Interconnected factors influencing family health and wellbeing in overcrowded homes and points for intervention – A qualitative study in London

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A R T I C L E   I N F O

A B S T R A C T

Household overcrowding contributes to poor familial health/wellbeing and is driven by a shortage of affordable housing. Despite being defined by spatial constraints, the other factors influencing and exacerbating over-crowding's impact remain underexplored. Through focus groups and interviews with London-based professionals working with overcrowded families ($n = 22$) and residents with lived experience ($n = 25$), using thematic analysis we identify aspects of living in overcrowded conditions which affect health/wellbeing outcomes framed according to levels within the Social Ecological Model (SEM). Besides lack of space, overcrowding affects health/wellbeing via a complex web of interactions across personal circumstances, housing suitability/quality, acces-sibility of amenities/services, and systemic societal challenges. Addressing these factors could improve the lives of families in overcrowded homes, particularly when rehousing may not be feasible in the short term. Household overcrowding contributes to poor familial health/wellbeing and is driven by a shortage of affordable housing. Despite being defined by spatial constraints, the other factors influencing and exacerbating overcrowding's impact remain underexplored. Through focus groups and interviews with London-based professionals working with overcrowded families ($n = 22$) and residents with lived experience ($n = 25$), using thematic analysis we identify aspects of living in overcrowded conditions which affect health/wellbeing outcomes framed according to levels within the Social Ecological Model (SEM). Besides lack of space, overcrowding affects health/wellbeing via a complex web of interactions across personal circumstances, housing suitability/quality, accessibility of ame-nities/services, and systemic societal challenges. Addressing these factors could improve the lives of families in overcrowded homes, particularly when rehousing may not be feasible in the short term.

Introduction

Housing is widely accepted as a determinant of health, but the mechanisms by which it affects health are complex and less well-understood ((World Health Organization (WHO) 2008; Marmot, 2010; O Solar and Irwin, 2010)). Complexities arise because housing is not just a physical structure; it interacts with its surroundings to influence health. For instance, the relationship between housing and health cuts across affordability, quality, security/stability, and neighbourhood (Marquez et al., 2019). Identifying factors influencing health within physical and social contexts can help explore the impact of housing is-sues like overcrowding and inform solutions (Marcia et al., 2011).

Household overcrowding is a growing problem in Europe (Eurostat 2024). In England, the highest prevalence of overcrowding is in London (Wendy Wilson, 2023). Overcrowding disproportionately affects Black, Pakistani, or Bangladeshi ethnicities, certain religious groups, families with children, and individuals with disabilities (Wendy Wilson, 2023). Overcrowding occurrence also varies by tenure, with higher rates among social and private renters (9 % and 7 % of households) than those owning their own home (1 %) (Wendy Wilson, 2023). Individuals living

in overcrowded homes may be more vulnerable to poorer health outcomes due to various socio-economic and environmental factors (Cable and Sacker, 2019).

There are well-documented connections between overcrowding and its negative effects on family health and wellbeing (S Harry et al., 2018). Studies demonstrate a direct association between overcrowding and adverse health outcomes (e.g., increased risk of infectious disease transmission and poor mental health) and early childhood development, including educational attainment (S Harry et al., 2018; Evans et al., 2002; Jaime Ruiz-Tagle, 2022; Lorentzen et al., 2023; Mah et al., 2023). These negative effects in childhood can persist into adulthood, impacting future outcomes (Lopoo and London, 2016; Cermakova and Csajbók, 2023). The COVID-19 pandemic highlighted the need to recognise overcrowding as a key health determinant, as crowded living conditions increased the risk of virus transmission and related deaths (Herath et al., 2024; Holt et al., 2022; Harris, 2020; Zhang et al., 2022). Many families living in crowded homes will not be able to be rehoused quickly, exposing them to potentially long-lasting impacts if their situation is not improved.

Overcrowding is variably described but definitions commonly encompass a lack of sufficient space or rooms for daily living, when a dwelling is too small to accommodate the number of people in a household (World Health Organization (WHO) 2018). Some definitions of overcrowding consider the number of bedrooms or living spaces, as well as factors like gender and age, to address privacy concerns. Overcrowding is often identified using metrics that capture the number of people exceeding the available rooms or space in a household (Kearns, 2022). In the UK, local authorities use variants of the 'bedroom standard' to identify overcrowded households (Zhang et al., 2022). This standard calculates the required number of bedrooms based on the household's composition (members age and gender) and relationships. If the requirement is not met, a household is considered overcrowded (Wendy Wilson, 2023).

Our previous research indicates that simply measuring the spatial availability in homes overlooks additional factors that co-occur in overcrowded circumstances that could exacerbate or mitigate the effects of overcrowding on family health and wellbeing (Ucci et al., 2022). For instance, accessible local green spaces may help mitigate the health and wellbeing impacts of overcrowding by providing families with additional space for children to play. Conversely, factors like poorly maintained or low-quality housing can worsen these effects (National Institute for Health and Care Research (NIHR) 2024). These factors may also persist and interact across different levels, including the neighbourhood, community, and society, contributing to poor family health. Given that housing demand is continuing to outstrip supply, many children will grow up in overcrowded housing. Understanding what can be improved without moving homes can help alleviate the impact of overcrowding on wellbeing for those unable to relocate. This is especially relevant for London households seeking local authority housing assistance, as most will not be rehoused directly through the council (Reast et al., 2024).

This study aimed to characterise how household overcrowding can intersect with other features of the family, home, and neighbourhood to affect the families' health and wellbeing, with the goal of identifying levers for interventions addressing the detrimental impacts of overcrowding when moving homes is not a feasible short-term solution. This paper is a qualitative exploration of the factors – over and above numbers of people per room – that affect health and wellbeing of families living in overcrowded homes.

Methods

A qualitative study was conducted in two overcrowded London boroughs using focus groups and interviews, with co-production principles integrated throughout, as detailed in Appendix A. Ethical approval was obtained from University College London (UCL) Research Ethics Committee (2037/008). Written consent was obtained before data collection commenced and lived experience participants were asked to complete an optional form to record demographic information.

Participants and recruitment

Participants were over 18 years old and either i) self-identified as living in an overcrowded home in Borough 2 or Borough 1 or ii) worked or volunteered with overcrowded families in Borough 2 or Borough 1 (identified as 'professionals'). Participants were recruited using purposive and snowball sampling techniques, via academic and council networks, social networks, e-bulletin boards, resident newsletters/ WhatsApp groups, flyers, and engagement activities.

We initially planned to conduct five focus groups, each with four to eight participants, along with a small number of interviews (<5) for individuals unable to participate in the focus groups. We sought to involve approximately 40 participants to enable us to capture a diverse range of perspectives while maintaining manageable group sizes for meaningful discussion. The inclusion of interviews ensured that we captured experiences from those who could not attend groups for logistical reasons or were not comfortable discussing overcrowding with others.

Data collection

In-person focus groups were conducted in Borough 2. Residents with lived experience and professionals attended separate groups to mitigate the potential for imbalanced power dynamics. Individual interviews (in-person, online using MS Teams, or by telephone) were employed in Borough 1 due to scheduling difficulties for focus groups. Participant characteristics were obtained using a short form and with supplementary data extracted from transcripts.

