlate homelessness to emotional morbidity in children (see Table 1). A systematic review of US research by Bassuk *et al.*, (2015) and found 10% to 26% of homeless preschool children and 24% to 40% of homeless school-age children had clinical mental health problems. Housing, particularly in the case of homelessness, is strongly related to childhood trauma, as described in the previous child maltreatment section, which has lasting impacts on child emotional development (National Health Care for the Homeless Council, 2019). There is little to no evidence looking at how housing affordability impacts child mental health. However, adult research demonstrates a direct, cumulative relationship between unaffordable housing and poor mental health, with the most pronounced effects on private renters (Baker *et al.*, 2020; Mason *et al.*, 2013; Bentley *et al.*, 2016). Even if the direct association does not extend to children, it is feasible that housing affordability influences child mental health outcomes through parental emotional contagion – there is a complex interplay between parent and child mental health (Mensah and Kiernan, 2010). Much more research is needed into all elements of housing deprivation and their potentially cumulative, negative effects on child emotional development.

There is a dearth of research investigating emotional development from the perspective of children as oppose to adult informed outcomes, such as disruptive behaviour. Future studies, looking at how housing deprivation affects children, in particular those relating to mental health, should consider using Participatory Action Research and Emancipatory Action Research methods. These methods are designed to empower the *researched* to play an active role in all elements of the research process. In this way, rather than reinforcing existing power dynamics and inequalities, studies respect the knowledge of participants and encourage them to engage in collective, self-reflective inquiry. These methods are essential if research is to be utilised as a vehicle for social justice. For more information on these research methods see Baum, MacDougall and Smith (2006) and Kemmis (2006).

Research Gaps:

- Generally, this entire research area needs much expansion. See Table 1. above for an overview of where research is most scarce.
- Studies utilising methods which put children and families central to the research process, for example Participatory Action Research and Emancipatory Action Research.



2.8 Applying Stress as a Conceptual Framework

It is important to note that the health constituents described above do not act in isolation – there is a complex interplay between all aspects of mental and physical health. Moreover, the social and physical environment can induce a physiological stress response; the chronic activation of this response can result in maladaptive development, with knock-on effect on numerous biological functions (Juster, McEwen and Lupien, 2010; Boyce and Ellis, 2005). Studies show that increased adversity in early childhood has marked effects on stress response pathways in humans (McLaughlin *et al.*, 2015; Gunnar *et al.*, 2009). In the context of previous sections, research has discerned associations of childhood chronic stress and immune system function, asthma morbidity, maltreatment and brain development (Carpenter *et al.*, 2011; National Scientific Council on the Developing Child, 2014; Danese and J Lewis, 2017; Sandel and Wright, 2006). Research correlating socioeconomic status to adverse stress responses is also gaining traction (Lupien *et al.*, 2001). Psychosocial factors, including stress, have been conceptualised as pathways to relate 'social, economic and environmental conditions, psychological and psychobiological processes, health behaviours and mental and physical health outcomes' across a lifetime (Bell, 2017). The influence of housing deprivation on chronic stress in childhood, and on the wider family unit, could provide a central integrated mechanism for its various effects on health and development. An examination of the relationship of housing and both child physical and mental health in the context of cumulative family stress would greatly enrich this research area.

Research Gaps:

- Influence of housing deprivation on chronic stress in childhood, and on the wider family unit, as a conceptual framework for the effects of housing on health.

3 Housing and Children's Health & Social Care

This section considers literature regarding how aspects of housing influence children's involvement in UK health and social care services. It is to be expected that if housing can negatively affect the health and wellbeing of children, then in turn it would increase their involvement in support services. However, this relationship is not always clear-cut owing to barriers to service involvement and continuation of care, and disparities between funding and need. In the absence of UK research, international studies are discussed.

3.1 Social Care Services

Undoubtedly local authority funding limits the amount of social care support that can be provided to children. Therefore, the number of children involved with local authority children's services cannot be considered representative of the total number of children who would benefit from support or the *demand* on services (Children's Commissioner, 2019b). However, local authority data shows growing pressure on children's services. In England from 2010-2018 the following measures of children's service activity rose: children in need (+8%), child protection enquiries (+122%), child protection plans (+38%) and looked after children (+17%) (Cromarty, 2019). In this time local authority funding was cut and largely redistributed away from preventative family support, putting significant strain on late intervention, particularly in deprived areas where the cuts have been most severe (Webb and Bywaters, 2018). Additionally, it is clear



there is a graded association between families' socioeconomic circumstances and the incidence of child abuse and neglect, despite the insufficiency of UK data collection (Bywaters *et al.*, 2016). Again, despite limitations of local authority reporting, it is estimated that child poverty is responsible for two-thirds of the costs of children's social care (Bramley and Watkins, 2008). However, the extent to which housing inequality influences this relationship is largely unresearched.

