



Fás Aníos in Éirinn

Growing Up in Ireland

Factors that Foster Resilience in Outcomes for Vulnerable Children

An Analysis Using Data from the
Growing Up in Ireland Survey



An Roinn Leanaí, Míchumais
agus Comhionannais
Department of Children,
Disability and Equality



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An Analysis Using Data from the Growing Up in Ireland Survey

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Authors: Charlotte Silke, Bernadine Brady & Caroline Heary
University of Galway



An Roinn Leanaí, Michumais
agus Comhionannais
Department of Children,
Disability and Equality



OLLSCOIL NA GAILLIMHE
UNIVERSITY OF GALWAY





The authors of this report are: **Dr Charlotte Silke, Dr Bernadine Brady and Professor Caroline Heary**
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Department of Children, Disability and Equality
Block 1, Miesian Plaza, 50 – 58 Lower Baggot Street, Dublin 2 D02 XW14
Tel: +353 (0)1 647 3000
Email: research@dcde.gov.ie
Web: www.gov.ie/dcde

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Contents

Executive Summary	5
About this Report	8
Chapter 1: Introduction	9
1.1 Defining Wellbeing: Understanding What it Means to be Doing Well in Life	10
1.2 Risk Factors: Identifying Those Most At-Risk for Poor Wellbeing Outcomes	12
1.3 Protective Factors: Understanding the Key Drivers of Resilience	15
1.4 The Current Study	18
Chapter 2: Method	20
2.1 Growing Up in Ireland (GUI)	21
2.2 Study Design	22
2.3 Participants	22
2.4 Measures	23
2.5 Data Access	27
2.6 Analytic Framework	28
Chapter 3: Results	31
3.1 Findings from Stage 1 Latent Class Analysis Models	32
3.2 Findings from Stage 2 Latent Profile Analysis Models	36
3.3 Findings from Stage 3 Examination of Moderation Effects	40
Chapter 4: Discussion	43
4.1 Overview of Key Findings	44
4.2 Association between Childhood Vulnerability and Adult Wellbeing	45
4.3 Implications for Research, Policy and Practice	49
4.4 Limitations	52
4.5 Conclusion	53
References	54
Appendix I	68
Appendix II	73



Executive Summary

Context

Why do some young people do well despite early disadvantage, while others experience poorer outcomes? Although early-life adversity is a risk factor for poor developmental outcomes, many young people go on to lead healthy and productive lives. This highlights the importance of resilience and the need to better understand the conditions that support positive development despite early adversity.

This study aims to advance understanding of how early-life vulnerability shapes later-life wellbeing, with a particular focus on why some young people ‘do well’ over time despite early exposure to risk. The research explores patterns of childhood disadvantage, their relationship with wellbeing in early adulthood, and the key protective factors – across family, peer, school, and community contexts – that support positive developmental trajectories. The findings are intended to inform more effective prevention, early intervention, and policy strategies.

Methodology

This study uses longitudinal data from the *Growing Up in Ireland* (GUI) study, a nationally representative survey tracking child development over time. Data from the Cohort ‘98 were analysed across four waves (ages 9, 13, 17/18, and 25), drawing on information from young people, caregivers, and teachers. The analytic sample included 8,568 participants at baseline, with subsequent analyses focusing on those with available data at later waves.

The study adopts a longitudinal, person-centred design to examine how early-life vulnerability contributes to young adults’ wellbeing outcomes and to identify factors that support positive outcomes. At age 9, patterns of early-life risk were identified using 11 indicators across individual, family, peer, school, and neighbourhood contexts. Latent Class Analysis (LCA) was used to identify the dominant patterns of risk experienced by children at age 9, and to group those with similar experiences together.

At age 25, wellbeing was assessed as a multidimensional construct, capturing functioning across social, emotional, physical, cognitive, community, and economic domains. Latent Profile Analysis (LPA) was used to identify the dominant wellbeing profiles experienced at age 25, by grouping together young people who showed similar patterns of responses across these wellbeing domains.

The analysis then examined the association between childhood risk classes and adult wellbeing profiles, and whether protective factors during adolescence – such as parent-child relationships, peer attachment, teacher support, extracurricular participation, and educational attainment – improve the likelihood of positive profiles. These effects were tested using chi-square analyses and survey-weighted, moderated logistic regression models.



Key Findings

Profiles of risk at age 9

Based on their experiences of adversity and other developmental challenges at age 9, children were categorised into one of three broad risk profiles:

Low Risk (80% of children): Children fitting this profile were characterised by a low probability of experiencing specific negative life events and developmental challenges.

Social-Health Risk (10.5% of children): This group typically showed a moderate to high probability of experiencing several social and health issues, including learning or health problems, school performance difficulties, emotional, peer, hyperactivity and/or conduct problems, and being the victim of bullying.

Family SES Risk (9.5% of children): Children in this group typically showed a moderate to high probability of experiencing family financial strain or belonging to lone parent households.

Profiles of wellbeing at age 25

Based on their pattern of responding across multiple wellbeing domains, it was found that most young people were likely to show a positive wellbeing pattern at age 25. Specifically, young people were categorised into one of two wellbeing profiles:

Doing Well: Approximately 73% of young people demonstrated above average levels of positive functioning across most wellbeing domains.

Struggling: Approximately 27% of young people evidenced lower than average functioning across most wellbeing domains.

Associations between childhood risk and adult wellbeing

Early-life exposure to risk was significantly and negatively linked to adult wellbeing. Belonging to the Family SES risk class or Social-Health risk class at age 9 was associated with reduced likelihood of 'Doing well' at age 25, in comparison to the Low risk group.

Analyses showed that:

- 60% of those identified in the 'at risk' groups at age 9 appeared to be 'Doing well' at age 25, whilst 76% of the Low risk category appeared to be 'Doing well' at age 25.
- 40% of those 'at-risk' at age 9 were categorised as 'Struggling' at age 25, whilst 24% of the Low risk group appeared to be 'Struggling' at age 25.
- Females were less likely to be 'Doing well' at age 25, compared to males.



The role of protective factors

- Higher levels of educational attainment, stronger teacher support, better peer relationships, lower levels of parent-child conflict, and regular participation in extracurricular activities were all associated with a greater likelihood of ‘Doing well’ at age 25.
- These protective factors typically had positive associations with adult wellbeing – regardless of young people’s pattern of early-life risk exposure.
- Educational attainment and leisure participation emerged as particularly strong protective factors, substantially increasing the odds of young people ‘Doing well’ at age 25.

Implications and Recommendations

The findings identify two distinct forms of early disadvantage: a ‘social-health’ risk pattern, where health or developmental difficulties co-occur with academic and peer challenges, and a ‘family SES’ risk pattern, characterised by structural disadvantages such as financial strain and lone parenthood. This distinction highlights the need for differentiated policy responses, combining targeted social supports with broader structural interventions to effectively address diverse forms of adversity. For example, policies that provide social or emotional support for parents, or ensure that appropriate services are available to meet the needs of children, may be particularly beneficial for children who have experienced social-health related adversity, while policies that provide financial relief to parents may be particularly helpful for those who experience family SES related adversity.

While it is positive that approximately three in four young people in Ireland are ‘Doing well’ at age 25, the finding that one in four young people are likely ‘Struggling’ is concerning and highlights the need for further policy intervention. A combined universal and targeted approach may be required, promoting greater wellbeing for all young people whilst also providing more intensive supports for those at risk.

Overall, in line with priorities outlined in Irish policy such as *Young Ireland: National Policy Framework for Children and Young People 2023-2028* and *Pathways to Wellbeing: National Mental Health Promotion Plan 2024-2030*, these findings highlight the value and importance of investing in key supportive environments – families, schools, peers, and communities – through multi-pronged strategies that strengthen relationships, educational engagement, and access to extracurricular opportunities. Such investment reduces the likelihood that children will experience poor wellbeing outcomes in later life.



About this Report

Commissioned by the Department of Children, Disability and Equality (DCDE), this research examines the factors that foster resilience among vulnerable children. The central aim of this study is to understand how young people who are considered ‘at risk’ at age 9, end up ‘doing well’ by age 25, and to identify the key protective factors that contribute to this resilience.

The study draws on longitudinal data from Cohort ‘98 (formerly known as the Child Cohort) of the Growing Up in Ireland (GUI)¹ study, Ireland’s national study of children and young people. By following participants from age 9 to age 25, the research adopts a life-course perspective to examine how early-life experiences shape adult wellbeing. Underpinned by a flourishing framework, this project adopts a holistic approach to wellbeing and examines how young people² are functioning across multiple, key aspects of life.

Guided by socio-ecological models of resilience, the analysis applies person-centred methods to identify distinct patterns of early-life vulnerability and adult wellbeing, alongside regression-based approaches to examine how protective factors influence wellbeing trajectories. In particular, the analysis explores the role that key social and contextual supports - including family, school, and peer contexts – play in promoting positive wellbeing trajectories and buffering against the effects of early-life disadvantage.

In doing so, this research directly addresses key national policy priorities, including those outlined in *Young Ireland: National Policy Framework for Children and Young People 2023-2028* and the *Pathways to Wellbeing: National Mental Health Promotion Plan 2024-2030*. These findings also have relevance for a range of other national and international policy frameworks, strategies and initiatives, particularly in areas relating to youth, health, education, and child protection. This report provides evidence-based insights into the conditions that enable positive wellbeing outcomes among vulnerable children, identifies key risk and protective factors across the life course, and highlights areas where further research and policy attention are needed. Overall, the report aims to support the development of more effective, preventative strategies to improve wellbeing for children and young people in Ireland.

1 Growing Up in Ireland (GUI) is funded by the Government of Ireland. GUI is managed as a partnership between the Department of Children, Disability and Equality (DCDE) and the Central Statistics Office (CSO). The CSO are responsible for the survey element of GUI. Results in this report are based on analyses of data from Research Microdata Files provided by the CSO. Neither the CSO nor DCDE take any responsibility for the views expressed or the outputs generated from these analyses.

2 The term ‘young person’ is used throughout this report to refer to individuals aged between 15-29 years, based on the widely used definition by the Eurostat: <https://ec.europa.eu/eurostat/web/children-youth>

Chapter 1

Introduction





Introduction

A central challenge for researchers, practitioners, and decision-makers is understanding why some young people thrive despite experiencing vulnerability or disadvantage in early childhood, and why others experience poor outcomes across various developmental domains. Although early-life disadvantage is widely recognised as a key predictor of later-life difficulties, evidence consistently shows that adverse early-life experiences do not unequivocally determine life trajectories. Many individuals exposed to adversity go on to lead healthy, productive, and fulfilling lives. Understanding this resilience is critical. From a policy perspective, identifying the conditions that enable young people who are ‘vulnerable to poor outcomes’ to subsequently ‘do well’ offers a powerful opportunity to inform prevention and early intervention, and guide development strategies for children and young people. In particular, understanding how risk and protective factors interact to shape development and wellbeing over time can help address current knowledge gaps and guide policy response. By bringing together evidence on risk, wellbeing, and protective processes, this research aims to generate policy-relevant insights into how positive developmental trajectories can be supported across the life course.

1.1 Defining Wellbeing: Understanding What it Means to be Doing Well in Life

Interest in the wellbeing of children and young people has grown exponentially in recent years, and has established itself as an emergent ‘hot topic’ in both research and public discourse (Jarden & Roache, 2023; Spratt, 2017). Concerns about the rising levels of mental health difficulties (Blanchflower, 2025; Collishaw & Sellers, 2020; Sacco et al., 2024), and contemporary societal challenges – such as the recent COVID-19 pandemic, ongoing housing crisis, growing economic uncertainty, and increasing geopolitical tensions (Luo & Van Assche, 2023; Panchal et al., 2023; Szucs, 2024) – affecting young people may have contributed to this heightened attention on wellbeing and development (Green & van de Groep, 2025). Evidence from both national and international research indicates levels of anxiety, stress, burnout, depression and loneliness are increasing among children and young people (Fitzgerald et al., 2025; Garcia et al., 2025; McGorry et al., 2025; Pitchforth et al., 2019), while happiness, future optimism, and life satisfaction appear to be declining (Badura et al., 2024; Chaves, 2021; Guo, 2025; Philippe, Sloan & Neville, 2025; Twenge & Blanchflower, 2025). In order to break this negative cycle, it is important to identify which young people are ‘doing well’ in society, understand what factors contribute positively or negatively to their wellbeing, and develop initiatives that can promote positive functioning among vulnerable children and young people (Bache & Reardon, 2016; Slimmen et al., 2024; WHO, 2021).

According to national policy, the vision for a healthy Ireland involves creating a “*society where everyone can enjoy physical and mental health and wellbeing to their full potential, and where health is valued and supported at every level in society*” (Pathways to Wellbeing: National Mental Health Promotion Plan 2024-2030, p.3; Healthy Ireland Framework 2013-2025). In Ireland, the promotion of wellbeing among children and young people is a key priority for policy and decision-making (Young Ireland: National Policy Framework for Children and Young People 2023–2028). This focus



on wellbeing promotion is also echoed in other international policies such as *The Geneva Charter for Wellbeing* (2022) and the World Health Organization's (WHO) *Global Framework on Well-being*, which mandate the importance of establishing global “well-being societies” that enable both current and future generations to thrive. However, despite this strong policy emphasis, defining and measuring what it means to ‘thrive’ or be ‘doing well’ in life remains a complex challenge (Jarden & Roache, 2023; Spratt, 2017).

Defining wellbeing is complicated, as there is no universal consensus on what it means to be ‘doing well’ (Chaves, 2021; Jarden & Roache, 2023). The term ‘wellbeing’ has multiple definitions and facets, and is often conceptualised differently by different audiences and disciplines (Baxter & Burnell, 2022). For example, traditional measures of wellbeing typically adopted an ‘absence of disease, disability or illness’ approach, with wellbeing often defined as the absence of negative psychological symptoms, such as depression or anxiety (Huppert & Whittington, 2007). Over time, researchers began advocating for a move away from this type of biomedical model, and proposed a ‘dual-factor model’, recognising that wellbeing³ involves both the absence of negative affect as well as the presence of positive emotions (Antaramian et al., 2010; Diaconu-Gherasim et al., 2023; Deci & Ryan, 2008). This framework argues that positive wellbeing and mental ill health are more than just opposite ends on the same coin and represent inter-related, yet distinct, dimensions of wellbeing (Bersia, 2022; Magalhaes, 2024; Mason-Stephens et al., 2023). The notion that “*the absence of mental illness symptoms is insufficient to achieve good mental health and wellbeing*” is now readily accepted in the literature (Baxter & Burnell, 2022, p.3)

However, other researchers contend that these dual-factor approaches are also limited in their scope as they rely on relatively narrow indicators of positive and negative affect (Ryff et al., 2021; VanderWeele, 2017). While these measures may provide important insights into psychological wellbeing, they nonetheless capture only one aspect of human functioning and fail to reflect the broader, more holistic nature of wellbeing. In particular, researchers argue that wellbeing involves more than just positive/negative mental health, and should reflect broader functioning across other key life domains (Baxter & Burnell, 2022; Ryan & Deci, 2001; Jarden & Roache, 2023). Indeed, it is now widely agreed that wellbeing should be viewed as a multi-dimensional construct, and that reliance on a single-domain indicator will likely provide an incomplete or misleading picture (Huta, 2016; Keyes, 2007; Li & Shen, 2026; OECD, 2025). For example, an individual may report good psychological functioning but experience financial insecurity or social isolation; conversely, someone may have strong social relationships but struggle with physical health or purpose in life. Hence, it is important to approach wellbeing from a holistic – whole-of-human-development – perspective.

In response to the need to develop a more comprehensive and holistic model of complete human wellbeing researchers proposed an alternative ‘flourishing’ perspective (Chaves, 2021; Seligman, 2011; Rule et al., 2024). Flourishing is regarded as a form of wellbeing that involves optimal functioning across all major life domains (Linares et al., 2022; Lippman et al., 2011; Rule et al., 2024). Initially promoted in the field of positive psychology, the flourishing literature has

3 May also be referred to as subjective or hedonic wellbeing



grown substantially and has expanded to multiple disciplines, including education, economics, business, medicine, and public health (Westphaln et al., 2022; VanderWeele et al., 2025). Often used interchangeably with the term wellbeing (VanderWeele et al., 2025), flourishing is regarded as an all-inclusive indicator of how well a person's life is going, and is described as a condition in which 'all aspects of a person's life are good', or whether a person is 'thriving' (Keyes, 2007; Waigel & Lemos, 2023; Wang et al., 2022). Broadly, from this viewpoint, wellbeing can be defined as a combination of *feeling good*, *functioning well* and *doing good for others* (Chaves, 2021; Huppert & So, 2013; Keyes, 2007). This flourishing perspective extends traditional definitions of wellbeing by proposing that wellbeing should be assessed not just by examining functioning in some life domains, but by examining functioning across all major life domains, such as one's mental, physical, cognitive, emotional, community, social, and material functioning (VanderWeele, 2015; VanderWeele et al., 2025). Thus, this flourishing model recognises that doing well in life is not determined by a single outcome, but rather by functioning optimally across multiple, key, interconnected areas.