A semi-structured guide was used at both sites (Appendix B). The guide featured two introductory questions to foster rapport and familiarity with the interview structure and gather information about participants' housing situations or job roles. The guide explored participants' definitions of overcrowding and how it affected their lives and activities. Finally, participants discussed two hypothetical vignettes of families experiencing overcrowding, allowing them to share their views without revealing personal circumstances and providing a basis for comparison across groups and interviews (Appendix C). The vignettes were developed collaboratively with Voluntary Sector Services (VCS) partners and individuals with lived experience of overcrowding. They were inspired by real stories collected from the two boroughs and were adapted to protect identities. Each vignette depicted a family with a bedroom standard occupancy rating of -2 or lower, indicating severe overcrowding. Key factors affecting these families (e.g., lack of storage) described in the vignettes were shared on physical cards. Participants were tasked with discussing/prioritising these factors based on the importance of their effect on health and wellbeing. Interviews and focus groups were recorded using an encrypted audio device and sent for transcription. To maintain confidentiality and anonymity, identifiers were removed from transcripts.

Data analysis

We approached the data analysis in two stages. First, the data was coded deductively with a focus on health and wellbeing impacts. The deductive coding list was informed by frameworks and theories of relevance to housing and health. Members of the research team (EE, LA, MU and JS) identified candidate theories and frameworks from reviews of other studies on housing and health and from the authors' prior work that could help understand the link between housing conditions and their impact on health/wellbeing (O Solar and Irwin, 2010; Centers for Disease Control and Prevention 2024; Bronfenbrenner, 1977; Swope and Hernandez, 2019). We discussed each framework/theory's relevance

according to their alignment with the study's objectives and their fit with data from transcripts.

We performed an initial rapid analysis using field notes to identify key themes, to guide subsequent data analysis (EE, LN, PS, and MOD) (Vindrola-Padro et al., 2022). We then used framework analysis to generate candidate themes (Ritchie and Spencer, 1994). Subsequent analysis focused on identifying and mapping contributing factors and their interrelationships. Two researchers (EE and LN) familiarised themselves with the data, inductively drafting a coding framework based on key participant-raised topics. We divided the transcripts and indexed the data, using double coding on a sample (20 %) to ensure consistency (EE, LN, PS, and MOD).

Theoretical framework

The Social Ecological Model (SEM), which conceptualises how health is influenced by multiple factors, aligned well with our initial interpretations of the data (Ritchie and Spencer, 1994). Building on the SEM, the Centers for Disease Control and Prevention (CDC) developed a four-level model that explores how individual, interpersonal, community, and societal factors collectively influence health (Centers for Disease Control and Prevention 2024). In our study, we use this model to map the factors affecting the health and wellbeing of families in overcrowded homes beyond the number of people per room. Our approach includes an additional level - 'housing' - which considers the factors relating specifically to the home environment (e.g., property layout). We have also integrated individual and interpersonal outcomes to explore family-level factors. We also use the model to identify intervention points at different levels that could mitigate health and wellbeing impacts on families. We structure the results by factors influencing health/wellbeing and related intervention levers at each SEM level (family, housing, community, and societal). We then explore the complex interrelationships between and within these factors and their impact on health/wellbeing outcomes.

Study context

Populations

Borough 1 and Borough 2 are boroughs in East and North London with diverse populations (Office for National Statistics 2022). Both boroughs are ethnically diverse, with over 40 % in Borough 1 and 60 % in Borough 2 coming from global majority ethnic backgrounds. Despite areas of affluence, both boroughs are more deprived than the average for England and Wales. Borough 1 has a high proportion of residents living in social-rented housing (approximately 40 % vs 20 % for England as a whole). However, Borough 2 experiences higher rates of overcrowding (approximately 16 %) compared to Borough 1 (approximately 9 % overall), which though Borough 1 has areas with high concentrations of pockets of overcrowding.

Local social housing allocation policies

In England, local authorities are mandated to produce their own local Housing Allocation Policy which sets out how they prioritise households with the greatest need for social housing and how they will manage overcrowded homes (Ministry of Housing, 2020). Families apply for social housing by registering with local authorities (HM Government 2024). The eligibility criteria vary by council, however, once accepted, individuals generally stay on the register (or 'waiting list') until housed or they opt to withdraw, with duration influenced by housing demand, housing stock, and priority status.

In Borough 1 a points-based system is used to allocate accommodations. Households with a high quantity of points can bid for vacant council or housing association properties. Borough 2 uses a three-level banding system. Applicants in Band 1 are considered the highest priority; overcrowded households with no other qualifying conditions are generally placed in Band 2.

Both councils periodically list available properties, mainly online, enabling residents to bid for specific sizes (e.g., one bedroom, etc.). Families can decline properties they bid on if they are deemed unsuitable. Most people on the housing register/waiting list will not be rehoused through the council and will need to find other ways to improve their living situation.

Results

Participant characteristics

Between October 2023 and January 2024, 47 participants took part in focus groups ($n = 4$) or interviews ($n = 13$), with another 12 taking part in the vignette exercise only. Twenty-five of these were residents (Borough 1 $n = 12$; Borough 2 $n = 13$) (Table 1), and 22 were professionals (Borough 1 $n = 13$; Borough 2 $n = 9$). Professional participants included local authority (LA), public sector, and voluntary and community sector (VCS) organisations (Table 2).

In Borough 1, many residents identified as single parents ($n = 6$). Two residents were living in multigenerational households (including two or more adult generations). Two residents shared that one of their children has a neurodiverse condition, such as Autism. One resident reflected on past experiences of overcrowding and was relocated to a larger property with their family. In Borough 2, two residents reported having neurodiverse children. Several participants mentioned living with extended adult family members (e.g., siblings, parents; multigenerational households), with two parents reporting four adults in their household. Residents did not report whether they were renting in private or social housing sectors, but only social housing was mentioned in discussions.

Factors influencing health and wellbeing, and intervention levers

Participants articulated a range of perceived impacts of overcrowding on health and wellbeing (Appendix D). They discussed how they believed overcrowded conditions interacted with various conditions/factors in both personal circumstances and fictional cases depicted in the vignette exercise. These interactions then changed, intensified, or mitigated impacts on health and wellbeing.

There were four overarching themes (family, housing, community, and societal) identified from the data analysis. Fig. 1 shows them mapped onto an adapted version CDC model of social-ecological theory, shown in concentric circles (Centers for Disease Control and Prevention 2024). Within each were factors (in black text) that contributed to health and wellbeing outcomes for families in overcrowded homes. We identified four potential intervention points or 'levers' (in red) - property suitability, accessibility, repairs, and communication - that could improve wellbeing of families remaining in overcrowded housing.

We first describe briefly how factors at different levels affected overcrowding, supported by a summary table in Appendix E. We then focus on selected outcomes from the domains of physical health, mental health and wellbeing, listed in Appendix D, to illustrate how factors at different levels interacted to affect experiences of overcrowding and the outcomes. We also describe how outcomes could exacerbate each other.

Family-level factors

Family-level factors encompassed characteristics of the members of the household and their interactions that could exacerbate or mitigate effects of overcrowding on health and wellbeing. They included the ages of children, parental relationship status, and family dynamics.

Being a single parent family is one example that was mentioned in our study. They made major trade-offs and concessions on their own wellbeing for other household members. For instance, single parents may sacrifice their bedroom and sleep in the living area to provide their child with privacy from their siblings. Where caregivers could not mitigate the impacts of overcrowding themselves dependent individuals

Table 1

Resident participant characteristics.

