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Childhood Adversity and Long-Term Mental Health Outcomes: A Systematic Review of UK Evidence

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ABSTRACT

Background: Childhood trauma and adverse childhood experiences (ACEs) are widely recognised as important contributing factor to later psychological vulnerability. While systematic reviews on the influence of childhood adverse experiences on the mental health outcomes in later life abounds, there is paucity of studies that synthesised this information in a systematic way in the UK context. Therefore, this study aims to synthesise evidence from UK context examining the relationship between childhood adversity and long-term mental health outcomes from adolescence into adulthood to strengthen evidence-base, inform policy and practice.

Methods: A structured search was conducted across MEDLINE, CINAHL and PubMed using predefined Boolean search terms. Filters were applied to identify peer-reviewed, English-language, UK-based studies examining childhood adversity and later mental health outcomes. Following duplicate removal and full-text screening, 12 longitudinal studies met the inclusion criteria. Studies were appraised using adapted CASP cohort criteria, and findings were synthesised narratively due to heterogeneity in exposure definitions, outcome measures, and follow-up periods.

Results: Cumulative exposure to childhood adversity was consistently related to an increased likelihood of depression, anxiety, and psychological distress, and self-harm from adolescence into adulthood. Several studies demonstrated graded relationships between Adverse Childhood Experiences (ACE) exposure and later difficulties, while evidence on timing and duration suggested that persistent and early-onset adversity conferred greater vulnerability. Although attrition, recall bias and variation in measurement were identified as limitations, consistent findings across study designs strengthened confidence in the overall pattern of association.

Conclusion: Childhood adversity is a significant contributing factor to long-term mental health trajectories. The findings highlight the importance of early identification, trauma-informed approaches, and greater consistency in longitudinal research.

KEYWORDS: Childhood adversity, child abuse, neglect, adulthood, mental health outcomes

INTRODUCTION

Childhood trauma is widely recognised as a significant contributing factor to long-term mental health, with enduring consequences for individuals, families, and health systems. Experiences such as physical, emotional, or sexual abuse, neglect, and exposure to domestic violence or household dysfunction have been consistently related to a greater risk of later psychological difficulties, including depression, anxiety disorders, post-traumatic stress disorder (PTSD), psychosis, and self-harm (Felitti et al., 1998; McLaughlin et al., 2010). These experiences often occur during critical periods of emotional and neurobiological development, when stress-response systems and regulatory processes are still maturing, making children particularly vulnerable to lasting harm (Shonkoff et al., 2012; Teicher & Samson, 2016).

Theoretical frameworks from developmental psychopathology and toxic stress research provide a foundation for understanding these associations. Chronic exposure to adversity may disrupt neurobiological development, alter hypothalamic-pituitary-adrenal (HPA) axis functioning and impair emotional regulation (Shonkoff et al., 2012; Teicher & Samson, 2016). Over time, such disruptions may increase susceptibility to psychiatric disorders across adolescence and adulthood. Evidence also suggests a dose-response relationship, whereby cumulative exposure to adverse childhood experiences (ACEs) is associated with progressively greater risk of mental illness (Felitti et al., 1998; Hughes et al., 2017), indicating that both the type and accumulation of trauma are important in shaping long-term psychological outcomes.

Despite the extensive literature in this area, important methodological differences remain. Studies vary in how childhood trauma is defined and measured, whether exposure is assessed prospectively or retrospectively, and which mental health outcomes are prioritised (Danese & Widom, 2020). Differences in follow-up duration, sample characteristics, and statistical approaches further complicate comparison across findings. In particular, synthesising longitudinal evidence within UK-based populations is valuable, as national cohort studies provide the opportunity to examine mental health trajectories from adolescence into adulthood within a broadly shared policy and healthcare context.

Given this variability, a systematic review of primary longitudinal research was undertaken to provide a structured and critical synthesis of the available evidence. The aim of this study is to examine the long-term mental health effects of childhood trauma and adverse childhood experiences using evidence from UK-based longitudinal primary research studies. The objectives of this review are 1., to synthesise longitudinal evidence examining the relationship between childhood trauma and mental health outcomes from adolescence into adulthood within UK-based populations. 2., to examine how the type, timing, and cumulative exposure to adverse childhood experiences affect the development of later psychological difficulties. A clearer understanding of these relationships has implications for early identification of vulnerability, the development of trauma-informed services, and the design of preventative mental health strategies within UK health systems.