This holistic approach to health and wellbeing aligns closely with the approaches adopted and advocated in both national and international policies. For instance, the *WHO Comprehensive Mental Health Action Plan 2013-2030* defines health as a state of complete physical, mental and social wellbeing. The wellbeing framework outlined by *Understanding Life in Ireland: The Well-being Framework 2025* also takes a multi-dimensional approach to wellbeing, identifying 35 potential indicators of wellbeing that reflect how people in Ireland are doing across 11 dimensions, including their subjective wellbeing, mental and physical health, income and wealth, civic engagement, trust and cultural expression, and connections, community and participation. Similarly, the *Young Ireland: National Policy Framework for Children and Young People 2023–2028* proposes five key outcome areas - being "active and healthy", "achieving in learning and development", "safe and protected from harm", "economically secure", and "connected, respected and contributing to their world" - as indicators of 'doing well'.

In summary, flourishing offers a holistic, multidimensional framework for understanding what it means for young people to be 'doing well'. It reflects contemporary developments in wellbeing research, aligns closely with Irish and international policy priorities, and provides a robust theoretical foundation for examining positive developmental outcomes among young people. By adopting this framework, the present study moves beyond deficit-focused or single-domain approaches and instead seeks to understand the conditions under which young people can thrive across multiple domains of life.

1.2 Risk Factors: Identifying Those Most At-Risk for Poor Wellbeing Outcomes

Childhood is a critical period that can lay the foundation for positive or negative developmental trajectories across the lifespan (Han et al., 2023; Linares et al., 2022). A compelling body of evidence demonstrates that childhood experiences play a key role in shaping adult wellbeing outcomes (Webster, 2022; Hughes et al., 2016), and that experiencing difficulties or disadvantage in early



childhood is associated with a wide range of adverse developmental outcomes, including poorer mental and physical health, lower educational attainment, reduced employment opportunities, and increased likelihood of social and economic disadvantage in adulthood (Bhutta et al., 2023; Liming & Grube, 2018; Sales et al., 2024; Schoon & Lyons-Amos, 2017). Early identification of risk factors can provide a valuable opportunity for early intervention and prevention, enabling the provision of supports to vulnerable children before difficulties escalate and informing current intervention strategies, such as those provided by Tusla. In line with Irish policy priorities, including those outlined in Young Ireland 2023–2028, there is a strong emphasis on identifying children who may be “vulnerable to poor outcomes” and ensuring that appropriate supports are put in place to promote their wellbeing, development, and life chances. In this context, identifying and understanding the key childhood-related factors that increase risk of poor wellbeing outcomes in adulthood is crucial for informing effective policy and practice (Heinsch et al., 2022).

Previous research has identified numerous risk factors that are associated with adverse wellbeing outcomes across the lifespan (Cairns et al., 2014; Linares et al., 2022; Wang et al., 2022). What is clear from this substantial body of research is that early-life vulnerability does not appear to be the result of any, one, singular risk factor; rather, it typically reflects the accumulation and interaction of multiple characteristics, experiences and challenges over time (Hill et al., 2026; Kraemer et al., 2001; Ungar & Theron, 2020). This perspective is reflected in socio-ecological models of development, which propose that individual outcomes are shaped by the dynamic interplay between various personal and environmental factors, including family, school, peer and community contexts (Bronfenbrenner, 1986; Eriksson et al., 2018; Reupert, 2017; Wassermann et al., 2021). In order to understand and identify the key drivers of poor wellbeing outcomes, this complexity needs to be considered and risk factors across these socio-ecological levels should be explored (Slimmen et al., 2024).

At the individual or personal-level, evidence suggests that experiencing health or developmental difficulties in childhood may place children at elevated risk of poorer social, emotional and cognitive outcomes later in life (Bhutta et al., 2023). In particular, a wide body of research indicates a link between childhood health difficulties and reduced quality of life (Didsbury et al., 2016), lower socio-economic status (Galobardes et al., 2006; Wilkinson et al., 2003), poorer academic achievement (Koivusilta et al., 2024) and lower labour market participation (Hansen et al., 2021). For example, longitudinal data drawn from the 1958 National Child Development Study in the UK revealed that individuals who experienced poor health in childhood showed significantly lower educational attainment and poorer health as adults (Case, Fertig & Paxson, 2005). Evidence from other longitudinal research also suggests that childhood disability can have long-term, adverse consequences for wellbeing, and may contribute to higher levels of depression and unemployment, as well as lower levels of education, income and family status in mid-adulthood (Latham, 2015; Mann & Honeycutt, 2014; West & Kamis, 2021). Likewise, findings from several international studies suggest that experiencing emotional, learning or behavioural problems in childhood is linked to poorer education, employment, life satisfaction and mental health outcomes (Espanol-Martin et al., 2023; Majid, 2024; State & Kern, 2017; Totsike et al., 2022; Wang et al., 2022). Additionally, findings from a recent review of over 24 published, peer-reviewed studies revealed that chronic mental (e.g., depression, anxiety) health conditions in childhood were associated with increased risk of



adulthood unemployment, NEET (not being in employment, education or training), and being in receipt of social welfare benefits, while chronic childhood physical health conditions were linked to adverse economic outcomes in adulthood (Dick et al., 2026). In the Irish context, evidence from a recent systematic review of Growing Up in Ireland research similarly highlights that having a chronic illness or special educational needs is consistently associated with poorer outcomes across multiple domains of wellbeing (Philippe et al., 2025).

In addition to these individual characteristics or personal-level risk factors, an extensive body of research indicates that social and contextual factors also play a substantial role in shaping wellbeing outcomes (Li et al., 2023; Slimmen et al., 2024). Indeed, researchers and practitioners increasingly emphasise the value of understanding the social determinants (e.g., the conditions in which people live, learn, work, play etc.) of health and wellbeing, while the importance of identifying and addressing the social and economic circumstances that contribute to individuals' health outcomes is readily outlined in Irish policy (Healthy Ireland, 2023; Institute of Public Policy, 2026; Kirkbride et al., 2024). While numerous aspects of the child's social environment have been flagged as potential risk factors, adverse or negative life experiences and living conditions have been consistently identified as key drivers of poorer wellbeing outcomes across multiple domains (Liming & Grube, 2018; Sales et al., 2024; Schotanus-Dijkstra et al., 2016; Wang et al., 2022). Although early operationalisations of adversity traditionally focused on exposure to dysfunction, abuse and/or neglect within the childhood home (Felitti et al., 1998), more recent approaches have adopted a broader conceptualisation which also recognises the importance of negative life experiences or adverse events that are experienced outside the family context – such as those that occur in school, peer or wider community contexts (Bartlett, 2020; Cronholm et al., 2015; Warner et al., 2023). Within this broader framework, adversity may be used to refer to a wide range of negative life experiences or stressors, such as exposure to maltreatment, bereavement, family conflict, financial hardship, disadvantage, parental illness, bullying, or unsafe environments (Buchanan et al., 2023; Gee, 2021). Research indicates that these forms of negative life experiences are common (Broekhof et al., 2022), as it is estimated that between 30-50% of children in Western societies experience some form of adversity (Kessler et al., 2010; McLaughlin et al., 2012; Walsh et al., 2025). However, some children, such as those from marginalised groups, may be more likely to be exposed to multiple forms or more deleterious patterns of adversity (Merrick et al., 2018; Silke et al., 2023).

The long-term impacts of exposure to adversity are well established. Researchers have accumulated a robust body of evidence to suggest that adverse childhood experiences can lead to poor wellbeing trajectories across the life-course, and can have a profound effect on children, families, communities, and future generations (Poole et al., 2017; Linares et al., 2022; Westphal et al., 2022). For instance, studies show that childhood adversity may contribute to health disparities, including increased risk of cardiovascular disease, stress, sleep disruption, somatic complaints, cancer and early mortality in adulthood (Grummit et al., 2021; Holman et al., 2016; Hughes et al., 2017; Oh et al., 2018; Turner et al., 2016). Chronic exposure to adversity may also alter brain connectivity and contribute to atypical neural development (Nelson, Sullivan & Valdes, 2025; Turner et al., 2016), and is linked to higher rates of adult mental health disorders – including depression, anxiety, self-harm, substance use and eating disorders (Juwariah et al., 2022; Larson



et al., 2017; LeTendre & Reed, 2017; McKay et al., 2021; 2022; Silke et al., 2024). Moreover, causal links between adverse childhood experiences and lower educational attainment, reduced income, lower socio-economic status and higher unemployment in adulthood are well documented (Bunting et al., 2018; Jang & Kim, 2025; Jaffee et al., 2018; Yeo et al., 2023). Crucially, previous research findings from the GUI datasets also highlight the importance of negative childhood experiences for wellbeing and the extent to which risk is socially patterned. As highlighted in the recent systematic review of GUI research (Philippe et al., 2025), adversity - such as socioeconomic disadvantage (e.g., lone-parent households; low-income families), peer problems, or unsafe neighbourhoods – was frequently associated with poorer outcomes across health, education, and socioemotional domains.

Overall, evidence from both national and international literature indicates that risk factors operate across multiple, interconnected domains, reflecting a socio-ecological patterning of disadvantage. Both adverse developmental conditions (such as health or learning difficulties) and exposure to negative life experiences (such as socio-economic disadvantage, family conflict, or victimisation) can disrupt developmental trajectories and reduce the likelihood of positive wellbeing outcomes in adulthood. Understanding how these risks cluster and interact is therefore critical for identifying children who may be most vulnerable to poor wellbeing outcomes, and for informing effective policy responses aimed at promoting wellbeing and reducing inequalities across the life course. The primary school years may represent a particularly valuable stage for examining these processes, as children are embedded across multiple social contexts – including family, school and peer environments – where patterns of risk and vulnerability become more observable. Yet the period from early-to-middle childhood remains a relatively underexplored stage of development (Voss et al., 2023).

1.3 Protective Factors: Understanding the Key Drivers of Resilience

While exposure to negative childhood experiences and developmental challenges may increase the likelihood of experiencing difficulties later in life (Bhutta et al., 2023; Liming & Grube, 2018; Sales et al., 2024), it is important to acknowledge that these trajectories are not fixed. A substantial body of research indicates that many individuals exposed to risk factors as children nonetheless go on to lead happy, healthy, and fulfilling lives (Carr & Kellas, 2018; Luecken & Gress, 2010; Solva et al., 2023). Individuals who manage to navigate early-life difficulties in a manner characterised as ‘flourishing’ or ‘doing well’ are frequently described as ‘resilient’ (Manning & Bouchard, 2020). Resilience is commonly defined as the ability to function effectively despite aversive or traumatic experiences and to adapt to difficult situations (Brodbeck et al., 2024). Resilience may be particularly relevant during adolescence, as it enables young people to overcome various life challenges and avoid negative-risk trajectories, ultimately leading to positive youth development and wellbeing (Pan et al., 2023). From a policy and prevention perspective, understanding why some young people thrive despite experiencing adversity or other developmental challenges is critically important. If certain factors help young people adapt and succeed even when they experience early-life disadvantage,



identifying and understanding these factors can provide valuable insights to help inform intervention and prevention initiatives and policy.

Why some young people evidence positive outcomes and show resilience in the face of highly adverse or challenging life conditions may be explained through the presence of key protective factors. According to resilience theory, access to key developmental assets can moderate the relationship between adversity and adult functioning (Fergus & Zimmerman, 2005; Marquez et al., 2023). These assets are commonly termed ‘protective factors’⁴ as they can offset the negative impact of risk and support positive development (Hirschauer & Scheerer, 2014; Marquez et al., 2023). Research shows that protective factors can support wellbeing both directly – by promoting wellbeing and positive developmental outcomes – and indirectly – by reducing the negative impact of early adversity or disadvantage and helping young people maintain positive trajectories despite challenging circumstances (Wright et al., 2012; Gallagher & Miller, 2018). Similar to risk factors, protective factors also operate across multiple levels, and a distinction is often made between those that are individual (e.g., internal; psychological) and those that are contextual (e.g., external; social; environmental) (Heffernan & Ward, 2017; Linares et al., 2021; Marquez et al., 2023). However, from a policy perspective, there may be particular value in focusing on social and contextual protective factors, as these factors are typically more amenable to intervention and structural change (Standley, 2020).

Notably, both national and international policy emphasise the importance of identifying and strengthening key contextual supports that can aid wellbeing and inform prevention and early intervention initiatives. At an international level, the World Health Organization’s (WHO) *Comprehensive Mental Health Action Plan 2013–2030* advocates for the need to build supportive social and community environments that can help promote mental wellbeing across the life course. In Ireland, several policy frameworks highlight the importance of strengthening supportive environments to promote positive outcomes for young people. For example, *Pathways to Wellbeing – The National Mental Health Promotion Plan 2024–2030* emphasises the importance of promoting “protective factors for good mental health, enhancing supportive environments and enabling access to skills, resources and life opportunities that promote the mental health and wellbeing of individuals and populations” (p.5). *Young Ireland: The National Policy Framework for Children and Young People 2023–2028* also outlines the need to promote protective factors that can enhance youth wellbeing, quality of life and emotional resilience, and highlights the importance of strengthening communities, improving social capital and access to out-of-school activities (p.46). Similarly, other national policy initiatives, including *Sharing the Vision: A Mental Health Policy for Everyone 2020–2030* and the *Opportunities for Youth: National Strategy for Youth Work and Related Services 2024–2028*, emphasise the need to strengthen communities and develop stronger social and community-based supports and out-of-school opportunities for young people in Ireland.

Evidence suggests that numerous social and contextual factors may play a significant, protective role in child development and that resilience is rarely the result of a single factor, but rather emerges through the interaction of multiple supportive conditions across different areas (e.g.,

4 Also known as ‘promotive’ factors.



family, school, community) of a young person's life – in line with socio-ecological perspectives (Bronfenbrenner, 1994; Ungar et al., 2013; Linares et al., 2021). Among these protective assets, positive social relationships and social support may be particularly important. Findings from systematic reviews and meta-analyses indicate that social support consistently acts as a buffer against the detrimental effects of adversity, and appears to exert a protective effect on mental health and wellbeing outcomes, particularly during adolescence and young adulthood (Buchanan et al., 2023). An umbrella review by Abate et al. (2024) also found evidence to suggest that social support plays a key role in promoting resilience, noting that 26% of individuals who experienced childhood hardship developed resilience due to supportive relationships with family, friends or their school. Findings from the Global Flourishing Study suggest that associations between strong child-parent relationships and adult flourishing are observed almost universally across cultures (VanderWeele et al., 2025), while other studies also indicate that children who experience supportive family relationships, reside in supportive neighbourhoods or receive support from extra-familial adults are more likely to thrive and show resilience as adults (Flores et al., 2005; Linares et al., 2022; Jean-Thorn et al., 2023; Westphaln et al., 2022). Overall, the literature appears to suggest that supportive relationships with family members, peers, and other trusted adults can reduce the likelihood of internalising difficulties in later life and promote positive adaptation, highlighting the enduring influence of early relational experiences on adult wellbeing.

Other research suggests that educational experiences similarly play a critical role in shaping long-term outcomes and may help minimise health inequalities (Stavrou & Kourtoutas, 2017). Researchers and theorists argue that education is essential for wellbeing, in that it “*contributes to the evolutionary growth process through the acquisition of the knowledge, skills, values, beliefs, and worldviews necessary to survive in a complex world with others*” (Balaguer et al., 2025, p.2). Evidence from systematic reviews supports this position and indicates that there are many avenues through which school can promote positive adaptation (Buchanan et al., 2023). For example, school connectedness, academic competence, and educational attainment have all been linked to fewer financial, psychological, and behavioural difficulties among individuals exposed to childhood adversity (Buchanan et al., 2023). Findings from several published international research studies suggest that lower educational attainment is associated with increased likelihood of mental health disorders and substance use (Erickson et al., 2016; Lee et al., 2013), with some research indicating that educational attainment may mediate the pathway between early adversity and adult functioning (Sheikh, 2018). Research also shows that positive school environments, perceptions of school safety and stronger teacher-student relationships are associated with lower levels of psychological distress, suicide ideation, greater life satisfaction and subjective wellbeing (Dooley et al., 2015; Garcia-Moya, 2020; Hardy et al., 2024; Jean-Thorn et al., 2023).