		Borough		Total residents (n)	Proportion of total residents (%)
		Borough 1 (*n* = 12)	Borough 2 (*n* = 13)		
Overcrowding status[a]	Overcrowded	6	8	14	56.0
	No/incomplete data[b]	6	3	9	36.0
Gender	Female	7	13	20	80.0
	No data[b]	5	0	5	20.0
Age profile (years)	18–24	0	0	0	0.0
	25–34	1	2	3	12.0
	35–49	5	9	14	56.0
	50–64	2	0	2	8.0
	No data[b]	4	2	6	24.0
Disability status	Disability	5	5	10	40.0
	No disability	3	7	10	40.0
	Prefer not to say	0	1	1	4.0
	No data[b]	4	0	4	16.0
Ethnicity (all groups)	Asian/Asian British	2	6	8	32.0
	Black/Black British	1	7	8	32.0
	Mixed	2	0	2	8.0
	Other	2	0	2	8.0
	No data[b]	5	0	5	20.0
House type	House	1	1	2	8.0
	Flat	6	12	18	72.0
	Bedsit/studio	1	0	1	4.0
	No data[b]	4	1	5	20.0
Number of household occupants	2	1	1	2	8.0
	3	2	0	2	8.0
	4	1	6	7	28.0
	5	0	3	3	12.0
	6	3	1	4	16.0
	7	1	0	1	4.0
	No data[b]	4	2	6	24.0
Number of bedrooms in the home	1	2	2	4	16.0
	2	2	10	12	48.0
	3	1	1	2	8.0
	4	1	0	1	4.0
	No data[b]	4	0	4	16.0

[a] Households occupancy rating according to the bedroom standard, whereby, −1 or less implies that a household's accommodation has fewer bedrooms than required (overcrowded)

[b] When no data were provided, participants could not complete registration forms on mobile devices

Table 2

Roles of professional participants

		Borough		Total participants (n)	Proportion of total (%)
		Borough 1 (*n* = 13)	Borough 2 (*n* = 9)		
Local authority (LA)	Housing	4	0	4	18.0
	Public Health	0	1	1	5.0
	Environmental services	1	0	1	5.0
Public sector	Health and social care services	0	2	2	9.0
Voluntary and community sector (VCS)	Health and social care support services	2	2	4	18.0
	Umbrella organisation[a]	0	1	1	5.0
	Community and cultural associations	6	0	6	27.0
	Housing support/advice	0	2	2	9.0
	No data	0	1	1	5.0

[a] An organisation made up of various VCS organisations, such as faith groups, health services, and other community organisations.

with lower autonomy (e.g., children/elderly) felt the impacts of overcrowding more significantly.

> *"I found [my children] places to study in my room, the living room. I make sure they've all got their own places but obviously at the end of the day I have to turn my living room into a bedroom and you can't watch TV after a certain time and everyone has to sleep and… obviously it affects your life"* (Borough 2 resident 1)

Housing-level factors

The condition and layout of the home were mentioned frequently as factors that can affect experiences of overcrowding and health. Several residents mentioned how insufficient storage made the floor space

cluttered, impacting mental health and creating trip hazards. Residents also shared that insufficient space to store food affected their diet.

Experiences of damp and mould were commonly described by participants. Overcrowding can increase the risk of damp and mould in a home due to many reasons such as higher than anticipated use of washing and laundry facilities. When the presence of damp and mould leads to some areas of the home being unusable, it can exacerbate overcrowding as it effectively means that liveable space is reduced. It is also a health risk, and several participants mentioned its effects on respiratory health.

> *"Overcrowded households are prone to severe damp and mould problems, which is difficult to address unless you move the household to an*
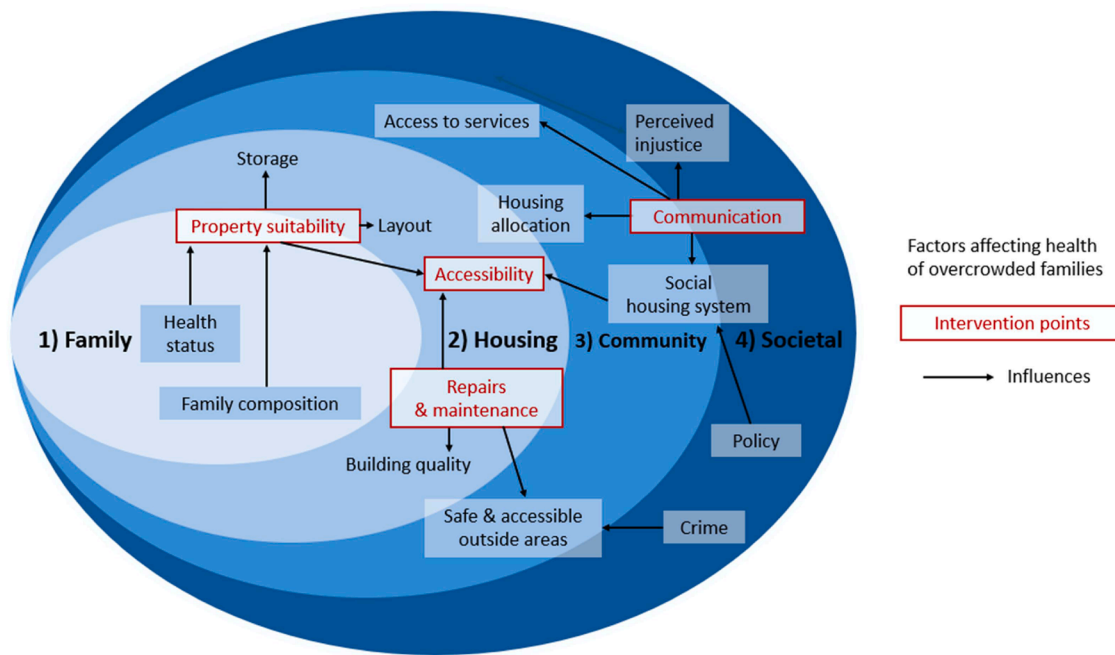
Fig. 1. The factors affecting the health/wellbeing of overcrowded families and intervention points/levers mapped onto the adapted version Centers for Disease Control and Prevention (CDC) model of social-ecological theory (Office for National Statistics 2022)
Caption for visually impaired:
The image shows overlapping coloured circles arranged in concentric layers. Each layer represents different levels of influence on health and well-being, from the individual family level to the broader societal level. The circles are labelled as "Family," "Housing," "Community," and "Societal," reflecting the adapted CDC model of social-ecological theory.
Arrows are used to show how various factors like "Property Suitability," "Accessibility," "Repairs & Maintenance," and "Communication" influence and interact within these layers. The arrows indicate the direction of influence and highlight points where interventions can be applied to improve the health and well-being of overcrowded families.

appropriately sized property, because it's often caused by condensation." (Borough 1 LA 17)

Community-level factors

Assistance from housing and local public services is vital for families in overcrowded homes and offers an opportunity to address the housing challenges which may impact health and wellbeing. Residents in social housing frequently engage with local authorities through the housing allocation system, for instance, while applying for larger homes or requesting repairs. Other public services such as parks and libraries could also give families somewhere else to be, other than the home.

Some residents commented that navigating the housing allocation system was time-consuming and unclear, affecting mental health. They noted they would value accessible support for housing reallocation and other housing services.