METHODOLOGY

Study Design

Ethical application approval reference number for this systematic review is 2025-AP-UG-3333. This systematic review examines the long-term mental health consequences of adverse childhood experiences (ACEs), childhood trauma, and maltreatment. A systematic approach was selected to ensure transparency, consistency and methodological rigour in the identification and synthesis of empirical evidence. By applying predefined inclusion criteria and structured screening procedures, the review aimed to minimise selection bias and improve replicability through transparent reporting of the search, appraisal, and selection processes. Given the conceptual complexity of ACE exposure and the variation in how trauma and mental health outcomes are defined across studies, a systematic review was considered the most appropriate method for addressing the research aim. The review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework (Page et al., 2021), which guided the identification, screening, and reporting process to improve clarity and methodological transparency. A meta-analysis was not undertaken due to substantial heterogeneity in study design, exposure definitions, outcome measures, and follow-up periods, which restricted the appropriateness of statistical pooling. Instead, a narrative synthesis approach was adopted to allow critical comparison of findings across diverse longitudinal studies. Particular emphasis was placed on research examining outcomes from adolescence into adulthood, enabling consideration of enduring psychological consequences across the life course rather than short-term associations alone.

Search Strategy

Electronic searches were conducted between 1st to 21st April 2026 in three databases: MEDLINE (via EBSCOhost), CINAHL (via EBSCOhost), and PubMed. These databases were selected to capture psychiatric, psychological, and public health literature relevant to adverse childhood experiences and their impact on long-term mental health. The following Boolean search string was applied: (“childhood trauma” OR “adverse childhood experiences” OR “child abuse” OR maltreat* OR neglect*) AND (“mental health” OR depress* OR anxiety* OR PTSD OR psychosis OR “self-harm”) AND (long-term OR longitudinal OR adulthood OR “later life”) Truncation (e.g., depress*, maltreat*) was used to increase search sensitivity and capture variations in terminology. The inclusion of life-course descriptors such as “long-term,” “longitudinal,” “adulthood,” and “later life” ensured alignment with the review’s focus on enduring mental health outcomes in adulthood. Study design was subsequently verified during the screening process to confirm inclusion of longitudinal or prospective research examining long-term associations.

Eligibility Criteria

Eligibility criteria were determined prior to the review to support consistency and alignment with the research aim, and were applied at the title, abstract, and full-text screening stages.

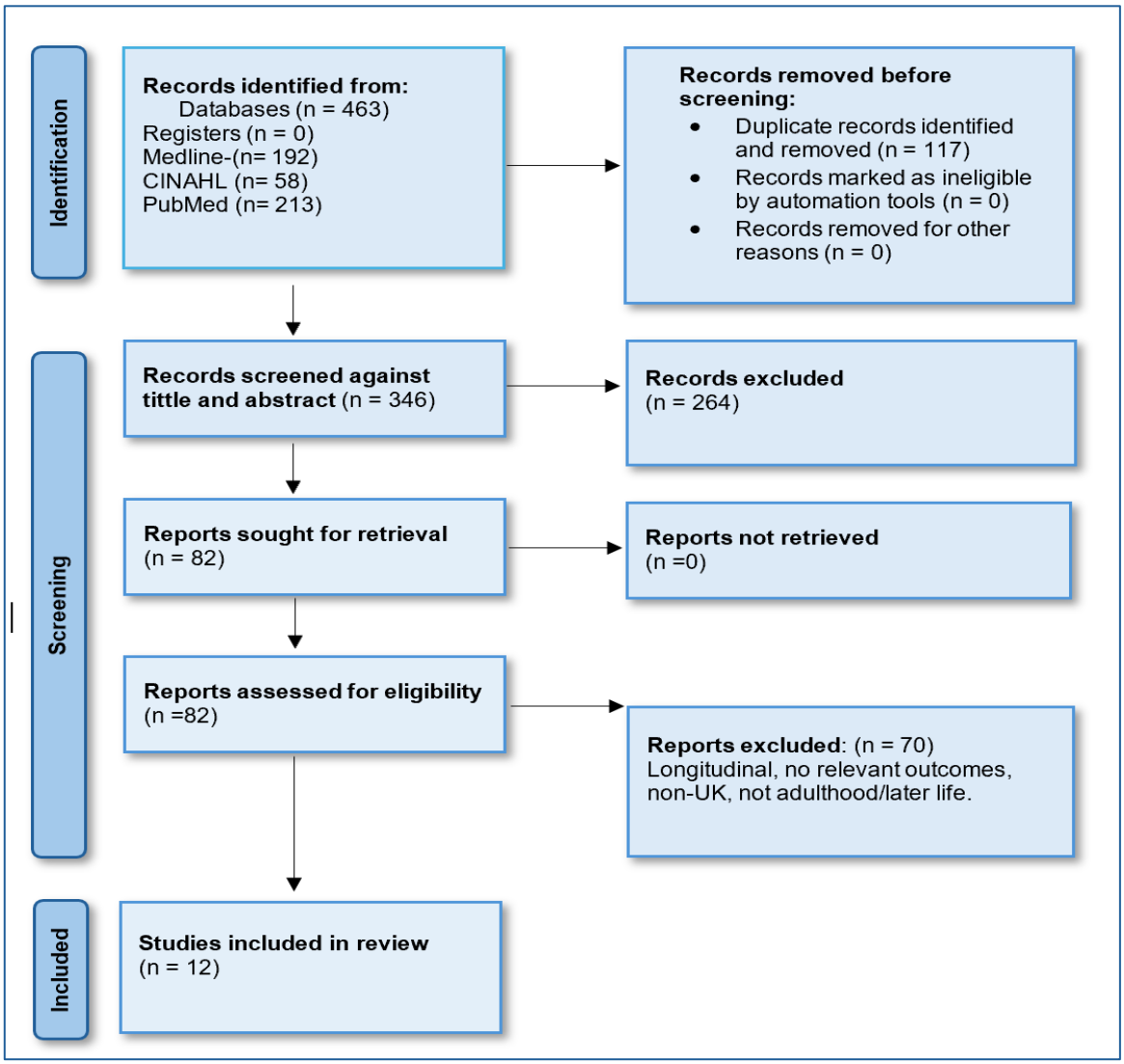
The included articles met certain criteria, including peer-reviewed empirical research, English language publications, UK-based demography, longitudinal, prospective, and cohort study designs examining mental health outcomes beyond childhood, including adolescence and adulthood. Other criteria that included articles met are exposure to adverse childhood experiences (ACEs), childhood trauma, abuse, or neglect occurring before the age of 18 as well as Mental health conditions, including depression, anxiety, post-traumatic stress disorder (PTSD), psychosis, psychological distress, and self-harm.

