Risk and protective factors that influence mental health outcomes

Rapid evidence review

April 2026

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Contents

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Intentions of review

This rapid review aims to provide an assessment of the current evidence base on risk and protective factors influencing mental health outcomes across the lifespan. By focusing on risk and protective factors, this rapid review intends to deliver timely and relevant insights to inform current practices, policies, and planning.

It is recognised that a significant volume of literature exists outside the parameters of this review. Exclusions have been made to maintain a focused and manageable scope.

Intervention studies are not included, ensuring the review remains clear in its scope. While interventions are important, they represent a separate research field centered on outcomes and effectiveness.

For a broad overview, the National Institute for Health and Care Excellence (NICE) provides Clinical Knowledge Summaries providing evidence on specific mental health conditions including:

- Definitions
- Prevalence
- Complications
- Diagnosis (what to screen, how to screen)
- Management of condition
- Prescribing information

Methodological and contextual considerations

Correlation not causation

Most studies included in this review used cross-sectional or qualitative designs, meaning they can identify patterns and associations but cannot prove causality (i.e. that one factor directly causes another). Several papers explicitly acknowledge this limitation, noting that the relationships they observed could operate in either direction or be explained by other, unmeasured factors. A smaller number of studies used stronger designs- such as prospective, longitudinal, or genetically informed approaches- which offer more robust evidence. These consistently show that the strength of reported associations tend to decrease once other influencing factors are properly accounted for.

Despite these limitations, the findings presented in this review offer valuable and broadly generalisable insights that are likely to be relevant to Suffolk's communities, mental health professionals, and commissioners. As such, they can meaningfully shape current practices, inform policy, and guide future planning.

Absence of evidence is not evidence of absence

It is important to acknowledge that this review can only reflect what is present in the available literature. Where a particular risk or protective factor does not appear in the findings, this should not be taken to mean it is unimportant or unsupported- only that it was not identified within the scope of the studies reviewed. Similarly, where a particular population group is not discussed, this does not imply they are unaffected or less likely to experience disproportionate mental health outcomes. It may instead reflect gaps in research attention, funding, or data availability. It is also worth noting that the available literature drawn on in this review largely focuses on common mental disorders, with limited discussion of severe mental illness. This is reflective of the broader evidence base rather than a deliberate omission and should not be taken to diminish the significance of severe mental illness or the experiences of those affected. This review aims to organise and summarise the existing evidence base as objectively as possible. With this in mind, the landscape of risk and protection is likely broader than what this body of literature can capture.

Language caveat

It is recognised that “mental ill-health” is widely considered the most inclusive and appropriate umbrella term for describing the many ways mental health difficulties can present. However, the studies and sources drawn on throughout this review use a range of terminology- including “mental disorders”, “mental health conditions”, “mental illness” and “psychiatric disorders”. As the scope of a rapid literature review requires synthesising findings across a broad evidence base, these terms are used interchangeably throughout to ensure consistency and readability. It is acknowledged that different terms may carry different meanings and connotations, and no single term will fully capture everyone's experience.

Similarly, when the review refers to groups facing additional or disproportionate risk, terms used are those provided within the original papers being discussed. Where it is helpful, definitions have been included to offer clarity. It is recognised that language in this area is continually evolving, and the aim throughout is to be as respectful and inclusive as possible.

Life course approach

This review covers the full lifespan, from birth to older age, reflecting the fact that mental health risks and protective factors shift across different stages of life.

Suffolk has an older age profile than England overall, with a higher proportion of residents in later working age and older age groups, and comparatively fewer younger adults.

As Suffolk's population ages, there will be a growing need for preventative approaches that support mental wellbeing in later life and ensure the timely identification and management of mental health conditions alongside physical health needs. This demographic context makes the findings of this review particularly valuable.

Nevertheless, the findings relating to children and young people should not be overlooked. Many of the risk and protective factors identified in earlier life have lasting effects that shape mental health outcomes in later years. Supporting prevention and early intervention across the whole life course can therefore not only improve outcomes now but also help reduce the future burden of mental ill health as Suffolk's population continues to age.

The interconnected nature of risk and protective factors

It is important to note that many studies discussed in this review highlight the interconnected nature of both risk and protective factors. Risk factors were shown to rarely operate in isolation; they frequently co-occur and compound one another. Similarly, protective factors often exert mediating or buffering effects, reducing the impact of risk factors on mental health outcomes. This underscores a critical message: addressing a single factor in isolation is unlikely to achieve meaningful change. To see real impact, all areas must be considered and addressed together through coordinated, holistic approaches.

Key findings

This review assessed literature gathered in an evidence search completed by the North East London NHS Foundation Trust Library and Knowledge Service in January 2026[1]. All evidence included was published within the last five years. Results were organised across the lifespan (children and young people, adults, and older adults) and then thematically organised into four themes. Within each theme there is a dedicated section highlighting where the literature identified population groups facing disproportionate risk or distinct protective needs. Where findings applied to all ages or could not be meaningfully attributed to a single life stage, these were captured within a fifth theme (cross-cutting themes) to ensure they were not overlooked simply because they did not sit neatly within one age group.

Theme 1: Relational and social environment

Children and young people

Parental mental health

Parental mental health has repeatedly been recognised as a risk factor contributing to mental health challenges among children and young people[2–7].

Research shows that parental psychiatric illness raises children's risk not just for one particular disorder but across a wide range- including substance use, mood disorders, anxiety, and psychosis-spectrum conditions[6,7]. This pattern suggests a broad vulnerability to mental health difficulties in general, rather than a specific inherited risk for any one condition.

Within this broad vulnerability, both maternal and paternal mental health have distinct influence. Maternal postnatal depression and anxiety was linked to offspring anxiety disorders and psychotic experiences in early adolescence[6], while worsening paternal depression over time was shown to independently predict both internalising and externalising symptoms in young children[5]. Similarly, having one parent (independent of gender) with a psychiatric disorder doubled the risk of offsprings developing a psychiatric disorder (23.8% vs 12.1%), and having both parents affected tripled the risk (34.7%)[7]. Together, these findings reinforce that the mental health of both parents- not mothers alone- may shape mental health outcomes in children and young people.

Importantly, these effects are not solely genetic. A key transmission mechanism operates through the family environment. Parents with mental illness were shown to be more likely to display critical, hostile, or emotionally over-involved interaction styles toward their children- patterns that exist independently of the child's own behaviour and reflect the parent's psychological functioning[3]. This critical family climate, particularly during the first three years of life, acts as a stressor that interacts with a child's existing vulnerability and predicts the development of mental health difficulties later in life[3].

Family climate

Building on this, the family climate is not only a mechanism through which parental mental illness affects children- it is, in its own right, a consistent predictor of mental health outcomes in children and young people[5,8–15].

How well parents are coping emotionally and practically is fundamental. Parental coping influences not only the parent-child relationship but also wider family cohesion, the capacity to protect children from harm, and opportunities for healthy social development [8,11]. This has been shown to increase the risk of poor mental health outcomes in children and young people[5].

The nature of specific parent-child relationships further shapes outcomes. A negative mother-child relationship during childhood has been identified as the key risk factor for later depressive symptoms in girls[14], and poorer experiences of paternal parenting as early as age seven are associated with increased risk of chronic depressive symptoms across adolescence into young adulthood[10]. These findings reinforce that caregiving experiences from mothers and fathers matter, and that if left unaddressed the effects on mental health can persist well beyond early childhood[5,10,14].

More broadly, family dynamics have a strong influence on a child's mental health- and work in both direction. When parental mental health is compromised, and conflict, instability, or low warmth define the household, these risks don't simply add up- they compound. Poor family relationships are significantly associated with psychological distress[9] and family violence is a significant predictor of anxiety[13]. Crucially, without protective factors to interrupt the process, these difficulties operate as a self-reinforcing system. Parental stress worsens family conflict, which deepens a child's psychological difficulties, which in turn feeds back into household tension. Once this cycle takes hold, problems in one part of the family rarely stay contained- they ripple outward, reinforcing one another [8]. These dynamics do not occur in a vacuum. Financial hardship, precarious employment, and extended working hours all generate parental stress, reducing the capacity to supervise, set boundaries, and maintain warm, consistent relationships with children [11,15]- this translates directly into children's mental health outcomes, predicting both internalising and externalising symptoms[5].

However, the system also works in the other direction. Where parent-child relationships are characterised by warmth and good communication, the family environment functions as a protective factor. Satisfaction with home environment and positive family relationships are shown to promote good mental health and wellbeing[8,9,12], and these qualities can buffer against psychological difficulties even when other risk factors are present[9,12,14]. This buffering effect is important- it means that not every part of the family climate needs to be functioning well for a child to be protected. Even where families face significant socioeconomic disadvantage, a strong warm relationship with a parent can act as a buffer- reducing the likelihood that financial stress, housing instability, or material deprivation translates into poor mental health outcomes for the child. While socioeconomic pressures are often entrenched and slow to shift, the quality of the parent-child relationship is something children experience daily- and something that can be more immediately supported through targeted intervention. This suggests that strengthening the family system, rather than targeting the individual child alone, may provide accessible protective effects- particularly for families where changing wider circumstances is not immediately possible.

Adverse childhood experiences

When family dysfunction forms part of a broader pattern of adversity in childhood, the evidence for lasting harm to mental health becomes particularly compelling. Adverse childhood experiences (ACEs)- encompassing abuse, neglect, household dysfunction, and exposure to violence- are among the most consistently evidenced risk factors for poor mental health in children and young people. A large-scale umbrella review of systematic reviews and meta-analyses found that ACEs were associated with a 66% increased risk of developing anxiety and depression later in life, with particularly strong effects observed for exposure to domestic violence, sexual abuse, and child abuse more broadly[16]. At a population level, US survey data highlights that household dysfunction ACEs are significantly associated with adolescent anxiety, depression, and their comorbid presentation, with particularly pronounced effects on depression[17]. Evidence from UK university and college students supports these findings, showing that a history of ACEs was significantly associated with elevated risks of self-harm, suicidal behaviour, anxiety, and depression[18].

The influence of adversity within the family environment is especially well documented. General practice data demonstrate that children living with a household member affected by cancer, psychiatric disease, or social problems were significantly more likely to develop psychiatric morbidities over a twelve-year follow-up period, with anxiety and depressive disorders the most common diagnoses[19].

Beyond the home, personal exposure to severe physical violence during adolescence has been shown to more than triple the odds of any psychiatric disorder by age 18, including both internalising and externalising conditions[20]. Childhood adversity more broadly has also been identified as a predictor of greater internalising and externalising problems and lower positive mental health among adolescents[21].

However, it is important to interpret these associations with some nuance. A genetically informed Swedish twin study cautions that the direct causal impact of many individual ACE types (particularly physical abuse and family violence) may be smaller than previously estimated, with much of the apparent effect attributable to shared genetic and familial vulnerability. Sexual abuse and cumulative exposure to multiple adversity types, however, retained robust independent effects even after full genetic control[22]. This suggests that while ACEs undoubtedly raise psychiatric risk, the pathways through which they do so are complex and likely interact with underlying genetic predisposition. If much of the association between adversity and mental ill-health is driven by shared genetic and familial vulnerability rather than the adverse experiences themselves, this strengthens the case for early, proactive support- not simply in response to what has happened to a child, but in recognition of the underlying susceptibility they may carry. Therefore, equipping these children with the skills and resources to protect their mental health before difficulties emerge is where intervention may have the greatest impact.

Peer relationships

Who a young person spends time with and how they are treated by their peers was shown to shape their mental health. Two large cohort studies found that worsening peer relationships in early adolescence directly predicted poorer mental health in late adolescence, independent of all other factors, suggesting that peer difficulties may play a more direct role in driving mental health outcomes[4]. The quality of a young person's social world is closely intertwined with their psychological wellbeing, family relationships, community environments and sense of identity-

meaning that difficulties or strengths across these domains do not operate in isolation but compound one another, amplifying or buffering mental health outcomes[8].

Where peer relationships are poor, the consequences are significant and lasting. Bullying and victimisation are associated with increased risk of mental health problems in later life[12,16,23,24]. Global data from over 167,000 adolescents across 65 countries confirms that all forms of bullying- verbal, physical, and neglect- significantly harm mental health, with verbal bullying exerting the largest effect. Younger adolescents under 15 are disproportionately affected, and greater frequency compounds the negative effects[25]. These consequences extend well into adulthood: longitudinal evidence links bullying and victimisation to increased anxiety, depression and broader psychiatric disorders at age 26 regardless of how it was measured, with the highest risk among those who reported bullying at both timepoints. Notably, adults were more likely to forget childhood bullying than to fabricate it when self-reporting incidence over time. This suggests that the long-term impact may be greater than retrospective studies capture[26].

Where peer relationships and the school environment are positive, they serve as powerful protective factors. A UK birth cohort study found that loneliness before age 11 was the single strongest modifiable predictor of chronic depressive symptoms persisting into adulthood- meaning children who feel socially connected are significantly less likely to develop lasting mental health difficulties. School connectedness was the only other factor to remain independently significant alongside loneliness across multiple analytical approaches, outperforming all biological markers tested (including inflammatory markers, sleep, and diet)[10]. At a whole-school level, student connectedness has also been shown to moderate the harmful impact of both traditional bullying and cyberbullying on depression, suicidal behaviour, and self-esteem- meaning that even where bullying occurs, a school environment in which young people feel they belong can meaningfully reduce its damage[23].

Taken together, this evidence suggests that the quality of a young person's social world may play a more significant role in long-term mental health trajectory than is often assumed- and that strengthening peer connections and school belonging could be a particularly effective preventive strategy.

Adults

Loneliness and Social isolation

Loneliness (defined as the subjective sense of inadequate social connection) was identified as an independent risk factor for depression in adults. A scoping review of 66 longitudinal studies found that in 8 of 9 studies focused on loneliness, feeling lonely at baseline predicted adverse mental health outcomes at follow-up, including higher risks of major depressive disorder, greater depressive symptom severity, and generalised anxiety disorder. Chronic loneliness carried particularly elevated risk of major depression compared to transient loneliness, and this association persisted for up to 12 years after loneliness was first reported [27].

Social isolation (defined as the objective lack of social contact or restricted social networks) was shown to influence mental health outcomes through both direct and indirect pathways. For example, directly, those reporting inadequate social contact had markedly poorer mental wellbeing [28]; indirectly, social isolation from friends and neighbours was linked to reduced out-of-home physical activity, which in turn predicted increased depressive symptoms over time [27]. These relationships were shown to hold across different cultural contexts [27] and across housing

tenure types and levels of area deprivation[28], suggesting that social isolation is a consistent risk factor for poorer mental wellbeing irrespective of socioeconomic circumstances.

