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Review Article

Multigenerational Living and Mental Health Outcomes of Working-Age Adults and Children—A Scoping Systematic Review

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Background: Household compositions can impact health-related outcomes. However, the definition of multigenerational living and its associations with mental health outcomes in adults and children are unclear.
Method: A systematic review was conducted according to PRISMA guidelines. Searches were conducted in Embase, PsycInfo and Medline via OVID, PubMed and the Cochrane Library. Two raters identified 112 reports for full paper reviews and 62 papers for data extraction. Quality ratings and certainty of evidence were assessed, and data were narratively synthesised.
Results: There were 289,071 participants across studies. Ten studies recruited samples of children/young people. The average quality rating was 7.8 (out of 10) and the certainty of evidence was low. Definitions of multigenerational living and associations with mental health outcomes were heterogeneous, indicating the role of moderating factors, and a need for better operationalisation in future research.
Conclusions: Findings have implications for clinical practice when conducting assessments and formulating psychological difficulties. There are further implications for researchers and policymakers responsible for housing and healthcare provision. The broad search strategy and specification of only anxiety and depression in the search strategy are limitations of the review, despite the scoping aims. A consensus definition of multigenerational living could benefit future research.

Keywords: anxiety; depression; mental health; multigenerational living; systematic review

1. Introduction

The proposed association between environmental factors and health-related outcomes is well established by theories such as Maslow's Hierarchy of Needs [1] and the Socio-Ecological Model [2, 3]. Research widely supports that mental health outcomes (encompassing common mental health difficulties such as anxiety and depression to serious and chronic conditions such as psychosis) have social determinants external to the individual affected. For instance, a seminal review of mental health research across the lifespan [4] reports the importance of social and environmental factors from childhood through to adulthood in predicting the presence and severity of mental health symptoms. Subsequently, mental health outcomes have been specifically addressed in Sustainable Development Goals [5, 6], bringing a global awareness to the importance of social and environmental factors on psychological well-being [7].

Due to its association with positive health-related outcomes, adequate housing has been recognised as a fundamental civil right since the Universal Declaration of Human Rights in [8]. A systematic review of housing and mental health research indicates that housing quality, security and satisfaction and housing which connects individuals to their social networks are associated with better mental health outcomes [9]. As such, research to date indicates that housing-related factors affect psychological health through providing shelter, stability and a space for important

interpersonal relationships [10]. Thus, the importance of housing on psychological well-being can be attributed to factors both beyond and within the physical structure of a home. This scoping review focuses on the composition of households, specifically the impact of multigenerational living on mental health outcomes. Other housing-related and sociological factors (e.g., crowding and economic status) will likely be relevant to the discussion when understanding any associations between multigenerational living and mental health outcomes but will not be analysed in this scoping review whereby the research questions explore multigenerational living.

Multigenerational living, sometimes referred to as intergenerational living, is a broad term describing a household where at least two generations of a family coreside, for example, grandparents coresiding with parents and children or a maternal aunt cohabiting with a single mother and child [11]. It is typically contrasted to living alone, cohabiting with a partner or friends or a nuclear family arrangement. Within multigenerational living, there can be further variations in the composition of a household, such as discerning who within the house is the owner or 'householder'. For example, a multigenerational household could comprise older adult householders living with their adult children and grandchildren or working-age adult householders living with parents and children [12]. Given the variations of household compositions which can fall under the term 'multigenerational living', further clarification of how this is operationalised in current research would be beneficial in understanding any associations with health outcomes.

Census records provide data on trends in multigenerational living. A review of the census data in 15 developing countries [13] suggested no overall change in multigenerational living rates but an increase in multigenerational households headed by older compared with younger generations, despite economic development and presumed opportunities for younger generations. In the United Kingdom, census data indicate an increase from 168,000 to 270,000 multifamily households, reflecting a 3% increase in the proportion of overall household numbers [14]. In the United States, the number of children living in multigenerational households (with parents and grandparents) doubled from 5% to 10% between 1980 and 2018 [15]. The COVID-19 pandemic may have added to these trends, as lockdown policies kept families apart and some responded by choosing to cohabit to sustain relational ties. These reports highlight the enduring prevalence of multigenerational living across the globe and pose the question of whether such living arrangements could be a social determinant of health outcomes.

Previous reviews have outlined pragmatic, social, cultural or political reasons for multigenerational living [16]. For example, familial attachments lead to pragmatic motivations and social obligations to provide childcare or care for older adults [17]. Demographic changes such as increased life expectancy influence multigenerational living in addition to changes to working patterns and people meeting life partners and having children later in life [16]. Moreover, financial strains due to economic recessions have contributed to the frequency of multigenerational coresidence, while increased use of technology has made intergenerational connections more salient [18]. Correspondingly, the potential benefits of multigenerational living can be social or economic—providing a solution to financial challenges, difficulties securing independent housing or a lack of social care and childcare provision [19]. Whether these benefits are associated with mental well-being is not established.