On the other hand, exclusion criteria include cross-sectional studies lacking temporal sequencing between exposure and outcome, studies conducted outside the United Kingdom, studies focusing solely on physical health outcomes, review articles, editorials, commentaries, or other non-empirical publications, and Non-English publications.

Study Selection

Studies were selected through a two-stage process, involving title and abstract screening followed by full-text eligibility assessment. Following the database searches, 463 records were identified. All records were exported to reference management software, where 117 duplicate records were identified and removed. After removal of 117 duplicate records identified across databases, 346 unique articles proceeded to title and abstract screening. During the initial screening phase, 264 records were excluded due to clear non-alignment with the predefined inclusion criteria. A total of 82 articles were included for full-text eligibility assessment. Following full-text review, 70 studies were excluded due to non-longitudinal design, absence of relevant mental health outcomes, non-UK populations, or lack of focus on outcomes beyond childhood, in line with the predefined eligibility criteria. Overall, twelve studies met the inclusion criteria and were included in the final synthesis. The selection process is presented in Figure 1 using a PRISMA 2020 flow diagram (Page et al., 2021).

Figure 1: PRISMA 2020 flow diagram of study selection



Quality Appraisal

Methodological quality was assessed using criteria adapted from the Critical Appraisal Skills Programme (CASP) cohort study checklist (Critical Appraisal Skills Programme, 2018). Studies were evaluated based on clarity of aims, appropriateness of design, sample representativeness, accuracy of exposure and outcome measures, control of confounding factors, completeness of follow-up, and transparency of statistical methods. Quality appraisal informed the interpretation of findings rather than serving as a basis for exclusion.

Data Extraction and Synthesis

A structured framework was used to extract and record key study characteristics, including author, year, study design, and sample size, trauma exposure definition, mental health outcomes, follow-up period, and principal findings. Extraction was conducted systematically to enhance consistency and enable comparison across studies. Given variation in trauma definitions, outcome

measures, and follow-up durations, statistical pooling was not appropriate. Instead, findings were synthesised narratively and organised by mental health outcome. This approach allowed identification of recurring patterns, dose–response relationships, and methodological differences across longitudinal research, while maintaining sensitivity to contextual variation between studies.

RESULTS

Characteristics of Included Studies

A structured data extraction matrix summarising study design, sample characteristics, exposure definitions, mental health outcomes, and key findings is presented in Table 1.

Across the twelve included studies, all employed longitudinal or cohort-based designs. Several drew upon nationally representative UK birth cohorts, including the 1970 British Cohort Study, findings based on the National Child Development Study and the Avon Longitudinal Study of Parents and Children (ALSPAC). One study utilised data from the UK Biobank population-based research database, while others analysed population-based or clinical samples. Adversity exposure was operationalised using cumulative ACE indices, specific maltreatment categories including experiences of emotional, physical, and sexual abuse, as well as neglect or prospectively recorded childhood adversity indicators. Mental health outcomes most frequently assessed depressive symptoms or psychological distress, followed by anxiety, PTSD, self-harm, suicide attempts, and psychosis-spectrum symptoms. Follow-up periods ranged from adolescence to midlife and older adulthood.