Additionally, the protective role of extracurricular participation and community resources have been well documented in both national and international research (Linares et al., 2022; Nolan & Smyth, 2021). Researchers such as Anderson (2021) contend that extracurricular activities can provide young people with a creative, social and/or physical outlet and help them derive purpose and meaning in their lives, which in turn may lead to positive personal development. Research shows that engagement in sports, youth clubs and creative arts may act as a protective factor for mental health (Bian & Xiang, 2023), and have been found to be significantly associated with positive



improvements in life satisfaction, happiness, and health over time (Yen et al., 2024). Greater physical, cultural and social leisure participation has also been linked to greater physical and mental health, self-esteem and social connection (Mock & Smale, 2023; Jean-Thorn et al., 2023; Khambati et al., 2018). These findings align with ecological models of resilience, which emphasise that children's health and wellbeing is not only shaped by individual or family factors but also by the wider social environments and opportunities that they are exposed to (Ungar et al., 2013).

In sum, the evidence indicates that resilience is supported by a combination of protective factors that operate across multiple domains of a young person's life. In particular, relational supports (e.g., family and peer relationships), educational engagement (e.g., educational attainment, positive teacher-student relationships), and participation in structured activities emerge as key protective processes that can buffer the effects of early adversity and promote positive life trajectories.

1.4 The Current Study

The current study seeks to advance understanding of how early-life vulnerability shapes later-life wellbeing outcomes, and crucially, why some young people go on to “do well” despite exposure to risk. While a substantial body of research has identified key risk and protective factors associated with adult wellbeing, important gaps remain. In particular, much of the existing literature has focused on single domains of wellbeing (e.g., mental health), or examined risk and protective factors in isolation. As a result, less is known about the patterns of early-life risk experienced by young people in Ireland, how these patterns relate to holistic indicators of adult wellbeing, and which protective factors support positive developmental trajectories amongst vulnerable young people.

This study addresses these gaps by adopting a longitudinal, person-centred, and policy-relevant approach using data from the Cohort '98 of the Growing Up in Ireland survey. In line with the objectives outlined by the Department of Children, Disability and Equality (DCDE) in the commissioning of this report, this research aims to examine whether and how young people who are vulnerable or ‘at-risk’ of poor outcomes at age 9, transition to a place of ‘doing well’ by age 25, and identify the key social and contextual protective factors that promote positive wellbeing trajectories. Central to this approach is the use of a holistic, multidimensional conceptualisation of wellbeing, operationalised as ‘flourishing’ or ‘doing well’ across multiple key aspects of life. The research is also underpinned by a socio-ecological framework, which recognises that development and wellbeing are impacted by the accumulation and interaction between multiple personal, social and contextual (home, peer, school, community) factors.



Specifically, this study aims to:

1. Identify distinct patterns of childhood risk and vulnerability, based on exposure to adverse developmental conditions and negative life experiences at age 9.
2. Examine patterns of wellbeing among young people at age 25, based on their functioning across social, emotional, cognitive, material, civic and health domains.
3. Explore the relationship between childhood risk profiles at age 9 and patterns of wellbeing at age 25, to determine how early-life vulnerability impacts later-life development.
4. Investigate the role that social protective factors – including parent, peer and teacher relationships, educational attainment and extracurricular participation during adolescence – play in promoting positive wellbeing outcomes.
5. Determine whether these protective factors moderate the relationship between risk and wellbeing and whether their presence reduces the likelihood that at-risk children will experience poorer wellbeing outcomes in later life.

Chapter 2

Method





Method

2.1 Growing Up in Ireland (GUI)

This study draws on data from Growing Up in Ireland (GUI), the national longitudinal study of children and young people in Ireland. GUI is a joint project between the Department of Children, Disability and Equality (DCDE) and the Central Statistics Office (CSO). The project collects interview and survey data on the lives and living conditions of young people in Ireland, and aims to generate robust, policy-relevant evidence on the development of children and young people across their life course (McNamara, Murray & Williams, 2019; Philippe et al., 2025). GUI tracks the development of three distinct cohorts over time:

- The **Cohort '98** includes children born in 1998 and first surveyed in 2007 at age 9.
- The **Cohort '08** includes children born in 2008, and first surveyed in 2008 at 9 months of age.
- The **Cohort '24** includes children born in 2024, and first surveyed in 2024 at 9 months of age.

Since their first interview survey, Cohort '98 and Cohort '08 have been followed at regular intervals (i.e., waves) over the course of their development. Cohort '98 has been surveyed across five waves, with data collected at ages 9, 13, 17/18, 20, and 25 to date⁵. Cohort '08 has been surveyed across five waves, with data collected at 9 months, 3, 5, 9, and 13 years. In addition, a special COVID-19 survey was conducted in 2020, capturing data from Cohort '98 at age 22 and Cohort '08 at age 12. GUI gathers information from multiple informants - including the young person, their primary caregiver, secondary caregiver, teacher and/or principal - across several waves of data collection. This multi-informant, longitudinal design enables the examination of how early-life experiences shape later outcomes, making it particularly well suited to investigating how child exposure to risk and protective factors impact adult wellbeing over a 16-year period. The current research focuses on data collected from multiple waves of the Cohort '98 surveys⁶:

- **Wave 1:** To identify risk factors at age 9.
- **Wave 2:** To identify protective factors at age 13.
- **Wave 3:** To identify protective factors at age 17/18.
- **Wave 5:** To identify wellbeing outcomes at age 25.

Further information about the GUI study can be found at: <https://www.growingup.gov.ie/>

5 Wave 5 represents the most recent timepoint at which data is collected, and is not intended as a fixed endpoint.

6 Wave 4 was not included in the current analyses, as the primary focus of the research was on examining childhood risk exposure, adolescent protective processes, and wellbeing outcomes in early adulthood.



2.2 Study Design

This research involves a secondary-data analysis of the GUI Cohort '98 datasets. The research adopts a longitudinal, person-centred design to examine wellbeing among young people exposed to early-life vulnerability, and identify the protective factors associated with positive wellbeing trajectories in adulthood. The study consists of three key stages:

1. **Identification of 'at-risk' children**

Latent Class Analysis (LCA) to identify 'at-risk' groups, based on children's exposure to adverse life events and developmental challenges at age 9.

2. **Exploration of young adults' wellbeing profiles**

Latent Profile Analysis (LPA) to identify 'wellbeing' profiles, based on young people's functioning across multiple life domains at age 25.

3. **Examination of moderation effects**

Moderated, logistic regression analyses to examine whether exposure to key protective factors during adolescence increases or decreases the likelihood of experiencing positive wellbeing profiles at age 25, and whether differential effects are observed for those exposed to early-life risk.

This approach allows for a holistic understanding of who is most at-risk in childhood; who is 'doing well' in adulthood; and what social factors increase the likelihood of positive outcomes.

2.3 Participants

The sample includes children and their teachers and primary caregivers who provided data in Waves 1, 2, 3, or 5 of the GUI Cohort '98 study. Specifically, data were analysed from the primary caregiver and teacher of the 8,568 children (4163 males, 4405 females) selected to participate in wave 1 of the Cohort '98 study. For the first wave, participants were selected through a two-stage sampling method. First, 1105 primary schools from the national total of 3177 were selected using a probability proportionate to size sampling method (Gallagher & Hannigan, 2014). Next, a random sample of eligible children was selected from within each school (McCoy et al., 2012). Eligible children were classified as those who were born between November 1st, 1997 and October 31st, 1998, and whose parents/guardians had provided written, informed consent (McCoy et al., 2012). Survey interviews were carried out with children and their caregivers (i.e., parents/guardians) at home, and with class teachers at the school. An overall response rate of 82% was observed at the school level, and a 57% response rate was observed at the household level (Layte, 2022).



2.4 Measures

2.4.1 Risk Factors

To identify children who may be at elevated risk of experiencing poor wellbeing outcomes as adults, data from Wave 1 of the GUI Cohort '98 study were analysed. Guided by a socio-ecological framework, indicators were selected to capture the multidimensional nature of adversity experienced across the child's personal, family, peer, school, and neighbourhood contexts at age 9. These indicators reflect both adverse developmental conditions (e.g., health or learning difficulties) and negative life events (e.g., family conflict or peer victimisation), that have been consistently linked to poorer life-course functioning.

In total, 11 variables from the Wave 1 GUI dataset were selected as indicators of early-life vulnerability. All indicators were derived from data provided by the child's primary caregiver or class teacher. Indicators from each -ecological level (e.g., personal, family, peer, school, and neighbourhood contexts) were selected from the data. Variables were selected based on their availability within the dataset; theoretical fit; and analytic compatibility. Indicators were comprised of both single-item responses and summed variables. All indicators were recoded into binary (e.g., 0 = no, 1 = yes) variables, to indicate whether the young person had experienced this issue/event or not. Variables that originally contained multi-categorical response options were recoded to form dichotomous response categories. Specifically, responses such as 'strongly agree' or 'agree' were combined and recoded as 'Yes' and response options 'strongly disagree' or 'disagree' were recoded as 'No'. Additionally, some indicators were derived by aggregating responses across multiple variables. See Table 1 below for a list of risk indicators included in this study.

**Table 1. List of risk factors measured at Age 9**

Indicator	Source	Description	Code
Learning or Health Problems	Primary Caregiver	The study child has experienced a hearing/sight problem requiring correction, speech difficulties, required support to move around and/or any specific learning, communication or co-ordination disorder.	1=Yes, 2= No
Family Financial Difficulties	Primary Caregiver	The study child's primary caregiver has difficulty making ends meet.	1=Yes, 2= No
Single Parent Household	Primary Caregiver	The study child's primary caregiver has no partner living in the household.	1=Yes, 2= No
Parent Conflict	Primary Caregiver	The study child has experienced or witnessed conflict between their parents.	1=Yes, 2= No
Parent Health Issues	Primary Caregiver	The study child's primary caregiver has experienced an ongoing chronic physical or mental health problem, illness or disability.	1=Yes, 2= No
Extended Family Issues	Primary Caregiver	The study child has experienced the serious illness or injury of a family member; drug taking or alcoholism in the immediate family, and/or mental disorder in the immediate family.	1=Yes, 2= No
Parent or Friend Death	Primary Caregiver	The study child has experienced the death of a parent and/or friend.	1=Yes, 2= No
School Performance Difficulties	Teacher	The study child's academic performance in reading, writing and/or math was classified as below-average (relative to the child's age group).	1=Yes, 2= No
Victim of Bullying	Primary Caregiver	The study child was the victim of bullying in the last year.	1=Yes, 2= No
Unsafe Neighbourhood	Primary Caregiver	The study child lives in a neighbourhood where it is not safe to play outside during the day.	1=Yes, 2= No
Peer, Conduct, Emotional or Hyperactivity (SDQ) Problems	Primary Caregiver	The study child showed high/abnormal scores for peer, hyperactivity, conduct or emotional problems sub-scales of the Strengths and Difficulties Questionnaire (SDQ).	1=Yes, 2= No

More detailed information about these risk factors is provided in Appendix I.



2.4.2 Wellbeing

Within the current research, wellbeing was conceptualised as a holistic, multidimensional construct which reflects optimal functioning across several, key life domains. Guided by the flourishing framework proposed by VanderWeele et al., (2017; 2025), wellbeing was operationalised by examining how young people were doing in areas relating to their mental and physical health; happiness; meaning; civic engagement; social relationships; and financial stability. Specifically, 10 variables from the Wave 5 GUI dataset (Cohort '98) were selected as multifaceted indicators of wellbeing at age 25. Items were selected to map on to one of the six 'flourishing' domains proposed by VanderWeele et al. (2017; 2025): emotional, material, cognitive, social, community, and physical wellbeing. At least one item was chosen to reflect each domain. Items were selected based on best theoretical alignment with the domain in question and analytic compatibility (e.g., only continuous or scale variables were selected). Nonetheless, the wellbeing indicators included in this study should be understood as theoretically informed proxy measures that represent the closest available matches to each wellbeing domain within the constraints of the dataset. While these selected items aim to assess key aspects of one's emotional, material, cognitive, social, community, and mental and physical wellbeing, they may not exhaustively represent the full conceptual breadth of each domain. All items were based on self-report data provided by the study child at age 25. See Figure 1 below for an overview of the wellbeing indicators included in this research. For further information about these wellbeing indicators see Appendix I.



Figure 1. Indicators of Wellbeing at Age 25





2.4.3 Protective Factors

To identify the social and contextual factors that may promote adult wellbeing and offset any risk imposed by early-life disadvantage, variables from Wave 2, Wave 3 and Wave 5 of the GUI '98 Cohort datasets were analysed. Guided by a socio-ecological framework, indicators were selected to capture potential protective effects within home, peer and educational contexts at age 13 (wave 2), 17/18 (wave 3) and 25 (wave 5) years. In particular, five variables were selected across the three waves. All indicators were measured through a combination of self-report data from the study child and reports from the primary caregiver. Variables were also assessed through a combination of single-item and scale measures. The selected protective factors include:

Wave 2 – Age 13

- **Extracurricular participation.** Primary caregivers indicated whether the study child engages in regular leisure activity through a single-item measure.

Wave 3 – Age 17/18

- **Peer Attachment.** The study child's relationship with their peers was assessed through 25 self-report scale items, measuring three broad dimensions of peer attachment: trust; communication quality; and alienation.
- **Teacher Support.** The level of support provided by teachers to the study child was measured through self-reports from the study child on a single-item measure.
- **Parent-Child Relationship.** The level of conflict in the mother-child relationship was measured through self-reports from the study child across two scale items.

Wave 5 – Age 25

- **Educational Attainment.** The highest level of education achieved by the young person by age 25 was measured through self-report data provided by the study child.

For further details about the protective factors included in this research see Appendix I.

2.5 Data Access

GUI data are anonymised and can be made available for research, for specific purposes, through the Central Statistics Office (CSO), through special request. Access to the restricted micro-file (RMF) GUI data files was granted to the lead author of this report in January 2026. All analyses were conducted in line with data protection regulations and ethical guidelines specified by the CSO. Further information on the GUI study design, sampling procedures, and measures can be accessed through official GUI documentation and technical reports.



2.6 Analytic Framework

The current research involves a secondary analysis of the GUI (Waves 1, 2, 3 and 5) datasets. Analyses were carried out in three stages: 1. Identification of at-risk profiles; 2. Exploration of adult wellbeing profiles; 3. Examination of moderation effects. All analyses were conducted through the CSO remote server. Descriptive statistics were carried out using IBM SPSS v. 29 and R studio was used to conduct all inferential statistics.

2.6.1 Stage 1 – Identification of at-risk profiles

Person-centred analyses were applied to the Wave 1 data to identify the dominant patterns of risk experienced by young people. Specifically, latent class analysis (LCA) was used to examine whether young people could be assigned to distinct categories of risk based on their experiences of negative life events or developmental challenges at age 9. LCA is a statistical approach used to identify the existence of hidden groups or sub-populations within a sample (Hagenaars & McCutcheon, 2002; Nylund-Gibson & Young, 2018). The assumption underlying LCA is that membership in unobserved (i.e., latent) groups or classes can be explained by participants' pattern of responses across key survey questions, assessment indicators, or scales (Weller, Brown & Faubert, 2020). In other words, LCA assigns participants to 'classes' (e.g. categories) based on their answers across key survey questions (Muthen & Muthen, 2000). Class assignment is based on the probability that a participant belongs in the same class as another participant based on similar response patterns. It is argued that LCA may be particularly useful for identifying subgroups of individuals who may benefit from a common intervention or initiative based on their shared characteristics (Weller et al., 2020).

In order to identify potential at-risk groups, a series of LCA models with ascending number of classes (k) were specified. LCA was conducted on the 11 selected 'risk factors'. All LCA models were specified using the tidySEM package in R, and followed recommended practices for LCA in R (Van Lissa et al., 2023). Model selection was determined by considering the substantive interpretability and utility of the observed classes and by comparing multiple, relative fit indices across models. For each LCA model the following fit indices and classification diagnostics were examined and compared, based on recommended LCA guidelines (Geisser, 2013; Nylund et al., 2007; Weller et al., 2020):

- Akaike information criterion (AIC): Models with lower AIC values were considered indicative of superior model fit.
- Bayesian information criterion (BIC): Models with lower BIC values were considered indicative of superior model fit.
- Sample-size adjusted Bayesian information criterion (saBIC): Models with lower saBIC values were considered indicative of superior model fit.
- Lo-Mendell-Rubin Likelihood Ratio Test (LRT): Where a significant ($p < .05$) LRT value was observed, this was considered indicative of support for the k model (i.e., the model with more latent classes) over the $k - 1$ model (i.e., the model with fewer latent classes).