"The amount of people I have coming saying, oh, so they've given me a piece of paper I need to do, but how do I access it? […] Like is there a person who speaks their language can teach them, okay, you've been given this, let's come for a session, five minutes it will take me to show you this idea online." (Borough 2 VCS 2)

Relationships between and within levels and health/wellbeing outcomes

1. Mental health: depression

We learnt that multiple factors contributed to poor health and wellbeing outcomes for families living in overcrowded homes. Fig. 2 illustrates how an overcrowded home environment directly and indirectly affected mental health of adult family members using the outcome, depression, as an example.

Many participants reported they had experienced depression or related symptoms, such as low mood or distress, which were directly related to their overcrowding situation. They expressed feelings of hopelessness about being rehoused and frustration with the housing allocation system policies, and their communication.

"When you email the council back and forth and then they just say, "You are not a priority to us because there's up to five people living in one bedroom." then obviously you automatically feel there is just no hope, there is just no light at the end of the tunnel so that is what started the whole depression." (Borough 1 resident 21)

One resident felt their depression began after their family circumstance changed, which was made worse by the long wait and ongoing bidding for available council properties.

"I started bidding from three years ago so before I had my son. I started bidding from when I was pregnant so that's why it hit me, that's where I got the depression knowing that he had hit two years and was still here." (Borough 1 resident 20)

Housing allocation policies exacerbated feelings of social stigma. Individuals felt trapped in environments that lacked adequate space and quality that differed from societal norms. One resident described that their children noticed their living situation was different from the idealised homes shown on TV and this caused distress.

"Like it's not normal living, like what the world claims as normal, if you know what I mean. Like when my daughter watches certain things and she's like, "Oh look at their bedroom," and, "Oh they've got their own wardrobe," and, "Oh the wardrobe is actually in their bedroom." Like, yes, ours is like- or, "Oh the fridge is actually in the kitchen, ours is in the living room."" (Borough 1 resident 23)
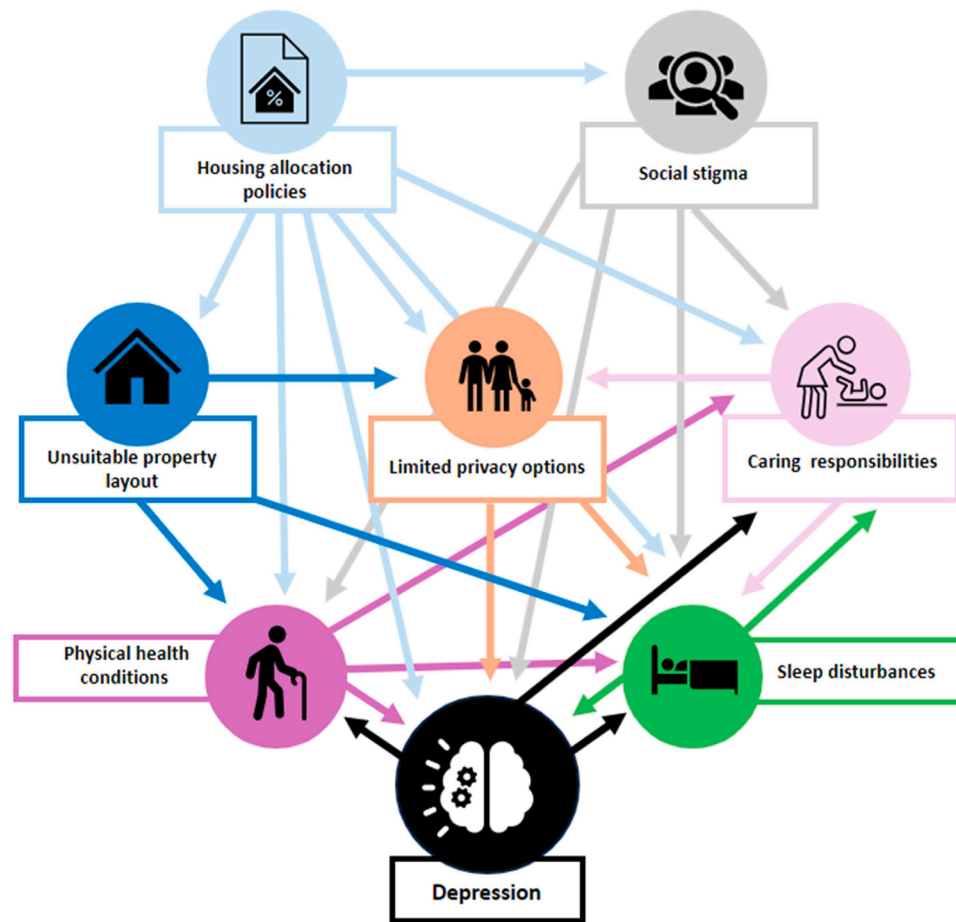
Fig. 2. An example of how living in an overcrowded home can contribute to poor mental health, using depression as an example

Caption for visually impaired: This image features eight circles arranged in a seven-sided shape, with one circle in the centre. Each circle represents a different factor contributing to poor mental health, such as depression, in individuals living in overcrowded homes. The factors include:

- Housing allocation policies
- Social stigma
- Unsuitable property layouts
- Limited privacy options
- Caring responsibilities
- Physical health conditions
- Sleep disturbances

Arrows connect various circles, illustrating how these factors are interrelated and influence each other. The connections show the complex interactions between these elements and their combined effect on mental health in overcrowded living conditions.

Families assigned homes with inadequate room numbers or impractical layouts that do not meet their needs (for privacy, accessibility, etc.) noted that this contributed to worsened physical and mental health.

> *"There was no space for any kind of disabled walker facilities for her, as well because the flat was very, very tiny, and full of, you can imagine, if three of us live there, then the space for furniture and other things at home, it was basically taking even more space of that flat."* (Borough 1 resident 16)

However, residents' mental health was not just directly linked to their experience of these systems, but also through its impact on other aspects of their living situation and physical health. Depression and physical health conditions were interlinked, exacerbating each other in

a cyclical manner. Participants acknowledged that worsening physical and mental health were intrinsically linked and self-perpetuating.

> *"It's altogether just too much and it causes more problems, stress, you know, develop diabetes and other long-term health conditions which are… you know, research shows that stress can cause those things to onset."* (Borough 2 resident 1)

Residents reported that lack of privacy and disrupted sleep worsened their mental health and limited their ability to manage it effectively. These challenges exacerbated one another. For example, not having privacy affected sleep, which made caring responsibilities more overwhelming, while caring responsibilities limited access to sleep and privacy. They could be compounded by caring responsibilities that added to the physical and emotional burden, further straining mental and

physical health.

> *"[living in overcrowding] just becomes a lot more physically draining as well because […] when [my son] was crawling I had to be on top of him throughout the day the entire time. [..] that's why [mothers] become so mentally drained because we don't have that time. […], we actually lose time because we have to be so worried about our children and having to make sure they are okay and safe."* (Borough 1 resident 20)

2. Physical health: Pre-existing conditions

Overcrowded homes also directly and indirectly affected the physical health of family members. Here we demonstrate this using the outcome of exacerbated pre-existing health conditions as an example.

Family-level factors, such as living with individuals who are neurodiverse in overcrowded accommodations, affected the health and wellbeing of other family members. A VCS individual described a family struggling to manage their autistic child's aggression and outbursts targeted at other family members, with the child's needs unmet in their current living situation.

We also observed other interactions with housing-level factors, where people with existing conditions or mobility issues describe unmet needs for safe storage space for medication and room for a wheelchair. In the case of neurodiverse individuals, there was also a need for storage for sensory toys to support development.