Table:1a Data Extraction Matrix of Included Studies

Author & Year	Study Design & Analysis	Sample (Country / Cohort / Age)	ACE Measurement	Mental Health Outcomes & Measures	Key Findings	Strengths	Limitations
1. Farooq et al., 2024	Prospective longitudinal analysis across three UK population-based cohorts (including ALSPAC), using multivariable regression	UK adolescents followed into early adulthood within large population-based cohorts	Adverse childhood experiences recorded prospectively, including type, timing, and duration (e.g. abuse, neglect, and household dysfunction)	Depressive symptoms (validated scale) and self-harm (self-reported)	Greater and more persistent exposure to ACEs was associated with higher risk of depression and self-harm. Early and long-term exposure had the strongest impact	Prospective design reduces recall bias; detailed measurement of exposure timing and duration; appropriate statistical adjustment	Attrition across follow-up waves and possible residual confounding
2. Woofenden, Fairchild, and Lancaster, 2025	Longitudinal cohort analysis using multinomial logistic regression	UK participants from the 1970 British Cohort Study (n = 16,407), with outcomes assessed in early adulthood (age 30)	Cumulative childhood adversity score (0–33), based on parent- and self-reported adversities across ages 0–16	Psychological distress assessed using the Malaise Inventory; co-occurrence with obesity also examined	Higher cumulative childhood adversity was associated with increased risk of psychological distress and co-occurring obesity. Associations were stronger for combined outcomes than for single conditions	Large nationally representative cohort; long-term follow-up; use of established measures	Reliance on self-reported measures; observational design limits causal inference

Table:1b. Data Extraction Matrix of Included Studies

Author & Year	Study Design & Analysis	Sample (Country / Cohort / Age)	ACE Measurement	Mental Health Outcomes & Measures	Key Findings	Strengths	Limitations
3. Chaplin, Jones, and Khandaker, 2021	Cohort analysis using UK Biobank data, with logistic regression to examine associations	UK adults from the UK Biobank; large midlife population sample	Retrospective self-report of childhood sexual and physical abuse	Depressive symptoms assessed using standardised self-report measures	Exposure to childhood sexual and physical abuse was associated with higher levels of depressive symptoms in adulthood	Exceptionally large sample size; adjustment for key demographic and socioeconomic factors	Retrospective reporting may introduce recall bias; UK Biobank sample may not fully represent the general population
4. Tracy et al., 2019	Prospective longitudinal cohort analysis examining the relationship between patterns of childhood adversity and later depression	UK participants from the ALSPAC birth cohort followed from childhood to age 18	Childhood adversity measured prospectively across multiple time points during early life	Depression at age 18 assessed using validated measures	Higher levels of childhood adversity were associated with increased risk of depression, particularly where exposure was persistent over time	Prospective design; repeated measures of adversity across childhood; allows examination of changes in exposure over time	Attrition across follow-up: use of cumulative measures may limit detail on specific types of adversity
5. Kilpi et al., 2025	Prospective birth cohort analysis using multivariable regression modelling	UK adolescents and young adults from a population-based cohort	Multiple adverse childhood experience domains aggregated into a cumulative ACE score	Depressive symptoms were assessed using validated instruments; the co-occurrence of depressive symptoms and overweight status was additionally examined	Higher ACE exposure was associated with increased risk of depressive symptoms, particularly where depression co-occurred with overweight	Long-term follow-up; examination of co-occurring mental and physical health difficulties; adjustment for early-life confounders	Mental health findings were examined within a framework of co-occurring mental and physical health difficulties, the observational design limits causal inference

Table:1c. Data Extraction Matrix of Included Studies

Author & Year	Study Design & Analysis	Sample (Country / Cohort / Age)	ACE Measurement	Mental Health Outcomes & Measures	Key Findings	Strengths	Limitations
6. Selous et al., 2020	Prospective birth cohort study with long-term follow-up, using regression analysis to examine associations	UK national birth cohort followed from early life into midlife	Childhood adversity recorded prospectively using early-life indicators	Adult mood problems assessed using validated self-report measures	Exposure to childhood adversity was associated with an increased risk of mood problems in midlife, even after	Long follow-up period: prospective measurement reduces recall bias; use of a nationally representative cohort	Attrition over time; earlier measures may lack detailed categorisation of ACEs