Conversely, multigenerational living can also be a source of financial and social stress [20]. Financial stress can occur for older generations living off pensions or working-age generations whose income must support the entire household. Interpersonal conflict can occur as household members negotiate their positions and advocate for their own wants and needs [21, 22]. Caring for older relatives can negatively impact well-being; most research reports negative effects on the mental health of adult and young carers, though the reviews of the topic also highlight a need for more quality studies [23, 24]. Moreover, when multigenerational living occurs in the context of low socioeconomic resources, it can be linked to household crowding, which is considered a risk factor for poorer mental health outcomes [25]. Once again, whether this equates to multigenerational living being a risk factor for poorer mental health is unclear. This is reflected in a recent mapping review of intergenerational interventions, which highlighted a gap in the literature when it comes to exploring mental health outcomes associated with intergenerational connections [26].

Driven by an awareness of the global ageing population [27], existing reviews focus on older adults and have yielded mixed results of the effects of multigenerational living on mental health, physical functioning and life satisfaction [28]. During the COVID-19 pandemic, intergenerational living within the United Kingdom was considered a risk factor for severe COVID-19 infections in older adults, indicating how the effects of household composition can be moderated by external, global factors [29]. For children, longitudinal research suggests lasting benefits to cognitive functioning from living in multigenerational households as a child [30]; however, this does not elucidate the impact of an intergenerational household composition during childhood. Evidence relating to the effects of multigenerational living on the mental health of working-age adults and children is less forthcoming. As such, this scoping review addresses the following questions:

1. How is multigenerational living operationalised and defined in mental health research?
2. What are the most common multigenerational household compositions observed in mental health research?
3. What are the mental health-related outcomes associated with multigenerational living in working-age adults and children?

In this scoping review, multigenerational living is defined as households comprised of two or more adult generations; for example, where a person coresides with a sibling

and family (i.e., multifamily), with their adult children or grandchildren or an aunt coresides with their niece/nephew and great nieces and nephews. It is expected that a number of different terms will have been used in research to refer to multigenerational household compositions. Mental health outcomes are defined as mental health conditions or symptoms operationalised by validated self-report or observational measures or diagnostic scales. The findings have implications for future research into multigenerational family types and social determinants of health, housing-relatedpolicies, and psychological and community-based interventions.

2. Method

This review was registered with the National Institute for Health Research's International Prospective Register of Systematic Reviews on 5th June 2023 (ID: CRD42023431342). There was no primary data collection, and thus, no specific ethical approval was required; however, ethical considerations were given to the appropriate use of data, information governance and transparency in research. The review was completed in line with PRISMA guidelines (PRISMA checklist available as PDF Online Appendix (Available here)) [31].

2.1. Inclusion Criteria. Submitted and published papers were included if meeting the following criteria: (i) observed a sample of working-age adults (age 18+ years) or children, residing in households comprising more than two generations or multiple family units, (ii) measured and reported family type of which one category must be intergenerational household, (iii) measured and reported a mental health outcome and (iv) reported the relationship between intergenerational living and mental health, irrespective of the study methodology. The mental health outcome was required to be an observed or self-reported validated quantitative measure or qualitative report of mental health conditions of symptoms. If a study developed its own measure, it would only be included if the measure were sufficiently tested for its validity and reliability. Though the focus is mostly on common mental health outcomes, others will not be excluded due to the scoping nature of the review. To minimise bias, papers not available in English were translated by the wider research team with fluency in other languages or translated with digital translation software to extract the required information. Grey literature (i.e., unpublished theses and abstracts) was included where there was sufficient detail to extract the number of participants, independent and outcome measures and a report of the relationship between intergenerational living and mental health outcome.

Papers were excluded if the sample did not include working-age adults (age 18–65 years) or young people (under 18), there was no measure or report of participants residing in a multigenerational housing arrangement, there was no reported mental health outcome based on a validated measure, the published work was a review and poster or abstract only with insufficient information to extract. There were no exclusion criteria based on the study methodology, country or setting.

2.2. Literature Search, Screening and Extraction. Searches were undertaken between July and August 2023 on Embase, PsycInfo and Medline via OVID, PubMed and the Cochrane Library for papers published between 1970 and 2023 (full search terms are available in Online Appendix word document). Acknowledging the ambiguity of 'multigenerational living' and the number of terms which may be used to refer to household compositions of multiple generations, synonyms of 'extended', 'joint' and 'intergenerational' were included as search terms. The authors then explored how these terms had been defined within the paper, primarily to address the research questions but also to avoid bias and ensure that the term met the definition being deployed for this review. These searches returned 1550 papers, of which 659 were identified as duplicates by OVID and EndNote software. Two raters (A.J. and D.P.) conducted title and abstract screening on the remaining 891 papers (see Figure 1, PRISMA diagram).

Of the 114 papers eligible for full paper review, 112 full reports were retrieved (for 2 papers, there was no response from the authors). Both raters undertook full paper reviews, resulting in a final 62 papers for data extraction. Reasons for exclusion can be seen in Figure 1. All studies were quantitative. Both raters provided quality ratings and extracted data based on study design, sampling method, country of study, setting, sample size, age of participants, sex of participants, operationalisation of the family type (including definition of intergenerational living if reported), measurement tool for mental health outcome, direction and effect of relationship between intergenerational living and mental health. These data were used for narrative synthesis to identify any patterns in the results. It was noted where any study characteristics were unavailable/missing and reflected in quality scoring.