> *"My son, I told you he's autistic, so I can't have a lot of sensory toys that he needs for his development because I just don't have the space. And there's a lot of times that I've had to get rid of toys because I just don't have the space. They don't have a lot of space to be able to play, you know."* (Borough 1 resident 26)

While community-level factors, such as access to community services or greenspace, were seen as positive, we heard that for those with pre-existing health conditions like mobility problems, maintenance issues, such as broken lifts, can trap them in their homes, preventing them from benefiting from these resources and meant people needed to spend even more time in their overcrowded situations. One resident with an autistic child described the lack of handrails on the stairs to her flat, making it unsafe and difficult to leave her home, along with the negative experiences she faced when attempting to get the council to address the issue. This meant that the family were often inside their overcrowded home, unable to navigate the stairs safely, and left feeling isolated and unsupported as they struggled to find a resolution to their concerns.

Residents reported that when they felt societal-level factors like policies on accessibility, safety, or maintenance were ignored, it could contribute to worsening physical and mental wellbeing over time.

3. Wellbeing: Family relationships

There were multiple examples of how family relationships were affected by living very close to each other in overcrowded homes. At its most severe, overcrowding could make women more vulnerable to unsafe relationships and domestic abuse. The attempt to protect children or remove oneself from a dangerous situation could even further limit the family's space in the home.

> *"Domestic abuse […] can be really challenging for a number of reasons, [..] if we do have a partner who is abusive, and for example, a woman with children who is trying to protect her children, and if he is dominating the space, it can lead either to limited places of safety for her, or, […] having to kind of increase overcrowding even more because she has to [..] occupy a really confined space with her children, if he is threatening to her and she can't enter certain rooms."* (Borough 1 LA 17)

There were examples from parents and staff of how living with little privacy affected children, from inappropriate exposure to parents' sexual activity in the home. Participants also described how overcrowding affected their capacity to ability to form and maintain positive relationships within the family. In many ways, not having sufficient rooms or space limited their opportunities to do core communal activities like cooking a family meal and eating together, although one participant in contrast also described that physical closeness necessitated by overcrowding could support emotional bonding.

> *"Children very sexually aware because could hear parents or were in the room at the time"* … *"The exposure to sexual nature that obviously isn't age appropriate."* (Borough 2 VCS 1)

> *"I have a very close relationship with my son, a bond, so I don't know if maybe it would be different if we didn't live in such a close, tight space"* (Borough 1 resident 18)

At the household-level, parents made efforts to reconfigure their environment to mitigate effects on children, and to seek opportunities to give them space and privacy, often at the expense of their own wellbeing. They experienced distress when those efforts were not effective and empathised with the frustration arising from overcrowding expressed by their children.

> *"I found [my children] places to study in my room, the living room. I make sure they've all got their own places but obviously at the end of the day I have to turn my living room into a bedroom and you can't watch TV after a certain time and everyone has to sleep and… obviously it affects your life."* (Borough 2 resident 1)

> *"[My son] also had a time when he felt frustrated, when he started shouting that we didn't have enough space, that he doesn't have his own room, that he doesn't want to live there. So when you see a 13 year old child like that, well, you can see this is a very, very severe frustration. It's very real, you don't want to see any child tell you that he doesn't want to be there, in your house or flat at that time."* (Borough 1 resident 16)

Community and social networks could provide relief from overcrowding by offering additional space or sharing caregiving responsibilities. However, social support was not always possible if individuals were geographically distant, and some parents became isolated because they felt unable to host friends due to feelings of stigma and shame about the home environment.

> *"I'm grateful I do have a good support bubble, my family live close so I obviously go and have sleepovers at my mum's, have sleepovers over at my sister's."* (Borough 1 resident 20)

> "*It becomes very lonely because where I don't feel comfortable with people coming, and like I said to you I don't have much support, so it gets very lonely, I find, for me, in the home. Because I don't have any outside- With anyone else, apart from being in the home, because it's so small and I don't want people coming around.*" (Borough 1 resident 26)

> "*I feel really embarrassed and […] I don't feel okay anyone seeing how we have to live.*" (Borough 1 resident 20)

There was also some evidence of potentially harmful spillover effects of household overcrowding to the community-level. Staff gave examples of young adults 'hanging around' outside because of a lack of space in the home. The presence of groups of young people outside led to perceptions and experiences of antisocial behaviour, making communal areas feel threatening to other residents.

> *"They're all cramped and living on top of one another and then you put a small playground down, that playground is not lasting that long because all these kids have got no space in the house, they're all hanging outside, you know, and they all got nothing else to do and they're damaging those*

things…their main issue is around sort of anti-social behaviour around neighbours 'cause that just makes where they are more claustrophobic and like, you know they can't escape." (Borough 2 VCS 2)

Variations across methods, borough, and participant perspectives

There were differences between the data collected in the general discussion (individual or group) and the discussion of the vignettes. The vignettes-focused discussion on specifics, e.g. family- and societal-level factors like health status and money and jobs (Vignette 1), and housing-level factors such as layout to support study and play (Vignette 2). Language (e.g., lack of alternative translation from English) consistently ranked lowest priority in the vignette exercises but emerged as a significant issue in interviews, where participants stressed the importance of communication and the need for translated materials as key community-level factors.

All themes were raised across both boroughs, though some were more frequently reported in one borough than another at the societal-level. For example, residents in Borough 1 were more likely to report stigma as a challenge than those in Borough 2, perhaps because overcrowding is more prevalent and therefore more normalised in Borough 2. Additionally, housing allocation policies differed, which might have affected how residents sought to alleviate their situations; Borough 1 residents focused on gaining more points for housing re-allocation, while Borough 2 residents were concerned with their place due to a banded scheme. However, residents in both boroughs believed that housing allocation processes could be more clearly communicated by local authorities.

Individuals participating from a lived experience perspective sometimes described different outcomes to individuals coming from a professional perspective. For example, professionals highlighted domestic abuse as a significant factor impacting health in overcrowded homes, a concern not mentioned by those with lived experience. In contrast, participants with lived experience more frequently reported negative interactions with housing and other local public services, as well as experiences of social stigma.

Discussion

Key findings

Our study illustrates how multiple factors—from individual to societal levels—interact and influence the impacts of living in overcrowded homes on family health and wellbeing. It highlights the complex relationships between these factors and how these interactions can further exacerbate the challenges families face. We also identified multiple intervention points that may help inform the development of targeted interventions to improve outcomes for families experiencing overcrowding, particularly when re-housing is not a feasible option in the short term.

Strengths and limitations

Whilst evidence on the health and wellbeing impacts of overcrowding already exists, most studies focus on selected outcomes or determinants highlighting the need for a more comprehensive understanding of these interrelationships. On the other hand, we captured multiple perspectives of the experience of overcrowding, which provided a comprehensive understanding of the complex network of factors influencing health/wellbeing. Our co-production approach, involving a team of a resident representative, community researchers, and VCS

researchers, significantly influenced the research design and process. It also helped us recruit participants and gather their views on what could be an emotional and distressing topic.

Data were collected in two London boroughs which enabled comparisons across these contexts. The study was limited in narrow geographic reach; thus, findings may not be generalisable to other overcrowded areas outside of London. Differences between the boroughs may also stem from methodological variations (interviews vs. focus groups). The depth and disclosure of information were greater in interviews, whilst the focus groups prompted varied discussions between participants in different situations.