					accounting for early-life factors		
7. Newbury et al., 2018	Prospective longitudinal cohort study examining the association between childhood maltreatment and later mental health outcomes	UK participants from the E-Risk Longitudinal Twin Study followed to age 18	Childhood maltreatment assessed using both prospective reports collected during childhood and retrospective self-report at age 18	Mental health outcomes at age 18 included depression, anxiety, and self-harm	Childhood maltreatment was associated with increased risk of mental health problems, with stronger associations observed for retrospective reports compared to prospective measures	Large, nationally representative cohort; use of both prospective and retrospective measures allows comparison of different reporting approaches	Outcomes limited to age 18; retrospective reports may be influenced by recall bias
8. Chen et al., 2025	Prospective cohort study using regression analysis to examine associations between ACEs and mental health	UK young adult cohort assessed in early adulthood	Cumulative ACE exposure and specific ACE types measured using structured self-report	Depression, anxiety, and psychosis-spectrum symptoms assessed using validated instruments	ACEs were associated with a broad range of mental health symptoms.	Comprehensive assessment of mental health outcomes; use of a dimensional approach; adjustment for confounders	Self-reported adversity may introduce reporting bias, observational design limits causal interpretation

Table:1d. Data Extraction Matrix of Included Studies

Author & Year	**Study Design & Analysis**	**Sample (Country / Cohort / Age)**	**ACE Measurement**	**Mental Health Outcomes & Measures**	**Key Findings**	**Strengths**	**Limitations**
9. Timmins et al., 2025	Prospective birth cohort follow-up study using regression modelling	UK participants from the National Child Development Study assessed at age 50	Childhood adversity recorded prospectively during early life	Psychological distress assessed using validated measures	Exposure to childhood adversity was associated with poorer mental health outcomes at age 50, indicating long-term effects across the life course	Long-term follow-up into midlife; nationally representative cohort; strong temporal sequencing	Attrition over time; potential survivor bias; observational design limits causal inference

10. Croft et al., 2019	Prospective longitudinal cohort study examining the association between childhood trauma and later mental health outcomes	UK participants from the ALSPAC birth cohort were followed from childhood to age 18.	Childhood trauma measured across various stages of development, including type, timing, and frequency of exposure	Psychotic experiences at age 18 assessed using structured interview measures	Childhood trauma was associated with an increased likelihood of psychotic experiences at age 18, with higher risk observed among those exposed to multiple or repeated forms of trauma	Large population-based cohort; detailed assessment of trauma across childhood; clear temporal relationship between exposure and outcome	Attrition across follow-up and a focus on psychotic experiences mean findings are less directly comparable with more common outcomes such as depression or anxiety

Table:1e. Data Extraction Matrix of Included Studies

Author & Year	Study Design & Analysis	Sample (Country / Cohort / Age)	ACE Measurement	Mental Health Outcomes & Measures	Key Findings	Strengths	Limitations
11. Farooq et al., 2025	Prospective cohort trajectory analysis examining patterns of ACE exposure over time	UK participants from the ALSPAC cohort followed from adolescence into early adulthood	Repeated measures of ACE exposure across childhood	Depressive symptoms and self-harm assessed using validated instruments	Distinct patterns of ACE exposure were associated with increased risk of depression and self-harm, with persistent exposure showing the strongest effects	Use of repeated measures; ability to examine exposure patterns over time; strong cohort data	Attrition across waves; findings based on a regional cohort may limit generalisability
12. Xie et al., 2025	Longitudinal cohort study using regression analysis to examine moderating effects	UK older adult cohort assessed in later life	Self-reported history of childhood maltreatment	Depressive symptoms and psychological wellbeing assessed using validated measures	Childhood maltreatment was associated with poorer mental health in later life, with lifestyle patterns influencing the strength of this relationship	Focus on later-life outcomes; examination of moderating factors; longitudinal design	Retrospective reporting may introduce recall bias, observational design limits causal conclusions

Synthesis of Findings

The included studies consistently indicated that childhood adversity was associated with poorer mental health outcomes from late adolescence into adulthood. Although the studies differed in how adversity was defined, as well as in follow-up periods and outcome measures, several common patterns emerged. These included consistent associations with depression and psychological distress, evidence of cumulative or dose–response relationships, and indications that the timing and persistence of adversity may influence later vulnerability. Broader outcomes, including anxiety, self-harm and more general psychological difficulties, were also identified across the included studies. This consistency across studies strengthens confidence in the overall reliability of the findings.

Depression and Psychological Distress

Depression and psychological distress were the most consistently examined outcomes across the included studies. Across both prospective and retrospective designs, individuals exposed to childhood adversity showed higher levels of depressive symptoms and broader psychological difficulties from late adolescence into adulthood, suggesting that the effects of early adversity may persist beyond childhood (Tracy et al., 2019; Selous et al., 2020; Timmins et al., 2025; Chaplin et al., 2021).