Quality of social relationships

Across the life course, poor quality relationships with family members, peers, and neighbours- whether in adolescence or adulthood- are highlighted as risk factors for depression, internalised symptoms, and functional somatic complaints[29]. More broadly, deteriorated social networks and negative social environments have been identified as among the strongest predictors of the development of poor mental health outcomes[30].

Conversely, higher quality, positive, supportive and maintained relationships actively protect mental health, serving as a buffer even when mental health difficulties are already present[30], and quality community involvement has been shown to consistently reduce depression over a 10-year period[27].

Low functional social support is a particularly impactful variable for mental wellbeing: those reporting high social support score markedly higher on wellbeing measures than those without. This effect operates largely through direct pathways, suggesting that quality social support benefits mental health in its own right, not solely by buffering against other risk factors[31]. The protective role of social support extends to specific populations and life stages: it is the second most consistently evidenced risk factor for postpartum anxiety[32], and inadequate social support was shown to approximately double the odds of mental health disorders among adults living with type 2 diabetes[33].

The long reach of social risk: trajectories and transitions

Mental health trajectories across the life course are shaped by a complex interplay of relational and social factors, with early experiences casting particularly long shadows into adulthood. Research from the Northern Swedish Cohort demonstrates that poor relationships with parents and peers during adolescence predict internalised mental health symptoms, functional somatic symptoms, and heavy episodic drinking well into middle age, underscoring the enduring influence of early relational environments. The accumulation of social and material adversities over time (including parental separation, residential instability, violence, and poor living standards) disproportionately affects those from lower socioeconomic backgrounds and accounts for the widening mental health gap observed between social groups from adolescence through to the mid-forties[29].

While early adversity carries significant weight, mental health across adulthood continues to be shaped by changing social circumstances. Depressive symptoms have been shown to follow a "broken stick" pattern, improving during the transition from adolescence to early adulthood before gradually worsening again through midlife[34]. This suggests that protective conditions in emerging adulthood, such as engagement in the labour market, may temporarily buffer against poor mental health but do not confer lasting protection. As individuals move into midlife, social determinants remain influential: university education appears protective against mental health decline, whereas unemployment and, most strikingly, exclusion from the labour market through sickness or disability increase the risk of deterioration[35]. These findings indicate that the midlife decline in mental health is not inevitable- it is driven by the social transitions and conditions people experience across this period.

Compounding these life course dynamics is the intergenerational dimension of adversity. Adverse childhood experiences show a striking dose-response relationship with adult mental

health, with those reporting four or more ACEs remaining over twice as likely to experience mental health difficulties even after adjusting for current socioeconomic circumstances[36]. Poor family support and exposure to community-level adversity independently increase this risk further, highlighting how relational and contextual stressors operate alongside individual histories of harm[36].

These findings support the case for addressing social connectedness, relationship quality, and social support as both risk and protective factors for mental health across the adult population. Tackling mental health inequalities requires attention not only to current economic circumstances but to the relational and social environments experienced across the entire life course- from the quality of family and peer relationships in childhood, through transitions into employment and education in early adulthood, to the social and material conditions that accumulate and compound over time.

Older adults

Social relationships

Older adults' social relationships play a central role in shaping mental health outcomes in later life. Across Europe, loneliness emerged as one of the strongest risk factors, with those reporting signs of loneliness more than twice as likely to experience depressive symptoms than those who did not report [37].

Marital and partnership status exerts a further significant influence on mental health risk. Older adults who were recently widowed faced a nearly fourfold increase in risk of developing a new mental disorder, while those who had never married had approximately double the risk, likely reflecting reduced access to companionship and long-term social support. The absence of religious affiliation was also associated with a 66% increase in risk, potentially because religious engagement provides access to structured social networks, a sense of community belonging, and adaptive coping mechanisms[38].

Quality of social relationships

The quality of social relationships also shapes mental health in later life. Satisfaction with social activities and social networks was found to be protective against depression, indicating that how older adults perceive their social engagement may matter more than the volume of activities they undertake. Participating in a higher number of social activities was paradoxically linked to increased depressive symptoms in the northern European region (Denmark, Estonia, Finland, Latvia, Lithuania, and Sweden), which may reflect the emotional toll of social overcommitment and fatigue[37].

Family caregiving roles present a similar pattern. Although moderate contact with grandchildren may offer emotional benefits, frequent or sustained grandchild caregiving was associated with elevated depressive symptoms among adults aged 65–74, suggesting that what begins as a rewarding role can become burdensome when demands are prolonged or intensive[37].

Taken together, these findings suggest that it is not simply the presence of social contact that protects mental health in later life, but its quality and sustainability. Meaningful, manageable relationships are protective- while loneliness, loss, and over-burdensome caring roles increase risk. This points to a clear priority: supporting older adults to maintain fulfilling social connections, without placing unsustainable demands on them or those around them. This could be worth considering in intervention design: in contexts where baseline social

participation is already high, it may be helpful to focus on the meaningfulness of engagement rather than simply increasing the number of activities.

Groups facing additional risk

Sexual and Gender Minority Young People

Sexual and gender minority (SGM) is used as an umbrella term for youth who identify as either a sexual minority (SM), a gender minority (GM), or both. Each are defined as follows:

- **Sexual minority (SM)** youth are those who identify as gay/lesbian, bisexual, pansexual, or asexual but do not identify as transgender, non-binary, gender fluid, or other gender.
- **Gender minority (GM)** youth are those who identify as transgender, non-binary, gender fluid, or other gender AND also identify with a non-heterosexual sexual orientation.

Sexual and gender minority (SGM) young people experience higher rates and greater severity of mental health difficulties compared to their heterosexual and cisgender peers, with gender minority youth at especially elevated risk[39–41]. These disparities are shaped by a web of interacting factors- central among them is the relational and social environment.

Family relationships emerge as a particularly influential factor[39–42]. Family rejection of a young person's sexual orientation or gender identity was consistently associated with depression, anxiety, and suicidality[40,41]. Conversely, family support, acceptance, closeness, and effective communication were shown to be protective- associated with reduced depression, anxiety, and suicidal ideation[39–42]. This suggests that parental rejection or acceptance can mediate the link between SGM young people and poor mental health outcomes[40,41].

Importantly, the quality of family relationship appears to matter more than the act of disclosure itself- young people whose families are warmth and accepting fare significantly better than those who face regular rejection, regardless of whether they have formally come out[40].

For gender minority young people specifically, being called by one's chosen name across family, school, and other social contexts was associated with reduced depression and increased self-esteem[40,42].

The school environment also emerged as both a risk and protective factor. School connectedness, teacher support, feeling safe at school, and the presence of gay-straight alliances or gender-sexuality alliances were associated with lower mental health risk, reduced bullying, and fewer suicide attempts[39,40,42]. School belonging was protective for both sexual minority and gender minority youth, though the mechanisms may differ between groups[39]. Whilst negative school climates- characterised by a lack of institutional support, bullying, and feelings of betrayal- partially explained the elevated rates of depression among SGM young people[40], and victimisation at school, including transphobic bullying, was associated with anxiety and broader psychopathology among gender minority youth[41].

Peer relationships and broader social support also played an important role. General social support from friends was negatively associated with depression, and social isolation was shown to fully explain the link between sexual minority identity and depression among males in at least one study[40]. Peer support was associated with increased wellbeing and reduced suicidality[42], and larger social networks- both online and offline- were linked to fewer suicidal thoughts and attempts among gender minority individuals[41]. Notably, it was general rather than identity-specific peer support that appeared most consistently protective; sexual orientation-specific support from friends did not show the same effect[40]. Community connectedness and feeling that one mattered to the community were associated with reduced depression and

suicidal ideation[42], though evidence for the protective role of community connectedness among gender minority populations specifically remained mixed[41].

Structural and institutional factors- though less extensively studied- were nonetheless significant. Access to affirming health and mental health services, inclusive school policies, and staff training on inclusion were associated with reduced stigma, lower rates of bullying, and improved wellbeing[42]. At a broader level, country-level structural stigma, measured through discriminatory laws, policies, and established community attitudes, was associated with lower life satisfaction among transgender and gender diverse individuals[41]. Negative healthcare experiences, including encounters with professionals lacking competence in gender diversity, were linked to poorer self-rated health and lower quality of life[41].

Taken together, these findings make clear that the mental health disparities experienced by SGM young people are not inevitable consequences of identity- they are influenced by their relational and social environments. Family acceptance, safe and inclusive schools, supportive peer relationships, and affirming services consistently emerge as protective factors. This suggests that some of the risk is modifiable. The priority is not to change the young person, but to change the environments they move through- ensuring that families are supported to respond with warmth, schools are equipped to foster belonging, and services are competent to affirm rather than alienate.

Autistic individuals

Bullying is a risk factor across the general population, but for autistic individuals it operates with particular severity and through additional pathways including social exclusion driven by stigma and group-based rejection. A systematic review found that bullying has an impact on the mental health of autistic individuals, leading to depression, low self-esteem, negative self-concept, loneliness, anxiety, and suicidal ideation. Bullying and victimisation was found to lead to psychopathological disorders later in life, including the development of psychosis, and was associated with self-harm and isolation as well as a lack of sense of belonging. Parents reported a significant connection between bullying and anxiety symptoms experienced by their autistic children, and a strong association between bullying and social anxiety was identified. The authors suggest that effective protection requires a multifaceted approach: increasing education and awareness about autism and neurodiversity, creating inclusive environments that foster acceptance and positive social interactions, building self-advocacy skills, collaboration among schools, parents, and community organisations, and providing accessible neuro-affirmative mental health support[43].

Children and Young People in Residential and Foster Care

A systematic review found that young people in the care system consistently show worse psychological outcomes than peers living with biological families, with several studies finding that over half of children in care exhibited clinically significant psychopathological symptoms. Maltreatment history was consistently linked to worse outcomes, and the cumulative effect mattered: adolescents who had experienced multiple types of maltreatment showed particularly elevated psychiatric symptoms. Children in group homes exhibited higher levels of aggression, worse peer relationships, and more peer victimisation than those in foster family settings- where troubled environments compound individual difficulties[44].

Social support from multiple sources was consistently associated with better mental health[44,45]. Support from friends and residential staff could partially substitute for absent parental support, and research suggested that at least two strong social network domains were

necessary for a meaningful protective effect. The quality of caregiver relationships was critical: emotional closeness and a sense of security with caregivers moderated the development of wellbeing, particularly in the first six months of placement, and strong caregiver relationships could weaken the connection between past trauma and current distress. Family dynamics continued to influence outcomes even after placement, with higher family cohesion associated with fewer internalising symptoms and family conflict linked to more[44].

These findings highlight that while children in care carry some of the highest levels of mental health risk, the quality of their relationships after entering the system can meaningfully alter their trajectory. Strong caregiver bonds, stable placements, and social support from multiple sources all emerge as protective- capable of weakening the link between past trauma and current distress. This suggests that the care system itself represents a critical intervention point: where relationships are warm, consistent, and secure, some of the effects of earlier adversity may be mitigated.

Young carers

Children of parents with mental illness are more likely to take on caring responsibilities, which can compound their risk further. A systematic review found that while having any family member with an illness increased mental health risks for young people, this risk was significantly elevated when the ill family member was a parent with mental illness or substance misuse problems[46].

Migrants

The relational and social environment was identified as a determinant of mental health outcomes for migrants. Social isolation and loneliness emerged as significant risk factors for poor mental health, with feeling rejected by the host community shown to compound pre-existing stress, while racism and everyday microaggressions increased the likelihood of developing depression and anxiety[47]. This pattern held across the life course, with older voluntary migrants (defined as those who migrated by choice rather than through forced displacement) who lacked social networks and language proficiency experiencing intensified loneliness, particularly following widowhood or partner loss[48].

Family relationships acted as both a source of strength and a source of strain. Supportive family functioning and cohesion were consistently associated with better mental health outcomes[47,48]. For children and young people from immigrant families, caring and supportive parenting and parental monitoring showed protective effects, with evidence linking family warmth to lower anxiety, depression, and stress, and to higher self-esteem. However, parent-child conflict, whether rooted in acculturative differences or general relational tension, was associated with higher depression and lower self-esteem among young people[49]. Among older voluntary migrants who joined adult children through family reunification, unmet expectations of emotional support and the erosion of family norms produced feelings of disconnection and loss of agency associated with increased risk of depression[48].

Gender shaped the social environment of migration in distinct ways. Being female, unmarried, and lacking social support were all identified as risk factors for poor mental health among South Asian migrants[50]. For older women migrating from patriarchal societies, continuing familiar domestic roles could paradoxically provide a sense of purpose, while men who migrated without partners often struggled with boredom and a loss of identity[48].

Bonding with co-ethnic peers (defined as others from the same cultural or national background) provided a platform to share language, culture, and challenges, reducing stress and fostering belonging among older voluntary migrants[48]. The process of acculturation (defined as gradually adapting to the new culture) generally supported willingness to engage with mental health services, while host country language proficiency emerged as one of the most consistent protective factors across the literature, reducing isolation and enabling access to care[47,48,50]. For older voluntary migrants, poor language skills were a barrier not only to services but to basic daily tasks, mobility, and social relationships[48].

Taken together, these findings suggest that social connection is a consistent protective factor for mental health among migrant populations, while isolation, discrimination, and strained family relationships represent risks. Approaches that foster community belonging, support intergenerational family functioning, and address gender-specific barriers to help-seeking may complement individually focused mental health services.

Refugees

The relational and social environment is equally significant for refugee mental health, though the context of forced displacement introduces additional complexities. Social isolation and feeling rejected by the host community were shown to compound pre-existing trauma, while racism and everyday microaggressions increased the likelihood of developing depression, anxiety, and post-traumatic symptoms[47]. Additionally, having friends and social connections in the host country was shown to be protective against depression and encouraged engagement with services[47].

For refugee children, poor social support, discrimination, and difficulties with peer relationships represented persistent low-grade stressors that both directly and indirectly undermine wellbeing. A meta-analysis found that such daily stressors fully mediated the relationship between past trauma and post-migration mental distress[51]. A large systematic review found evidence that social engagement- including group membership, interpersonal trust, and a sense of belonging- was associated with better mental health among refugees living in high-income countries[52]. Engagement with both one's own ethnic community and the broader host community was associated with better mental health outcomes[52].

Supportive family functioning, cohesion, and adaptability were consistently associated with better mental health outcomes across refugee populations. However, the literature also highlighted that the family environment could also be a site of risk, particularly where acculturative differences created tension between generations[47,52].

Gender introduced additional layers of vulnerability within refugee populations. Women faced particular risks including the burden of undisclosed gender-based violence, sole responsibility for childcare limiting help-seeking, and in some communities, male control over access to healthcare[47,50].