- Entropy: Values closer to 1 were considered indicative of greater model fit. Specifically, values over .70 were considered indicative of acceptable class separation, while values over .80 were considered indicative of ‘good’ class separation.

Final model selection also considered theoretical interpretability and practical relevance, with caution applied to solutions containing very small classes (e.g., <5% of the sample), and preference given to the most parsimonious model (Geisser, 2013; Nylund-Gibson & Young, 2018; Shanahan et al., 2013). Together, these criteria ensured that the selected class solutions were both statistically robust and theoretically meaningful. Once the best model was selected, participants’ probability of belonging to each class was determined based on their raw posterior probability scores. The posterior probability scores are calculated as part of the LCA model, and are estimates of how likely each participant is to belong to each latent class. Participants were assigned to the class for which they showed the highest posterior probability score, and were categorised as belonging to that class based on the ‘most-likely’ class assignment method. Item probability scores across each class were used to interpret the meaning of each identified class. Missing data were handled through the use of Full Information Maximum Likelihood (FIML) estimation within the model.

2.6.2 Stage 2 – Exploration of adult wellbeing profiles

In the second stage, person-centred analyses were applied to the Wave 5 data to identify the dominant wellbeing profiles evidenced by young people at age 25. In particular, latent profile analysis (LPA) was carried out to examine whether young people could be assigned to different groups or ‘profiles’ based on their pattern of responding across the 10 wellbeing indicators measured at Wave 5. LPA is a similar statistical technique to LCA, but is used when the indicators are measured on a continuous scale (Bauer, 2022; Weller et al., 2020). As in stage 1, separate LPA models were specified with an ascending order of profiles. All LPA models were specified using the tidySEM package in R. Each model was compared using the same model fit criteria applied in Stage 1 (i.e., AIC, BIC, saBIC, LRT, Entropy, Theoretical Fit, Class size). Missing data were handled using FIML. Participants’ likelihood of belonging to each ‘profile’ was determined based on their raw posterior probability scores. Participants were assigned to their “most-likely” class based on these scores. Differences between the latent profiles on the standardised mean scores across the 10 wellbeing indicators were reviewed in order to interpret the conceptual meaning of each ‘profile’.

2.6.3 Stage 3 – Examination of Moderation Effects

In stage 3 of the analysis, moderation analyses were conducted to examine whether protective factors buffered the relationship between early risk exposure at age 9 and wellbeing outcomes at age 25. Specifically, survey-weighted, moderated, logistic regression models were specified to examine the association between protective factors (e.g., Parent-Child Relationships; Extracurricular Participation; Peer Attachment; Teacher Support; Educational Attainment) and wellbeing (Main Effect) and identify whether risk classes and protective factors interacted to impact wellbeing (Moderation Effect).



Risk membership was operationalised as participants' raw posterior probability scores from the latent class analysis in Stage 1, and these were entered as predictor variables in the models. Wellbeing was operationalised using a dummy-coded variable, derived from the most likely class assignment based on the latent profile analysis conducted in stage 2, and was entered as the outcome variable in the models. Gender (0=male, 1=female) was included in the model as a covariate, as previous research has evidenced significant gender differences in wellbeing.

Analyses were restricted to participants (n=3380; 49% female) who had provided data in Wave 5 of the GUI study. In order to account for item-level missingness across the waves, missing data were handled using multiple imputation, implemented using the mice package in R. Regression models were estimated separately within each imputed dataset and pooled to obtain final parameter estimates and standard errors. All continuous moderators (e.g., Parent-Child Relationships; Peer Attachment; Teacher Support; Educational Attainment) were mean-centred prior to inclusion in the pooled model to facilitate interpretation of interaction terms. Sampling weights were applied to the final pooled model to ensure that the model results were representative of the wider population from which the sample was drawn. Models were estimated using weighted generalised linear modelling (GLM), under the survey package in R.

Significant interactions were probed using the pick-a-point (+/- 1SD) approach (Hayes, 2018). For ease of interpretation, significant interactions were probed and plotted using most-likely class assignments for the risk classes.

Chapter 3

Results





Results

3.1 Findings from Stage 1 Latent Class Analysis Models

Latent class analysis was conducted on all 11 risk indicators selected from the wave 1 (Age 9) GUI dataset. A series of models estimating solutions with 1-5 classes were run. Based on a review of model fit indices, in combination with theoretical meaning and class size, the model with a three-class solution was chosen as the best fitting model. While the models with the 4 and 5 class solutions also evidenced acceptable model fit, both models returned solutions with very small class sizes (e.g., < 5% of the sample) and had less theoretically meaningful separation between the classes. Therefore, in line with recommended guidelines (Nylund-Gibson & Young, 2018), the three-class solution was selected as the preferred model due to parsimony, theoretical fit and greater class separation. Average latent class probabilities for the three-class solution ranged from .61-.97 (see Table 2 below).

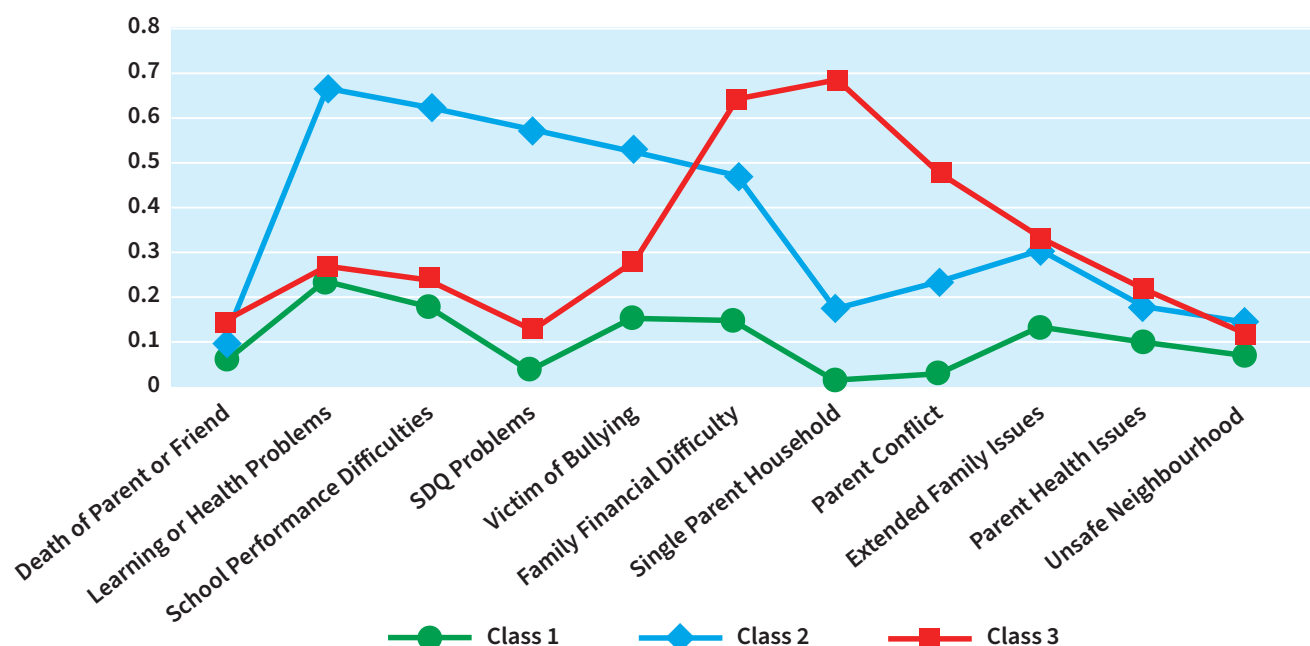
Table 2. Model Fit Statistics for all LCA Models with 1-5 Classes

Classes	AIC	BIC	saBIC	Entropy	LRT
1	79985.80	80063.41	80028.45	--	--
2	77621.09	77783.38	77710.29	0.60	2303.89**
3	77145.00	77391.96	77280.73	0.71	482.34**
4	77038.84	77370.46	77221.10	0.68	125.54**
5	76868.71	77285.00	77097.51	0.71	187.24**

Note: ** $p < .001$

The average probability of children within the three classes experiencing each risk factor were plotted (see Figure 2) and reviewed.

Figure 2. Average probability of children in each class experiencing each risk factor





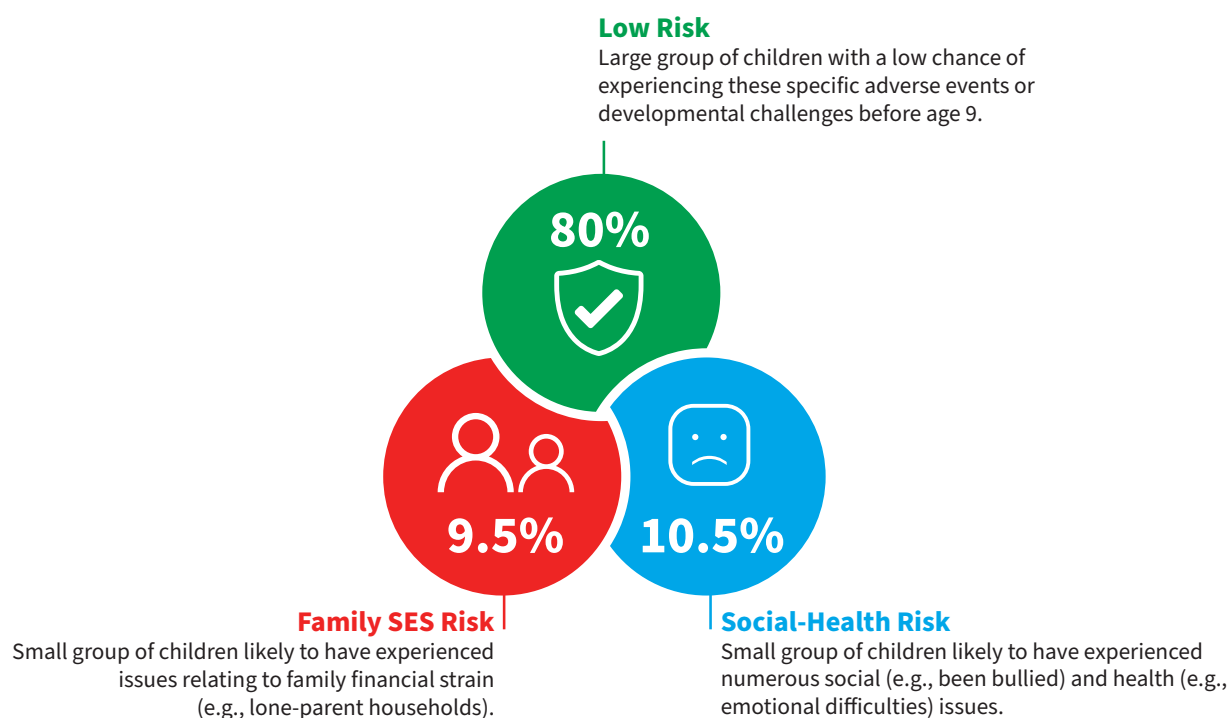
These item probability scores indicated that there were three distinct typologies of risk occurring among children at age 9. In particular, findings indicated that children could be assigned to one of three classes or ‘typologies of risk’ depending on their likelihood of early-life exposure to developmental challenges and negative life experiences across home, school or neighbourhood contexts. As latent class analysis identifies probabilistic groupings, these classes should be interpreted as representing the dominant patterns of risk identified, rather than absolute categories of experience. A visual overview of the characteristics of each risk class is provided in Figure 3⁷.

Class 1 – Class 1 was the largest category observed. 80% (n = 6850) of children appeared to belong to this class (51% male; 49% female). On average, children in class 1 were characterised by a low probability of experiencing these negative life events or developmental conditions. This class was named the **Low Risk Class**.

Class 2 – Class 2 was the second largest group observed. 10.5% (n = 898) of children sampled appeared to belong to this class (57% male; 43% female). On average, children assigned to class 2 showed a moderate-to-high probability of experiencing several social and health issues, including learning/health problems, school performance difficulties, emotional, peer, hyperactivity and/or conduct (SDQ) problems, and being the victim of bullying. This class was named the **Social-Health Risk Class**.

Class 3 – Class 3 was the smallest group observed. 9.5% (n = 820) of children were assigned to this class (44% male; 56% female). On average, children in class 3 showed a moderate-to-high probability of experiencing issues related to family financial strain or household composition. The primary caregivers of these children were likely to report finding it difficult to make ends meet and being part of a lone parent household. This class was named the **Family SES Risk Class**.

Figure 3. Visual overview of the characteristics of each risk group



7 Classes are data-driven and the researchers have no control over the characteristics or profiles of any group.



3.1.1 Socio-Demographic Comparisons Between Risk Classes

Descriptive statistics, including frequency estimates and group comparisons (e.g., crosstabulations) were carried out to compare the socio-demographic characteristics (e.g., Household Income; Social Welfare Benefits Received; Home Ownership; Parental Education) between children in each risk class.

As can be seen in Table 3 below, findings showed that for children in the Low risk group the majority of families (65%) received less than 5% of their total income from social welfare. In contrast, for children exposed to Family SES or Social-Health related risk, a sizeable percentage of households, 34% and 16% respectively, relied on social welfare payments for over 50% of their household income.

Table 3. Percentage (number) of children within each risk class receiving household income from social welfare payments

Proportion of Household Income from Social Welfare			
	Less than 5%	Between 5-50%	More than 50%
Social - Health Risk	49% (433)	35% (315)	16% (141)
Low Risk	65% (4437)	31% (2134)	3% (231)
Family SES Risk	33% (272)	33% (269)	34% (646)
Total	60% (5142)	32% (2718)	8% (646)

Note: Table shows unweighted percentage (number) of children within each class.

Similar trends were observed for equivalised household income. A large percentage of children in the Family SES (55%) and Social-Health (46%) risk groups were in the lowest two income quintiles. In contrast, most children in the Low risk group (55%) belonged to the top two household income quintiles (see Table 4).

Table 4. Break-down of equivalised household income quintiles for each risk class

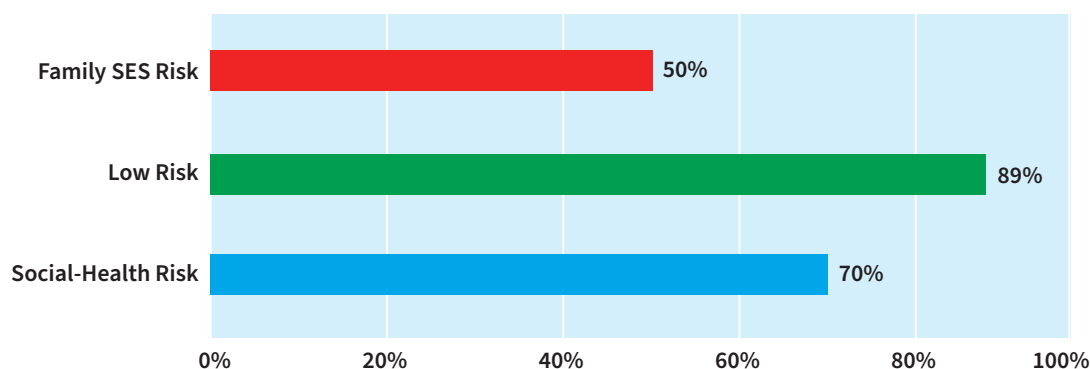
	1st (Lowest) Quintile	2nd Quintile	3rd Quintile	4th Quintile	5th (Highest) Quintile
Social - Health Risk	25% (207)	21% (179)	20% (170)	18% (154)	16% (134)
Low Risk	10% (614)	16% (1013)	20% (1259)	25% (1553)	30% (1895)
Family SES Risk	31% (234)	24% (183)	20% (154)	14% (108)	11% (85)
Total	13% (1055)	17% (1375)	20% (1583)	23% (1815)	27% (2114)

Note: Table shows unweighted percentage (number) of children within each class.



In relation to home ownership, while 89% of children in the Low risk group, and 70% of children from the Social-Health risk group, lived in owner-occupied accommodation, only 50% of children in the Family SES risk group lived in owner-occupied accommodation (see Figure 4 below).

Figure 4. Percentage youth in each risk class living in owner occupied accommodation



In relation to the educational level of the primary caregiver/parent, 28% of primary caregivers of children in the Low risk group had a third-level education, in comparison to 22% of those from the Family SES risk group and 16% of those from the Social-Health risk group (see Table 5).