Prospective cohort studies showed that adversity recorded during childhood was associated with poorer mental health later in life, even after adjustment for socioeconomic and familial factors (Selous et al., 2020; Timmins et al., 2025). Studies with longer follow-up periods were particularly important, as they indicated that the effects of childhood adversity may extend beyond early adulthood and remain evident into midlife. Evidence from Tracy et al. (2019) also highlighted the importance of exposure patterns, showing that persistent or increasing adversity across childhood was connected to elevated risk of depression at age 18. Retrospective studies reported similar, and in some cases stronger, associations. However, these findings should be interpreted with care, as self-reported measures of adversity may be shaped by recall bias or current mental health (Chaplin et al., 2021). Newbury et al. (2018) further demonstrated that childhood maltreatment was associated with a range of mental health outcomes at age 18, including depression, supporting the broader relationship between adversity and psychological vulnerability.

Studies examining timing and duration suggested that persistent and early-onset adversity may be particularly important, with higher levels of exposure associated with increased risk (Farooq et al., 2024; Farooq et al., 2025). This aligns with developmental psychopathology perspectives, which propose that sustained stress during sensitive developmental periods may contribute to longer-term difficulties in emotional regulation and mental health.

Self-Harm and Suicidality

Self-harm outcomes were examined in Farooq et al. (2024, 2025) and Newbury et al. (2018). These studies reported associations between exposure to childhood adversity and increased risk of self-harm and related behaviours in late adolescence and early adulthood. Evidence from longitudinal analyses suggested that persistent and cumulative adversity was linked to greater risk pointing to the significance of both the timing and duration of exposure. Overall, the findings show a progressive association between cumulative childhood adversity and vulnerability to self-harm.

Anxiety, PTSD and Transdiagnostic Outcomes

Chen et al. (2025) and Newbury et al. (2018) examined broader psychiatric outcomes, including anxiety and related mental health difficulties. Both studies found that childhood adversity was associated with increased risk across multiple outcomes, rather than being limited to a single disorder. Chen et al. (2025) adopted a transdiagnostic approach, showing that ACE exposure was linked to more general psychological vulnerability. This is consistent with models suggesting that early adversity may influence shared underlying mechanisms across different mental health conditions. Evidence from Croft et al. (2019) further supports this, indicating that childhood trauma was also associated with psychotic experiences in early adulthood.

Co-occurring Mental and Physical Health Outcomes

Higher cumulative childhood adversity was associated with increased risk of psychological distress alongside obesity or overweight status (Woofenden et al., 2025; Kilpi et al., 2025). Childhood adversity showed stronger associations with the co-occurrence of mental and physical health difficulties than with either outcome alone.

Lifestyle factors did not appear to significantly moderate these relationships in some analyses (Woofenden et al., 2025), although other evidence suggests that lifestyle patterns may influence the strength of associations between childhood adversity and later mental health outcomes (Xie et al., 2025). These findings suggest that the effects of early adversity may extend beyond behavioural pathways and reflect longer-term biological or psychosocial processes.

Risk of Bias Assessment

Overall methodological quality was moderate to high across the included studies. Selection bias was primarily related to attrition in long-term cohort designs. Although several studies applied weighting procedures, loss to follow-up may have disproportionately affected individuals with greater exposure to adversity.

Prospective birth cohort studies, including Selous et al. (2020), Timmins et al. (2025) and Farooq et al. (2024, 2025), demonstrated stronger temporal sequencing but were subject to attrition across extended follow-up periods. In contrast, studies relying on retrospective self-reports of maltreatment, including Chaplin et al. (2021), Chen et al. (2025) and Xie et al. (2025), were more vulnerable to recall and reporting bias. The UK Biobank analysis by Chaplin et al. (2021) may additionally be affected by healthy volunteer bias, limiting generalisability.

Information bias was therefore a key distinction between study types. While prospectively recorded adversity reduces recall error, it may underestimate exposure due to underreporting in official records. All studies adjusted for key socioeconomic and demographic confounders; however, residual confounding remains possible. As all included studies were observational, causal inference remains limited.

Gaps in the Literature

Several important gaps were identified across the included studies. First, while depression and psychological distress were widely examined, comparatively less attention was given to severe mental illness, including clinically diagnosed psychotic disorders. This limits understanding of whether childhood adversity is associated with risk across the full spectrum of psychiatric conditions.

Second, ethnic subgroup analyses were limited, reducing insight into intersectional vulnerability and the potential influence of structural inequalities. Greater attention to demographic diversity would strengthen generalisability and improve consideration of equity-related factors.

Third, variation in the measurement and operationalisation of adverse childhood experiences limits cross-study comparability. Differences in cumulative scoring, retrospective reporting and prospective recording approaches make it difficult to directly compare findings across studies.