Religious practice and cultural identity also played a protective role among refugees, though findings were more mixed depending on context[47,51]. Host country language proficiency emerged as one of the most consistent protective factors, reducing isolation and enabling access to care[47,52].

Taken together, these findings suggest that social connection and community engagement are consistent protective factors for refugee mental health, while isolation, discrimination, and the compounding effects of pre-existing trauma represent significant risks. Approaches that foster

belonging within both one's own community and the host community, alongside attention to family functioning and gender-specific barriers, may complement trauma-focused services.

Ethnic minorities

Racial and ethnic discrimination was identified as a significant and independent risk factor for poor mental health among young people and adults from minority ethnic backgrounds. Discrimination was identified as the strongest predictor of negative mental health in a cross-sectional study of school-going adolescents in Greater London, associated with a fivefold increase in the odds of poor mental health outcomes[24]. Similarly, experienced racism was significantly associated with anxiety, depression, and their comorbidity in a US survey- with particularly pronounced effects on depression, where exposure to racism more than tripled the odds of a diagnosis[17]. These findings were echoed in a large-scale machine learning analysis of two longitudinal cohorts, which identified victimisation, marginalisation, and discrimination as key peer-relational factors linked to worse future mental health[4].

The relationship between discrimination and mental health is not uniform across ethnic groups. A study of adolescents in England found that while racial or religious discrimination was harmful for all young people, its negative impact on wellbeing was significantly amplified for Indian and Pakistani teenagers compared to their White British peers. Notably, Bangladeshi young people did not show this amplified effect despite reporting similar levels of discrimination, suggesting that community-level or cultural protective factors may buffer the impact in some groups. This variation underscores the importance of disaggregating broad ethnic categories in both research and service planning, as grouping diverse communities together can obscure the specific mechanisms through which discrimination operates and the distinct protective resources available to different groups[53].

Among Black children and young people specifically, racial discrimination has been shown to co-occur with a wide range of other adverse childhood experiences, including neighbourhood violence, household mental illness, and material deprivation. Even after adjusting for eight conventional adverse childhood experiences and sociodemographic factors, Black children who had experienced racial discrimination were 35% more likely to have depression and 39% more likely to have anxiety than those who had not. The authors of this study argued that discrimination should be understood not merely as an isolated stressor but as a structurally embedded experience that increases exposure to further adversity, since institutional racism disproportionately places Black families in contexts where community violence and economic hardship are concentrated. This stress proliferation pathway means that the cumulative burden of culturally specific and conventional adversities may be considerably greater than any single factor alone[54].

The relationship between ethnicity and mental health is not, however, one of straightforward disadvantage. A longitudinal English study found that Asian and Black young people reported fewer mental health difficulties and higher wellbeing than their White peers[55], reinforcing the view that it is not ethnic minority status itself that places young people at risk, but rather their exposure to discrimination, marginalisation, and the structural conditions in which these occur[24,54,55]. Understanding this distinction matters for policy and practice, because it directs attention towards environmental factors that can be changed rather than treating ethnicity as an inherent vulnerability. Equally, cultural and community factors commonly assumed to be protective do not always operate in that way. Regular religious attendance, for instance, was linked to slightly lower wellbeing among some groups, including Pakistani and Mixed White-

Black African young people, possibly because frequent attendance during the teenage years reflects greater parental control at a time when young people are seeking independence[53].

Theme 2: Socioeconomic and environmental factors

Children and young people

Economic disadvantage

Economic disadvantage is consistently associated with poorer mental health outcomes among children and young people. This finding holds regardless of how hardship is measured- family income, material deprivation, free school meal eligibility, or neighbourhood-level indices[11–13,53,55–58].

Children and young people from low-income families show higher rates of depression, anxiety, and behavioural difficulties. A large US study found children from the lowest income families were approximately twice as likely to have a current mental disorder, with risks three to four times higher for disruptive behaviour disorders[57]. Longitudinal evidence from Australia found that those in the lowest affluence group had persistently higher depressive symptoms over time[56], while a further study identified financial problems as a significant predictor of stress, depression, and anxiety in adolescents[13]. Free school meal eligibility- a standard UK indicator of low income- was associated with more difficulties and lower wellbeing[55], and home material deprivation predicted poorer wellbeing over time[12].

Poverty is not only a direct risk factor for poor mental health in children and young people, it also operates indirectly. Low income increases parenting stress, which in turn increases adolescent risk of depression and anxiety[11]. Similarly, growing up in a low-income household with less education increased risk of depression and somatoform disorders into adulthood[58]. These pathways suggest that economic hardship affects young people through the quality and stability of their wider environment not income alone.

Poverty rarely operates in isolation- it intersects with other forms of disadvantage to compound mental health risk. For example, girls from low-income families had significantly worse depression and anxiety trajectories than either poverty or female gender alone would predict[56]. This demonstrates that the combination of disadvantages produces outcomes greater than the sum of their individual effects. School-level deprivation adds a further layer: students attending the most deprived schools had the highest anxiety scores, suggesting that disadvantage in a young person's wider environment amplifies the risk already carried by individual circumstances[56].

However, this compounding pattern does not hold uniformly across all groups. The link between deprivation and poorer wellbeing was not equal across ethnic groups. One UK study found the association was weaker among several ethnic minority groups, and in some cases reversed- Black African teenagers in more deprived neighbourhoods reported better wellbeing than those in wealthier areas, and Indian young people on free school meals reported better wellbeing than those who were not. The authors suggest poverty may carry greater social stigma among specific ethnicities, increasing its impact on mental health[53].

Neighbourhood deprivation and structural disadvantage

Neighbourhood deprivation is a consistent risk factor for poorer mental health in children and young people, independent of family-level income[4,20,59–61].

Children living in more deprived neighbourhoods show worse mental health outcomes. A study of over 2,000 primary school-aged children in South-West England found that those in the most deprived areas had higher levels of mental health difficulties, and this association was stable across all three time points measured over 30 months[60]. A UK birth cohort study similarly found that high neighbourhood deprivation in childhood was associated with more total mental health problems and more internalising difficulties at age 17, even after controlling for family income and ethnicity[59]. Low socioeconomic status at the neighbourhood level was also identified as one of the strongest predictors of worse mental health in late adolescence across two large cohorts[4].

The risk stems not just from household poverty but from the cumulative characteristics of a neighbourhood- its educational resources, economic opportunity, safety, and environment[20,61]. A US study of adolescents aged 10–19 found that depression was associated with living in lower-opportunity neighbourhoods, consistent with the wider literature. However, for anxiety and suicidal ideation, the relationship reversed: rates were higher among hospitalised adolescents from higher-opportunity areas, likely reflecting both academic and social pressures in higher-opportunity settings and greater access to and utilisation of hospital-based mental health care among families in these areas[61]. Neighbourhood context therefore affects different mental health conditions in different directions.

Neighbourhood-level risk itself was shown to increase when it co-occurs with personal adversity. Neighbourhood disorder- characterised by visible signs of social disorganisation- was associated with increased odds of psychiatric disorder in a longitudinal cohort study. The risk was greatest when neighbourhood disorder coincided with personal experiences of violence: over three quarters of adolescents exposed to both met criteria for a psychiatric disorder, compared with roughly a third of those exposed to neither. The compounding effect was strongest for internalising and thought disorders. This suggests that living in threatening environments may promote heightened threat perception which may be harmful to mental health[20].

One methodological finding with practical relevance was that the link between deprivation and mental health difficulties was stronger and more consistent when reported by parents compared to teachers. This suggests that school-based monitoring alone may underestimate need in more deprived communities, and that gathering information from families is important for accurate identification[60].

Social exclusion

The risk to young people's mental health is often not from any single area of deprivation but from the accumulation of multiple forms of social exclusion. A US national survey of children's health found significant associations between several markers of social exclusion and adolescent anxiety and depression. Food insecurity showed a particularly strong link with depression, while housing insecurity and poor access to healthcare were associated with anxiety. When anxiety and depression co-occurred, the picture was broader: poverty, housing insecurity, caregiver underemployment, poor access to healthcare, food insecurity, and a poorly built environment were all significantly associated with comorbid symptoms[17]. This suggests that as forms of exclusion accumulate, so does mental health risk.

A large Australian survey, of nearly 19,000 young people aged 15–19, reinforced this pattern. Social exclusion was measured across four domains- relational difficulties, financial hardships, housing challenges, and education/employment issues. Each domain was independently

associated with higher psychological distress, greater loneliness, and lower wellbeing, but the critical finding was that experiencing multiple forms of exclusion together produced substantially worse outcomes- those affected across all four domains showed roughly a 9-point increase in distress scores and a 26-point drop in wellbeing scores[62].

Certain populations were disproportionately affected by social exclusion: gender-diverse young people, those in rural or remote areas, those from lower socioeconomic backgrounds, and those from non-English-speaking households[62]. This indicates that social exclusion does not affect all young people equally and tends to cluster among those already facing other forms of disadvantage.

Physical environment

The physical environment in which children and young people live- including access to green space, the quality of the built environment, and opportunities for outdoor activity- is associated with mental health outcomes[10,63–65].

Access to nature was shown to be protective against poor mental health outcomes in children and adolescence. Analysis of the UK Millennium Cohort Study found that neighbourhood greenspace was linked to better behaviour and thinking skills as children grow, with benefits seen in the early years before children start school[65]. A UK birth cohort study found that greater participation in outdoor activities at age 11 was protective against chronic depressive symptoms, with those who participated less having roughly half the odds of protection compared to more active peers[10]. Qualitative evidence reinforces this, in a photovoice study with East London adolescents, young people described green spaces as therapeutic and restorative, particularly during periods of stress such as exams [63]. This suggests that promoting use of the natural environment and outdoor activities may buffer the effects of particular risk factors such as stress and protect children and young people from poorer mental health outcomes.

However, when green spaces are polluted, littered, poorly maintained, or threatened by development, their mental health benefits are reduced[63]. The built environment can also cause distress. In East London, adolescents described tall buildings as “imposing” and pointed to sharp differences in environmental quality across their neighbourhood- with neglected spaces making them feel sad[63]. This suggests that the quality of local environments acts as both a risk and protective factor for children and young people's mental health- well-maintained green spaces can support wellbeing, while neglected or unequal environments can actively undermine it.

Adolescents also repeatedly recognised disparities in the quality of their local environment which negatively impacted mental wellbeing. East London participants described well-maintained areas as feeling "too good" for their neighbourhood. Young New Zealanders associated their mental health struggles with environmental inequalities that they felt powerless to change- including inequality, climate change and economic investment in the environment[64]. These accounts suggest that the psychological impact of the living environment extends beyond the physical space itself to include what it communicates about a young person's place in society[63,64].

Digital environment

Social media use is a significant risk factor for children and adolescent mental health. Evidence shows that when children use social media more than usual, they develop more depressive

symptoms the following year[66]. Similarly, social media use both outside and during school hours was shown to independently predict higher depressive symptoms and lower wellbeing respectively[67]. Further building this case, children who were already depressed did not go on to use more social media[66]. This suggests that social media use may increase risk of depressive symptoms rather than poor mental health leading to increased social media use. Similarly, social media use both outside and during school hours was shown to independently predict higher depressive symptoms and lower wellbeing respectively[67].

However, total screen time alone does not appear to be the primary driver of harm. Evidence shows that screen time increased odds of poor mental health but did not reach significance when other factors were accounted for[24]. Similarly, analysis of two large cohort studies found that reducing screen time alone did not meaningfully improve predicted outcomes[4]. This suggests that screen time may operate indirectly, rather than being a direct cause of mental health deterioration in children and young people.

This supports the finding that the type of use matters more than the amount of time spent online. Evidence shows that passively scrolling, watching content and comparing appearances was consistently linked to low mood, body dissatisfaction, and poorer wellbeing and excessive passive use was also linked to suicidal ideation and self-harm- particularly among girls[68]. Whereas, actively communicating with friends, creative expression and engaging with positive or humorous content was linked to better wellbeing[64,68]. This suggests that simply telling children to spend less time on screens misses important nuances- the harm comes from how they engage, not how long for.

The negative influence of passive use is also linked to commercial platform design. Digital platforms promote scrolling-based engagement because it generates advertising revenue, and this same infrastructure is used by industries to market directly to young people. For example, food companies market energy-dense, nutrient-poor products to children through social media advertising, contributing to dietary patterns associated with increased risk of anxiety and depression, while the resulting overweight and obesity create further risk through stigma and low self-esteem. Gambling is normalised through digitally targeted advertising and game-like betting apps, with exposure linked to addictive behaviours and psychological harm from an early age. Easy access to online pornography is linked to distorted perceptions of relationships, body image problems, anxiety and depression in children. The growth of mental health apps marketed to young people without adequate clinical oversight is an additional concern, as these may lead to incorrect self-diagnosis or reliance on technology instead of building real-world coping skills[15]. This suggests that the risk factors for poor mental health in children and young people within the digital environment may be shaped by commercial and structural forces rather than individual choice- platform design, algorithmic content and commercial marketing create the conditions in which children engage online, and young people navigate these conditions but do not control them[15,64].

Young people recognise this themselves too, describing social media not as a direct cause of their distress but as something that makes existing pressures- academic stress, financial worry, identity struggles- harder to cope with[69].

Taken together, this suggests that interventions focused solely on changing individual behaviour- such as telling children to spend less time online- are unlikely to be sufficient. Addressing the digital risk factors of child mental health requires action at a structural level, which could include regulation of how commercial industries target children through digital

platforms, restrictions on harmful advertising in children's online spaces, and equipping young people through schools and families to recognise and resist manipulative platform design[15,64].

Adults

Economic disadvantage

Economic disadvantage was a consistently identified risk factor for poor mental health among adults. Evidence shows that financial hardship, income inequality, material deprivation, and housing insecurity each contribute to worse mental health outcomes- and that these effects operate through multiple reinforcing pathways[29–31,36,70–75].

Research consistently shows a clear income gradient, whereby lower income is associated with progressively higher risk of mental health problems[30,31,70,74]. A large European study reinforced this gradient, finding that workers in the lowest income group had the highest probability of mental health disorders, with risks decreasing progressively at each higher income level[72]. Similarly, research on informal caregivers in the United States found that those with household incomes below $35,000 had significantly higher odds of psychological distress than those earning $75,000 or more[74].

Evidence suggests that economic disadvantage harms mental health through the material deprivation it can cause- specifically, the inability to afford basic necessities. Research across multiple countries supports this. An Italian study found that each step down in financial security brought a measurable decline in mental wellbeing, even when health status is held constant[31]. In Sweden, workers below the poverty line- despite being employed- had a substantially increased risk of diagnosed mental health disorders and antidepressant prescriptions compared to non-poor full-year workers, with the risk even higher among those in unstable employment[70]. A Spanish study further clarified this pathway, finding that being unable to buy medication due to financial difficulty nearly tripled the odds of mental health problems, while being unable to afford therapy more than doubled them. Notably, employment status was largely absent as a significant predictor once material deprivation and social relationships were accounted for[30]. Together, these findings suggest that it is not economic disadvantage in isolation that drives poor mental health, but the material deprivation it produces- and that employment alone, without the ability to meet basic needs, is unlikely to improve outcomes.