Quality scores were calculated according to standard quality assessment criteria outlined by Kmet et al. [32]. Using this tool, studies are rated on whether they have met (score of 2), partially met (score of 1) or failed to meet (score of 0) 14 criteria relating to study design, analysis and reporting. Some criteria can be responded to with N/A if not relevant to the study (e.g., allocation to intervention groups for nonexperimental studies). Final scores are a percentage calculated from the sum of criteria items divided by the greatest possible score from items not marked N/A. The average of both raters' scores was used to indicate studies in this review.

Certainty of evidence was assessed in accordance with the Grading of Recommendations Assessment, Development and Evaluation (GRADE) adapted for reviews without meta-analyses and single estimates of effect [33]. The GRADE approach asks authors to consider methodological limitations, indirectness of evidence to the study question, imprecision of estimates, inconsistency of evidence and the likelihood of publication bias. Bias domains utilised in the

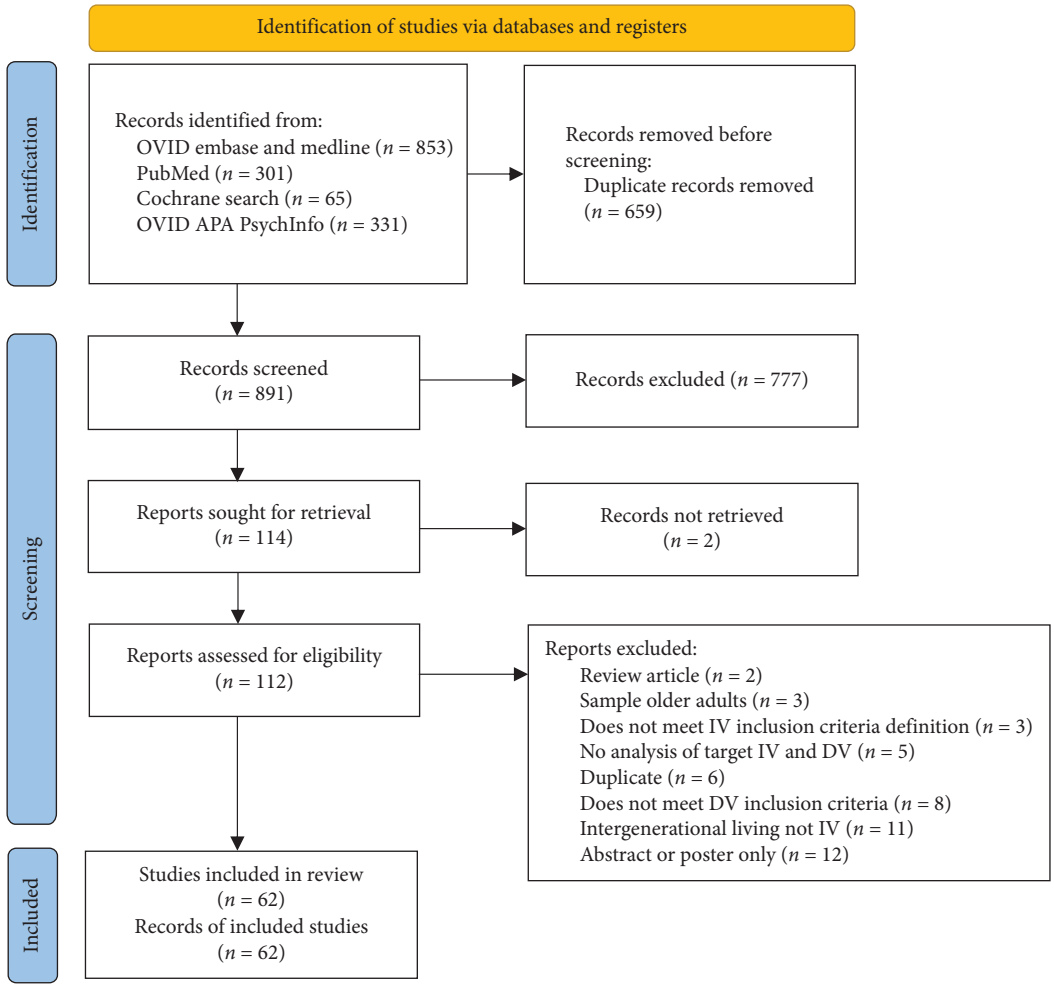

Figure 1: PRISMA flowchart of review paper searches and screening (IV = independent variable; DV = dependent variable).

Cochrane Collaboration risk of bias tool were considered when judging risk of bias in the study methodology [34]. These include selection bias, attrition, reporting bias and blinding protocols where relevant.

There were 12 papers which the raters disagreed on inclusion at the full paper screening. These were reviewed together, resulting in eight papers being included and four papers being excluded as their definition of multigenerational living did not meet inclusion criteria (2), the relationship between multigenerational living and mental health was not reported (1) and the sample comprised predominantly of older adults without the results of working-age adults being discernible (1).