Comparison with other literature

The health and wellbeing impacts observed in our study aligned with international findings (S Harry et al., 2018), and the complex relationship between mental health, physical health, and environment is widely acknowledged. In contrast to studies reporting the higher prevalence or additional burdens of managing viral illnesses (respiratory or gastrointestinal) (Herath et al., 2024; Holt et al., 2022; Rotheram et al., 2021; Parkes and Gore, 2024), these were rarely mentioned in our study. However, the additional burden on caregivers in overcrowded settings did emerge strongly (Schulz and Sherwood, 2008).

Participants' experiences were like those described in other literature on the topic. For example, people with disabilities or health conditions face challenges of overcrowding due to inaccessible environments—including neighbourhoods (Saugeres and Saugeres, 2010; Ho et al., 2007; Grieiman et al., 2022). Our findings align with numerous studies linking poor housing quality to family health and wellbeing (Rolfe et al., 2020; Lee, 2024; Evans et al., 2001; Baker et al., 2016; Holding et al., 2020). Although overcrowding does not directly cause poor housing conditions, having more occupants in a home than it was designed to accommodate may be associated with conditions e.g., increased moisture, that affect home quality (Lorentzen et al., 2022). Our findings emphasise the importance of providing quality homes, prompt repairs, and efficient housing support (Noah and Durst, 2014).

Studies highlight the wider built environment's role in mitigating poor health (Ricardo Codinhoto et al., 2009). We expected community/outdoor areas and greenspace around the home to reduce overcrowding's impact on families. Indeed, residents experiencing overcrowding reported that exploring the local area could help their wellbeing, particularly their mental health. Having their own garden or private space was not reported as a major priority, but many residents expressed difficulties in access and concerns about the safety of communal spaces. This suggests that improving wellbeing requires more than just enhancing the surrounding community and neighbourhood areas.

Recommendations for research, policy, and practice

There is an increasing need for bigger affordable homes in many urban areas, to ensure families can continue to live within them. However, increasing the supply of affordable homes in the short term may be unfeasible where housing demands exceed supply and availability. Therefore, residents often remain in unsuitable housing for extended periods, further impacting their health and wellbeing. In addition to the ethical implications of ignoring these impacts, an unhealthy population creates more challenges for healthcare, employment rates, and the provision of appropriate housing support in the future. A comprehensive, holistic approach across family, housing, and community levels is critical for local public services to consider supporting families living in overcrowding (Table 3). While evidence is sparse, some promising

Table 3
Recommendations for research, policy, and practice.

Housing-level-factors: Living environments for families
○ Prioritise prompt repairs and maintenance to overcrowded homes
○ Collect and use information on residents' disabilities/pre-existing health conditions to implement accessibility-related modifications in the home and wider building
Community-level-factors: Investment
○ Improve availability and safety of community indoor and outdoor facilities and amenities in areas with high household overcrowding
○ Consider perceived safety and accessibility as well as location and quality
Societal-level-factors: Local housing policies and communication
○ Review the flexibility of local housing allocation criteria to prioritise matching families with suitable properties based on their distinct needs and circumstances (considering additional factors e.g., pre-existing health conditions)
○ Provide clear and regular communication with residents who are waiting for social housing (e.g., support with housing allocation systems)

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examples from settings outside of England suggest improving the home environment can improve living conditions and perceptions of space (Richter et al., 2023; Hopton and Hunt, 1996), and combining home improvements with improved access to key services outside of the home (e.g. healthcare) (Richter et al., 2023; Bullen et al., 2008) could improve child wellbeing.

Conclusions

Household overcrowding is a growing problem in many urban societies. This study maps the interaction between household overcrowding health and wellbeing impacts across family, home, and neighbourhood factors. It demonstrates how the health effects of living in overcrowded housing are often worsened by poor housing conditions and strained family relationships. The impacts may be somewhat mitigated by improving access to community facilities and clear, consistent communication on housing eligibility and processes.

To improve the lives of families in overcrowded homes, especially when rehousing is not feasible in the short term, the focus should be on enhancing living environments, investing in communities and local amenities, and refining local housing policies and communication. Further research is needed on cross-disciplinary interventions to support family health and wellbeing for individuals who continue to live in overcrowded homes.

Data statement

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Ethical approval

Ethical approval was obtained from University College London (UCL) Research Ethics Committee (2037/008). Written consent was obtained before data collection commenced, and lived experience participants were asked to complete an optional form to record demographic information.

CRediT authorship contribution statement

Elizabeth Rose Eveleigh: Writing – review & editing, Writing – original draft, Visualization, Validation, Project administration, Methodology, Investigation, Formal analysis, Data curation. **Laura Nixon:** Writing – review & editing, Writing – original draft, Validation, Project administration, Methodology, Investigation, Formal analysis, Data curation. **Mathilda O'Donoghue:** Writing – review & editing, Validation, Methodology, Investigation, Formal analysis. **Pratima Singh:** Writing – review & editing, Validation, Methodology, Investigation, Formal analysis. **Rose McDonald:** Validation. **Marcella Ucci:** Writing – review & editing, Validation, Supervision, Resources, Methodology, Funding acquisition, Conceptualization. **Jessica Sheringham:** Writing – review & editing, Validation, Supervision, Resources, Methodology, Funding acquisition, Conceptualization.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Jessica Sheringham reports financial support and article publishing charges were provided by National Institute for Health Research. Jessica Sheringham reports financial support was provided by UK Research and Innovation Medical Research Council. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. The use of co-production guiding principles in qualitative research involving individuals with lived experience (Islam et al., 2022)

Co-production principle	Example(s) in the present research
Sharing of power	○ Lived experience partners in Borough 1 were invited to participate in the research decision-making process throughout, having received initial training in research methods at the start of the project ○ All research decisions were made transparently and collectively, allowing every team member, including those contributing with lived experience, to provide feedback and reflect on the process ○ Every document, from flyers to dissemination posters, were designed with accessibility in mind, ensuring flexibility and suitability for both the research team and participants
Including all perspectives and skills	○ To embrace a wide range and diverse perspectives and skills to ensure these are represented in the project, the research lead to the field team was dedicated to including every perspective whether it was designing the vignettes or deciding who would be the audience and why
Respecting and valuing knowledge and lived experience	○ The vignettes specifically were informed by individuals with lived experience of household overcrowding to make them more realistic and appropriate for participants, aiming to resemble their own experiences
Reciprocal benefits for all	○ Giving vouchers as a thank-you and respecting participants' time was valued by the community but often seen as a tick-box exercise. Keeping that in mind, the field team was consistently finding ways to keep the trust of the community ○ Despite the challenge of maintaining this principle due to the complexity of the research theme and the long-term vision of influencing policy, the research team ensured findings were shared with policymakers ○ The research team supported the communities in both boroughs through public events, sharing signposting leaflets (a key finding where participants lacked direction), inviting advisory teams after group exercises
Going to communities and not expecting them to come to you	○ Data collection were conducted in locations nearby residents to connect with them in their own environments
Working flexibly	○ We adapted research activities to accommodate both face-to-face and online formats, allowing for flexibility to combine digital options with in-person activities, especially after challenges in recruiting participants for an in-person group in one of the boroughs
Appropriate terminology and information	○ Recruitment information and findings posters were carefully designed with the audience in mind, avoiding jargon and ensuring communities had timely access to clear, pictorial information addressing language needs ○ With community organisation support, the research team designed and implemented research activities in preferred locations and times, using accessible language, informal setups, relevant stories, and connections with advisory teams
Building and maintaining long-term relationships	○ The field team engaged directly with the community, fostering relationships and addressing questions while managing expectations ○ To keep the long-term relation team tried to link all the participants with the community organisation's advice team and the community organisation discussed and took views in every step of the research ○ An in-person information sharing event was arranged, to give participants the opportunity to respond to the findings, and – on the advice of a resident advisor, speakers from the local councils attended to signpost residents to help or address their problems if possible at the time
Adequate resources	○ The researchers and community organisation partners on this project were funded for their involvement in the project ○ On the advice of community and voluntary organisations, resources were allocated to address barriers to participation e.g. for caring responsibilities, taxis for those with mobility impairments, interpreters to enable data collection to take place in other languages than English ○ Participants with lived experience were gifted £25 for taking part which is recommended by the NIHR as a guide/benchmark for taking part in focus group research and nutritious food was provided during the sessions that participants could take away