Finally, few studies examined biological mechanisms or resilience factors that may influence long-term outcomes. Greater integration of developmental, psychosocial, and biological perspectives would help improve understanding of how childhood adversity affects mental health over time.

DISCUSSION

Overview and Interpretation of Key Findings

This review synthesised longitudinal evidence from UK studies examining the relationship between childhood adversity and later mental health outcomes from late adolescence into adulthood. Taken together, the findings suggest that early adverse experiences act as ongoing risk factors for psychological difficulties across the life course. Rather than reflecting short-term distress limited to adolescence, the evidence indicates that exposure to adversity may contribute to patterns of vulnerability that continue into adulthood and, in some cases, midlife or later life.

A consistent feature across the reviewed studies was the graded pattern of risk. Higher levels of exposure to adverse experiences were associated with greater psychological burden, supporting a cumulative risk perspective. This reflects the dose–response relationships widely reported in earlier ACE research (Felitti et al., 1998; Hughes et al., 2017), suggesting that adversity is not experienced in isolation but builds over time. Findings relating to timing and persistence further suggest that adversity occurring earlier in development, particularly when sustained, may have a stronger impact. This is consistent with developmental psychopathology frameworks, which emphasise increased sensitivity to environmental stress during key periods of emotional and neurobiological development (Shonkoff et al., 2012; Teicher & Samson, 2016). In this context, prolonged exposure to stress may contribute to longer-term vulnerability in mental health. This may indicate that current longitudinal research captures associations effectively but remains limited in explaining the underlying causal pathways linking childhood adversity to later mental health outcomes.

Strengths and Limitations of the Included Evidence

The evidence included in this review has several strengths. All studies used longitudinal or cohort-based designs, allowing for clearer temporal sequencing between childhood adversity and later mental health outcomes. This strengthens confidence in the direction of the relationship, as exposure to adversity was measured prior to the development of psychological difficulties. The use of large UK cohort datasets further enhances the robustness of the evidence, as these studies provide extended follow-up periods and enable examination of mental health outcomes across various stages of adulthood. In addition, the consistency of findings across a number of studies and cohorts strengthens the reliability of the observed associations, suggesting that the relationship between childhood adversity and later mental health outcomes is not limited to a single sample or study design.

At the same time, several limitations should be considered. A key limitation is the reliance on retrospective self-report measures of childhood adversity in some studies, which introduces the possibility of recall bias and mood-congruent reporting. Individuals experiencing current psychological difficulties may be more likely to recall or interpret early experiences negatively, potentially inflating associations (Danese & Widom, 2020). Although prospective cohort studies reduce this limitation, they may underestimate adversity where experiences were not recorded or disclosed during childhood, highlighting the complexity of accurately measuring childhood trauma. Attrition is also a common limitation in long-term cohort research. Loss to follow-up may disproportionately affect individuals with higher levels of adversity or poorer mental health, potentially introducing bias and reducing representativeness over time. While several studies attempted to address this through weighting or statistical adjustment, residual bias may still remain. In addition, variation in how both adversity and mental health outcomes were measured limits direct comparison across studies. Differences in cumulative ACE scoring, specific categories of adversity, and the use of diagnostic versus symptom-based measures may contribute to inconsistencies in findings and reduce comparability across studies.

Finally, as all included studies were observational in design, causal interpretations should be made with caution. Although many studies adjusted for key socioeconomic and demographic confounders, unmeasured variables may still influence the observed

relationships. This suggests that while the association between childhood adversity and later mental health outcomes is consistent, the underlying mechanisms remain insufficiently understood within current longitudinal research.

Limitations of the Review Process

Several limitations of the review process should be considered. First, the search strategy was limited to three electronic databases: MEDLINE, CINAHL and PubMed. While these databases are appropriate for capturing psychiatric, psychological, and public health literature, it is possible that some relevant studies were not identified. The restriction to English-language publications may also have introduced language bias, although this is less likely to have had a substantial impact given the UK-specific focus of the review. In addition, the inclusion of only UK-based studies strengthened the contextual relevance of the review and ensured alignment with the research aim, but it also limited the breadth of available evidence. As a result, the findings may not be fully generalisable to populations in different healthcare systems or cultural contexts.

A further limitation relates to the small number of included studies, which restricts the overall depth of evidence available for synthesis. Although this was partly due to the strict inclusion criteria, it may limit the ability to fully capture variation in findings across different populations and study designs. The review also relied on narrative synthesis rather than meta-analysis. While this was appropriate given the heterogeneity across studies in terms of adversity definitions, outcome measures, and follow-up periods, it means that pooled effect estimates could not be produced, which may reduce the overall precision of the conclusions.