Across the UK, a child living in a deprived neighbourhood is much more likely to be 'looked after' away from parents, relatives and friends, however this relationship is much stronger in England, Scotland and Wales than NI (Bywaters *et al.*, 2018). NI is the most deprived UK country but has the least relative numbers of children in care, therefore country-level deprivation does not adequately explain differences in child social care use (Mason *et al.*, Accepted 2020). Interestingly, as discussed in section 1.1, NI has less poor housing and fuel poverty than its counterparts; housing in NI could be buffering the effects of deprivation on social care service use. Whilst country-level comparisons provide an interesting 'natural experiment' it is vital that patterns are explored at community level. Firstly, the quality and availability of affordable housing in small areas (e.g. Lower Layer Super Output Areas) should be compared to activity of children's services. Secondly, the socioeconomic make up, including housing situation, of children in need of social care support, looked after and involved in child protection plans or enquiries must be uncovered. To aid the growth of this research area governmental housing surveys must allow for more detailed analysis of housing quality differences by area and the Department of Education must begin recording socio-economic characteristics of families involved in child protection. The Children's Commissioner (2019a) has called for local authorities to 'be required to report the number of children being housed by children's services, just as they are required to do so for children housed by the housing department. Unless the Government begins collecting this data, the Children's Commissioner's Office will use its powers to do so.' Furthermore, child welfare involvement varies hugely by ethnicity in England, thus it is essential that studies examine how racial inequality intersects with other dimensions of this issue (Bywaters *et al.*, 2019).

Research investigating associations between housing deprivation and children's social care is sparse, and almost non-existent in the UK in the past two decades. However, a few studies examining the backgrounds of children in care and on child protection registers have found correlates to overcrowding and housing tenure (Bebbington and Miles, 1989; Sidebotham, Heron and Golding, 2002; Teyhan *et al.*, 2019). Additionally, child welfare service providers and users, when interviewed, identified housing problems, including affordability, overcrowding, and availability of social housing, as driving forces for the increased social support need (Hood *et al.*, 2020). Moreover, US research has highlighted homelessness as a predictor of child welfare service involvement (Park *et al.*, 2004; Culhane *et al.*, 2003; Cowal *et al.*, 2002; Font and Warren, 2013). It is clear that research investigating how housing deprivation influences the likelihood of a child's involvement in UK social care services is imperative.

3.2 Health Care Services

There is a scarcity of research investigating whether housing deprivation increases pressure on healthcare services. The Building Research Establishment estimated that if all significant HHSRS hazards in UK homes were repaired the NHS would save £2.5 billion a year, in first year treatment costs from directly attributable injuries and illness alone (Nicol, Roys and Garrett, 2015). Moreover, it is estimated that the Warm Homes scheme in NI saved the NHS around £13 million between 2001-2008, as a result of fewer children receiving treatment for respiratory conditions, allergies and mental health problems (Katiyo *et al.*, 2017). Considering this economic impact, the total burden of poor housing on the NHS can be assumed to be vast. Shelter (2006a; 2004a) reported an increased frequency of GP and A&E visits among homeless children, however this data is outdated and based on subjective accounts. Notably, Giebel *et al.*, (2019) found housing quality to be predictive of adult A&E attendance in deprived areas of north-west England.



An understanding of how housing quality, availability and affordability alter the use of all child healthcare services, including mental health, is paramount. A study by Rodgers *et al.*, (2018) looked at the impact of various social housing improvements on health services in a large sample of residents of all ages. Housing improvements were associated with fewer emergency hospital admissions, prescribed medications for asthma and GP visits for respiratory problems; the cost saving of housing intervention was totalled at £138 million. Future studies should use similar longitudinal research design to assess the impact of housing improvements on utilisation of health care services by families.