Appendix B. Topic guide

Overview
- Planning and set up (prior to sessions)
- Introduction to group and housekeeping
- Initial information
- Topic 1: What does household overcrowding mean to you
- Topic 2: How can living in overcrowded housing affect people's lives/activities?
- Topic 3: Introducing scenarios of overcrowding situations

Planning and set up
- Test equipment (e.g., recorder)
- Print consent and demographics forms
- Purchase/organise lunch/refreshments and any equipment on the list below
- Set up flip chart (is one available at UCL)
- Design signage and directions for participants to locate session
- Organise tables etc. at the community centre
- Organise interpreters' attendance

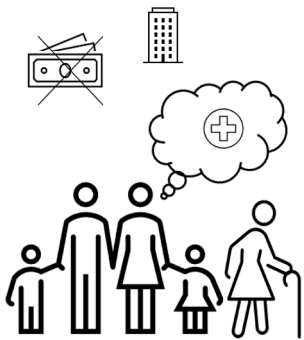| Equipment |
|---|
| - Pens/pencils |
| - Consent form (translated) |
| - Refreshments/ lunch |
| - Recorder (for transcription) |
| - Flip chart for noting down opinions |
| - Post-it notes- if individuals do not wish to provide details verbally |
| - Vouchers |
| - Signage for sessions and directions (via email?) |
| - Soft play area toys |
| - Note pad for moderators/researchers |
| - Leaflet/information on housing help and advice |

Appendix C. The vignette exercise presenting participants presenting two hypothetical scenarios of families experiencing household overcrowding

Narrative 1: Ayesha's story

Ayesha, Zane and their two children live in a one-bedroom council flat. They moved in six years ago when Ayesha was pregnant with their first child.

Ayesha has chronic lower back pain. Struggling to work due to her condition, she relies on Zane, who is currently unemployed, to care for their son and daughter (5 and 3 years). Their flat on the 3rd floor means that they have to share a room with their children, and their home feels even smaller since her mother-in-law moved in and they had to start using their shared space as bedroom. A broken lift makes it hard for Ayesha and her family to enter and exit the flat. Their son has autism which is often triggered by loud noises from other flats. Recent outbursts against his younger sister mean that she worries about them all sharing a room, but there is nowhere else for him to sleep.


EXAMPLE 1: Ayesha's Story

- 2 parents
- 2 young kids (boy + girl)
- 1 elderly
- 3 bedrooms
- 3rd Floor
- Broken lift
- Unsafe shared garden
- No job
- Chronic pain
- Developmental disability

Narrative 2: Maria and Antoni's story

Maria and Antoni live in a two-bedroom flat with their four children. They share their room with their two-year-old son, and their three daughters (ages 10, 8, 4) share one room. Eight-year-old Julia has bad asthma that is getting worse because of the mould developing in their bedroom. The mould gets worse because the family have no space to dry washing other than in the bedrooms. Both parents work from home so the shared space must be used as two offices, a dining room, kitchen, play area and storage for clothes and toys. Now that Anna (age 10) is about to start secondary school she needs more space to do her homework. They want to let the kids go outside to play, but Maria is scared they will get hurt because it is covered in broken glass and needles. The family argue a lot because of this, and Antoni and Maria's relationship is getting worse.

EXAMPLE 2: Maria and Antoni's Story
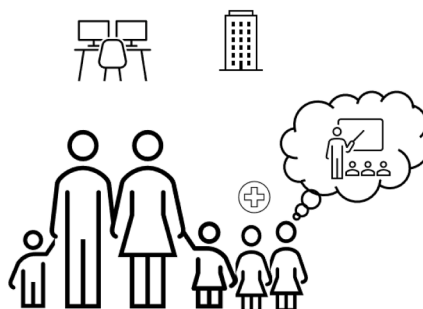
- 2 parents
- 4 young kids (boy + 3 girls)
- 2 bedrooms
- Home working
- Chronic condition
- Street unsafe for play
- Family conflict

Appendix D. The perceived impacts of overcrowding on health and wellbeing

Impact on health/wellbeing	Example quote(s)
Physical health	
Breathing problems/asthma	*"[mould is] very, very bad for people who have asthma. Basically, we do not have asthma, but I suffered from a chronic cough, and at some point, that mould caused me to have difficulty breathing when I was going to sleep, blocking my nose, and not able to breath normal as I usually do when I'm going to sleep."* (Borough 1 resident 16) *"Like damp you mean, things like that yes […] with my parents and my niece and nephews, it was just the walls were damp constantly so obviously that's all getting the children coughing and asthma-like symptoms."* (Borough 2 resident 2) *"Yes we, with the service requests we ask them whether there's any specific medical needs or health needs say and I don't know the exact statistics but it's very, very common for [residents] to say, mention things like asthma, bronchitis, yes sort of depression, anxiety. There's lots and lots of physical and mental health issues that we see time and time again with the tenants"* (Borough 1 LA 22)
Physical injury	*"Safety does affect […] us mothers mainly, […] the amount of times I've hurt myself bumping into silly things that you know that I laugh about in the end that you won't really face if you have a big house […] having to measure and know exactly how, what angle you have to move the door, how you have to move to not be hit by it."* (Borough 1 resident 20)
Fatigue/exhaustion	*"[lack of sleep] does have an impact on my wellbeing, how I'm able to function at work, it's the reason I had to change jobs because I could no longer work five days a week because I'm absolutely exhausted, losing weight, they're checking me for all these different medical things and then it's just come down to no, actually, you're just not getting enough rest and sleep."* (Borough 1 resident 25)
Health complications and reduced quality of life (for those with health conditions and/or disabilities)	*"my son, […] he's autistic, so I can't have a lot of sensory toys that he needs for his development because I just don't have the space. And there's a lot of times that I've had to get rid of toys because I just don't have the space."* (Borough 1 resident 26)
Mental health	
Anxiety	*"I do have anxiety and I do get stressed out a lot, then it affects my mood as well. It's hard to explain, but you know when you're home, but you don't feel at home, kind of thing, and it stresses you out, no matter how much I try to organise or try to make it more liveable for me and the kids, it's just impossible. And then it stresses me out and it gives me anxiety and it's just horrible."* (Borough 1 resident 26) *"Yes we, with the service requests we ask them whether there's any specific medical needs or health needs say and I don't know the exact statistics but it's very, very common for [residents] to say, mention things like asthma, bronchitis, yes sort of depression, anxiety. There's lots and lots of physical and mental health issues that we see time and time again with the tenants"* (Borough 1 LA 22)
Stress	*"no matter how much I try to organise or try to make it more liveable for me and the kids, it's just impossible. And then it stresses me out and it gives me anxiety and it's just horrible."* (Borough 1 resident 26)
Depression	*"it leads to depression, [residents] end up on medication […] we get people saying, "Look you know I'm suicidal, I can't cope, I don't know what to do about my children," […] they can't look after their children because the accommodation is so small."* (Borough 2 VCS 27) *"Yes we, with the service requests we ask them whether there's any specific medical needs or health needs say and I don't know the exact statistics but it's very, very common for [residents] to say, mention things like asthma, bronchitis, yes sort of depression, anxiety. There's lots and lots of physical and mental health issues that we see time and time again with the tenants"* (Borough 1 LA 22)
Low mood	*"the parent cannot be happy because if they see the child unhappy, you know, struggling, problems and overcrowding, you will feel somehow guilty that you cannot help them"* (Borough 2 resident 1)
Poor self esteem	*"[overcrowding] does impact your confidence and your day to day, because I feel like some days I look around, I just don't want to do anything because you feel like closed in, you feel depressed, like I can't even- My house is so small and I've got so much inside of it, because there's three people living here, it's hard even for me to decorate. You know, my house, it just depresses me that I can't do anything to the house to change it because it's not big enough to do anything, you know."* (Borough 1 resident 26)