Table 5. Education level of primary caregiver

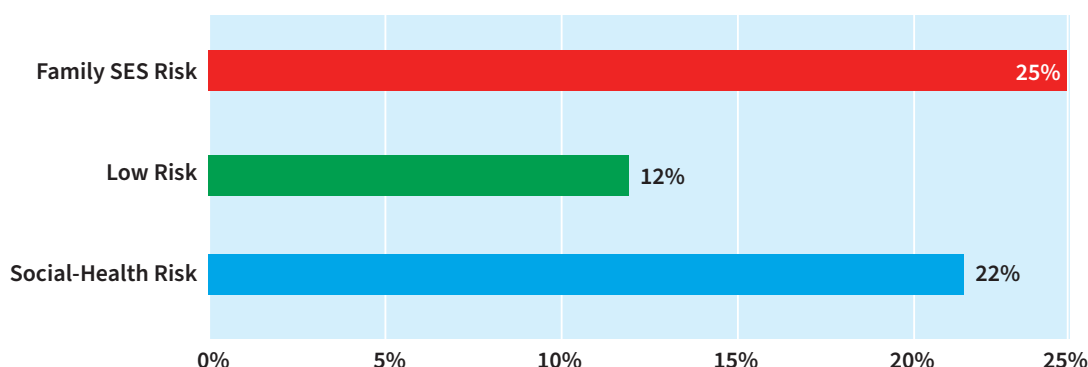
	None	Lower Secondary	Higher Secondary/ Technological or Vocational	Non-Degree	Primary/ Postgrad
Social - Health Risk	8% (72)	23% (207)	31% (276)	22% (201)	16% (142)
Low Risk	2% (165)	13% (855)	32% (2181)	25% (1730)	28% (1919)
Family SES Risk	6% (49)	20% (162)	19% (241)	23% (192)	22% (176)
Total	3% (286)	14% (1224)	32% (2698)	25% (2123)	26% (2237)

Note: Table shows unweighted percentage (number) of children within each class.

Additionally, as can be seen in Figure 5, 12% of children in the Low risk group attended DEIS schools compared to 22% of children from the Social-Health risk class and 25% of children in the Family SES risk class.



Figure 5. Percentage youth in each Class attending schools with DEIS status



3.2 Findings from Stage 2 Latent Profile Analysis Models

Latent profile analysis was carried out on all 10 wellbeing indicators selected from the Wave 5 GUI (Age 25) dataset (e.g., *Trust; Friendship Quality; Political & Civic Activism; Depression; Stress; Health; Life Satisfaction; Self-Esteem; Future Optimism; Financial Stability*). A series of models estimating solutions with 1-5 classes were run. Based on a review of model fit indices, in combination with theoretical meaning and class size, the model with a two-class solution was chosen as the best fitting model. While the models with the 3, 4 and 5 class solutions evidenced improved model fit in some areas, these models showed less theoretically meaningful separation between the classes. For these reasons, the two-class solution was selected as the best fitting model on the basis of parsimony and substantive meaning. Average latent class probabilities for the two-class solution ranged from .89 - .97 (see Table 6 below).

Table 6. Model Fit Statistics for all LPA Models with 1-5 Classes

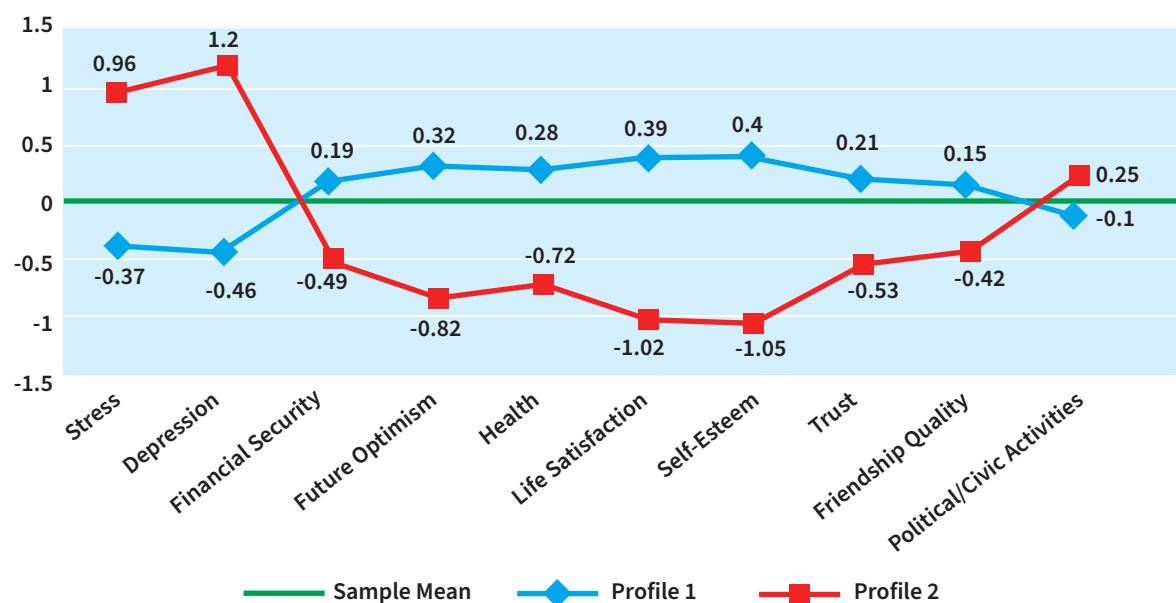
Classes	LL	AIC	BIC	saBIC	Entropy	LRT
1	-43397.49	86834.98	86957.49	86893.95	--	--
2	-40353.66	80769.31	80959.21	80860.70	0.83	28.90**
3	-40001.95	80087.91	80345.18	80211.73	0.85	8.27**
4	-39253.97	78613.94	78938.59	78770.19	0.79	13.35**
5	-38990.84	78109.68	78501.72	78298.37	0.81	7.08**

Note: ** $p < .001$

Model results indicated that young people could be assigned to one of two categories depending on their pattern of responding across the wellbeing indicators. Standardised item means for each wellbeing indicator were plotted across the two groups, in order to interpret the trends and characteristics relevant to each group (see Figure 6).



Figure 6. Standardised item means across all wellbeing indicators for the two profiles



As can be seen in Figure 6, in general, young people in the first wellbeing group were significantly above average on their scores for financial security, future optimism, health, life satisfaction, self-esteem, trust and friendship quality. They also showed significantly lower levels of stress and depression, compared to the average 25-year-old in the sample (i.e., sample mean), and slightly lower than average involvement in political and civic activities. Typically, young people in the second wellbeing group showed an opposite wellbeing profile in comparison to Profile 1. In general, young people in this group were significantly below-average in their financial security, future optimism, health, life satisfaction, self-esteem, trust and friendship quality and were significantly above average for stress and depression. They also showed greater levels of civic/political activism compared to the average 25-year-old in the sample. Thus, these differences indicated two distinct profiles of wellbeing.

Profile 1 – Most young people appeared to belong to Profile 1. Approximately, 73% (n=2473) of young people were assigned to this category (46% male; 54% female; 87% heterosexual). Young people in this group were characterised by moderately above average levels of self-esteem, financial security, future optimism, life satisfaction, trust, relationship quality and health, as well as below-average levels of depression and stress. Overall, this pattern suggests a broadly typical or normative level of functioning across most wellbeing indicators, and as such, this group was labelled the ‘**Doing well**’ profile.



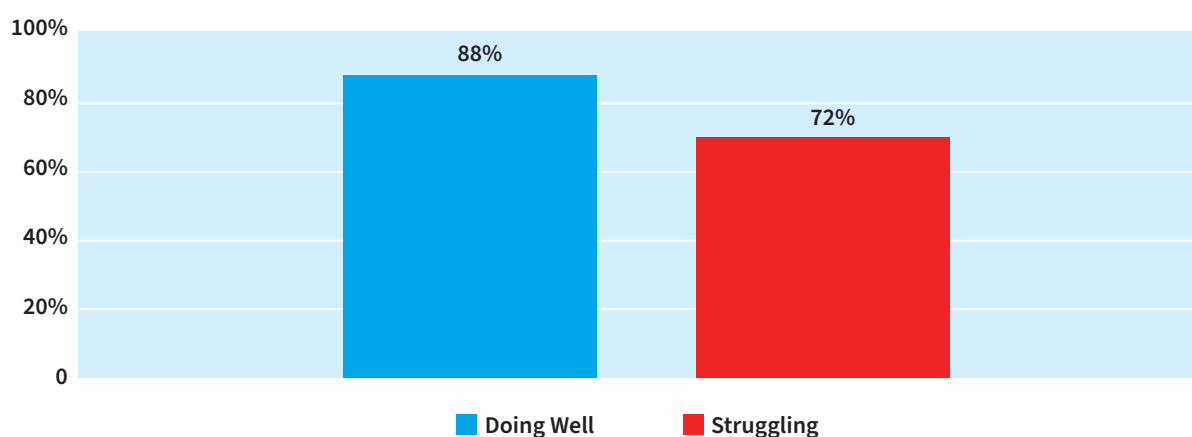
Profile 2 – Approximately 27% (n=900) of participants were assigned to Profile 2 (37% male; 63% female; 71% heterosexual). Young people in this group were characterised by scores that were substantially lower than average across multiple positive wellbeing indicators, including self-esteem, financial security, future optimism, life satisfaction, trust, relationship quality, and health, and substantially above-average levels of depression and stress. Overall, this pattern reflects consistently poorer functioning across both positive and negative wellbeing domains, with large deviations from the sample mean observed across most indicators. Accordingly, this group was labelled the **‘Struggling’** profile.

3.2.1 Socio-Demographic Comparisons Between Risk Classes

Descriptive statistics, including frequency estimates and group comparisons (e.g., crosstabulations; chi-square tests) were carried out to compare the socio-demographic characteristics (e.g., Household Income; Social Welfare Benefits Received) between young people in each wellbeing profile. Descriptive statistics show unweighted percentages or frequencies across latent groups.

As can be seen in Figure 7, more youth in the ‘Doing well’ group expected to buy a home in the future (88%), compared to those who were ‘Struggling’ (72%).

Figure 7. Percentage youth in each profile group who expect to buy a home in the future



Levels of employment significantly differed across groups ($X^2(2) = 47.98$, $p < .001$, $\Phi = .12$). Of those ‘Doing well’, 82% were employed compared to 71% of those ‘Struggling’ (see Table 7 below). Of those ‘Struggling’, almost 30% were either unemployed or outside the labour force, compared to 17% of young people who were ‘Doing well’.

**Table 7. ILO Employment status across each wellbeing profile group**

	Employed	Unemployed	Outside Labour Force
Doing well	82% (1902)	4% (100)	13% (307)
Struggling	71% (616)	6% (51)	23% (196)
Total	79% (2518)	5% (151)	16% (503)

Note: Table shows unweighted percentage (number) of young people within each profile group.

In relation to education, young people who were 'Doing well' were 2.5 times more likely to have received a Level 7 (or higher) educational qualification, compared to those who were classified as 'Struggling' ($X^2(1) = 134.73$, $p < .001$, $\Phi = .15$, $OR = 2.53$). As can be seen in Table 8, almost half (46%) of the 'Struggling' group had achieved a level 6 qualification or lower, compared to a quarter (25%) of those who were 'Doing well'.

Table 8. Highest level of education across each wellbeing profile group

	Level 6 or Lower	Level 7 or Higher
Doing well	25% (632)	75% (1845)
Struggling	46% (419)	54% (484)
Total	31% (1051)	69% (2329)

Note: Table shows unweighted percentage (number) of young people within each profile group.

Similarly, those who were 'Struggling' were almost three times as likely to receive income from social welfare payments, compared to those who were 'Doing well' ($X^2(1) = 60.06$, $p < .001$, $\Phi = .14$, $OR = 2.95$). Approximately, 5% of the 'Doing well' group reported receiving income from social welfare payments, compared to 15% of the 'Struggling' group (see Table 9).

Table 9. Income from social welfare across each wellbeing profile group

	No income from social welfare payment	Get income from social welfare payment
Doing well	95% (1861)	5% (107)
Struggling	85% (626)	15% (106)
Total	92% (2487)	8% (213)

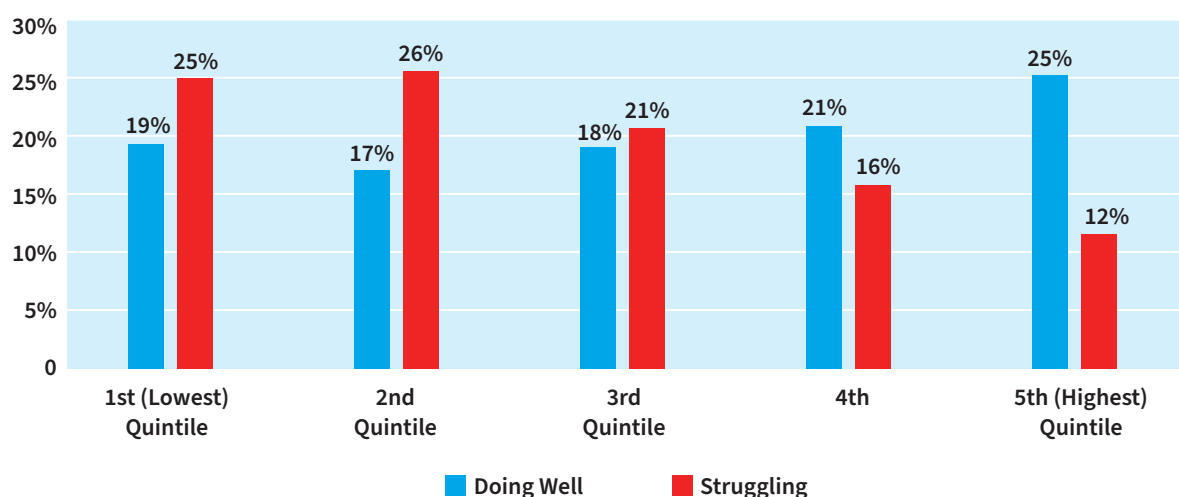
Note: Table shows unweighted percentage (number) of young people within each profile group.

There was also a significant difference in reported income in 2022 between the two groups ($X^2(1) = 97.39$, $p < .001$, $\Phi = .17$). Of those young people who were 'Struggling', the majority (51%) were



in the lowest two income quintiles for 2022, with only 12% among the top income quintile. In comparison, 25% of the young people who were ‘Doing well’ were among the top (quintile) income earners in 2022, and only 36% were in the lowest two quintiles (see Figure 8).

Figure 8. Income quintiles for all income (including social transfer and SUSI grants) across each will be in profile group



3.3 Findings from Stage 3 Examination of Moderation Effects

3.3.1 Preliminary Analyses

Chi-square analysis was performed in order to examine the relationship between young people’s risk class membership (e.g., Low risk, Family SES risk, Social-Health risk) and wellbeing profiles (e.g., Struggling or Doing well). For the purpose of this stand-alone analysis, the Social-Health and Family SES risk groups were combined to form one, overall ‘at-risk’ category. Group categorisation was based on most-likely class assignment. Results indicated that wellbeing profiles significantly differed between the Low risk and at-risk groups ($\chi^2(1)=62.32$, $p<0.001$, $\Phi=-0.14$, $OR=.47$). While the majority of the at-risk groups (60%) were ‘Doing well’, young people identified as being at-risk at age 9 were more than twice as likely than the Low risk group to be ‘Struggling’ at age 25 (see Table 10). Please see Appendix II for further information on the preliminary analyses (e.g., correlations).



Table 10. Percentage of Low risk or At-risk Children Who Are Likely ‘Doing well’ or ‘Struggling’ at age 25

	Doing well at age 25	Struggling at age 25
Low risk at age 9	76% (2136)	24% (675)
At-risk at age 9	60% (341)	40% (228)
Total	73% (2477)	27% (903)

Note: Table shows unweighted percentage (number) of young people within each profile group.

3.3.2 Moderated Logistic Regression

Sample-weighted, moderated logistic regression models were estimated to examine whether teacher support, extracurricular participation, parent-child relationships, educational attainment, and peer attachment moderated the relationship between children’s risk class membership at age 9 and their wellbeing profiles at age 25. Models were estimated across multiple imputed datasets to account for data missingness. Results are presented as pooled estimates across imputations. As the observed three-class LCA model was found to have an entropy value less than 0.80, participants’ raw posterior probability scores were entered into the model instead of the nominal “most-likely class” assignment variable, in order to control for any possible classification error that may have resulted from low entropy (Kamata et al., 2018). As the ‘Low risk’ group was used as the referent category, only raw probability scores for the Social-Health and Family SES risk classes were included in the model. As entropy for the two-profile LPA model was above .80, wellbeing was included as a dummy coded outcome variable (0=Struggling, 1=Doing well) in the model, based on participants’ ‘most-likely’ class assignment. All moderators, predictors, and covariates were entered into the model simultaneously. All models were just-identified, and therefore, model fit statistics are not reported.