Whilst poor housing may increase demand on health services, it is also important to consider how housing deprivation may influence the dynamics of children's healthcare use. For example, it may be the case that families who frequently move home owing to housing instability or unaffordability have poorer uptake and retention in appropriate health services, and are more likely to use Accident & Emergency (A&E) departments; this can be explained in two major ways. Firstly, families may attend A&E as a first resort for non-emergencies placing an unnecessary strain on acute health care, in addition to a great financial strain on the NHS. In England from 2018-2019 10.8% of A&E attendances were unnecessary; in other words, no treatment was needed, or treatment could have been provided by a pharmacist or GP (NHS Digital, 2019). Secondly, barriers to accessing medical care created by housing may lead to conditions becoming more severe before they are picked up by services. Many children's visits to A&E could be prevented by receiving care from a GP, pharmacist or mental health service at the appropriate time. In future, it is vital that researchers consider that less strain on certain healthcare services may be representative of unmet healthcare need as opposed to good health.

Research Gaps:

- Effect of housing deprivation on the demand of UK children's social care services.
- How housing deprivation alters the use of child healthcare services, including mental health. Does housing deprivation cause families to access healthcare more acutely?

4 Integrating Housing, Health and Welfare Systems

This section discusses whether local authorities and the NHS have a coordinated policy response to concerns that housing may be impacting children's health, safety, and wellbeing. It also considers examples of effective integration between housing, health and social care systems.

It is a legal requirement of local authorities in England to co-operate with 'bodies of any nature who exercise functions or are engaged in activities in relation to children in the authority's area' (Children's Act, 2004). Within a region, local authority housing and social services in addition to the NHS Commissioning Board and clinical commissioning group must work together to protect children's physical health, mental health and emotional wellbeing, and to safeguard them from harm and neglect. Government guidance stresses that shared responsibility and co-operation are critical to the safeguarding of children (HM Government, 2018). Similarly, the Homelessness Act (2002) sets out a requirement for housing departments to co-operate with children's services in cases where a child is not



eligible for assistance or deemed intentionally homeless (Housing Act, 1996b). To what extent these policies are operating in practice lacks clarity.

The Children's Commissioner (2015) in a review of services for low-income families suggested that collaboration between housing services and other agencies was generally insufficient; many families felt that housing services did not consider their wellbeing and support was only available at crisis points. An up-to-date review of multi-agency collaboration across UK local authorities is greatly needed. Notably since 2015, councils in England have taken on new public health duties including the responsibility of health visiting services. Whilst this change had the potential to support greater integration between housing, children's, and health services, dwindling public health funding has instead resulted in service reductions (Royal College of Nursing, 2018). A study should quantify health visitor workforce numbers and assess their potential for providing integrated support for families, particularly those experiencing homelessness. This review could also assess alternative models of support such as Focused Care, which work with households to unpick the chaotic situations that influence their health (Focused Care, undated). Local Safeguarding Partnerships have a statutory requirement to include local authorities, police and clinical commissioning groups, however, housing services do not appear to play a large part in these arrangements. It is important to note that since lack of welfare support and crime, particularly domestic violence, are inextricably linked to housing instability welfare agencies and police are equally crucial to successful collaboration. Dr Chris Hanvey (2019), former chief executive of the Royal College of Paediatrics and Child Health, suggests staff from a range of services are seconded into an integrated workforce. Expansion of multi-agency safeguarding arrangements, to include greater involvement housing services should be piloted and child outcomes measured.

This review has uncovered two examples of how housing and health services are integrated to improve child outcomes. Firstly, Coventry is A *Marmot City* which responded to its high incidence of child accidents with a unifying approach, utilising recommendations from the local safeguarding board and Child Accident Prevention Trust (Child Accident Prevention Trust, 2019). A home safety training course was developed and delivered to staff across agencies, including health visitors, school nurses and housing officers. The involvement of a further charitable organisation allowed for the delivery of 'Idea Factories' to empower parents to better promote child safety. Secondly, The Seasonal Health Intervention Network (SHINE) provides a single point of access for referrals from housing, social, health and voluntary services (Islington Council, undated). A full package of support is available to families across London to overcome fuel poverty including advice, discounts, home visits, debt support, care services, heating and insulation grants, benefit maximisation and fire safety checks. An analysis of the effects of this support on child outcomes is needed. Importantly, more such examples of best practice need to be identified and evidenced in empirical research.

Research Gaps:

- Review of existing integration between different children's support agencies across UK local authorities.
- Number of health visitors and their potential to provide integrated support for families, particularly those experiencing homelessness.
- A piloted expansion of multi-agency safeguarding arrangements to involve housing services and the effect of child outcomes.
- Detailed overview of best practice.