Housing insecurity has also been shown to represent a specific form of economic disadvantage with direct mental health consequences for adults. A longitudinal Australian study found that missing rental payments due to financial difficulty caused a small but meaningful decline in mental health above and beyond general financial hardship. The effect was strongest among renters who had already experienced prolonged financial difficulty and those paying a high proportion of their income in rent, and it persisted for at least a year[73].

Economic disadvantage also affects mental health indirectly through family and caregiving contexts. A survey of parents in Northern Ireland found that those parents living in the most deprived areas had almost double the rate of self-reported mental health problems compared to parents in less deprived areas, and that receipt of welfare benefits independently increased the odds of parental mental health difficulties by 64%[36]. This matters because parental mental health is a key determinant of children's outcomes, creating a potential intergenerational cycle of disadvantage.

Income inequality at the area level adds a further layer of risk. Research using multilevel modelling in Italy found that inequality was associated with worse mental health not only at the regional level but also independently at the local level, suggesting that both broad structural conditions and the immediate community environment matter. Notably, living in a highly unequal local areas was found to be more damaging to mental health than exposure to broader acute crises such as the COVID-19 pandemic, highlighting how persistent structural disadvantage can quietly erode wellbeing over time[71].

This disadvantage also shapes how people move through their environment. A large-scale US study using mobility data found that economic segregation- measured by where people actually spend their time, not just where they live- widens mental health inequalities between income groups. Poorer individuals whose daily lives are confined to economically deprived areas experience compounding disadvantage, while wealthier individuals benefit from access to better-resourced environments[75]. Together, these findings suggest that inequality does not just affect where people live- it structures their entire daily reality, reinforcing mental health disparities at every turn.

Housing and neighbourhood

Homeownership is consistently associated with better mental health outcomes in adults. A large US study found that, compared to homeowners, renters had higher rates of depressive disorders (29% higher odds), greater difficulty with concentration and memory (38% higher odds), and more days of poor mental health in the preceding month[76]. Data from Cornwall showed that mental wellbeing scores were highest among homeowners, lower among private renters, and lowest among social housing residents[28]. These gradients are not solely explained by income; housing tenure appears to shape mental health through multiple pathways including financial stress, sense of control, and stability[28,76].

Housing insecurity-specifically, the inability to meet rental payments- compounds the mental health toll of broader financial hardship. An Australian longitudinal study demonstrated that renters who fell behind on payments experienced an additional decline in mental health beyond what financial hardship alone would predict. This effect was strongest among those who had already endured prolonged financial difficulty and those spending a high proportion of income on rent, suggesting that housing insecurity hits hardest when people are already under strain. Notably, the effect persisted for at least a year before fading, indicating that it is not merely a short-lived reaction to a missed payment [73].

The physical condition of the home matters independently. A longitudinal analysis of British households found that living in damp housing, particularly homes affected by condensation and structural rot, was associated with increased psychological distress. Combinations of dampness indicators produced stronger effects than any single indicator alone[77]. In Cornwall, dissatisfaction with housing quality and fuel poverty were linked to lower wellbeing among homeowners and private renters, though notably not among social housing residents. The authors suggest this may reflect greater investment in social housing stock through energy efficiency programmes and maintenance standards- extending similar standards to the private rented sector could reduce mental health inequalities[28].

Living in a deprived neighbourhood is linked to poorer adult mental health, but the relationship is complex. Swedish research tracking people from adolescence to midlife found that growing up and living in disadvantaged areas predicted worse mental health at age 43- through accumulated personal hardship for women, and through biological stress markers for men.

Where someone lived during adolescence also made an independent contribution, suggesting early neighbourhood environments can have lasting effects[29].

However, A US study found that neighbourhood poverty did not predict depression severity once personal socioeconomic circumstances were accounted for[78]. This suggests that neighbourhood and individual disadvantage are closely intertwined and reinforce one another, meaning interventions need to address both levels to be effective.

Neighbourhood change through gentrification introduced a distinct set of mental health risks for adults. A scoping review found that long-term residents and those displaced from gentrifying areas consistently experienced worse mental health, including increased stress, depression, and anxiety. The harms operated through multiple mechanisms: financial pressure, social isolation, a sense of dispossession, disempowerment, and erosion of community identity. Importantly, even the anticipation of displacement (not just displacement itself) produced significant psychological distress. Low-income renters were among the most affected, and financial pressure from rising costs forced some adults into harmful coping strategies such as overwork or remaining in unsafe relationships[79].

Living alone amplifies many of these risks for adults. Research on single-person households in urban settings found that adults living alone experienced depression more frequently than those in multi-person households and reported significantly higher levels of suicidal ideation. Urban residency was also associated with poorer outcomes. However, trust and interpersonal networks consistently reduced these risks, pointing to social connectedness as a key protective factor even where housing circumstances are challenging[80].

The evidence points to several protective dimensions for adult mental health. Feeling safe in one's neighbourhood emerged as a fundamental prerequisite for wellbeing across tenure types, but particularly for social housing residents, who were more than twice as likely to report feeling unsafe as homeowners. For homeowners, community integration, mutual respect among neighbours, and a sense of belonging were important protective factors- likely reflecting their longer-term investment in their local area. For private renters, access to practical amenities, local services, and housing stability mattered more than community cohesion, possibly reflecting the more transient nature of renting[28]. Among residents of gentrifying areas, maintaining identification with one's neighbourhood acted as a buffer against mental ill-health, while those who felt alienated from their changing community were at greater risk[79].

Employment

The quality and security of work- not just whether someone has a job- is a consistent risk factor of adults mental health. The evidence shows that unemployment, precarious employment, and poor working conditions are significant risk factors, while stable, supportive work environments and structured labour market participation serve a protective function[31,34,35,70,81–84].

Unemployment is a well-established risk factor for poor mental health in adults. A British birth cohort study found that experiencing unemployment during midlife was associated with 75% higher odds of declining mental health, while those with permanent or temporary sickness or disability were three times more likely to experience deterioration compared to those in full-time employment[35]. An Italian population study confirmed that unemployed adults scored lower on mental wellbeing than employed workers, while those excluded from the labour market through disability-related inactivity scored lowest of all- suggesting that exclusion from meaningful activity, not just loss of income, drives the harm[31].

The damage of unemployment can be particularly lasting when it occurs during the transition to adulthood. Swedish longitudinal research tracking people from age 16 to 43 found that those who experienced prolonged unemployment in their late teens and early twenties never showed the natural improvement in depression seen in every other group. However, the same study found that participation in structured government employment programmes- providing routine, social contact, and purpose- protected mental health as effectively as conventional education or employment, even among those otherwise struggling in the job market[34]. This highlights that the mental health benefits of work extend beyond income to include structure, identity, and social connection.

However, having a job is not enough if that job is insecure, poorly paid, or lacking in protections. A Swedish register-based study of over 2.5 million workers found that in-work poverty (being employed full-year but still below the poverty line) was associated with a 58% increased risk of diagnosed mental health disorders for men and 30% for women, compared to full-year non-poor workers. The highest risks were among those in part-year, poor employment and the long-term unemployed, but crucially, even full-time workers were not protected when economic security was lacking[70].

Looking at employment quality over time strengthens this picture further. A study tracking 2.7 million Swedish workers over 13 years found that sustained low-quality employment- including precarious contracts, solo self-employment, and unemployment- predicted clinically diagnosed depression, anxiety, and stress-related disorders across all population groups[82].

A qualitative scoping review identified four core experiences through which precarious employment damages mental health:

1. financial instability from unpredictable income
2. temporal uncertainty from variable schedules that prevent planning
3. marginal status from feeling undervalued and excluded in the workplace
4. employment insecurity from the constant threat of losing work.

These experiences produce cascading effects- stress, anxiety, low self-esteem, hopelessness, and social isolation- that go beyond financial hardship alone. Even well-paid professionals in insecure roles reported similar mental health impacts, underscoring that instability itself is harmful regardless of income level[81].

How precarious employment harms mental health is largely through the poor working conditions it creates. A European study of nearly 16,000 workers found that roughly two-thirds of the effect of precarious employment on mental health was explained by psychosocial risk factors at work- high demands, low control, and low social support[83].

Low workplace social support was the single largest contributor, accounting for around half of the indirect effect for both men and women. The pathway was gendered: for women, workplace conditions fully explained the link between precarious employment and poor mental health, while for men a direct effect of precariousness remained even after accounting for working conditions[83].

A review of white-collar workers found that work overload, excessive hours, high job strain, and workplace bullying were consistent risk factors for depression, anxiety, and burnout across pre-pandemic, pandemic, and post-pandemic phases. During the pandemic, new risks emerged including technostress, social isolation from remote working, and blurred work-life boundaries. The return to office introduced further stressors, particularly where there was a mismatch

between employees' expectations of flexibility and what employers offered. Hybrid working models showed promise as a protective factor when supported by clear communication and adequate infrastructure[84].

The evidence points to several workplace characteristics that protect adult mental health. Stable, secure employment with adequate income is the foundation[70,82].

Beyond this, workplace social support from managers and colleagues is consistently the most important psychosocial protective factor. Job control (defined as having autonomy over how and when work is done) and manageable demands also contribute to better outcomes[83,84].

For those outside conventional employment, structured programmes that provide routine, social contact, and a sense of purpose can deliver comparable mental health benefits to paid work[34].

University education was also associated with lower odds of mental health decline during midlife, likely reflecting the more secure employment pathways it opens[35].

Finally, being engaged in meaningful activity of any kind- whether employment, education, or structured programmes- was consistently associated with better wellbeing than inactivity or exclusion[31,34].

Older adults

Economic disadvantage

Inadequate income in retirement was shown to directly affect mental health. A European study of over 2,000 adults aged 80 and above found that financial difficulty was significantly associated with higher depressive symptoms[37]. How well older people felt they could manage on their income- not just how much they earned- was also important for mental wellbeing in the oldest age groups[85]. This suggests that supporting older people to feel financially secure in their day-to-day lives may be an important pathway through which income influences mental health.

Pension increases were shown to impact men and women differently. A longitudinal study examining the impact of pension increases for low-income pensioners between 1998 and 2002 found that the additional income contributed to improved mental wellbeing for men, particularly those living in the most deprived areas, where wellbeing scores improved. However, no equivalent improvement was found for women. The authors suggest this may reflect gendered patterns in how income relates to wellbeing- with income potentially carrying greater psychological significance for men due to longstanding breadwinning norms-and that the income increase may not have been sufficient to shift women's financial security meaningfully[86].

The relationship between economic disadvantage and mental health in older adults is shaped not just by individual income but by the wider welfare and social environment. A cross-national European study found that older adults living in countries with stronger welfare states- characterised by higher social spending, lower inequality, and greater social trust- reported better mental wellbeing across all five dimensions measured, including life satisfaction, happiness, autonomy, sense of meaning, and positive relationships[85]. This suggests that the mental health impact of economic disadvantage in later life is not fixed but can be meaningfully reduced when people live in societies that cushion the effects of financial hardship through stronger social safety nets and more equitable distribution of resources.

The built environment

The physical environment plays a role in shaping older adults' mental health. A scoping review of urban resilience determinants found that over 74% of reviewed studies identified environmental factors as significant determinants[87]:

- Low neighbourhood walkability increased loneliness, which in turn was associated with poorer mental health.
- Green and blue spaces, including parks, gardens, lakes, and beaches, were consistently associated with better mental health outcomes, including reduced antidepressant use, though the quality and design of these spaces mattered more than total area alone.
- Perception of safety was related to both physical and mental health.
- Housing quality, exterior building characteristics, interior design, and home facilities all affected mental health.
- Commercial and recreational facilities directly impacted mental health
- Women with better access to transportation stations had higher mental health levels.

The review also addressed resilience in the context of crises. During the COVID-19 pandemic, older people with a history of depression reported higher depression levels. Lockdowns caused loneliness, fear, despair, helplessness, decreased activity engagement, disconnection from social support, and reduced contact frequency. Physical activity significantly decreased, with depression severity increasing particularly in women. Two studies examining natural disaster impacts found associations between storm exposure, loss of family members, and depression[87].

Taken together, these findings suggest that the built environment is an active determinant of older people's mental health, and that decisions about neighbourhood design, housing quality, green space provision, and transport infrastructure represent tangible opportunities to strengthen resilience and reduce mental health inequalities in later life.

Groups facing additional risk

Ethnic minorities

The social and structural conditions in which ethnic minorities live play a fundamental role in shaping mental health. A network analysis of a large urban sample of ethnic minorities in the Netherlands found that factors such as employment, education, perceived ethnic discrimination, cultural adaptation, religion, and social support were all connected to depressive symptoms- not directly, but by shaping how much stress and adversity individuals were exposed to in the first place. Neighbourhood factors sat even further back in the chain, influencing people's socioeconomic and cultural circumstances rather than depression itself. While the immediate psychological pathways to depression looked similar across ethnic groups, the wider social and economic conditions feeding into those pathways differed substantially between groups. This suggests that mental health inequalities among ethnic minority communities are driven by a combination of structural conditions (such as economic opportunity and neighbourhood environment) and relational factors (such as discrimination and social support) which together determine the level of stress and adversity individuals face, rather than individual vulnerability alone[88].

Migrants

Employment quality and economic security are among the most consistently identified determinates of mental health across migrant populations. Unemployment was associated with higher odds of moderate-to-severe psychological distress among immigrants[50,89], and living above the poverty threshold is protective against distress[89]. Household income was also significantly associated with depression among first- and second-generation immigrants in the United States, though this association was attenuated once other risk and protective factors were introduced[90]. Among older voluntary migrants- those who migrated by choice rather than through forced displacement- paid employment provides a sense of purpose and meaning, though unrecognised foreign credentials frequently limit employability, leading to dependency on adult children and consequent mental health difficulties[48].

All workers in low-quality employment faced an increased risk of severe common mental disorders, but this risk was substantially greater for those with a migrant background. Among men in constant low-quality employment, second-generation migrants faced a 54% higher risk compared to 25% among native-born Swedish men in the same conditions. Among women, first-generation non-EU migrants faced the highest risk of any group, at 66% higher in constant low-quality employment and rising to 73% among those who had transitioned from good to poor employment quality. Notably, second-generation migrants born and raised in Sweden showed risks comparable to first-generation migrants and well above those of the native-born population, suggesting that growing up in the host country does not fully eliminate the additional vulnerability associated with migrant background. Female workers faced compounded disadvantage throughout, with gender, migrant background, and low-quality employment each independently increasing risk and producing amplified effects when combined[82].