Finally, although quality appraisal was conducted using a structured framework, both appraisal and synthesis involve a degree of interpretation. While efforts were made to apply criteria consistently, some subjectivity is unavoidable in the review process, which may have influenced how findings were interpreted and presented.

Implications for Practice and Policy

This review highlights key implications for both practice and policy. The consistent link between childhood adversity and poorer mental health outcomes points to the need for early identification and intervention.

This suggests that recognising adversity at an earlier stage may help reduce the progression of psychological difficulties over time. Professionals working in mental health, primary care, education, and social care settings should remain aware of the potential long-term impact of adverse childhood experiences when assessing psychological distress.

The findings also support the value of trauma-informed approaches within services. Recognising adversity as a contributing factor to later mental health difficulties may allow support to be delivered in ways that are more responsive to the longer-term effects of abuse, neglect, and household dysfunction. This is particularly relevant for individuals presenting with recurrent depression, self-harm, or more complex psychological difficulties, where early adversity may form part of the wider clinical context. This may also improve engagement with services, as interventions that acknowledge past experiences are more likely to be perceived as relevant and supportive.

At a policy level, the review highlights the importance of prevention and early support. Strategies aimed at reducing exposure to childhood adversity, including family support, safeguarding measures, early years intervention and accessible mental health services, may help reduce the long-term burden of mental ill health. The evidence for cumulative risk also suggests that individuals exposed to multiple forms of adversity may require more sustained and targeted support, rather than short-term or crisis-led intervention alone. This indicates that long-term, coordinated approaches may be more effective in addressing the complex needs of this population.

RECOMMENDATIONS FOR FUTURE RESEARCH

Future research should aim to address the limitations identified within the current evidence base. Greater consistency in how adverse childhood experiences are defined and measured would improve comparability across studies and strengthen interpretation of long-term associations. This may also enhance the ability to identify which forms of adversity are most strongly associated with specific mental health outcomes. More research is also needed on underexplored outcomes, particularly severe mental illness, psychosis and other less frequently studied psychiatric conditions.

There is also a need for further investigation into demographic and social differences in vulnerability. Limited attention has been given to ethnic differences, intersectional disadvantage, and the ways in which structural inequalities may influence both exposure to adversity and later mental health outcomes. Addressing these gaps would improve the inclusiveness and generalisability of the evidence base and support the development of more equitable interventions.

Finally, future studies would benefit from greater attention to underlying mechanisms and moderating factors. While many studies show that childhood adversity is associated with poorer mental health in adulthood, fewer explain how or why this relationship develops over time. Greater integration of developmental, psychosocial, and biological perspectives may help clarify the pathways linking early adversity.

CONCLUSION

This systematic review synthesised longitudinal evidence from UK studies examining the long-term mental health consequences of childhood adversity and adverse childhood experiences (ACEs). Across the included studies, early-life adversity was consistently linked to a higher risk of depression, anxiety, self-harm, and broader psychological difficulties from late adolescence into adulthood. Greater exposure was linked to higher levels of vulnerability, while studies examining timing and persistence suggested that sustained adversity during earlier developmental stages may have particularly long-lasting effects. Overall, the evidence consistently indicates that childhood adversity is a significant determinant of long-term mental health trajectories. The consistency of findings across different longitudinal designs strengthens confidence in these associations. Although methodological limitations such as attrition, retrospective reporting and residual confounding should be considered, similar patterns observed across both prospective and retrospective studies suggest that the relationship between childhood adversity and later mental health is unlikely to be explained by methodological factors alone. At the same time, this review identified several gaps in the current evidence base. While common mental health outcomes with conditions like depression and anxiety frequently studied, less attention was given to severe mental illness, psychosis, and other complex psychiatric conditions. In addition, variation in the measurement and operationalisation of ACEs limits comparability across studies, and there remains a need for greater consideration of demographic diversity and intersectional factors influencing vulnerability.

The findings have clear implications for both practice and policy. Early identification and intervention remain important, particularly for individuals exposed to multiple or persistent forms of adversity. The evidence also supports the development of trauma-informed approaches across healthcare, education and social care settings, alongside preventative strategies aimed at reducing childhood adversity and its long-term impact. Future research should aim to improve consistency in the measurement of ACEs, extend longitudinal follow-up across adulthood, and examine under-represented outcomes such as severe mental illness. Greater attention should also be given to the mechanisms linking childhood adversity with later mental health outcomes, including biological, psychological, and social pathways, to support the development of more targeted interventions. Overall, this review reinforces the importance of addressing childhood adversity as a key determinant of mental health across the life course and highlights the need for both preventative and intervention-based approaches to reduce long-term psychological harm.

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