Model results indicated that the final model demonstrated modest explanatory power, with a deviance-based pseudo- R^2 value of 0.12. This indicated that the full model, which included covariates, risk classes, protective factors, and interaction terms, improved model fit relative to the null (intercept only) model. Main and interaction effects are displayed in Table 11. As can be seen here, belonging to the Family SES risk class at age 9 was associated with significantly reduced likelihood of ‘Doing well’ at age 25, in comparison to the Low risk group. Belonging to the Social-Health risk class at age 9 was also associated with significantly lower odds of ‘Doing well’ at age 25, compared to the Low risk group. Gender was found to be a significant covariate, with females less likely to be ‘Doing well’ at age 25, compared to males.

For the moderator variables, all five protective factors entered into the model were found to exert a significant (main) effect on wellbeing. In particular, higher levels of educational attainment at age 25, greater teacher support at age 17/18, better peer attachment at age 17/18, and lower conflictual parent-child relationships at age 17/18 were associated with greater odds of being classified as ‘Doing well’ at age 25. Given that these variables were mean-centred, these effects reflect the



change in odds associated with a one-unit increase on each variable, relative to the sample mean. Additionally, regular participation in extracurricular activities at age 13, was associated with a 126% increase in odds of being classified as ‘Doing well’ at age 25, compared to those who did not participate in extracurricular activities.

However, no significant interaction effects were observed, indicating that the relationship between wellbeing and these protective factors did not vary between the Low risk class and either at-risk class (see Table 11).

Table 11. Moderated Logistic Regression Model Examining the Association Between Childhood Risk Profiles, Protective Factors, and the Likelihood of Belonging to the “Doing OK” Wellbeing Profile at Age 25

Predictors	B	SE	95% CI Lower	95% CI Upper	OR
Gender	-.53*	.12	-.77	-.30	0.59
Social-Health Risk Class (SH)	-1.06*	.27	-1.59	-.52	0.35
Family SES Risk Class (SES)	-.72*	.26	-1.21	-.21	0.49
Educational Attainment (Edu)	.27*	.04	.18	.36	1.31
Conflictual Parent-Child Relationship (Res)	-.09*	.05	-.19	-.002	0.92
Peer Attachment (Peer)	.02*	.01	.01	.03	1.03
Teacher Support (Sup)	.25*	.12	.02	.48	1.28
Extracurricular Participation (Extra)	.82*	.29	.24	1.39	2.26
SH * Edu	-.24	.13	-.50	.03	0.79
SES * Edu	-.001	.14	-.27	.27	1.00
SH * Res	-.26	.16	-.57	.05	0.77
SES * Res	.14	.15	-.17	.49	1.14
SH * Peer	.001	.02	-.03	.04	1.00
SES * Peer	-.004	.02	-.04	.03	0.99
SH * Sch	-.19	.31	-.80	.42	0.82
SES * Sch	.09	.34	-.59	.77	1.10
SH * Extra	-.48	.69	-1.76	.78	0.61
SES * Extra	-.24	.73	-1.67	1.19	0.78

Note: Unstandardised Estimates (B); Standard Errors (SE); Odds Ratios (OR); 95% Confidence Intervals (CI)

* $p < .05$; significance is determined by zero not being contained with the CIs

Chapter 4

Discussion





Discussion

4.1 Overview of Key Findings

The present study sets out to examine how early-life vulnerability shapes later-life wellbeing, and to identify the factors that can support young people to ‘do well’ despite exposure to disadvantage or adversity in childhood. Drawing on longitudinal data from Cohort ‘98 of the GUI study, the analysis provides a comprehensive, life-course perspective on the developmental trajectories of young people in Ireland from age 9 to age 25. The research addresses a key policy priority by providing insight into the conditions under which children who are vulnerable to poor outcomes can go on to achieve positive outcomes in adulthood. These findings provide notable insights which can help inform policy interventions for current and future generations of children and adolescents.

First, the findings from this research indicated that children’s experiences of adversity are not uniform. Children exhibit distinct patterns of early-life vulnerability. Specifically, based on their experiences of adversity and other developmental challenges at age 9, children could be categorised into one of three broad groups: (i) A large “Low risk” group - where children had a low probability of experiencing this form of adversity – and two smaller “at-risk” groups – where children were likely to experience either (ii) social or health-related challenges or (iii) family socio-economic disadvantage.

Findings also revealed the presence of two distinct wellbeing profiles in adulthood. By age 25, one cohort of young people could be described as “Doing well”, as they demonstrated relatively positive functioning across multiple developmental domains, including above-average levels of mental and physical health, positive social relationships, and material wellbeing. However, there appeared to be a separate, smaller cohort of young people who were likely “Struggling”, as they evidenced consistently poorer functioning across multiple life domains, including lower life satisfaction, poorer mental and physical health, and reduced financial and social wellbeing. Importantly, early-life risk exposure appeared to significantly impact these later-life wellbeing profiles. While most young people appeared to be ‘Doing well’ at age 25, this outcome was significantly more likely for those who showed ‘Low risk’ patterns at age 9.

Finally, results highlighted the critical role that positive social experiences and supports during adolescence and early adulthood play in promoting positive adaptation. Notably, higher levels of educational attainment, stronger teacher support, better peer relationships, lower levels of parent-child conflict, and regular participation in extracurricular activities were all associated with a greater likelihood of being classified as “Doing well” at age 25. Crucially, these factors were found to exert relatively similar effects for all young people - regardless of their early-life patterns of vulnerability. These findings have important implications for research, policy and practice which are discussed in more detail below.



4.2 Association between Childhood Vulnerability and Adult Wellbeing

4.2.1 Aim 1: Identification of Childhood ‘Risk’ Profiles

The current research explored children’s patterns of early-life vulnerability using a person-centred approach. Findings identified three typologies of risk, based on children’s exposure to negative life experiences and developmental challenges at age 9. Specifically, a Low-risk group, a Social-Health risk group, and a Family SES risk group were identified. Notably, findings indicated that the vast majority (80%) of 9-year-olds in Ireland were unlikely to have experienced these specific forms of adversity or developmental challenges. Nonetheless, a substantial minority (20%) were identified as being ‘at-risk’ of poor developmental outcomes, which is in line with prevalence rates reported in other international studies with similar aged child populations (Hales et al., 2023) and further illuminates the need for early intervention and prevention in this area.

Additionally, the identification of two distinct ‘at-risk’ profiles provides important insights into how developmental challenges and adversity are experienced in childhood. Rather than a single or uniform experience, these findings indicate that children experience different forms of disadvantage, with certain adverse experiences/challenges tending to co-occur and cluster into meaningful patterns. Specifically, one cohort of children were found to have a higher probability of experiencing educational, peer and health-related challenges (e.g., bullying victimisation; learning difficulties; academic difficulties), while another group of children were more likely to experience forms of family socioeconomic disadvantage (e.g., belonging to a lone parent household; financial difficulties). Interestingly, the presence of a ‘social-health’ risk group suggests that children who experience health or developmental difficulties, such as emotional, hyperactivity or conduct problems, are also likely to experience academic difficulties and social/peer related issues, such as bullying – which highlights the interconnected nature of children’s developmental environments and the potential for difficulties in one domain to spill over into other domains. In contrast, the presence of a ‘Family SES risk’ group suggests that some children may be more likely to experience structural or material forms of disadvantage, such as household financial strain and lone parenthood. This distinction is important from a policy perspective, as it not only suggests that different prevention or intervention approaches may be needed to tackle different forms of adversity, but that provision of both structural and social supports may be required.

Notably, other research using person-centred approaches to explore early-life adversity and vulnerability have also found similar trends in that some young people appear to experience adversity within one singular domain, such as the home, while others experience adversity across multiple domains (Hales et al., 2023; Silke et al., 2024). However, it is important to acknowledge that the latent classes identified in this research represent predominant patterns of risk, and should not be interpreted as suggesting that all children within the class experienced these specific risk factors. For example, it is possible that some children assigned to the Social-Health risk class may also have experienced elements of family socioeconomic disadvantage. Class membership reflects the pattern of responses that most closely characterises the child relative to others in the sample. Nonetheless, these findings have important implications for research and policy as they emphasise



the importance of exploring early-life vulnerabilities from a socio-ecological perspective, and ensuring that assessments of ‘risk’ consider both young people’s personal characteristics (e.g., health) as well as their wider experiences, including those that occur within the home and across key social (e.g., peer or school) networks (Eriksson et al., 2018; Reupert, 2017; Wassermann et al., 2021).

4.2.2 Aim 2: Wellbeing Profiles at Age 25

In relation to young people’s pattern of wellbeing at age 25, several notable trends were observed which warrant discussion. First, findings from the latent profile analysis identified distinct wellbeing profiles, which indicated the presence of two sub-groups of young people: A ‘Doing well’ group and a ‘Struggling’ group⁸. Crucially, the majority (73%) of young people appeared to be ‘Doing well’ and showed positive functioning across multiple life domains, including areas of their social, emotional, cognitive, physical, mental, and material wellbeing. These trends align with wider international evidence which also suggest that most young people in western society are healthy and functioning positively across key life domains (Hardy et al., 2024; Nguyen et al., 2022; van der Velden, Das & Muffels, 2019).

However, it is important to acknowledge that although this cohort demonstrated above-average functioning across multiple wellbeing domains, the magnitude of these differences was relatively modest. This suggests that these young people may be best described as functioning ‘adequately’, rather than functioning ‘optimally’. In other words, although most young people appeared to be ‘Doing well’ in several aspects of their lives, it may not be possible to classify them as ‘thriving’. This distinction is important as flourishing frameworks typically emphasise optimal functioning across all domains of life (Logan et al., 2023; Rule et al., 2024; VanderWeele, 2017), whereas the current findings suggest that many young people may be experiencing only moderate levels of wellbeing. While previous research suggests that only a minority of young people experience optimal functioning across multiple wellbeing domains simultaneously (Bethell, Gombojav & Whitaker, 2019; Singh et al., 2015), the current findings nonetheless highlight that even among those who are ‘Doing well’, there remains scope to enhance their wellbeing further. From a policy and practice perspective, this suggests that intervention and prevention initiatives may benefit from adopting a universal approach to wellbeing promotion – one that targets all young people, rather than focusing solely on those who are ‘Struggling’ – and considering how to help more young people move from a position of ‘Doing ok’ to a place of thriving.

A further important finding relates to the 27% of young people who appeared to be ‘Struggling’. This group demonstrated consistently poorer functioning across multiple wellbeing domains, including lower than average levels of life satisfaction, financial security, optimism for their future, physical health, mental health, self-esteem, trust and relationship quality, alongside substantially elevated levels of stress and depression at age 25. These findings add to a growing body of international evidence which suggest that approximately 1 in 4/5 young people experience poor wellbeing or mental health issues (Kwapong et al., 2023; Sacco et al., 2024). While the wellbeing

8 Profiles should be interpreted as probabilistic groupings.



profiles identified here are not intended as a clinical diagnosis, the finding that over one in four young people in Ireland are likely ‘Struggling’ across multiple domains of life is concerning. Other research shows that emerging adulthood is often characterised by increased instability and financial, social, and/or occupational pressures which may partly explain this patterning (Arnett et al., 2014). Given the breadth and depth of difficulties observed within this group, these findings highlight the importance of sustained policy investment in supports and provisions for emerging adults; supports that not only address mental health needs, but also the broader social, educational, occupational, and financial challenges young people may face during this transition to adulthood.

A final point worth noting relates to young people’s pattern of civic engagement. In contrast to all other wellbeing indicators, participation in civic/political activism was higher for those in the ‘Struggling’ group, while those who were ‘Doing well’ showed lower than average levels of political/civic activism. This pattern was unexpected as previous research and theory suggest a positive association between civic engagement and thriving (Albanesi et al., 2007; Keyes et al., 2005; Schreiner, 2010). However, some researchers have found that young people who experience significant personal, social, or economic challenges may be more likely to engage in political activism (Bezzo & Jeannet, 2023), perhaps as a means of responding to perceived injustice, inequality, or unmet needs (Akiva et al., 2017; Kwan, 2023). As the survey questions used to measure civic engagement in the current study centred more on political forms of activism/volunteerism, this may explain the higher participation rate among those from the ‘Struggling’ group. Future research may benefit from adopting a more comprehensive operationalisation of civic engagement – one that incorporates more informal, community-based, and prosocial forms of participation.

4.2.3 Aim 3: Relationship between risk and wellbeing

Findings from the present study suggest that early-life vulnerability is significantly and negatively linked to adult wellbeing, which is in line with trends observed in other literature (Li et al., 2023; Villanueva et al., 2024). Young people who were identified as being ‘at-risk’ at age 9 were significantly more likely to struggle at age 25. However, it should be acknowledged that the majority of those identified as being ‘at-risk’ at age 9 were nonetheless ‘Doing well’ at age 25. These findings highlight that while early-life vulnerability may increase the likelihood of poorer outcomes in adulthood, such pathways are not fixed and should not be regarded as a *fait accompli*. Similarly, 24% of those who were identified as ‘Low risk’ at age 9, appeared to be ‘Struggling’ at age 25. Thus, findings suggest that wellbeing trajectories are dynamic and can fluctuate over time under different social, developmental, or environmental conditions. This underscores the importance of both early intervention and the provision of sustained supports across all ages and stages of development, in order to effectively respond to young people’s changing needs or fluctuating risk profiles over time.

In addition, the current findings advance our understanding of the relationship between risk and wellbeing, by providing evidence to suggest that different forms of adversity or early-life challenge may have differential associations with adult wellbeing. In particular, findings suggest that young people who experienced either Social-Health related challenges or Family SES related difficulties at age 9 were more likely to ‘struggle’ at age 25 – in comparison to young people who did not experience early life challenges – but those in the Social-Health risk group appeared to have the



lowest odds of ‘Doing well’ later in life. Although further research should be conducted to examine differences between the two risk groups, other research suggests that young people may be less able to cope when they encounter challenges across multiple domains (Grummit et al., 2022; Silke et al., 2024). Hence, those in the Social-Health risk group may have had a more compounded level of risk because they experienced multiple challenges across multiple domains (e.g., developmental, educational and social). These findings have important implications for policy and practice as they provide further evidence to suggest that young people who experience adversity or challenges – and particularly those who experience these across multiple developmental contexts – early in life may be at higher risk of poorer wellbeing outcomes and should be a priority group for intervention and prevention efforts.

Furthermore, it is important to acknowledge that gender was observed as a significant covariate in this study, with females significantly less likely to be classified as ‘Doing well’ at age 25 compared to males. While other studies using the Growing Up in Ireland data have also indicated that girls report higher levels of anxiety and socio-emotional difficulties during adolescence (Philippe et al., 2025), the current findings extend this literature by indicating that these discrepancies not only continue into adulthood, but are also evident across wider, more holistic forms of wellbeing. These findings have relevance for the *National Strategy for Women and Girls 2025-2030*, and suggest that adopting gender-sensitive approaches to wellbeing promotion – that consider the distinct social pressures, developmental experiences, and mental health challenges that may disproportionately affect young women across adolescence and emerging adulthood – may be beneficial.

4.2.4 Aim 4: Protective Factors for Wellbeing

Another important contribution from this research is the identification of multiple protective factors that appear to be linked with greater adult wellbeing. Notably, all protective factors examined – low-conflict parent-child relationships, peer attachment, teacher support, extracurricular participation, and educational attainment – were significantly associated with increased likelihood of experiencing positive wellbeing profiles at age 25. Consistent with socio-ecological models of development (Bronfenbrenner, 1994; Ungar & Theron, 2020), these findings indicate that supports across family, school, peer, and community contexts all play a role in shaping wellbeing trajectories. However, while findings generally suggest that educational attainment, supportive relationships and regular leisure participation are associated with a greater likelihood of ‘Doing well’ as adults, it is noteworthy that extracurricular participation and educational attainment both appeared to exert a relatively large effect on wellbeing. Specifically, each one-unit increase in educational attainment was associated with a 31% increase in the odds of being classified as ‘Doing well’ at age 25, while those who engaged in regular leisure participation had 126% better odds of being classified as ‘Doing well’, compared to those who did not engage in extracurricular activities. These findings support a growing body of evidence which suggest that sport and leisure activities can act as important developmental assets (Kim et al., 2024; Lenze et al., 2025), and that promoting academic engagement or achievement may be important, not only for improving economic outcomes, but also for cultivating broader aspects of wellbeing, such as self-esteem, life satisfaction and future optimism (Buchanan et al., 2023; Wong et al., 2019). Therefore, these findings are important for policy and practice as they highlight the potential value of investing in both educational and community supports, as outlined in Young Ireland.