Housing and living conditions represented both risk and protective factors for mental health among migrants. Financial strain and inaccessibility of safe, affordable housing were associated with poorer quality of life and increased psychological distress among older voluntary migrants. Some were forced into shared accommodation with people from different cultural backgrounds, where they were unable to cook or eat familiar food, with disruptions to daily routines and cultural practices linked to acculturative stress (defined as the psychological impact or anxiety resulting from adapting to a new culture) and declining wellbeing. Conversely, stable housing and the ability to maintain familiar cultural practices in the home environment was shown to serve as protective factors by preserving a sense of continuity and identity during the transition to a new country[48].

Limited proficiency in the host country's language emerged as one of the most prominent structural barriers to mental health across migration contexts. Without adequate language skills, everyday tasks such as buying groceries, reading medical prescriptions, or using public transport were shown to become overwhelming, and forming meaningful social connections was shown to become significantly harder. The resulting isolation and loss of independence was linked to loneliness, depression, and declining wellbeing[48,50]. Similarly, language barriers have also been identified as a major factor influencing mental health among South Asian migrants[50]. Notably, language barriers were shown to be particularly consequential for older voluntary migrants due to its influence on managing their own health and accessing health information[48]. Building on this, when adult children are relied upon to translate at medical appointments, this can compromise privacy, reduce the older person's sense of control over their own care, and in some cases contribute to misdiagnosis[48].

Education showed a nuanced relationship with mental health. Educational attainment was a stronger risk factor for psychological distress among Black immigrants than White immigrants, in the US, with high school graduates and those with some college education showing higher odds of distress compared to college graduates[89]. Lower education is also identified as a factor influencing mental health among South Asian migrants[50].

Taken together, these findings suggest that mental health difficulties among migrant populations are shaped in large part by structural and socioeconomic conditions- including employment quality, housing stability, and language access- rather than individual vulnerability alone.

Refugees

Refugee populations face a distinct set of mental health challenges rooted in experiences of persecution, war, and forced displacement. The psychological toll of these experiences is well documented, with refugee populations reporting elevated rates of post-traumatic stress disorder, depression, and anxiety compared to non-migrant populations[51,52]. While evidence suggests that approximately two-thirds of adult refugees do not meet clinical thresholds for psychological disorders following resettlement[52], this should be interpreted with caution- clinical thresholds vary across measures and contexts, and falling below a diagnostic cut-off does not mean an absence of distress or difficulty. Nevertheless, the variation in outcomes among people exposed to similar adversity does suggest that understanding the conditions and factors associated with better mental health is a worthwhile complement to identifying risk.

Employment and financial security are strongly associated with better mental health among refugees in both high-income and lower-and-middle-income countries. Being employed in the host country and having a higher income each show strong protective associations, while job satisfaction is moderately linked to better outcomes in high-income settings[52].

Housing and living conditions also matter. Stable, uncrowded housing in community-based rather than camp-based settings, and home ownership, are each associated with better mental health among refugees in high-income countries. Access to basic needs- including food, water, and healthcare- is similarly protective[52]. For refugee children, where they are resettled matters: the type of setting, whether camps, institutions, or urban and rural communities, and the safety and quality of the surrounding neighbourhood and school environment are all significant determinants of wellbeing[51].

Visa security is a particularly important factor. There is strong evidence that holding a protected or permanent visa is associated with better mental health in high-income countries. Safety, security, and certainty have long been recognised as core conditions for recovery after trauma, and permanent visa status may remove a major source of ongoing uncertainty, enabling people to begin rebuilding their lives without the fear of being returned to the place from which they fled[52].

Language proficiency is another protective factors identified in the literature. Greater proficiency in the host language is strongly associated with good mental health among refugees in high-income countries[52], while for refugee children, language difficulties represent a key daily stressor that both directly and indirectly undermines wellbeing[51].

In contrast, the evidence for a direct link between education level and mental health among refugees was found to be insufficient across both high-income and lower-and-middle-income settings[52].

Taken together, these findings suggest that mental health among refugee populations is strongly influenced by the conditions of the resettlement environment, including visa security, access to employment and stable housing, and the ability to meet basic needs. Improving these structural conditions, alongside ensuring language support and accessible services, may represent some of the most important modifiable factors for reducing mental health inequalities.

LGBTQ+ populations

Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, and more (LGBTQ+) young people face fewer protective factors and greater structural barriers than their cis-heterosexual peers. A study examining social support found that LGBTQ+ youth living in the most rural areas reported significantly lower support compared to those in major metropolitan areas, and that higher social support was in turn associated with lower depression, lower anxiety, and greater wellbeing, suggesting that rurality acts as a risk factor for this population by limiting access to supportive networks.[53] A systematic review of protective factors found that access to affirmative therapy, financial security, inclusive school and national education policies, and LGBTQ+ community resources were all linked to better outcomes[42]. Despite this, studies indicated that sixty to seventy per cent of LGBTQ+ adolescents experience bullying, homelessness, or difficulties accessing health services, and one in three intersex, trans, non-binary, and gender-diverse individuals have contemplated suicide[42]. This suggests that the mental health of LGBTQ+ young people is fundamentally shaped by socioeconomic and environmental factors- including where they live, the policies that govern their schools and services, and the availability of inclusive community resources[91].

Gypsy, Roman and Traveller communities

Gypsy, Roma and Traveller communities experience significantly worse mental health than the general population, driven by the intersection of socioeconomic deprivation, discrimination, and barriers to care. A systematic review found that a range of structural factors were associated with this disparity, including issues with housing, education and employment, and widespread discrimination. Poor physical health and barriers to accessing healthcare compounded these difficulties. Women faced worse mental health outcomes, possibly due to enforced gender roles, early marriage, and domestic violence. Significant stigma around mental health and suicide persists in these communities, making it difficult for affected individuals to seek help[92]. This suggests that the mental health inequalities experienced by Gypsy, Roma and Traveller communities are rooted in socioeconomic and environmental factors, and that meaningful improvement will require these structural barriers to be addressed.

People with intellectual disability

People with intellectual disability face compounded vulnerability when structural disadvantage is overlaid on disability-related risk. An Australian retrospective cohort study found that living in areas of greater socioeconomic disadvantage was associated with the onset of any mental illness in people with intellectual disability. Serious mental illness onset was specifically associated with living in outer regional, remote, or very remote areas[93]. Conversely, a systematic review of social determinants in youth with intellectual disability found that socioeconomic factors produced more mixed findings, though poverty was associated with increased behavioural problems in some studies[94]. This suggests that socioeconomic and environmental factors -particularly area-level deprivation and geographic remoteness- interact with existing disability-related vulnerabilities to increase the risk of mental illness, and that

reducing these structural inequalities is essential to improving mental health outcomes for people with intellectual disability.

Theme 3: Health behaviours

Children and young people

Diet and nutrition

Dietary behaviour is a consistently studied health behaviour in relation to adolescent mental health[18]. A scoping review found that adolescents who skipped breakfast- whether rarely, something, or frequently- exhibited higher odds of developing anxiety disorders compared to those who ate breakfast regularly. For depression, many included studies reported a significant link, with evidence suggesting that skipping breakfast three or more days per week increased the odds of depressive symptoms, and five or more days per week was associated with depressive mood. Importantly, irregular breakfast consumption was also linked to co-occurring anxiety and depression, and the association persisted independently of other dietary behaviours such as energy drink consumption. The review further highlighted that eating breakfast in a stable, familiar environment- particularly when shared with family- appeared to serve as a protective factor, suggesting that mealtime routines may carry psychological as well as nutritional significance[95].

Research suggests that being overly cautious about dietary behaviour from a young age may influence mental health outcomes in later life. A UK birth cohort study found that health-conscious or vegetarian diet at a young age was associated with an increased risk of persistent high depression symptoms across adolescence and young adulthood. While this may reflect reverse causality or unmeasured confounders rather than a direct causal link, it underscores the complexity of diet–mental health relationships and the need for nuanced interpretation[10].

Physical activity

Physical activity was shown to be one of the most commonly evidenced protective factor for adolescent mental health across the evidence base[18]. A cross-section study examining protective factors of emotional vulnerability in Scottish adolescents aged 12-18 years found that when all biological, psychological, and social factors were considered together, physical activity emerged as the only modifiable protective factor that independently predicted lower depressive symptoms. Together, all the factors in the study explained roughly two-thirds (68%) of why some teenagers were more depressed than others- and physical activity was the only changeable one that made an independent difference. This matters because most earlier studies looked at these factors one at a time, while this study tested them all together. The implications are practical: many things that predict depression, like genetics or personality, are hard to influence and change but physical activity is a key modifiable factor that schools, parents, and policymakers can realistically target[67].

Reinforcing these findings, a Brazilian cross-sectional study of school children aged 10-19 found that active children had significantly better mood profiles across multiple dimensions. Inactive young people were 41% more likely to experience depression, 42% more likely to report anger and fatigue, and 53% more likely to experience mental confusion. Physical activity explained 39% of the variance in vigour- the largest effect in the study. Notably, the group living with obesity but where physically active showed greater vigour than those living with overweight but inactive peers. This suggests that participation in physical activity matters more than weight

status alone for mood outcomes. This supports inclusive, non-stigmatising approaches to activity provision[96].

Similarly, a longitudinal analysis found that physical activity was protective for resilience in adolesce. Notably, physical activity yielded stronger protective effects among boys than girls[12].

However, the picture is not uniformly strong. A machine learning analysis of two large cohort studies found that while more physical activity predicted slightly better mental health, the direct effect was small and only meaningful at very low baseline levels. The authors noted that physical activity levels among adolescents have not significantly declined since 2001, making it an unlikely driver of the current adolescent mental health crisis[4]. Similarly, a cross-sectional study of school-going adolescents in Greater London found that low physical activity increased odds of mental health difficulties but did not reach statistical significance in multivariate analysis[24]. This suggests that while physical activity likely plays a helpful role in supporting adolescent mental health, it is not a silver bullet- its benefits may be modest and are unlikely to be enough on their own to address the broader mental health challenges young people face.

Alcohol, tobacco and vape use

A narrative review on commercial determinants of child and adolescent mental health identified tobacco, electronic cigarettes, vaping devices, and alcohol as industries that represent major commercial determinants of young people's mental health. Early exposure to these substances was associated with an increased prevalence of anxiety disorders, depression, and addictive behaviours, compromising long-term mental and physical wellbeing[15,18].

A cohort study examining sequelae of preterm birth highlighted a prenatal health behaviour dimension: maternal alcohol consumption during pregnancy was associated with a substantially increased risk of the child developing depression in adulthood. When this factor was accounted for, the previously observed link between extreme prematurity and depression became less clear-cut, suggesting that health behaviours during pregnancy may shape mental health trajectories decades later[58].

Sleep

Sleep difficulties in early childhood represent a significant behavioural risk factor[18]. A German longitudinal study found that child sleeping difficulties remained a significant predictor of externalising symptoms at age four, even after accounting for a wide range of other factors. Maternal sleep difficulties were also associated with children's externalising symptoms, likely through impaired parenting capacity. This reinforces the importance of a whole-family approach to sleep[5].

Adults

Physical activity

Physical activity is one of the most consistently evidenced protective factors for adult mental health. A systematic review of reviews found that individuals with high physical activity levels had a 17% reduced risk of developing depression (adjusted RR = 0.83) and 26% reduced odds of developing anxiety (adjusted OR = 0.74) compared to those with low activity levels. The authors assessed these associations against the Bradford Hill criteria and rated the relationship as "probably causal" for both conditions, noting evidence of temporality, consistency, biological plausibility, and a modest dose–response relationship. Crucially, the steepest benefits came at

lower activity volumes: the greatest gains were observed in moving from sedentary to moderately active, with diminishing returns at higher levels[97]. This is encouraging because people don't need to become athletes to benefit- the biggest payoff comes from getting those currently doing the least to start moving even a little.

Similarly, one European study found that the more minutes spend on sport or recreational physical activity the lower the probability of mental health problems, highlighting physical activity as one of the most actionable protective factors of adult mental health[72].

An Australian review reinforces this, finding that even moderate or vigorous physical activity once per week was significantly associated with higher quality of life. Even some activity was better than none, and reduced sitting time was independently associated with improved wellbeing (OR 1.50). Leisure activities-sport, walks, gardening, and social sports clubs- were most likely to enhance wellbeing. A particularly noteworthy finding was that while people often started exercising for perceived physical benefits, they tended to maintain activity because of the mental health benefits, suggesting that interventions should market the immediate psychological gains of exercise rather than focusing solely on long-term physical health[98].

Sleep

Sleep behaviour was shown to be a consistent modifier of mental health risk in adults. A UK cohort study found that people with healthy sleep patterns were roughly three times less likely to develop depression and twice less likely to develop anxiety than those who slept poorly. Importantly, good sleep habits could partly counteract both a genetic predisposition to mental ill-health and the negative effects of other unhealthy health behaviour factors. This makes sleep stand out as a particularly powerful lever- it's something people can change, and its benefits hold up even for those who are otherwise at higher risk[99].

A further UK Biobank study of 84,404 participants found a U-shaped relationship between sleep duration and depression. Both short and long sleep durations, as well as fragmented sleep, were associated with increased odds of depression. Six to eight hours of unfragmented sleep predicted the best long-term metabolic and mental health outcomes[100].

Older Adults

Physical activity

A review of older people's mental health in urban settings found that those who did flexibility exercises one to four days a week were 81% less likely to develop depression[87]. A large cross-European study found that physical inactivity, while linked to worse mental health initially, lost its significance once physical health conditions were accounted for[37]. This suggests that in later life, inactivity may affect mental health indirectly, through its impact on physical health.

Smoking

Smoking was consistently linked to poorer mental health. The urban review found it was associated with higher stress and depression[87], while a European study found that people who had never smoked regularly had fewer depressive symptoms- though this only held for those aged 65–74[37]. This suggests that smoking's impact on mental health in older age may vary depending on the stage of later life.

Physical health

A European study found that all physical health factors- chronic disease, functional limitations, pain, and sensory impairment- were significantly associated with depression in older adults. Pain showed a particularly strong pattern: the more pain someone experienced, the worse their mental health[37]. This highlights that in older populations, physical health conditions may be among the most important drivers of depression.