3. Results

3.1. Study Characteristics. Studies were published between 1978 and 2023 with 50% published after 2017. Studies were conducted across 16 countries: India (17), Pakistan (13), Bangladesh (5), Turkey (5), China (5), the United States (5), the United Kingdom (3), Taiwan (2), Thailand (1), Nepal (2), Mexico (1), Jamaica (1), Korea (1), Kosovo (1), Egypt (1) and Philippines (1). This includes two studies [35, 36], who sampled from two countries. Table 1 shows the study characteristics of the included papers. Percentages do not add up to 100% due to some studies utilising more than one sampling method and several studies not explicitly stating study characteristics—in these instances, both raters derived methods from the study description.

There were 289,071 participants across all studies (range: 39–229, 595), of which 55.87% ($n = 161{,}503$) were female. Two studies [37, 38] gave no breakdown of sample by sex, two studies only had male participants [39, 40], and thirty studies only had female participants. Mean sample ages were available from 42 studies, with the average sample age across studies being 29.72 years. Where age was reported separately for subsamples (e.g., men and women), a single mean value was calculated using sample numbers.

3.2. Study Quality and Certainty of Evidence. According to mean quality ratings between coders, the range of study quality was between 3.27 and 10 (10 indicating high quality). Average quality was 7.8, suggesting a moderate quality of evidence overall. Average scores were lowest in criteria relating to how detailed authors reported their results and reporting of effect sizes. In addition, average scores were low for subject selection, with papers not giving

Table 1: Frequency of study characteristics.

Study characteristic	Frequency (%)
Design	
Cross-sectional	55 (88.7)
Not stated	7 (11.3)
Longitudinal	4 (6.5)
Prospective	1 (1.6)
Quasiexperimental	1 (1.6)
Randomised control trial	1 (1.6)
Sampling	
Convenience	33 (55.2)
Not stated	30 (48.4)
Random	13 (21.0)
Purposive	13 (21.0)
Stratified	6 (9.7)
Cluster	5 (8.1)
Systematic	3 (4.8)
Probability	2 (3.3)
Setting	
Community/cohort	26 (41.9)
Secondary care health	25 (40.3)
Perinatal/maternity services	14 (22.6)
Psychiatric	3 (4.8)
Paediatric	3 (4.8)
Fertility	2 (3.2)
Oncology	1 (1.6)
Postsurgical	1 (1.6)
Neurology	1 (1.6)
School	4 (6.5)
University	3 (4.8)
Primary care health centres	2 (3.2)
Workplace	1 (1.6)
Special educational needs school	1 (1.6)

a comprehensive description of recruitment strategies. There was overall low certainty of evidence due to concerns related to the study methodology, directness and consistency (Table 2).

3.3. Measures. Thirty-seven different mental health outcomes were used (Table 3) to measure mental health symptoms of anxiety, depression, posttraumatic stress disorder, psychosis and general psychological well-being. Where multiple studies utilised the same measure [41–43], there was a lack of consistency between studies in what score was used to indicate the presence of significant symptoms with cutoffs of 13, 14 and 17 used, respectively.

3.4. Definition of Multigenerational Living. In reference to one of the main aims of the review, data were extracted on the operationalisation of the family type and definition of multigenerational living. There was variation in the definition of family types. More than half of the studies (56.5%) made a distinction between nuclear and 'joint' families and 29.0% made a distinction between nuclear and 'extended' families. Other papers referred to multigenerational living as multigenerational families, three-generation families and expanded families. Over half (61.3%) of the studies did not provide a definition or description of family types. Definitions of the family type which were provided are summarised in Table 4. There were broad conceptual grouping of family types across different definitions: a couple living only with their children (i.e., a nuclear family), a couple with children living with grandparents, multiple families coresiding, a heterosexual couple living with the family of the husband and one or more adults who are not a grandparent living with a couple and their children.

One longitudinal study [44] had a second variable reflecting change to family structure across waves of data collection: remained in nuclear, remained in extended, changed to nuclear and changed to extended. Two studies [45, 46] reported using a measure of intergenerational living, the Family Jointness Scale (developed by Agarwal et al. [45]). This scale considers financial and decision-making within families in addition to living arrangements to define the degree of involvement of different generations within a family. In four studies, intergenerational living arrangements reflected a patrilocal system [47] by specifying that the relatives living together would be those of the husband or male bloodline [40, 48–50]. Moreover, many papers were heteronormative in their definitions of relationships, classing nuclear families as those with a married husband and wife.

3.5. Multigenerational Living and Mental Health. Of the 62 reviewed papers, 35 reported multigenerational living to be a risk factor for poorer mental health outcomes. There was significant heterogeneity in definitions and outcomes and no consistent trend between country, year of study, sample or study setting.

3.5.1. Study Design. even studies reported using clinician-rated scales of mental health in the form of clinical diagnostic interviews [45, 46, 51–55]. These studies took place across India, Pakistan, the United States and Mexico, with varying sample sizes and settings. There was no consistent pattern of results reported for the association between multigenerational living and anxiety or depression within these studies, with three reporting living in a nuclear family type to be a risk factor for distress [45, 46, 54] while the remaining four reported multigenerational living to be a risk factor.