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(*continued*)

Impact on health/wellbeing Physical health	Example quote(s)
Isolation/loneliness	*"[I went from] having friends and family over to not having anyone over anymore […] it's just my mum, she's the only person that comes to help me with my son that I feel comfortable having over and seeing the way I live because I just don't feel comfortable with anybody else."* (Borough 1 resident 21)
Wellbeing	
Work	*"one day had to take a meeting from the kitchen because [..] I think it was during half term, everybody was making noise in […] the living room, they were coming and knocking at my bedroom door so- and because there's a baby gate so I just locked myself in the kitchen, but I had to like stand up for the whole meeting"* (Borough 1 resident 24)
Education	*"even now I feel like there's no space for my children, for their books. My oldest daughter's gone to secondary. There's no space for her books, her study space, a table for the study."* (Borough 2 resident 1)
	"[Overcrowding] impacts your education because then when you're well rested, a quiet study are to revise, to do exams, if you don't have that space you're naturally at a disadvantage based off of your peers." (Borough 2 resident 2)
Cooking and eating	*"I'm not really able to like take time and enjoy it and make like healthy, nutritious meals as often as I would like to, because the majority of the time I just want to get out of the kitchen because it's just depressing."* (Borough 1 resident 18)
Play	*"Living space, they don't have a space to play, to do other things"* (Borough 2 resident 2)
	"You know, my children don't have anywhere to play so it's like the priority, is it my health, do they sacrifice their childhood and their fun times being silent so that I can get that rest or, you know, so it's very, very challenging." (Borough 2 resident 2)
Family and social interactions	*"[My son] also had a time when he felt frustrated, when he started shouting that we didn't have enough space, that he doesn't have his own room, that he doesn't want to live there. So when you see a 13 year old child like that, well, you can see this is a very, very severe frustration. It's very real, you don't want to see any child tell you that he doesn't want to be there, in your house or flat at that time"* (Borough 1 resident 16)

LA; Local authority, VCS; Voluntary and Community Sectors organisations.

Appendix E

Factors Family-level factors	Example quote(s)
Family composition: single parents	*"[managing my mother's caring needs was] connected with many other things regarding overcrowding and mental health and even physical health, because for days, everything was kind of on my shoulders, so the person who had to move the furniture to have access to certain things like a bed or wardrobe. So it was physically very tiring as well"* (Borough 1 resident 16)
	"I found [my children] places to study in my room, the living room. I make sure they've all got their own places but obviously at the end of the day I have to turn my living room into a bedroom and you can't watch TV after a certain time and everyone has to sleep and… obviously it affects your life" (Borough 2 resident 1)
Family composition: age and gender	*"Children very sexually aware because could hear parents or were in the room at the time"* … *"The exposure to sexual nature that obviously isn't age appropriate"* (Borough 2 VCS 1)
Pre-existing health conditions	*"a really classic scenario's where we've got an autistic child who struggles more to live in the same size space than someone without those additional needs."* (Borough 1 VCS 17)
Personal relationships	*"domestic abuse […] can be really challenging for a number of reasons, [..] if we do have a partner who is abusive, and for example, a woman with children who is trying to protect her children, and if he is dominating the space, it can lead either to limited places of safety for her, or, […] having to kind of increase overcrowding even more because she has to [..] occupy a really confined space with her children, if he is threatening to her and she can't enter certain rooms"* (Borough 1 LA 17)
Housing-level factors	
Housing quality (damp/mould, making areas of the home unusable and reducing living space further)	*"overcrowded households are prone to severe damp and mould problems, which is difficult to address unless you move the household to an appropriately sized property, because it's often caused by condensation."* (Borough 1 LA 17)
Property layout	*"It's quite strange, actually, they've made my bathroom bigger than my kitchen, which didn't make sense to me"* (Borough 1 resident 26)
	"if I'm being given a property with an open plan kitchen, I couldn't do it because I've got children. So I have to like be picky on certain things" (Borough 1 resident 24)
Insufficient storage	*"it's very overwhelming because you don't have that sort of section or space to put everything else you have to just deal with the space you have and that's why it becomes overcrowded"* (Borough 1 resident 20)
	"you're basically trying to only have a week and a bit food-worth … I don't have enough space." (Borough 1 resident 25)
Community-level factors	
The housing allocation system: Poor communication and accessibility	*"The amount of people I have coming saying, oh, so they've given me a piece of paper I need to do, but how do I access it? […] Like is there a person who speaks their language can teach them, okay, you've been given this, let's come for a session, five minutes it will take me to show you this idea online."* (Borough 2 VCS 2)
	"You just get fobbed off. It's horrible. And it deflates you as an individual and makes you feel so worthless, like you're not important enough to get that help and support, especially in that type of situation" (Borough 1 resident 26)
Local services	*"I'd spoken to … my GP at that time, explaining what is happening at my house, and what situation I'm living in, and I received very great advice, and loads of support"* (Borough 1 resident 16)
	"I would always try and keep upbeat and say to myself, you live across from the [healthcare facility]. You have everything that you need, doctors, the nursery, all close by." (Borough 1 resident 25)
Societal-level factors	
Social stigma	*"I feel really embarrassed and […] I don't feel okay anyone seeing how we have to live"* (Borough 1 resident 20)
	"…I don't feel comfortable with people coming, and like I said to you I don't have much support, so it gets very lonely, I find, for me, in the home. Because I don't have any outside- With anyone else, apart from being in the home, because it's so small and I don't want people coming around" (Borough 1 resident 26)

(continued)

Factors	Example quote(s)
Family-level factors	
Antisocial behaviour	*"they're all cramped and living on top of one another and then you put a small playground down, that playground is not lasting that long because all these kids have got no space in the house, they're all hanging outside, you know, and they all got nothing else to do and they're damaging those things.* (Borough 2 VCS 2)
Housing policy	*"these licencing schemes from landlords and landlord's associations […] are increasing the rental costs for tenants. […] I think [rental caps] could be quite a good thing within London if we had something like that"* (Borough 1 LA 22)

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