These findings also suggest that the adolescent period may provide a critical window for intervention, as with the exception of educational attainment, all protective factors examined in this study were supports that young people experienced during their teenage years. This aligns with a substantial body of developmental research which identifies adolescence as a period of profound social, emotional, and cognitive change, during which young people gain independence, solidify their identities and engage in behaviours that lay the foundations for lifelong health trajectories (Avedissian & Alayan, 2021; Fuhrmann, Knoll & Blakemore, 2015; Sawyer et al., 2018). In fact, organisations such as the WHO and UNICEF regard adolescence as a “second window of opportunity” to foster resilience, and advocate for greater policy investment and intervention during this period (UNICEF, 2018; WHO, 2018). Therefore, those involved in designing intervention strategies or policies aimed at promoting wellbeing should be aware that the provision of supports during adolescence may be particularly relevant for shaping later-life wellbeing.

4.2.4 Aim 5: Buffering Effects for At-Risk Groups

While all protective factors demonstrated significant main effects, it should be noted that there was limited evidence of any buffering or moderating effects, with no significant interactions observed. In line with modern resilience theories (Gallagher & Miller, 2018; Zimmerman et al., 2013), this finding suggests that these factors may operate in a promotive or compensatory manner - supporting positive outcomes for all young people - rather than specifically offsetting the negative effects of early adversity. This highlights that while strengthening these supports appears to be important for increasing the likelihood of experiencing positive wellbeing outcomes later in life; on their own these factors may not fully attenuate the long-term impact of early-life vulnerability. Consequently, young people who are exposed to early-life adversity or disadvantage may need greater access to both universal and targeted supports.

4.3 Implications for Research, Policy and Practice

The current research has important implications for practice and policy in Ireland by indicating that wellbeing should not be understood as a fixed or predetermined state, as children and young people’s developmental trajectories are not set in stone. Although early-life vulnerability was significantly associated with increased risk of poor wellbeing outcomes in adulthood, most of those young people who were classified as ‘at-risk’ at age 9 were ‘Doing well’ by age 25, while one in four young people who were classified as ‘Low risk’ at age 9 were ‘struggling’ at age 25. This shows that young people’s wellbeing trajectories can change significantly over time, under different personal or social circumstances. This suggests that wellbeing should be regarded as a dynamic – rather than fixed – state, reinforcing the importance of policy and practice approaches that are flexible, responsive to changing needs, and capable of supporting young people at different points across the life course.

National and international policies emphasise the importance of identifying key contextual supports that can enhance wellbeing (e.g., Pathways to Wellbeing: National Mental Health Promotion Plan 2024-2030; WHO Comprehensive Mental Health Action Plan 2013–2030). These



results provide support for these policies by indicating that parents, peers, schools and community organisations all play a role in fostering wellbeing. This suggests that intervention and prevention approaches may benefit from using a multi-pronged approach, that recognises the importance of cross-sectoral supports and provisions. These results also have further implications for policy and practice by highlighting the importance of investing in children and young people's everyday developmental contexts and ensuring young people have access to 'supportive environments' throughout their lifespan. Educational achievement, quality relationships within school (including with teachers and peers) and at home (with parents), and regular participation in extracurricular activities, all had a significant effect on wellbeing. Intervention and prevention efforts may benefit from considering how to strengthen these social environments and ensure that all young people have equitable access to relational, educational, and community-based supports.

Similarly, findings also point to the potential importance of adopting a combined universal and targeted approach to wellbeing promotion. Notably, while the majority of young people were classified as 'Doing well' at age 25, their wellbeing profiles implied more moderate, rather than optimal levels of functioning – suggesting there is scope to further enhance wellbeing at a population level. At the same time, the limited number of buffering effects observed in the current study, coupled with the finding that young people who experience risk are more likely to struggle in adulthood, suggest that on their own these protective factors may not be sufficient to fully offset the impact of early-life adversity, and targeted interventions may also be needed. Together these findings imply a need for policy to ensure the availability of both intensive, targeted strategies for children and young people who are 'Struggling' or 'at-risk', and universal supports and services that can promote higher levels of wellbeing across the whole population.

Finally, results emphasise the critical importance of early intervention and sustained prevention in promoting positive wellbeing, particularly for those exposed to early-life vulnerabilities. The results show that the protective factors young people experience during adolescence and early adulthood are significantly linked to their adult wellbeing profiles, which provides support for international policy calls to prioritise investment and intervention during this developmental stage (WHO, 2018; UNICEF, 2018). However, the relatively modest effect sizes observed for some protective factors may suggest that other factors play an additional role in shaping wellbeing. This should be explored further in future research. It is also possible that earlier intervention and prevention efforts may be needed for those who experience early-life vulnerabilities. While adolescence is often regarded as a key 'second window' for intervention, the first window for intervention is early childhood. Previous research indicates that long-term exposure to stress or adversity can disrupt neural development and damage neural receptors (Lemus-Roldan et al., 2025; Turner et al., 2016), suggesting that there may be a crucial need to intervene early – when these challenges are first experienced – to prevent adversity from becoming biologically or developmentally embedded. Future research may benefit from considering the utility of a developmentally sequenced approach to intervention, where supports are introduced early in childhood to prevent the accumulation of risk, and sustained throughout adolescence and emerging adulthood to promote continued resilience and positive adaptation.



Key Messages & Recommendations



Early-life vulnerability is associated with greater risk of poor adult wellbeing.

Young people who experience childhood adversity or developmental challenges should be a priority target for intervention and prevention strategies.



Most young adults show positive wellbeing profiles, but 1 in 4 are struggling.

Some young people may require additional or continued supports and intervention throughout childhood, adolescence and emerging adulthood.



Schools, parents, peers and communities play a role in promoting wellbeing.

Educational attainment, quality relationships (at home, in school and with friends) and extracurricular activities support wellbeing, highlighting the importance of establishing supportive environments and adopting cross-sectoral approaches to wellbeing promotion.



Both universal supports and targeted approaches may be needed.

Policy and practice should combine targeted, early intervention and supports for at-risk youth with universal strategies that promote wellbeing across the wider population.



Wellbeing is a dynamic state, and risk trajectories may fluctuate over time.

Young people's wellbeing trajectories can change substantially over time, highlighting the importance of sustained, life-course approaches that provide support to young people when and where it is needed.



4.4 Limitations

While the current research offers important insights into the relationship between early-life vulnerability and adult wellbeing, several limitations should be acknowledged. First, wellbeing indicators utilised in this research were intended to map on to six theoretical aspects of flourishing. Although the selected indicators captured a broad range of wellbeing domains, it should be acknowledged that they do not fully encompass the depth or complexity of flourishing as a theoretical construct. Future research would benefit from incorporating more comprehensive, validated measures of flourishing, to allow for a more precise assessment of optimal wellbeing. Likewise, the selection of risk factors within the current research - while grounded in existing literature - was not exhaustive. Thus, there may be other forms of adversity or developmental challenges experienced by young people not captured within this study. In addition, adversity was measured in a relatively binary and static manner (i.e., whether the study child had experienced this adverse event or challenge by age 9), and important nuances such as timing, duration, severity, or chronicity of exposure are missing from this data. Moreover, the current study focused on risk exposure at a single time point (age 9), and did not account for whether adversity persisted into adolescence or whether new adversities emerged after this period. As such, the findings may underestimate the extent to which ongoing or later-emerging adversities influence developmental trajectories. Moreover, while latent class/profile analysis is useful for identifying common response patterns within a population, these approaches may overly simplify the heterogeneity of young people's experiences, and some young people in the sample may have other adverse or positive experiences that are not fully captured within the identified classes/profiles. It should also be noted that the current study only examined a small number of contextual protective factors, and did not assess whether other individual-level protective processes (such as coping strategies) impacted wellbeing outcomes. Future research would benefit from adopting a more holistic approach to resilience, incorporating both internal and external assets, and their stability or durability over time. Additionally, some variables included in the analysis were derived from single-item measures, which may limit reliability or validity. Furthermore, while steps were taken to minimise classification error (e.g., use of raw posterior probabilities) within these person-centred analyses, the absence of approaches such as BCH weighting may introduce some degree of bias in the estimation of associations between latent classes and distal outcomes. Future research may benefit from applying alternative methods that more fully account for classification uncertainty. Finally, although the study draws on a large, nationally representative longitudinal dataset, the findings remain subject to common limitations of observational research and causal relationships cannot be inferred.



4.5 Conclusion

In conclusion, findings show that there is a significant relationship between early-life vulnerability and adult wellbeing. While most young people in Ireland show positive wellbeing profiles, those who experience adversity and developmental challenges in early childhood are more likely to struggle as adults. However, supportive (teacher, parent and peer) relationships, educational attainment and regular leisure participation appear to play a protective role and contribute to more positive wellbeing across all risk groups. These findings underscore the importance of early identification of vulnerability, targeted intervention, and sustained investment in supportive social, educational, and community environments. Addressing risk when it first emerges, while also maintaining support across the life course, may be key to promoting and sustaining greater wellbeing among children and young people.



References

- Abate, B. B., Sendekie, A. K., Tadesse, A. W., Engdaw, T., Mengesha, A., Zemariam, A. B.,... & Azmeraw, M. (2024). Resilience after adversity: an umbrella review of adversity protective factors and resilience-promoting interventions. *Frontiers in Psychiatry*, 15, 1391312.
- Adjei, N., Jonsson, K. R., Straatmann, V. S., Bellevia, A., Yaya, S., McGovern, R., ... & Taylor-Robinson, D. C. (2024). How does family support mitigate the impact of childhood adversity on adolescent mental health?. *European Journal of Public Health*, 34, 144-112.
- Albanesi, C., Cicognani, E., & Zani, B. (2007). Sense of community, civic engagement and social well-being in Italian adolescents. *Journal of Community & Applied Social Psychology*, 17(5), 387-406.
- Anderson, L. S. (2021). Flourishing through leisure: An inclusive, ecological, and strengths-based approach. *Society and Leisure*, 44(2), 198-207.
- Antaramian, S. (2015). Assessing psychological symptoms and well-being: Application of a dual-factor mental health model to understand college student performance. *Journal of Psychoeducational Assessment*, 33(5), 419-429.
- Arnett, J. J., Žukauskienė, R., & Sugimura, K. (2014). The new life stage of emerging adulthood at ages 18–29 years: Implications for mental health. *The Lancet Psychiatry*, 1(7), 569-576.
- Avedissian, T., & Alayan, N. (2021). Adolescent well-being: A concept analysis. *International Journal of Mental Health Nursing*, 30(2), 357-367.
- Bache, I., & Reardon, L. (2016). The politics and policy of wellbeing: Understanding the rise and significance of a new agenda. In *The Politics and Policy of Wellbeing*. Edward Elgar Publishing.
- Badura, Petr, Eriksson, Charli, García-Moya, Irene, Löfstedt, Petra, Melkumova, Marina et al. (2024). *A focus on adolescent social contexts in Europe, central Asia and Canada: Health Behaviour in School-aged Children international report from the 2021/2022 survey*. World Health Organization. Regional Office for Europe.
- Balaguer, Á., Johnson, D., & Gatty, F. (2026). Education for human flourishing in adolescents: a scoping review. *The Journal of Positive Psychology*, 21(3), 565–577. <https://doi.org/10.1080/17439760.2025.2502480>
- Bartlett, J. D. (2020). Screening for childhood adversity: Contemporary challenges and recommendations. *Adversity and Resilience Science*, 1(1), 65-79.
- Bauer, J. (2022). A primer to latent profile and latent class analysis. In *Methods for researching professional learning and development: Challenges, applications and empirical illustrations* (pp. 243-268). Cham: Springer International Publishing.
- Baxter, L., & Burnell, K. (2022). What is wellbeing and how do we measure and evaluate it?. In *Archaeology, Heritage, and Wellbeing* (pp. 7-25). Routledge.



- Bhutta, Z. A., Bhavnani, S., Betancourt, T. S., Tomlinson, M., & Patel, V. (2023). Adverse childhood experiences and lifelong health. *Nature Medicine*, 29(7), 1639-1648.
- Bersia, M., Charrier, L., Berchialla, P., Cosma, A., Comoretto, R. I., & Dalmasso, P. (2022). The mental well-being of Italian adolescents in the last decade through the lens of the dual factor model. *Children*, 9(12), 1981.
- Bian, J., & Xiang, Z. (2023). Do the various leisure forms have equal effects on mental health? A longitudinal analysis of self-selected leisure activities. *Frontiers in Public Health*, 11, 1134854.
- Blanchflower, D. G. (2025). *Declining youth well-being in 167 UN countries. does survey mode, or question matter?* (No. w33415). National Bureau of Economic Research.
- Brodbeck, J., Bötschi, S. I., Vetsch, N., Stallmann, L., Löchner, J., Berger, T., ... & Marmet, S. (2024). Fostering resilience and well-being in emerging adults with adverse childhood experiences: study protocol for a randomized controlled trial to evaluate the FACE self-help app. *BMC Psychology*, 12(1), 84.
- Broekhof, R., Nordahl, H. M., Bjørnelv, S., & Selvik, S. G. (2022). Prevalence of adverse childhood experiences and their co-occurrence in a large population of adolescents: A Young HUNT 3 study. *Social Psychiatry and Psychiatric Epidemiology*, 57(12), 2359–2366. <https://doi.org/10.1007/s00127-022-02277-z>
- Bronfenbrenner, U. (1986). Recent Advances in Research on the Ecology of Human Development. In: Silbereisen, R.K., Eyferth, K., Rudinger, G. (eds) *Development as Action in Context*. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-662-02475-1_15
- Bronfenbrenner, U. (1994). Ecological models of human development. *International Encyclopedia of Education*, 3(2), 37-43.
- Buchanan, M., Walker, G., Boden, J. M., Mansoor, Z., & Newton-Howes, G. (2023). Protective factors for psychosocial outcomes following cumulative childhood adversity: systematic review. *BJPsych Open*, 9(6), e197.
- Bunting, L., Davidson, G., McCartan, C., Hanratty, J., Bywaters, P., Mason, W., & Steils, N. (2018). The association between child maltreatment and adult poverty—A systematic review of longitudinal research. *Child Abuse & Neglect*, 77, 121-133.
- Cairns, K. E., Yap, M. B. H., Pilkington, P. D., & Jorm, A. F. (2014). Risk and protective factors for depression that adolescents can modify: a systematic review and meta-analysis of longitudinal studies. *Journal of Affective Disorders*, 169, 61-75.
- Carr, K., & Kellas, J. K. (2018). The role of family and marital communication in developing resilience to family-of-origin adversity. *Journal of Family Communication*, 18(1), 68-84.
- Case, A., Fertig, A., & Paxson, C. (2005). The lasting impact of childhood health and circumstance. *Journal of Health Economics*, 24(2), 365-389.



- Chaves, C. (2021). Wellbeing and flourishing. In M. F. Furlong, R. Gilman, & E. S. Huebner (Eds.), *The Palgrave handbook of positive education* (pp. 273–295). Cham: Springer International Publishing.
- Collishaw, S., & Sellers, R. (2020). Trends in child and adolescent mental health prevalence, outcomes, and inequalities. In *Mental health and illness of children and adolescents* (pp. 63–73). Singapore: Springer Singapore.
- Cronholm, P. F., Forke, C. M., Wade, R., Bair-Merritt, M. H., Davis, M., Harkins-Schwarz, M., ... & Fein, J. A. (2015). Adverse childhood experiences: Expanding the concept of adversity. *American Journal of Preventive Medicine*, 49(3), 354–361.
- Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia, and well-being: An introduction. *Journal of Happiness Studies*, 9(1), 1–11.
- Department of Children, Equality, Disability, Integration and Youth. (2023). *Young Ireland: National policy framework for children and young people 2023–2028*. Government of Ireland. Retrieved from: <https://www.gov.ie/en/department-of-children-disability-and-equality/policy-information/young-ireland-policy-framework/>
- Department of Children, Equality, Disability, Integration and Youth. (2024). *Opportunities for youth: National strategy for youth work and related services 2024–2028*. Government of Ireland. Retrieved from: <https://www.gov.ie/en/department-of-education/publications/opportunities-for-youth-national-strategy-for-youth-work-and-related-services-2024-2028/>
- Department of Children, Equality, Disability, Integration and Youth. (2025). *National strategy for women and girls 2025–2030*. Government of Ireland. Retrieved from: <https://www.gov.ie/en/department-of-children-disability-and-equality/campaigns/national-strategy-for-women-and-girls-2025-2030/>
- Department of Health. (2013). *Healthy Ireland framework 2013–2025*. Government of Ireland. Retrieved from: <https://www.gov.ie/en/healthy-ireland/publications/healthy-ireland-framework-2019-2025/>
- Department of Health. (2020). *Sharing the Vision: A Mental Health Policy for Everyone 2020–2030*. Government of Ireland. Retrieved from: <https://www.gov.ie/en/department-of-health/publications/sharing-the-vision-a-mental-health-policy-for-everyone/>
- Department of Health. (2024). *Pathways to wellbeing: National mental health promotion plan 2024–2030*. Government of Ireland. Retrieved from: <https://www.gov.ie/en/department-of-health/publications/pathways-to-wellbeing-national-mental-health-promotion-plan/>
- Diaconu-Gherasim, L. R., Mardari, C. R., & Măirean, C. (2023). The relation between time perspectives and well-being: A meta-analysis on research. *Current Psychology*, 42(7), 5951–5963.
- Dick, S., Saji, A. M., Lucka, K., Chik, C. W., Chan, L. H., & Turner, S. W. (2026). Systematic review of the relationship between chronic health conditions in childhood and economic outcomes in adulthood. *Archives of Disease in Childhood*, 111(4), 364–369.