One study had a quasiexperimental [56] design, and one was a randomised control trial [54]. In the study by Mustillo et al. [56], three-generation households and two-generation households in a city in China were matched on demographic and household statistics. Nuclear (two-generation) family types were reported as a risk factor for child negative affect, measured by the child-rated Negative Affect Scale for Children, in families where there was work-to-family conflict for the parents. The randomised control trial [54] was set in a perinatal service in Pakistan and compared a cognitive-behavioural intervention to enhanced standard care. In this study, living in a multigenerational family was associated with remission from depression over the course of the intervention, though this was not statistically significant.

Table 2: Certainty of evidence judgements and concerns for included studies.

GRADE domain	Judgement	Concerns about certainty domains
Methodological limitations	Risk of bias was judged on: sampling methods, blinding (for interventional studies), the appropriateness of variable measurements, consideration of confounding variables, appropriateness of statistical analyses and completeness of data and reporting. Thirty studies did not provide a description of sampling methods. Twenty-six studies did not clearly describe their inclusion and exclusion criteria. Two studies did not specify the cutoffs used for outcome measures, and there was variation in the cutoffs used by studies using the same scales. The majority but not all studies analysed the impact of family type alongside potentially confounding demographic variables. Eight studies provided confidence intervals, but effect sizes were rarely reported. There was one RCT which reported blinding of assessors and cluster randomisation. Overall, the judgement was made that there were serious concerns about the methodological quality of evidence	Serious
Indirectness	While all studies provided evidence relevant to the effect of family type on mental health, studies varied in their exact definitions of multigenerational living arrangements. Twenty-two studies provided definition, while the remainder provided no definition. Outcomes were measured with different scales, and different cutoffs were sometimes applied when the same scale was utilised, though these cutoffs were typically established in the literature. The lack of standardisation seriously affects the directness of the evidence	Serious
Imprecision	There were ~28,000 participants across studies. As most studies were cross-sectional, there were few instances of attrition affecting outcomes. Nonsignificant relationships were reported for both large and small samples, indicating that a lack of reported effect was not due to issues of power but heterogeneity between designs and populations	Not serious, borderline
Inconsistency	Evidence was highly inconsistent with reports of positive associations between multigenerational living and mental health difficulties ($n = 35$), negative associations ($n = 22$) and no effects ($n = 16$). There was a serious inconsistency	Serious
Publication bias	Both studies reported positive, negative and no effect discovered. The inclusion criteria of the review allowed for 'grey' literature	Not suspected

Table 3: Measures of mental health outcomes.

Measure	Frequency
Beck Depression Inventory	9
Edinburgh Postnatal Depression Scale	7
Centre for Epidemiologic Studies Depression Scale	7
Diagnostic interview	7
Patient Health Questionnaire (PHQ-9)	4
Beck Anxiety Inventory	3
Hospital Anxiety and Depression Scale	3
Hamilton Anxiety Rating Scale	3
State-Trait Anxiety Inventory	3
Perinatal Anxiety Screening Scale	2
General Health Questionnaire (12 or 28 item)	2
Hamilton Depression Rating Scale	2
Acute stress disorder scale	1
Posttraumatic stress disorder symptom scale	1
Aga Khan University Anxiety and Depression Scale	1
Strengths and difficulties questionnaire	1
Brief Symptom Inventory	1
Child posttraumatic stress scale	1
Childhood psychopathology measurement schedule	1
Fear of birth scale	1
Depression Anxiety Stress Scales	1
Generalised Anxiety Disorder Assessment (GAD-7)	1
Panic Disorder Severity Scale	1
Rutter Scale for Children	1
Diagnostic criteria	1
Impact of events scale	1
Bradford Somatic Inventory	1
Pakistan Anxiety and Depression Questionnaire	1
Kessler Psychological Distress Scale	1
Negative Affect Scale for children	1
SCAREDp child version	1
Sinha Anxiety Scale	1
Social Interaction Anxiety Scale	1
Symptom Checklist (SCL-90)	1
Traumatic Stress Symptom Checklist	1
Psychosis Screening Questionnaire	1

3.5.2. Community and Population Samples. There were mixed findings in the association between multigenerational families and depression within studies of community samples with seven studies reporting that multigenerational living increased risk of depression [41, 57–61], two reporting higher likelihood of anxiety [62, 63], and one reporting increased risk of panic disorder [64]. Some studies report sex and age differences. For example, Samaksha et al. [60] report multigenerational living to be a risk factor for depression, with this association accounted for by a significant result in male participants. In contrast, a cohort study of Asian American US residents reported living in an intergenerational family to be protective for overall mental health symptoms in men and US-born women [65]. Contextual factors could account for these differences, such as societal and cultural differences between India and the United States, or Samaskha et al. [60] and Yildrim et al. [63] undertakingrecruitment during the COVID-19 outbreak. Similarly, a prospective cohort study of parents in Taiwan during the pandemic reported that joint families are associated with higher scores on the Brief Symptom Rating Scale, suggesting poorer overall mental health [66]. Ghufran [57] reported multigenerational living to be predictive of depression in young women while the opposite is true for older women where nuclear family types are a risk. Other findings suggest multigenerational living can be protective against hallucinatory symptoms [67, 68], anxiety [108], overall level of mental health difficulties and depression [49]. Seven studies reported no relationship between multigenerational living and mental health outcomes [42, 69–74]. This finding is supported by longitudinal cohort studies with larger samples from China, the United Kingdom [36] and the Philippines [44]. Studies measuring panic in adults [64] and posttraumatic stress disorder symptoms in adolescents [75] report joint family living as a risk factor.