Screen time and digital engagement

Screen time in older adults presents a more nuanced picture than in younger populations. A systematic review of screen time and mental health in adults aged 60 and over found that television viewing was the screen activity most consistently linked to poorer mental health, particularly at high durations (six or more hours per day). However, the type of screen activity mattered considerably: while passive consumption such as television was associated with depressive symptoms and psychological distress, interactive digital tools- messaging apps, WhatsApp, and social networking- were associated with reduced loneliness. Nighttime screen use was linked to poorer sleep quality regardless of device type, and physical activity moderated the relationship between sedentary screen time and mental health. Older adults appeared less susceptible to problematic smartphone use than younger populations, suggesting greater self-regulation in device use[101]. This suggests that blanket advice to reduce screen time misses the point for older adults- what matters is what they're doing on screen. Encouraging interactive, social use while limiting passive television watching and nighttime use is likely to be a more effective approach.

Similarly, an eight-year longitudinal study provided strong evidence on digital isolation. High digital isolation- disengagement across multiple digital domains including email, internet, computer, and mobile phone use- was associated with a 35% increased risk of incident depression (adjusted HR 1.35), even after accounting for in-person social isolation. The relationship followed a dose-response pattern: moderate isolation carried an increased risk of 63% (adjusted HR 1.63), and high isolation more than doubled the risk (HR 2.23). Email isolation showed the strongest individual association (HR 1.52), while mobile phone isolation was the weakest, possibly because near-universal phone adoption means that phone use alone does not confer sufficient protective connectivity[102]. This means that being cut off from the digital world carries real mental health risks for older adults- and the more disconnected someone is, the greater the risk. Helping older people stay digitally engaged, particularly with tools like email and the internet, could be a meaningful way to reduce depression.

Counterintuitively, younger older adults (≤75 years), those with higher education, and those with fewer chronic diseases were more vulnerable to the mental health effects of digital isolation, possibly because they had greater psychological reliance on digital connectivity. With approximately 31% of older adults highly digitally isolated and over 50% not using email or internet, this represents a widespread and potentially modifiable risk factor[102]. This may suggest that those who have come to depend on digital connectivity are most affected when they lose it- meaning that as more of today's adults age into later life with digital habits already embedded, the mental health risks of digital exclusion are likely to grow, not shrink.

Groups facing additional risk

Migrants

The relationship between health behaviours and mental health among immigrants is shaped by racial, cultural, and wider structural context, and the terms used to describe racial groups below reflect those used in the original study. Among Black immigrants in the US, obesity carried a 58% increased risk of psychological distress, and smoking nearly doubled the risk- both effects stronger than for White immigrants. However, alcohol use was not a significant risk factor for this group. Longer residence in the US was associated with lower distress, suggesting that over time, settling in may be protective for Black immigrants[89].

Equally, among White immigrants, obesity and smoking were also linked to higher distress, though the effects were somewhat weaker than for Black immigrants. Alcohol use, however, was a significant risk factor for this group where it wasn't for Black immigrants. Notably, longer residence in the US increased distress for White immigrants- the opposite of the pattern seen in Black immigrants[89]. This suggests that the experience of acculturation affects different racial groups in different ways, and what protects one group may not protect another.

Some patterns did hold across both groups. Being married or in a partnership was protective, while unemployment increased risk. Physical activity did not emerge as significant in the overall model- though this may say more about the structural barriers immigrants face in accessing opportunities to be active than about physical activity itself[89].

Together, these findings suggest that addressing mental health in immigrant communities requires understanding how health behaviours interact with race, culture, and the practical realities of people's lives. However, it is important to note that these findings are drawn from US-based studies and should be applied to the UK context with caution, as migration patterns, racial dynamics, and access to services differ in ways that may shape these relationships.

Theme 4: Psychological Factors

Children and young people

Emotion regulation

A range of psychological, social, and environmental factors interact to shape mental health outcomes in children and young people, with emotional regulation emerging as one important piece of that picture. A large UK longitudinal study found emotional regulation to be the strongest predictor of both mental health difficulties and subjective wellbeing within its model, outperforming all other measured factors [55]. However, wider longitudinal evidence suggests a more complex, interacting picture. Research shows that a child's natural temperament- particularly traits like emotional reactivity and shyness- plays a significant role early on, with more emotionally reactive or shy children at increased risk of developing anxiety and mood difficulties, sometimes as young as four. Notably, emotional reactivity is a related but distinct concept from emotional regulation; it reflects how intensely a child responds to stimuli, while regulation concerns how they manage those responses. Sociability, meanwhile, appears to offer some protection. These temperamental traits don't operate in isolation- they interact with parental mental health, family stress, and broader social circumstances to shape early outcomes. Although temperament tends to stay fairly consistent over time, researchers suggest that early intervention to help children build emotional coping skills can still shift how things unfold for them [5].

Specifically, evidence showed that neuroticism (a trait describing how prone a person is to experiencing negative emotions like anxiety, worry, fear, anger, and sadness) was the largest single predictor of adolescent depression within a model explaining 68% of variance. Alongside neuroticism, rumination (repetitive negative thinking) and negative self-reference bias were key drivers of depressive symptoms, while perceived stress and attributional style (the pattern the brain tends to follow when making sense of why things happen to an individual- both good and bad) drove wellbeing[67]. This suggests that reducing depression and promoting wellbeing may require different psychological targets.

Further complicating the picture, research shows that mental health difficulties in young people don't come from just one source. Instead, they sit at a crossroads where different kinds of stress overlap- tough experiences, family problems, difficulties with friends, and physical health issues all feed into each other. Struggles like finding it hard to manage emotions, having low self-esteem, or getting stuck in cycles of negative thinking don't appear out of nowhere; they're closely linked to all these other pressures[8].

Taken together, the evidence points to mental health in childhood as emerging from interacting psychological, social, and environmental factors. Traits like emotional regulation and neuroticism are important influences, but they sit within this broader system rather than above it. Early intervention to build coping skills- particularly where temperamental vulnerability is present- can shift outcomes, but the evidence also suggests that reducing depression and promoting wellbeing may require distinct approaches targeting different psychological mechanisms.

Internal psychological resources

Internal psychological resources- including self-esteem, self-efficacy and optimism- consistently showed strong protective effects in adolescent samples. Analysis of a longitudinal dataset found that these internal psychological strengths produced the most robust protective effects across multiple model specifications, outperforming external and social factors[12].

Self-esteem was shown to be especially protective for children living in the most deprived neighbourhoods, with its benefit significantly stronger for those exposed to high deprivation compared to those who were not. The authors recommended prioritising self-esteem interventions for young people in the most deprived areas, where they appear to have the greatest impact[59].

Self-efficacy and optimism emerged as key modifiable resources in several studies. Evidence found that high self-efficacy buffered the impact of a negative mother-child relationship on depressive symptoms, while optimism showed the strongest protective associations for girls[14]. Another longitudinal study found that self-efficacy had a small but significant buffering effect specifically for lower-socioeconomic-status adolescents transitioning into early adulthood, and recommended school-based programmes designed to help young people develop the belief that their actions can make a difference[103]. Similarly, a systematic review identified that psychological strengths (including resilience, self-efficacy, optimism, emotional intelligence, adaptability, and grit) are associated with better coping and reduced depressive symptoms among UK university students, with self-compassion specifically linked to help seeking behaviour[18].

Taken together, the evidence suggests that psychological strengths- particularly self-esteem, self-efficacy, and optimism – are strong protective factors for young people's mental health, consistently outperforming external and social factors. Notably, these strengths appear to matter most or those facing the greatest disadvantage, meaning that target interventions to build self-belief and confidence in young people from deprived backgrounds could be an effective way to reduce mental health inequalities.

Thinking skills, motivation, and purpose

Beyond emotional skills and self-belief, several studies found that the way young people think and what motivates them also plays an important role in protecting their mental health. A UK cohort study found that higher IQ at age eight and better attention control at age 10 were each independently associated with reduced risk of chronic depressive trajectories across adolescence and young adulthood, suggesting that cognitive capacity may support more adaptive processing of adversity[10]. Prospective evidence showed that a sense of life meaning and purpose (defined in the paper as a feeling that life matters and has direction) functions as an intermediary determinant of adolescent mental health[104].

Additionally, a longitudinal study identified problem solving, goals, and aspirations, and prosocial behaviour as predictors of subjective wellbeing, though with smaller effect sizes than emotional regulation and stress. Notably, empathy was associated with slightly greater mental health difficulties, suggesting that the capacity to understand others' distress may itself be a source of psychological burden in the absence of adequate coping resources[55]. Reinforcing the importance of coping strategies, a systematic review identified an enhanced reward response, and adaptive stress-coping skills were key protective factors for the offspring of parents with depression[2].

Taken together the evidence shows that cognitive abilities like attention control and problem-solving, along with having a sense of purpose and goals, can protect young people's mental health- but their effects are smaller than those of emotional regulation. It also highlights that empathy, while generally positive, can become a source of distress without adequate coping skills, reinforcing the importance of equipping young people with practical strategies to manage stress.

Identity formation and navigation

The process of forming and navigating identity has been shown to influence adolescent mental health outcomes across literature. A qualitative study found that identity formation was experienced as "complex" and "high stakes" by young people who navigated pressures around gender, sexuality, culture, and race. Participants suggested that while navigating those pressures they often felt they "lacked the freedom to explore who they truly were". Social media was shown to intensify these challenges by demanding curated online personas, adding a further layer of psychological burden to the identity development process. The study underscored that marginalised groups continue to face significant identity-related pressures, and that services and schools should ensure inclusive, affirming environments where diverse identities are genuinely supported[64].

A large cohort study further demonstrated this, highlighting that cultural and linguistic identity influences mental health trajectories in nuanced ways. Culturally and linguistically diverse adolescent began secondary school with higher symptom levels but showed a crossover pattern by Year 10, suggesting that the psychological experience of navigating a minority culture

identity shifts over the course of adolescence[56]. Similarly, a cross-sectional secondary analysis found that the relationship between social identity and ethnic identity interact differently across ethnicity[53]. Studies further emphasised that threats to identity, including racial hostility and experiences that undermine a young person's sense of belonging were among the strongest predictors of anxiety and depression[17,24].

Finally, analysis of two large cohort studies found that peer relationships, victimisation, and exposure to marginalisation- all of which shape how a young person comes to understand and value their own identity- predicted worse future mental health across two large cohorts[4].

Together, these findings suggest that identity is not a backdrop to psychological wellbeing but an active psychological process: the capacity to explore, integrate, and feel secure in one's identity is itself a determinant of mental health, and environments that constrain or threaten identity development impose a measurable psychological cost.

Adults

Internal psychological resources

Internal psychological resources have been identified as modifiable mediators in adults- qualities that can be developed and that act as a bridge between the external stressors people face and the mental health outcomes they experience. A scoping review found that self-esteem, self-efficacy, mindfulness, and self-compassion were the four most robust individual level variables, shaping how much a person's mental health affects their overall sense of wellbeing[105]. This suggests that investing in the development of these four psychological resources could play a meaningful role in improving wellbeing, by helping to shape how life's pressures ultimately affect the way people feel about their lives.

Notably, the review also found that the psychological resources people need most depend on the type of adversity they face. In acute crises such as the COVID-19 pandemic, the ability to reframe situations positively and recover quickly from stress were the most important mediators. Under long-term, ongoing adversity, social support networks and having a range of coping strategies mattered most. In stable conditions, self-related factors like self-esteem and the quality of close relationships played the central role. How people manage their emotions also made a difference- learning to reframe difficult thoughts was consistently helpful, while suppressing emotions was actively harmful, highlighting that not all coping is equally beneficial[105]. This suggests that effective support needs to be matched to context, with different psychological resources prioritised depending on whether someone is in crisis, enduring chronic difficulty, or navigating everyday life.

These patterns have also been shown to hold across specific life contexts too. Research into new mothers found that the way they perceive themselves was an important modifiable risk factor in whether they went on to develop postpartum anxiety. Negative self-appraisals- including low confidence in parenting ability, low general self-belief, and low self-esteem- were consistently linked to postpartum anxiety, with one large study finding that low maternal self-efficacy was the single greatest predictor. Repetitive negative thinking, avoidance of difficult emotions, difficulty managing emotions, and unhelpful coping strategies were all also implicated[32]. This suggests that major life transitions like becoming a parent can expose the psychological resources someone does or doesn't have, and that building these resources before and during such transitions could reduce vulnerability.

A similar picture emerges in the workplace. Research found that self-efficacy, psychological empowerment, and mindfulness were key protective factors for office-based workers in the post-pandemic era, with resilience increasingly understood not as a fixed personality trait but as a set of skills that can be developed. Notably, personality traits were stronger predictors of burnout than the pandemic lockdown itself, reinforcing how central internal psychological factors are[84]. Equally, an Australian study found that optimism strongly predicted wellbeing, and that even small, simple exercises- such as writing down three pleasurable or meaningful things each day for a week or spending two to three minutes viewing images of wild nature- could meaningfully improve how people feel. Importantly, traits like optimism are not fixed; they can be developed through established approaches such as cognitive behavioural therapy[98]. This suggests that relatively low-cost, scalable psychological practices may influence how people cope at work and in daily life, particularly when they target the internal resources that matter most.

Life satisfaction

Life satisfaction, while partly shaped by material and social conditions, also acts as a psychological resource that can independently protect mental health. Evidence found that higher life satisfaction showed a strong stepwise relationship with mental wellbeing across all housing tenure groups- meaning that at each level of increased satisfaction, wellbeing improved in a consistent, graded way[28]. Similarly, research found that higher life satisfaction nearly doubled the level of protection against mental health conditions[30]. This indicates that subjective experiences of life quality play an important role in mental health outcomes, operating alongside structural factors such as income, housing, and social conditions.

Older Adults

Subjective health perception

A study of adults aged 80 and over across 24 European countries asked why people in countries with stronger welfare states tend to have better mental wellbeing. Of eleven factors tested, how older adults felt about their own health (regardless of how healthy they actually were) was one of the most important. Once this was accounted for, the wellbeing advantage of living in a stronger welfare state largely disappeared, suggesting that these states improve wellbeing not directly, but by helping older adults feel more positive about their health[85]. This suggests that subjective health perception is a psychological resource in its own right- one that could be supported through how health information is shared, how care is delivered, and how people are helped to think about their own ageing.

Lifelong learning

A study of adults aged 80 and over across 24 European countries found that having the opportunity to learn new things was linked to better wellbeing and was highlighted by the authors as an under-researched but potentially important area for the oldest age groups [85]. This suggests that services and community programmes designed for older adults could have a greater impact on wellbeing if they deliberately foster opportunities for continued learning and intellectual engagement.

Appreciation of surroundings

Research into adults aged 80 and over across 24 European countries found that the ability to appreciate one's surroundings modestly but meaningfully contributed to feelings of purpose and engagement. This reflects psychological capacities- curiosity, openness, and present-moment awareness- that can be nurtured and supported [85]. This suggests that creating

environments and experiences that encourage older adults to notice and value what is around them could play a meaningful, if modest, role in sustaining wellbeing in later life.