5 Conclusions and Suggestions for Research

Children live in housing that is poor-quality, unaffordable, unstable and overcrowded in large numbers across the United Kingdom. However, specific estimates of how many children experience housing deprivation, and for how long, are limited by the shortcomings of governmental data collection. There is strong evidence for associations between the following: UK housing strain and childhood injury; damp, overcrowding and infection; and damp and asthma morbidity. Research investigating housing's influence on childhood maltreatment and development needs expansion but suggests complex, interrelated associations. Negative housing environments may result in familial chronic stress, a potential central mechanism to conceptualise the various effects on health and development. As this research area expands the housing experiences of families with multiple disadvantages in relation to race, sex or disability should not be ignored. Furthermore, research methods used may be reinforcing existing inequality – this review strongly suggests the use of Participatory Action Research and Emancipatory Action Research methods to empower participants to actively engage in the research process.

Deprivation has been related to an increased demand on health and social care services, and changes to the way these services are used. It is paramount that research explores the impact of housing among children on their involvement in local authority children's services and NHS mental and physical health services. Although it is a legal requirement for housing departments to cooperate with health and social care it is difficult to discern to what extent this integration plays out in practice. Housing and children's health and social care may be operating a push-pull dynamic with significant economic and health costs. Multi-agency safeguarding arrangements may provide existing networks to test better integration within these systems.

The quality and affordability of the housing children live in is a direct result of UK government policy; the damage this policy has had on the health and wellbeing of children was preventable. This review has evidenced that policy decisions to reduce welfare support, decrease affordable housing stock, promote the private rental sector and favour the needs of high-income families undermines the government's responsibility to safeguard children. UK policy decisions have the power to cripple children's chances to lead a happy and healthy life and make scant economic sense in a country which champions a National Health Service free at the point of delivery. UK policy undermines children's health and welfare and the financial stability of local authority and national health services. Conversely, the government's 'everyone in' policy during the COVID-19 outbreak has shown how quickly things can change when the willingness to address the issue is there. It is critical that the government listens to the calls of children who need a safe place to call their home:

“Mum, do you know everybody when they leave school, they go home. Where do I go?” (Shelter, 2016)

“It's not really a home, it's just a room. A home has other rooms... I just so want our own house with no one to share with... Because all my friends have houses it makes me sad that I don't.” (Shelter, 2006a)

“I feel angry... Everything is broken, nothing works.” (Shelter, 2006a)

“I feel sick sometimes... With five people in a [bed]room I feel ill. I can't breathe sometimes and that makes me feel ill. I have to miss school because I have a headache or feel sick.” (Shelter, 2006a)

A strong research base is needed to drive efforts to change policy. Overleaf is a summary of the research suggestions made throughout this review.



Summary of Research Suggestions:

- **Participatory and Emancipatory Action Research** methods should be considered in study design.

How many UK children live in housing deprivation?

Research should quantify:

- How many children live in poor-housing, and for how long, using a metric designed with the health and safety requirements of children in mind.
- The number of children in fuel poverty.
- The extent to which overcrowding disproportionately affects children.
- The conditions of UK temporary accommodation for children.
- How many children are rehoused by children's services, and the accommodation provided.
- The numbers of homeless parents labelled as 'single' by local authorities and the effect this has on family reunification.

Family Experiences

Research should collect families' lived experiences of:

- Poor-quality accommodation, including reporting hazards and the HHSRS system.
- Housing affordability.
- Hidden homelessness.
- Inequality within the housing system, including gender, race and disability.

Health and Welfare Research

Much more research investigating the influence of housing on health, safety and wellbeing is needed including analysis of:

1. Paediatric **injury** risk alongside UK legislative framework, and the development of a more child-appropriate system for injury prevention.
2. Impact of housing deprivation on child **infection** rate.
3. The numbers of children with **asthma** living in poor-quality housing, their health outcomes, and the validity of housing intervention as a treatment.
4. How housing affordability, condition, and homelessness affect **child maltreatment** risk.
5. Influence of housing environment on **physical development**, particularly deformational plagiocephaly ('buggy babies').
6. Effect of specific housing conditions and **cognitive development**.
7. How housing quality and affordability impact **emotional wellbeing**, using child-informed measures.
8. Housing environment and chronic **stress**.

Health and Social Care Services

Research should discern:

- The effect of housing quality, affordability and availability on access to and retention in children's health and social services.

Integration of Housing, Health and Welfare Systems

Research should assess to what extent integration between local authority agencies exists including:

- Best practice.
- Review of the health visitor workforce, and alternatives.
- Potential to expand multi-agency safeguarding arrangements to include greater involvement of housing services.



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