3.5.3. Perinatal Settings. There were 14 studies conducted specifically during the perinatal period, eight from South Asia [39, 48, 50, 54, 76–79], four from East Asia [80–83] and two from Turkey [84, 85]. Most reported multigenerational living to be a risk factor for depression, with odds ratios ranging between 1.9 and 3.0 [50, 76, 80, 81, 83]. Two studies identified joint family types as a risk factor for anxiety in the perinatal period [39, 82, 84]. In one longitudinal cohort study of US mothers [53], the timing of when mothers lived in multigenerational households moderated its impact on mental health and effects were also impacted by mother's ethnicity; living in a joint family at birth until 1-year postpartum was a risk for depression for married mothers and single mothers, particularly Latina mothers. On the other hand, living in a nuclear family at both time points increased the likelihood of depression for married mothers, compared with living in a multigenerational household at either birth or 1 year postpartum. For mothers cohabiting with their partner, living in a nuclear family was a risk factor for depression compared with multigenerational living for the duration of first year or at birth. For Black and Latina mothers, living in a nuclear family at year one was associated with a higher risk of depression.

3.5.4. Health Settings. Excluding those from perinatal settings, 12 studies recruited either adult service users or clinicians from healthcare settings [35, 38, 52, 86–91]. Patel et al. [52] sampled healthcare workers in India during the outbreak of coronavirus (COVID-19) and reported those in joint families to have 2.28 (95% CI: 0.97–5.40) times the odds of experiencing depression than those in nuclear families. Two studies were conducted in fertility clinics and reported conflicting findings. Dadhwal et al. [88] reported multigenerational living to be associated with increased odds for depression (OR: 3.62 and 95% CIs: 1.14–11.54), even when controlling for variables relating to personal, family and spousal support. Meanwhile, Batool and de Visser [35] reported lower scores of overall mental health status in Pakistani women living in nuclear compared with joint families, a result which was not shown in the sample of UK women in the same paper. In other health settings, multigenerational living was mostly associated with increased risk of depression [86, 89, 91]. However, this was not conclusive, with a longitudinal study based in an oncology clinic in India [38] associating nuclear family types with increased rates of depression. Moreover, John

Table 4: Definitions of intergenerational living (and comparators) where provided.

Intergenerational living category name	Definitions
Extended	Child living with grandparents and parents versus just with parents Multigenerational (defined as grandparents coresiding with parent(s) and children) Individual in a relationship living with or without one set of parents versus single parent versus both sets of parents versus living only with partner Family of partner and/or children or 5+ people in household where < children reported Additional adults above 18 yo (nuclear defined as just own children at home) Another adult cohabiting with married couple Living with parents as an adult (nuclear defined as just living with partner) Question asking who is present in the household and their relation to the respondent (nuclear defined as only husband and/or children) Single parent in extended family household (nuclear defined as married couple and children, additional comparison to single-parent only households)
Joint	2–3 families per household Multiple generations (beyond parents and children, of any relation) Multiple married couples living together where men are blood-related Related family members (beyond parents and children, adults may be of the same generation) Descendants, uncles, brothers and sisters-in-law coresiding 3 or more generations living together Married couple, children, grandchildren and relatives of the male partner (nuclear family defined as married couple and children only) Married couple with husbands, parents and siblings or other relatives)
Multigenerational	Having a grandparent living in household
Generation-based	One versus two versus three-generation family
Other	Study giving categories of (1) living with partner only compare versus living with partner and children/grandchildren versus (2) living with no partner but with children/grandchildren versus (3) living with or without partner in other multigenerational household, i.e., coresiding with parents/grandparents while children/grandchildren could be present or absent versus (4) living alone

[90] reported no association between the family type and depression in parents supporting children with cystic fibrosis and Adnan et al. [92] reported no association with depression amongst patients attending a psychiatric outpatients. The latter may suggest family type has less influence over maintenance and recovery for those with established mental health difficulties while most studies focus on family type as a precipitating factor.

3.5.5. Children and Adolescents. Ten studies recruited samples of children and adolescents [43, 56, 69, 70, 75, 93–97] and one study where the outcome of children and adolescents were reported separately from those of adults [37]. The age range of young people in these studies fell between 8 and 12 years old. Radwan and Mallik [94], Mushtaq et al. [95] and Muthusamy et al. [96] recruited samples of young people from school settings and utilised self-report measures of general mental well-being, anxiety and social anxiety, respectively. All these studies associated multigenerational living with a higher risk of psychological difficulties. Us Syed et al. [43] also recruited from a school setting in Pakistan but reported that nuclear family types were a risk factor for depression (risk ratio = 2.54 and 95% CI: 1.40–4.58). Two studies using community samples of young people and adolescents in India reported no association between multigenerational living, anxiety and depression [69, 70]. One study [37] including adults and children reports differential effects for the two age groups; being in a joint family was a risk for anxiety and depression in mothers, but a nuclear family was a risk for child maladjustment. Children in this study had a mean age of 2.8 years, and their psychological health was assessed by a teacher-rated screening measure for mental health difficulties.