Groups facing additional risk

Sexual and gender minority young people

The mental health of sexual and gender minority (SGM) young people is shaped by a complex interplay of psychological risk and protective factors operating primarily through internal (proximal) pathways[40,41].

Internalised stigma represents a central psychological risk factor across both sexual and gender minority young people. Among sexual minority youth, internalised homophobia (defined as the absorption of society's negative attitudes toward sexual minorities into one's own belief system) was the most extensively studied proximal factor, with thirteen studies finding consistent associations with depression, generalised anxiety, and PTSD[40]. Among gender minority young people, internalised transphobia operated through a parallel process, with higher levels of shame associated with anxiety, depression, and suicidal ideation, and alienation associated with anxiety and depression[40,41]. European evidence further demonstrated that proximal minority stress explained approximately one-third of the variance in mental health difficulties among transgender and gender diverse individuals and significantly mediated the relationship between external stressors and depressive symptoms[41]. These findings illustrate that the psychological harm of stigma is not confined to direct experiences of discrimination but operates through the way young people come to perceive and evaluate themselves.

Maladaptive coping strategies constituted a further psychological risk pathway. Self-blame and rumination partly explained the link between internalised homophobia and depression among sexual minority females, while emotion-oriented coping methods were associated with depression, PTSD, and separation anxiety among gender minority young people. Emotion regulation deficits, anxious personality traits, and feelings of burdensomeness were also associated with poorer outcomes. Notably, coping strategies specifically targeting sexual orientation concerns were not significantly associated with depression or anxiety, suggesting that generic psychological coping skills may be more important than identity-specific strategies[40].

By contrast, positive coping skills, problem-solving, and self-efficacy were identified as protective, being associated with increased wellbeing and reduced depression, anxiety, non-suicidal self-injury, and suicidal ideation[42]. Acceptance-based coping partially reduced the relationship between sexual orientation and depression[40].

The psychological impact of identity concealment presented a nuanced picture. Among sexual minority young people, discomfort with and concealment of one's sexual identity were associated with depression and social anxiety, though evidence was mixed[40]. European evidence on gender minority populations found identity concealment to be largely unrelated to mental health outcomes, challenging traditional assumptions about its inherent harm. The authors suggested that concealment may in some contexts reduce exposure to discrimination, and for some individuals living in accordance with their felt gender can itself be identity-affirming[41]. This suggests that the psychological impact of concealment is context-dependent rather than universally detrimental.

Conversely, sexual identity integration (defined as the sustained internal and external embrace of one's sexual identity) was protective against depression among sexual minority young people, though this effect was only significant when integration was maintained at consistently high levels over twelve months, suggesting that occasional positive feelings about one's identity may be insufficient[40]. Pride in one's transgender or gender diverse identity was negatively associated with depression, though not with anxiety[41]. Self-care, self-acceptance, and gender positivism were similarly associated with increased wellbeing and self-esteem among LGBTQ+ adolescents[42].

Resilience, personal mastery, and perceived competence to handle difficult situations were consistently protective against depression and PTSD across both sexual and gender minority young people[40–42]. Psychological resilience significantly moderated the association between everyday discrimination and both depression and suicidal ideation among European gender minority populations[41]. Emotional awareness and feelings of mattering and belonging were further protective internal factors[40].

Self-esteem presented a complex picture. Among gender minority populations in European studies, low self-esteem was consistently associated with psychopathology, anxiety, non-suicidal self-injury, and mental distress, and may represent a more proximal predictor of outcomes than internalised stigma itself[41]. However, among gender minority young people in other contexts, self-esteem was not significantly associated with depression or trauma symptoms, contrasting with sexual minority findings. Among sexual minority young people, the relationship between self-esteem and depression was also mixed[40].

Help-seeking beliefs and behaviours were linked to reduced depression, anxiety, and suicidal ideation and increased wellbeing. Spirituality was associated with reduced depression and suicidal behaviour, while healthy activities and caring about school achievement were linked to reduced suicidal ideation and self-harm respectively. Staying out of conflict and managing conflict effectively was associated with reduced depression among LGBTIQ+ adolescents[42].

Certain subgroups face heightened psychological vulnerability. Non-binary individuals reported greater depression and anxiety than binary transgender young people, potentially due to a lack of social recognition and established support pathways[40,41]. Bisexual females were at greater risk than gay men, and asexual young people reported more severe depression than bisexual or gay and lesbian peers[40]. Those assigned female at birth were associated with higher levels of negative mental health outcomes in European studies. Younger age was a consistent risk factor among gender minority populations[41]. The depression gap between SGM and heterosexual young people widened from adolescence into young adulthood[40], suggesting a cumulative psychological burden of minority stress across this developmental period.

Refugees

A systematic review of protective and promotive factors of refugee mental health found that cognitive coping strategies (particularly cognitive reappraisal, positive appraisal, and positive reframing) had strong evidence of association with good mental health. Self-efficacy (both personal and collective), psychological resilience, and a sense of coherence were also consistently protective. Problem-focused coping showed moderate evidence of benefit, while emotion-focused coping had insufficient evidence. The review noted that approximately two thirds of adult refugees do not report clinically significant psychological symptoms following resettlement despite substantial adversity, highlighting the role of psychological resources in supporting adaptation[52].

Migrants

A systematic review identified a range of psychological coping strategies among older unforced migrants. These included spending time with family and friends, using social media to maintain homeland connections, participating in community-based activities, emotion-focused religious coping, mindfulness, and reminiscing about life in the home country. The review highlighted that fear of physiological decline and death, loss of independence, and feelings of burdensomeness were prominent psychological concerns. Engaging in traditional gender roles served as a cognitive coping strategy for some, while dependence on adult children due to limited knowledge of the host country led to loss of agency, decision-making power, and self-esteem. The interplay between individual psychological coping and structural barriers such as language proficiency and migration policy was a defining feature of this population's experience[48]. This suggests that while individuals draw on personal coping strategies such as social connection, faith, and mindfulness to manage their mental health, these efforts can be undermined when people face barriers that take away their independence and sense of control. This highlights that good mental health within migrant populations is likely to be influenced not just by individual coping but also on the environments and systems around them.

Adolescents in contact with child welfare services

A study of protective factors among adolescents receiving child welfare services in Norway found that goal orientation (planning and organisation skills), self-confidence (belief in oneself and confidence in choices), and social competence (ease of forming relationships) were all significantly associated with lower mental health problems regardless of negative life event exposure, supporting a compensatory model of resilience [45]. In Norway, adolescent welfare services encompass a broad range of statutory interventions for adolescents and families, from in-home support and family counselling through to foster care and residential placements- broadly comparable to the spectrum of services delivered by children's social care in England or social services departments across the UK. While the systems differ structurally, the study's focus on psychological protective factors and adversity exposure offers relevant insights for understanding resilience among young people in contact with statutory services more broadly.

Adolescents receiving in-home services- where the young person remains in the family home while the family receives support and intervention from child welfare- showed the most pronounced risk profile, reporting the highest levels of negative life events and the lowest scores on all protective factors compared to the general population. In the foster care group, goal orientation showed a slight buffering effect at higher adversity levels, suggesting that planning and goal-setting skills may be particularly beneficial for young people facing greater adversity [45].

Notably, young people experiencing the greatest cumulative adversity were also those with the least access to the very protective resources associated with better mental health. Adolescents receiving in-home child welfare services experience the greatest cumulative adversity and the lowest access to protective psychological resources. This does not indicate that foster care is inherently preferable, but rather that young people supported at home are often living with sustained instability that existing service models may not be sufficient to buffer[45].

Theme 5: Cross-cutting themes

Physical health conditions

Chronic conditions and Functional Impairment

The association between physical health conditions and mental health difficulties was consistently identified across every stage of life. Among young people, chronic physical health conditions and suboptimal physical health were identified as leading predictors of worse mental health in later adolescence [4,12]. In working-age populations, chronic illness, disability, and dependency within a household all increased the risk of mental health conditions, with implications for carers and family members as well as those directly affected [30].

Among older adults, having two or more chronic diseases was associated with an increased risk of depression. Pain also showed a clear dose-response relationship with depressive symptom burden. Sensory impairment was also relevant, with fair or poor hearing and vision both identified as independent risk factors, as were hospital stays in the preceding 12 months[37]. In parallel, having no functional limitations due to health was shown to be protective [37,106]. This suggests that those experiencing any level of impaired physical functioning, whether through illness, disability, pain, or sensory loss, may benefit from mental health support to help manage the psychological impact of living with these challenges.

Cardiovascular disease and metabolic risk

Cardiovascular disease, obesity and metabolic conditions such as type 2 diabetes were shown to influence mental health outcomes. At population level a study analysis data from over 140,000 European workers found that body mass index was a leading predictor of mental health problems, with risk elevated at both extremes of the weight spectrum[72]. A meta-analysis of eight mendelian randomisations also found that genetic predisposition to higher BMI was associated with increased depression risk. However, when modelled at the population level, the doubling of obesity prevalence over two decades would have increased psychological distress by only around 0.6 percentage points- too small to separate from background variation in national survey data[107]. Obesity therefore appears to be a genuine causal risk factor at the individual level, though its contribution to population-level trends is modest.

An umbrella review of mental health risk in patients with type 2 diabetes- a population with nearly double the rate of diagnosed mental disorders- identified obesity (OR 1.75), neuropathy (OR 2.01), diabetes complications (OR 1.90), and elevated C-reactive protein (a marker of inflammation) as risk factors[33]. This shows how a single long-term condition can generate a cluster of interacting risks (inflammatory, neuropathic, and metabolic) that together increase mental health vulnerability.

These metabolic risks feed directly into cardiovascular disease, which was itself identified as a risk factor for mental health conditions. A study using mendelian randomisation (a design that uses genetic variants to approximate causal inference) found that coronary artery disease and myocardial infarction causally increase the risk of major depressive disorder and mania, while heart failure was linked to bipolar disorder and schizophrenia. Atrial fibrillation was associated with generalised anxiety disorder. The reverse analysis found no evidence that mental health disorders cause coronary heart disease, indicating that the causal direction runs from cardiac disease to psychiatric outcomes[108].

Further evidence showed that patients with acute coronary syndrome, heart failure, and cardiac implantable electronic devices are two to four times more likely to die by suicide than

the general population, with the highest risk in the first 3–12 months after a cardiac event. The authors identified individuals with low mental health service use, substance-use diagnoses, and low disclosure of suicidal intent as a potential profile of individuals at particular risk. The authors also argued that current cardiology guidelines represent missed opportunities for suicide prevention. They recommended that cardiology teams complete suicide prevention training and that depression screening should not be treated as equivalent to suicide risk assessment[109].

Preterm birth

A cohort study following individuals from birth into adulthood found that babies born before 28 weeks of gestation were approximately four times more likely to develop major depression and five times more likely to develop an anxiety disorder as adults. Moderately preterm birth (29–36 weeks) did not carry the same elevated risk; the vulnerability was concentrated in extreme prematurity. Birth weight itself did not predict adult mental health- what mattered was how early the baby was born. Children born extremely prematurely who also experienced difficulties with peer relationships and emotional regulation in early childhood (ages 2–4) were particularly likely to develop depression as adults, a pattern not seen among those born at term. This risk remained after adjusting for socioeconomic background, confirming extreme prematurity as a physical health risk factor in its own right[58]. These findings point to a group that would benefit from sustained support extending beyond the neonatal period and into childhood and adulthood.

Environment

Climate change

Climate change is already contributing to a wide range of mental health and wellbeing impacts across the life course, with effects expected to intensify as climate risks increase[110]. Eco-anxiety (defined as chronic, often overwhelming fear of environmental doom or damage to the planet) has emerged as a distinct psychological phenomenon with measurable mental health consequences. A systematic review found that eco-anxiety was consistently associated with psychological distress, anxiety, depression, and stress symptoms across varying age ranges and nationalities, with small-to-large associations reported[111].

Evidence synthesised by UKHSA also shows that both acute climate-related hazards such as flooding, heatwaves, wildfires and drought, and slower-onset environmental changes can negatively affect mental health through many formats. Direct impacts include increased rates of psychological distress, anxiety, depression and post-traumatic stress disorder (PTSD), as well as sleep problems, reduced wellbeing, substance misuse and elevated suicide risk. Flooding carries particularly strong evidence of long-term mental health consequences, with symptoms often persisting for years after an event. High temperatures are associated with increased mental health-related hospital attendances, including among people with dementia, while drought can heighten stress and distress, especially in communities dependent on the land. Awareness of climate change itself can also trigger emotional responses such as eco-anxiety[112].

Displacement from homes, disruption to essential services, loss of income or employment, insurance difficulties, damage to property, and erosion of community cohesion all contribute to poorer mental health outcomes. Food and water insecurity linked to climate hazards poses additional risks. People living in areas of higher deprivation, those already experiencing health inequalities, and inclusion health groups may face heightened vulnerability. Children and young

people are particularly affected due to disrupted routines, education and family stability, and because climate-related worry is more prevalent among younger populations. Occupational groups such as farmers, land-based workers, emergency responders and firefighters also face elevated risks due to both the material and psychological impacts of climate-related events. Individuals with pre-existing physical or mental health conditions may be more susceptible to worsening symptoms, and climate-related mental health effects can be long-lasting[112].

Despite these risks, clinical interventions including cognitive behavioural therapy (CBT), trauma-focused therapies, and Acceptance and Commitment Therapy have been shown to reduce symptoms following climate-related distress[112]. Digital interventions such as web-based programmes, text-message support and app-based therapies can also improve mental health and may increase accessibility, particularly in rural areas[112]. Social support, strong community networks, clear communication from authorities and effective recovery processes all act as protective buffers, reducing psychological harm[112]. However, there is limited evidence from UK settings, a lack of long-term evaluations, insufficient focus on groups experiencing multiple disadvantages, and minimal research on the mental health impacts of slower-onset climate changes or cumulative events[112].

Overall, climate change and mental health interact as overlapping public health challenges, with implications for health services, emergency planning, social care and community resilience. Anticipating and addressing these impacts is essential for safeguarding population mental health in Suffolk.

Disasters and pandemics

Environmental crisis, such as natural disasters and pandemics, have been shown to have lasting effects on individuals' mental health across the life course. A multilingual systematic review of 234 papers on long-term mental health trajectories after disasters and pandemics found that post-traumatic stress symptoms (PTSS) gradually decline over time, but depression and anxiety remain chronically elevated for years, indicating these conditions require sustained rather than short-term intervention. Children and adolescents reported significantly higher rates of depression and anxiety than adults across all post-disaster time points. Female gender was consistently associated with higher PTSS at every time interval. Ethnic minority status, pre-existing psychiatric illness, direct disaster exposure, injury, property loss, and displacement were recurring risk factors, while social support, community engagement, higher education, employment, and positive coping strategies were protective[113].