4. Discussion

This scoping review of 62 papers from 17 countries explored relationships between multigenerational living and mental health outcomes in working-age adults and children. Interest in this area appears to have grown in recent years, potentially influenced by the publication of the United Nations [6] Sustainable Development Goals, housing shortages and economic challenges affecting household living arrangements [98], and renewed focus on social and environmental predictors of health outcomes during the COVID-19 pandemic [99].

There was a lack of an agreed definition of multigenerational living and a lack of consistency in the outcome of the 37 measures of mental health outcomes utilised across studies, making comparison between studies difficult. Across studies, there are reports of positive associations between multigenerational living and mental health

outcomes ($n = 35$), negative associations (i.e., multigenerational living being protective) ($n = 22$) and no effects ($n = 16$). The lack of consistent trends reported may in part relate to the broad scoping nature of the review, as well as indicating that the mental health impact of multigenerational living is highly context dependent.

4.1. Definition of Multigenerational Living and Observed Household Compositions. With respect to the first two research questions of this review, there was substantial variation in the definition of multigenerational living and comparator household types, even between studies using the same term to describe multigenerational living. As has been acknowledged, multigenerational living is a broad term which encompasses a diverse range of household compositions; as such, it is especially important that it is clearly operationalised when used in research and it was, therefore, surprising and concerning that 61.3% of the studies did not provide definition. Where definitions were provided, multigenerational households typically referred to a couple living with children and at least one set of grandparents. The comparator was most commonly a 'nuclear' family of parents and children, whereby the relationships were assumed to be heteronormative, set within the context of marriages. In four studies, the definition of nuclear families reflected a patrilocal system. Future research should consider how multigenerational living can be defined in a more standardised way, which is inclusive of diverse relationships and living arrangements. This is important as it is likely that the composition of the household and relational dynamics between individuals determine whether the arrangement is adaptive or not for different residents; for instance, a multigenerational family including elderly relatives may add to the care load of working-age adults, while the presence of another working-age adult in employment could relieve financial pressures.

4.2. Associations Between Multigenerational Living and Mental Health-Related Outcomes in Working-Age Adults and Children. The mixed findings of relationships between multigenerational living and mental health reflect possible subgroups defined by individual contexts and life circumstances and confounding factors not accounted for in current research. This contextual diversity is further explored over the following paragraphs. For example, when multigenerational living is a chosen arrangement by all parties, the experience of it can be positive compared with when it is a response to economic or social pressures or challenging life events [100]. Similarly, a sense of control over living space has been associated with positive perceptions of multigenerational living [21], which could explain findings in studies such as [53] where mother's mental health benefited from multigenerational living arrangements for only short durations around the birth of a child but not for more extended periods, where their sense of agency may become eroded.

Social roles such as being the householder, providing care [100] or being a 'lodging' household member affects interpersonal relationships and power [101], mediating multigenerational and psychological well-being. Future studies may need to elucidate the context leading this living arrangement and the sense of agency individuals have within the household. Using a measure such as that devised by Agarwal et al. [45] which measures family 'jointness' on different domains could capture more of the nuance in multigenerational living and standardise measurement of the variable across studies.

Qualitative studies offer insight to the nuanced subjective experience of multigenerational living; for instance, Jothikaran et al. [102] discuss the relational challenges faced by working-age adults in multigenerational households with older adults as they balance the demands of work, familial expectations and caring responsibilities against opportunities to maintain family ties and uphold cultural values. Moreover, the presence and support of extended family outside of the household are important in navigating such conflicts, and such collectivism may protect against potential negative mental health effects.

Size and structure of family may also be mediating factors as living in crowded housing conditions with limited privacy could outweigh any potential benefits [25]. Measuring the house size or crowding via an established measure alongside multigenerational living arrangements could help differentiate the impact of these related variables [103].

Demographic factors may also explain the complex picture of results with two studies indicating that sex moderates the effect of multigenerational living on mental health [60, 65]. Women's well-being is reported to be predicted by their own coping strategies while the well-being of a man in a heterosexual partnership living in a multigenerational family is related to how well their partner is coping [104]. The findings of Walton and Takeuchi [65] also indicate the importance of intersectionality, as both men born in the United States and those with migrant status had greater distress in a nuclear family; however, only women born in the United States had the same finding. There is a need for research within a greater spread of family types to understand the interactions between sex, gender, social role, familial roles and multigenerational living arrangements.

Studies during the perinatal period suggest this could be a time when women are sensitive to the impact of multigenerational living in the context of changing family relationships, familial expectations, community perceptions, autonomy and self-efficacy in maternal mental health [105]. Moreover, most perinatal studies in this review were based in South and East Asia where systematic review evidence has highlighted the role of interpersonal relationships and support in experiences of depression [106].

Only 10 studies recruited samples of children and adolescents. In studies recruiting young people from school settings, multigenerational living was associated with increased risk of anxiety while nuclear family types were associated with increased risk of depressive symptoms [43, 94–96]. However, community studies reported no association between multigenerational living, anxiety and depression [69, 70]. This is in line with research indicating that the quality of relationships is of greater importance to psychological adjustment in children as opposed to the composition of families, quantity of connections or demographics of household members [107, 108].

4.3. Implications. Future research should look to develop a nuanced understanding of multigenerational living and its relationship to mental health that considers a range of demographic, social and contextual mediators and an updated agreed definition of household types. Providing clear definitions of household types would allow greater comparison between studies. Any consensus definition needs to be inclusive, to not perpetuate heteronormative biases in research [109] and to capture the many components of multigenerational living. The multidimensional measure developed by Agarwal et al. [45] could be a provisional starting point.

As highlighted, there are a multitude of potential confounders and mediators of the impact of multigenerational living on mental health (i.e., sex, culture and interpersonal relationships); inclusion of such variables in future studies would help in understanding conditions under which multigenerational living is a risk or protective factor. Moreover, studies comparing samples between countries or between regions of countries should consider cultural and social differences in family living arrangements, which influence perception and choice over living arrangements. Given the range of settings where multigenerational living has been considered, it could be interesting to explore the rationale for why this variable is considered relevant to different populations; for instance, does the perinatal period or the presence of physical health conditions provide an indication for multigenerational living whereby additional support is available to household members. Existing prospective and longitudinal research could be expanded upon to explore the effects of multigenerational living over time or the impact of transitioning into multigenerational living.

In healthcare practice, curiosity from clinicians working in adult or child services around living arrangements could be important for psychological formulation of mental health difficulties or physical health recovery. This aligns with social cognitive theory, which suggests that health outcomes and behaviours have social determinants [110]. Subsequently, health psychology interventions can encourage self-efficacy and relationships, which promote mental well-being [111]. Family members in caring roles can be through psychoeducation and strategies to manage psychological or physical health symptoms or provided individual counselling related to their caring responsibilities [112]. Evidence that multigenerational households are beneficial for some populations could also support the use of intergenerational interventions whereby participants from different age groups connect with the aim of improving mental well-being, increasing meaningful connections and reducing loneliness [26]. Finally, health and social care providers may need to advocate for alternate housing arrangements or access to more suitable housing for larger, multigenerational families where crowding is a concern.

Capitalising on the social and practical benefits of multigenerational households may be of increasing interest in expanding and ageing populations, leading to intensified demands on health and social care systems [113]. However, such benefits can only be realised if household members' mental health is not compromised by increased caring responsibilities, reduced autonomy or financial strain. This provides a rationale for research exploring factors which facilitate positive experiences of multigenerational living where members work as a collective to meet the individual needs of all. To support those living in multigenerational households, family therapy or systemic psychological interventions can be delivered to individuals or cohabitants together to support interpersonal relationships and foster flexibility in family units around significant life transitions [114].

At a macro level, policymakers need to consider that housing policies and economic conditions impacting individuals' ability to access suitable housing have implications for health outcomes [5]. Moreover, property developers can be informed by research when designing living spaces to ensure that home environments have sufficient space, privacy and adaptability to changing household compositions. This has been highlighted in a recent report for the UK National House Building Council [115].

4.4. Limitations. There was a potential limitation in the search strategy of this study where anxiety and depression were specified while other mental health outcomes were not; the rationale for this was to focus this exploratory/scoping review on common mental health conditions; however, the studies investigating other psychological outcomes may have been missed and it could have contributed to the heterogeneity of results. Future research may wish to specify further psychological outcomes or focus on a specific outcome and conduct meta-analyses on a less heterogeneous set of papers.

5. Conclusion

This review included 62 papers reporting measures of mental health outcomes and multigenerational living. Studies were heterogeneous in their designs, settings, samples, and methodologies, and importantly, in their definition of multigenerational living. There were no consistent patterns in the direction of relationships reported between mental health outcomes and multigenerational living, highlighting the need to formulate the impact of this factor at an individual level and consider a variety of potential confounding factors. Establishing an inclusive definition of multigenerational living would be beneficial for future research, the findings of which could inform clinical practice as well as housing development and economic policies that impact housing and living arrangements.

Data Availability Statement

Search and screening data are available upon request.

Ethics Statement

This manuscript did not require ethical approval as it is a review of existing research and, therefore, did not involve the recruitment of participants. Ethical considerations were given to the conduct of the research—the authors registered the review protocol, reporting of the review process in terms

of the process and search terms, appropriate citation of sources and declaration of interests. Risk of selection bias was also reduced by the use of two independent raters.

Disclosure

This study was completed as part of the doctoral thesis of Abbeygail Jones at University College London.

Conflicts of Interest

The authors declare no conflicts of interest.

Author Contributions

Abbeygail Jones: conceptualization, data curation, formal analysis, methodology, writing–original draft and review and editing; Daniel Pugh: formal analysis and validation; Vaughan Bell: supervision and writing–review and editing; Keri Ka-Yee Wong: conceptualization, supervision and writing –review and editing.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. *(Supporting Information)*

Supporting materials include PRISMA_2020_checklist and Online Appendix containing the review search terms.

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