Pollution

Noise, air and light pollution have all been shown to influence mental health outcomes.

A narrative review of the relationship between noise pollution and psychiatric outcomes found that exposure to different sources of urban noise, including road, rail, and air traffic, was associated with modestly elevated odds and risks of psychiatric disorders, with effect sizes ranging from OR 1.05 to OR 1.42 depending on the outcome and noise source examined. Noise annoyance predicted symptoms of depression, anxiety, and sleep disturbance over a five-year period, and perceived noise was among the neighbourhood characteristics most strongly associated with psychological wellbeing and depression in an international survey of over 76,000 respondents. Children and pregnant women were identified as particularly vulnerable populations. Among children, road traffic noise exposure was associated with a seven per cent increase in parent-reported behavioural problems. Among pregnant women, higher noise levels, particularly at night, were associated with elevated risk of hospitalisation for depression.

The association between noise exposure and sleep disturbances may itself represent a risk factor for subsequent psychiatric conditions, including affective and bipolar disorders[114].

Air pollution has been linked to psychiatric disorders throughout the life course. A position paper by the European Psychiatric Association noted that in 2022, ninety-six per cent of people in EU urban areas were exposed to fine particulate matter exceeding WHO health standards. Pollutants including PM2.5 and NO_2 (major sources vehicle emissions, wildfires and industrial processes) have been linked to depression, anxiety, dementia, and, in children, psychosis, personality disorders, and suicide-related outcomes[115]. The link between air pollution and mental health appears to work through neuroinflammation and oxidative stress. A Mendelian randomisation study confirmed genetic causal links between PM2.5 and both depression and anxiety, and between NO_2 and schizophrenia, with changes in brain structure partly explaining these effects[116].

Artificial light at night, has been associated with depressive symptoms, mood and anxiety disorders, manic symptom relapses in patients with bipolar disorder and suicidal behaviours. The primary mechanism involves disruption of circadian rhythms through effects on melatonin secretion, sleep patterns, and chronobiology. Several processes involved in depression and mood disorders are under circadian control and thus vulnerable to disruption by environmental influences including air pollution. The impact may differ across the lifespan, though the evidence supports an association between light at night and mental disorders independent of age[117].

Gender differences

This section uses 'gender' as its primary framing term. While a number of the included studies measured biological sex (male or female) as their variable rather than gender, the overarching finding of this review is that the observed disparities between men and women are predominantly shaped by social and structural conditions (employment, income, caregiving roles, discrimination, and social expectations) rather than by biological sex alone. Where specific findings relate to biological mechanisms, such as hormonal pathways across the reproductive lifespan, this is noted explicitly. The decision to frame this section around gender rather than sex reflects the weight of the evidence, which consistently points to socially modifiable determinants as the primary drivers of the mental health differences observed.

Internalising and externalising symptoms

The most consistent finding across the evidence base is a gender divergence in how mental distress is expressed. Across the evidence base, females showed higher rates of internalising difficulties (depression, anxiety, psychological distress, and stress), while males were more likely to present with externalising difficulties (substance misuse, conduct problems, and aggression)[4,5,12–14,24,29,37,44,52,55–58,72,87,96]. This pattern appeared in childhood[5,57], adolescence[4,12–14,24,55,56,96], adulthood[29,58,72,84], and in older age[37,87], and was replicated across vulnerable populations included institutionalised young people[44], refugees[52], and people with type 2 diabetes[33]. This suggests that males and females tend to express mental distress differently and that mental health services may benefit from recognition and response to differing expressions of mental distress.

Gender disparities

Women experience distinct mental health risks across the life course, shaped by biological, social and economic factors. Around one in five women experience a common mental health problem such as depression or anxiety[118].

A critical finding is that the observed gap in mental wellbeing between men and women is largely a product of gendered social conditions. Multiple studies confirmed that the gap is driven by women's disproportionate exposure to socioeconomic disadvantage (unemployment, low income, precarious work, and unpaid domestic labour) as well as gender-based violence and unequal caregiving burdens[29,30,82,83,119,120]. For example, the mental health impact of precarious employment operated entirely through the psychosocial work environment for women (full mediation), whereas men retained a direct effect independent of working conditions[83]. Gendered housework inequality was associated with somatic symptoms in women and psychological distress in both partners[29], while female caregivers of dependent adults had nearly double the odds of distress compared with males[74]. The perinatal period was identified as a critical window, with low social support during pregnancy and postpartum consistently predicting depression and anxiety, and role strain persisting as a risk factor up to eight years after childbirth[27,120].

However, it is also important to note that biological sex-specific pathways alongside these social ones also influence mental health. Oestrogen has a role in mood regulation and heightened vulnerability at key reproductive stages including menarche (the first menstrual period), the premenstrual period, the puerperium, and menopause[119]. The menopause typically occurs between ages 45 and 55, although symptoms can begin several years earlier during the perimenopausal stage[121]. Fluctuating hormone levels during menopause are associated with changes in mood, anxiety, sleep and cognitive functioning, sometimes described as "brain fog"[121,122]. Research suggests that women in the perimenopausal stage are around 40% more likely to experience depressive symptoms compared with premenopausal women, and many report increased anxiety, irritability and reduced confidence during this transition[121]. Physical symptoms such as sleep disruption, hot flushes and fatigue can further affect emotional wellbeing and daily functioning. Despite this, awareness remains limited, with surveys indicating that many women are unaware that menopause can be linked to mental health difficulties[121,122]. Improving recognition of menopause-related mental health symptoms within primary care, workplaces and community services is therefore an important component of supporting women's wellbeing during midlife. Similarly, the perinatal period is a time of elevated risk for depression and anxiety, with implications for both maternal wellbeing and child development[123].

At the same time, protective factors are evident. Women are generally more likely to seek help, maintain social networks and engage with health services, which can support earlier identification and intervention[123]. However, structural inequalities particularly poverty, caring burden, and exposure to violence continue to shape mental health outcomes.

In parallel to this, gender equality itself was protective. Women with non-traditional gender ideologies at age 30 had fewer anxiety symptoms over a decade later, and men who took on non-traditional childcare roles showed fewer depressive symptoms[29]. [18] Leisure time- disproportionately limited for women with caregiving responsibilities- was independently protective against common mental disorders[119].

Taken together, the evidence suggests that gender disparities in mental health are not fixed, they are predominantly produced by identifiable, modifiable social conditions, with biological sex-specific pathways playing a contributory but secondary role. In Suffolk, addressing women's mental health requires a whole-system approach spanning perinatal services, primary care, domestic abuse support, employment and financial advice, and community-based prevention. Targeted support for women experiencing deprivation, trauma or multiple caring responsibilities is essential to reduce inequalities and improve long-term outcomes.

Gender and intersecting disadvantage

Building on the gender disparities discussed above, gender does not operate in isolation, it intersects with other forms of disadvantage to compound mental health risk. First-generation non-EU migrant women in low-quality employment showed the highest risk of common mental disorders of any group studied[82], First-generation non-EU migrant women in low-quality employment showed the highest risk of common mental disorders of any group studied[50] and within Roma and Traveller communities, where enforced gender roles, early marriage, and domestic violence contributed to women's worse outcomes[92]. Among older migrants, gender shaped the migration experience itself: women sometimes benefited from continuity of domestic roles or escape from patriarchal norms, while men who migrated without partners were more vulnerable to feelings of purposelessness[48]. Among people living with HIV, women showed significantly higher odds of anxiety, and those with a transgender identity showed more than double the odds[124]. Among people with intellectual disabilities, male sex was specifically associated with serious mental illness onset[93], and among people with intellectual disabilities, male sex was specifically associated with serious mental illness onset[45]. Community empowerment interventions benefited men and women through different pathways- collective control for men, social connection for women- while unhealthy lifestyle clustering was disproportionately concentrated among younger, less educated men[125,126].

Overall, this suggests that gender should not be treated as a standalone variable. It intersects with migration status, ethnicity, socioeconomic position, and other forms of marginalisation to create compounded risk.

The renewed Women's Health Strategy for England

The Renewed Women's Health Strategy for England, published by the Department of Health and Social Care in April 2026[127], positions women's mental health as a national concern, highlighting that around 1 in 4 women have a common mental health condition compared to around 1 in 7 men[128], and that suicide is the leading cause of maternal direct deaths from 6 weeks to a year after pregnancy ends[129]. Women are almost twice as likely as men to have an eating disorder, more likely to have made a suicide attempt or self-harmed, and more likely to have post-traumatic stress disorder[128]. The strategy frames these disparities not simply as differences in prevalence, but as the product of systemic under-recognition, medical misogyny, and a healthcare model that fails to listen- 84% of women reported times they were not listened to by healthcare professionals in the call for evidence informing the 2022 strategy[130].

The document emphasises significant inequalities, noting elevated mental health risks among:

- Young women
- Lesbian, gay and bisexual women
- Women from deprived communities
- Black and Asian women
- women experiencing rough sleeping

- female victims and survivors of partner abuse
- women experiencing hormonally linked conditions

To address these issues, the strategy proposes several system-level actions, including:

- expanding NHS Talking Therapies
- rolling out community mental health
- accelerating the rollout of Mental Health Support Teams in schools and colleges
- investing in Early Support Hubs
- investing in Best Start Family Hubs
- maintaining specialist perinatal mental health services in every ICS and 24/7 access to mother and baby units for postpartum psychosis
- embedding routine maternal mental health assessment into all five statutory health visiting reviews
- creating a digital front door to mental health support through the NHS App
- Improving 'Staying Safe from Suicide' guidance and practitioner e-learning
- publishing a modern service framework for children and young people
- commissioning research into how reproductive transitions such as menstruation and menopause affect women's mental health

Throughout, the strategy stresses that improving women's mental health is essential for reducing inequalities, improving healthy life expectancy, and addressing a leading driver of economic inactivity. It argues that the structural drivers of poor outcomes- a paternalistic care model, dismissal of women's symptoms and pain, fragmented services, and the failure to recognise mental health as embedded within menstrual, reproductive and ageing pathways- must be addressed to enable earlier intervention, reduce crisis-driven care, and deliver on the strategy's central ambition of giving women genuine voice, choice and power over their own health.

Men's health: A strategic vision for England

The strategy by the Department of Health and Social Care published in November 2025 positions men's mental health as a national concern, highlighting that mental ill health is rising, suicide remains the leading cause of death for men under 50, and men are less likely than women to seek help, often "suffering in silence" due to stigma and gendered expectations. Substance misuse, alcohol use, and risk-taking behaviours are identified as important, overlapping contributors to poor mental health among men[131].

The document emphasises significant inequalities, noting elevated mental health risks among:

- men in deprived and coastal areas
- South Asian men (particularly regarding CVD and diabetes interactions with mental health)
- Gypsy, Roma and Traveller men
- LGBTQ+ men, who experience higher rates of depression, anxiety, self-harm and suicide
- autistic men and those with SEND, who face barriers to accessing mental health support
- men experiencing homelessness (high premature mortality and extreme vulnerability)
- men in the criminal justice system (high prevalence of poor mental health and substance-related harms)

To address these issues, the strategy proposes several system-level actions, including:

- expanding access to care through neighbourhood health centres, extended hours, and improved digital routes (e.g., NHS App self-referral to talking therapies)
- improving health literacy and normalising help-seeking behaviour, particularly among boys and younger men
- using trusted settings to engage men, such as workplaces, sports clubs and community venues
- developing a Premier League partnership on suicide prevention, with campaigns embedded in matchday environments and club outreach
- strengthening pathways for emotional and practical support at diagnosis via Diagnosis Connect
- improving health worker training to better recognise and engage men experiencing mental distress
- investing in community-based men's health programmes that include mental health support

Throughout, the strategy stresses that improving men's mental health is essential for reducing inequalities and improving healthy life expectancy. It argues that social norms around masculinity such as self-reliance, reluctance to talk about emotions, and avoidance of services must be addressed to enable earlier intervention and reduce the burden of crisis-driven care.

Deprivation

Deprivation is associated with higher prevalence of common and severe mental health conditions across the live course, increased exposure to adversity and trauma, and reduced access to timely and effective support[132]. Socioeconomic disadvantage also interacts with other risk factors for mental ill health, including unemployment, poor housing, physical ill health and social isolation, contributing to mental health inequalities throughout life[133].

Evidence demonstrates a strong social gradient in mental health outcomes. Rate of severe mental illness are substantially higher in more deprived populations, with national evidence indicating that the prevalence of psychotic disorders is many times higher among people in the lowest income groups compared to those in the highest[134]. Common mental health conditions such as depression and anxiety are also significantly more prevalent in deprived communities[118]. This relationship is complex and bidirectional: experiencing deprivation increases the risk of developing ill mental health, while mental ill health can in turn contribute to a spiral of adversity, affecting employment, income, housing stability, and social relationships, and increasing the likelihood of further disadvantage[134,135].

Conclusions

This rapid review set out to identify what the current evidence tells us about the risk and protective factors that shape mental health across the lifespan. Five clear messages emerge:

1. Relationships matter. From the earliest parent-child bond through to social connections in later life, the quality of people's relationships is one of the most consistent influences on mental health - and one of the most amenable to support.
2. Mental health is rooted in material conditions. Poverty, poor housing, insecure work, and deprived neighbourhoods do not simply sit alongside mental health difficulties, they actively drive them. Addressing someone's practical circumstances is not a precursor to mental health support; it is part of it.

3. Everyday behaviours make a meaningful difference. Regular physical activity, healthy sleep, and mindful use of technology each contribute to better mental health. These are areas where even modest, supported changes can produce real benefits.
4. People's inner resources shape how they respond to adversity. Self-esteem, emotional regulation, optimism, and effective coping skills act as a buffer against hardship at every stage of life and importantly, these capacities can be built and strengthened.
5. Risks rarely travel alone. Physical illness, environmental exposure, gender inequality, and deprivation interact and compound one another, meaning that those facing multiple disadvantages carry a burden far greater than any single risk factor would suggest.

Running through all of these findings is a consistent thread: the factors that harm mental health are largely the same factors that drive wider inequality, and they accumulate across the life course. This may have direct implications for Suffolk's ageing population, where the long-term effects of earlier disadvantage will increasingly shape demand for support in later years.

For practitioners, commissioners, and policymakers, the message is both challenging and hopeful. Challenging, because it calls for responses that reach beyond individual treatment into the social, economic, and environmental conditions in which people live. Hopeful, because at every life stage, modifiable protective factors exist- in relationships, in communities, in services, and in people themselves- that can be actively strengthened. The evidence consistently shows that well-timed, well-targeted support can interrupt cycles of disadvantage and build resilience, even in the face of significant adversity.

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