- Didsbury, M. S., Kim, S., Medway, M. M., Tong, A., McTaggart, S. J., Walker, A. M., ... & Wong, G. (2016). Socio-economic status and quality of life in children with chronic disease: a systematic review. *Journal of Paediatrics and Child Health*, 52(12), 1062-1069.
- Deighton, J., Humphrey, N., Belsky, J., Boehnke, J., Vostanis, P., & Patalay, P. (2018). Longitudinal pathways between mental health difficulties and academic performance during middle childhood and early adolescence. *British Journal of Developmental Psychology*, 36(1), 110-126.
- Dooley, B., Fitzgerald, A., & Giollabhui, N. M. (2015). The risk and protective factors associated with depression and anxiety in a national sample of Irish adolescents. *Irish Journal of Psychological Medicine*, 32(1), 93-105.
- Erickson, J., El-Gabalawy, R., Palitsky, D., Patten, S., Mackenzie, C. S., Stein, M. B., & Sareen, J. (2016). Educational attainment as a protective factor for psychiatric disorders: findings from a nationally representative longitudinal study. *Depression and Anxiety*, 33(11), 1013-1022.
- Español-Martín, G., Pagerols, M., Prat, R., Rivas, C., Ramos-Quiroga, J. A., Casas, M., & Bosch, R. (2023). The impact of attention-deficit/hyperactivity disorder and specific learning disorders on academic performance in Spanish children from a low-middle-and a high-income population. *Frontiers in Psychiatry*, 14, 1136994.
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, 14(4), 245-258.
- Fergus, S., & Zimmerman, M. A. (2005). Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annual Review of Public Health*, 26(1), 399-419.
- Flores, E., Cicchetti, D., & Rogosch, F. A. (2005). Predictors of resilience in maltreated and nonmaltreated Latino children. *Developmental Psychology*, 41(2), 338.
- Fuhrmann, D., Knoll, L. J., & Blakemore, S. J. (2015). Adolescence as a sensitive period of brain development. *Trends in Cognitive Sciences*, 19(10), 558-566.
- Gallagher, S., & Hannigan, A. (2014). Depression and chronic health conditions in parents of children with and without developmental disabilities: The growing up in Ireland cohort study. *Research in Developmental Disabilities*, 35(2), 448-454.
- Gallagher, M. L., & Miller, A. B. (2018). Suicidal thoughts and behavior in children and adolescents: an ecological model of resilience. *Adolescent Research Review*, 3(2), 123-154.
- García-Moya, I. (2020). The importance of student–teacher relationships for wellbeing in schools. In I. García-Moya (Ed.), *The importance of connectedness in student–teacher relationships: Insights from the teacher connectedness project* (pp. 1–25). Palgrave Macmillan.
- Garcia, L., Hunter, R., Anderson, N., & WHO Commission on Social Connection (2025). From loneliness to social connection - charting a path to healthier societies: report of the WHO Commission on Social Connection. World Health Organization.



- Galobardes B., Shaw, M., Lawlor, D.A., Lynch, J.W. & Davey, S.G. (2006). Indicators of socioeconomic position (part 1). *J Epidemiol Community Health*, 60(1):7–12. <https://doi.org/10.1136/jech.2004.023531>.
- Gee, D. G. (2021). Early adversity and development: Parsing heterogeneity and identifying pathways of risk and resilience. *American Journal of Psychiatry*, 178(11), 998-1013.
- Government of Ireland. (2025). *Understanding life in Ireland: The well-being framework*. Government of Ireland. Retrieved from: gov.ie/wellbeing-framework.
- Green, K., & van de Groep, S. (2025). Navigating societal challenges during adolescence and young adulthood: The impact on wellbeing through microsystem mechanisms in the family environment. Retrieved from: https://osf.io/preprints/psyarxiv/mp48h_v1
- Grummitt, L. R., Kreski, N. T., Kim, S. G., Platt, J., Keyes, K. M., & McLaughlin, K. A. (2021). Association of childhood adversity with morbidity and mortality in US adults: a systematic review. *JAMA pediatrics*, 175(12), 1269-1278.
- Guo, Z. (2025). Exploring the effects of happiness motives and general efficacy on life satisfaction. In *SHS Web of Conferences* (Vol. 222, p. 03012). EDP Sciences.
- Hales, G., Debowska, A., Rowe, R., Boduszek, D., & Levita, L. (2023). Comparison of person-centered and cumulative risk approaches in explaining the relationship between adverse childhood experiences and behavioral and emotional problems. *Journal of Interpersonal Violence*, 38(13-14), 8065-8087.
- Hales, G. K., Saribaz, Z. E., Debowska, A., & Rowe, R. (2023). Links of adversity in childhood with mental and physical health outcomes: A systematic review of longitudinal mediating and moderating mechanisms. *Trauma, Violence, & Abuse*, 24(3), 1465-1482.
- Han, D., Dieujeste, N., Doom, J. R., & Narayan, A. J. (2023). A systematic review of positive childhood experiences and adult outcomes: Promotive and protective processes for resilience in the context of childhood adversity. *Child Abuse & Neglect*, 144, 106346.
- Hansen, C. D., Kirkeby, M. J., Kjellmann, K. G., Andersen, J. H., & Møberg, R. J. (2021). The importance of adverse childhood experiences for labour market trajectories over the life course: a longitudinal study. *BMC Public Health*, 21(1), 2044.
- Hardy, R. Y., Boch, S. J., Davenport, M. A., Chavez, L. J., & Kelleher, K. J. (2024). Rural-urban differences in social and emotional protective factors and their association with child health and flourishing. *The Journal of Rural Health*, 40(2), 314-325.
- Heffernan, R., & Ward, T. (2017). A comprehensive theory of dynamic risk and protective factors. *Aggression and Violent Behavior*, 37, 129–141. <https://doi.org/10.1016/j.avb.2017.10.003>
- Heinsch, M., Wells, H., Sampson, D., Wootten, A., Cupples, M., Sutton, C., & Kay-Lambkin, F. (2022). Protective factors for mental and psychological wellbeing in Australian adults: A review. *Mental Health & Prevention*, 25, 200192.



- Hill, E. D., Kashyap, P., Raffanella, E., Wang, Y., Moffitt, T. E., Caspi, A., ... & Posner, J. (2026). Prediction of mental health risk in adolescents. *Nature Medicine*, 31(6), 1840-1846.
- Hirschauer, N., & Bavorová, M. (2014). Advancing consumer protection through smart food safety regulation. *European Food and Feed Law Review*, 91-104.
- Holman, D. M., Ports, K. A., Buchanan, N. D., Hawkins, N. A., Merrick, M. T., Metzler, M., & Trivers, K. F. (2016). The association between adverse childhood experiences and risk of cancer in adulthood: a systematic review of the literature. *Pediatrics*, 138(Supplement_1), S81-S91.
- Hughes, K., Lowey, H., Quigg, Z., & Bellis, M. A. (2016). Relationships between adverse childhood experiences and adult mental well-being: results from an English national household survey. *BMC public health*, 16(1), 222.
- Hughes, K., Bellis, M.A., Hardcastle, K.A., Sethi, D., Butchart, A. & Mikton, C. (2017). The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. *Lancet Public Health*, 2(8): e356–66.
- Huppert, F. A., & So, T. T. (2013). Flourishing across Europe: Application of a new conceptual framework for defining well-being. *Social Indicators Research*, 110(3), 837-861.
- Huppert, F. A., & Whittington, J. E. (2003). Evidence for the independence of positive and negative well-being: Implications for quality of life assessment. *British Journal of Health Psychology*, 8(1), 107-122.
- Huta, V. (2017). An overview of hedonic and eudaimonic well-being concepts. In L. Reinecke & M. B. Oliver (Eds.), *The Routledge handbook of media use and well-being: International perspectives on theory and research on positive media effects* (pp. 14–33). Routledge/Taylor & Francis Group.
- Institute of Public Policy. (2026). Social Determinants of Health. Retrieved from: <https://instituteofpublichealth.org/social-determinants-health>
- Jaffee, S. R., Ambler, A., Merrick, M., Goldman-Mellor, S., Odgers, C. L., Fisher, H. L., ... & Arseneault, L. (2018). Childhood maltreatment predicts poor economic and educational outcomes in the transition to adulthood. *American Journal of Public Health*, 108(9), 1142-1147.
- Jang, H., & Kim, J. (2025). Adverse childhood experiences and adult employment outcomes: Unpacking mechanisms across the life course. *Social Science & Medicine*, 118514.
- Jarden, A., & Roache, A. (2023). What is wellbeing?. *International Journal of Environmental Research and Public Health*, 20(6), 5006.
- Jean-Thorn, A., Tremblay-Perreault, A., Dube, V., & Hebert, M. (2023). A systematic review of community-level protective factors in children exposed to maltreatment. *Trauma, Violence, & Abuse*, 24(4), 2827-2842.
- Juwariah, T., Suhariadi, F., Soedirham, O., Priyanto, A., Setiyorini, E., Siskaningrum, A., ... & Fernandes, A. D. C. (2022). Childhood adversities and mental health problems: A systematic review. *Journal of Public Health Research*, 11(3), 22799036221106613.



- Kessler, R. C., McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., ... & Williams, D. R. (2010). Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. *The British Journal of Psychiatry*, 197(5), 378-385.
- Keyes, C. L. (2007). Promoting and protecting mental health as flourishing: a complementary strategy for improving national mental health. *American Psychologist*, 62(2), 95.
- Khambati, N., Mahedy, L., Heron, J., & Emond, A. (2018). Educational and emotional health outcomes in adolescence following maltreatment in early childhood: A population-based study of protective factors. *Child Abuse & Neglect*, 81, 343-353.
- Kim, E. J., Kang, H. W., & Park, S. M. (2024). Determinants of the happiness of adolescents: A leisure perspective. *PLoS One*, 19(4), e0301843.
- Kirkbride, J. B., Anglin, D. M., Colman, I., Dykxhoorn, J., Jones, P. B., Patalay, P., ... & Griffiths, S. L. (2024). The social determinants of mental health and disorder: evidence, prevention and recommendations. *World Psychiatry*, 23(1), 58-90.
- Koivusilta, L. K., Acacio-Claro, P. J., Mattila, V. M., & Rimpelä, A. H. (2024). Health and health behaviours in adolescence as predictors of education and socioeconomic status in adulthood—a longitudinal study. *BMC Public Health*, 24(1), 1178.
- Kraemer, H. C., Stice, E., Kazdin, A., Offord, D., & Kupfer, D. (2001). How do risk factors work together? Mediators, moderators, and independent, overlapping, and proxy risk factors. *American Journal of Psychiatry*, 158(6), 848-856.
- Kwapong, Y. A., Boakye, E., Khan, S. S., Honigberg, M. C., Martin, S. S., Oyeka, C. P., ... & Sharma, G. (2023). Association of depression and poor mental health with cardiovascular disease and suboptimal cardiovascular health among young adults in the United States. *Journal of the American Heart Association*, 12(3), e028332.
- Larsen, J. T., Munk-Olsen, T., Bulik, C. M., Thornton, L. M., Koch, S. V., Mortensen, P. B., & Petersen, L. (2017). Early childhood adversities and risk of eating disorders in women: A Danish register-based cohort study. *International Journal of Eating Disorders*, 50(12), 1404-1412.
- Latham K. (2015). The “Long Arm” of childhood health: Linking childhood disability to late midlife mental health. *Research on Aging*, 37(1), 82–102.
- Layte, R. (2022). Does family economic strain reduce child educational achievement? A longitudinal assessment using the great recession in Ireland. *European Sociological Review*, 38(3), 408-424.
- Lemus-Roldan, K., Castorena Torres, F., León Rojas, D., & Rodríguez-de-Ita, J. (2025). From early adversity to neurodegeneration: stress biomarkers as predictive signals for lifespan brain health. *International Journal of Molecular Sciences*, 26(22), 11013.
- Lee, J.O, Herrenkohl, T.I., Kosterman, R., Small, C.M, & Hawkins, J.D. (2013). Educational inequalities in the co-occurrence of mental health and substance use problems, and its adult socio-economic consequences: a longitudinal study of young adults in a community sample. *Public Health*, 127,745–753



- Lenze, L., Benzing, V., Schmid, J., Minder, B., Henn, R. E., & Frahsa, A. (2025). The effects of different types of leisure-time physical activity on positive mental health among adolescents: a mixed-methods systematic review and meta-analysis. *International Journal of Behavioral Nutrition and Physical Activity*, 22(1), 123.
- LeTendre, M. L., & Reed, M. B. (2017). The effect of adverse childhood experience on clinical diagnosis of a substance use disorder: Results of a nationally representative study. *Substance Use & Misuse*, 52(6), 689-697.
- Li, H., & Shen, G. (2026). Factors influencing subjective well-being: key dimensions and research evolution. In *The Anatomy of Subjective Well-Being: Linking Built Environment to Life Satisfaction in China* (pp. 153-182). Singapore: Springer Nature Singapore.
- Li, S. M., Zhang, C., Bi, K., & Chen, M. S. (2023). Longitudinal impacts of adverse childhood experiences on multidimensional health outcomes: Predicting trajectories in mental, physical, and behavioral health. *Child Abuse & Neglect*, 106543.
- Liming, K. W., & Grube, W. A. (2018). Wellbeing outcomes for children exposed to multiple adverse experiences in early childhood: A systematic review. *Child and Adolescent Social Work Journal*, 35(4), 317-335.
- Linares, D. E., Kandasamy, V., & Vladutiu, C. J. (2022). Lifecourse factors associated with flourishing among US children aged 1–5 years. *Child: Care, Health and Development*, 48(2), 298-310.
- Lippman, L. H., Moore, K. A., & McIntosh, H. (2011). Positive indicators of child well-being: A conceptual framework, measures, and methodological issues. *Applied Research in Quality of Life*, 6(4), 425-449.
- Logan, A. C., Berman, B. M., & Prescott, S. L. (2023). Vitality revisited: The evolving concept of flourishing and its relevance to personal and public health. *International Journal of Environmental Research and Public Health*, 20(6), 5065.
- Luecken, L. J., & Gress, J. L. (2010). Early adversity and resilience in emerging adulthood. In J. W. Reich, A. J. Zautra, & J. S. Hall (Eds.), *Handbook of adult resilience* (pp. 238–257). The Guilford Press.
- Luo, Y., & Van Assche, A. (2023). The rise of techno-geopolitical uncertainty: Implications of the United States CHIPS and Science Act. *Journal of International Business Studies*, 1.
- Magalhães, E. (2024). Dual-factor models of mental health: A systematic review of empirical evidence. *Psychosocial Intervention*, 33(2), 89-102.
- Majid, A. (2024). Psychological disorders in the world of education: examining the relationship between behavioral disorders and learning disorders on mental health. *International Journal on Advanced Science, Education, and Religion*, 7(4), 264-271.
- Mann D. R., Honeycutt T. C. (2014). Is timing everything? Disability onset of youth and their outcomes as young adults. *Journal of Disability Policy Studies*, 25(2), 117–129. <https://doi.org/10.1177/1044207313484176>



- Manning, L. K., & Bouchard, L. (2020). Encounters with adversity: A framework for understanding resilience in later life. *Aging & Mental Health*, 24(7), 1108-1115.
- Marquez, J., Francis-Hew, L., & Humphrey, N. (2023). Protective factors for resilience in adolescence: Analysis of a longitudinal dataset using the residuals approach. *Child and Adolescent Psychiatry and Mental Health*, 17(1), 140.
- Mason-Stephens, J., Iasiello, M., Ali, K., van Agteren, J., & Fassnacht, D. B. (2023). The importance of measuring mental wellbeing in the context of psychological distress: Using a theoretical framework to test the dual-continua model of mental health. *Behavioral Sciences*, 13(5), 436.
- McCoy, S., Smyth, E., & Banks, J. (2012). The primary classroom: Insights from the Growing Up in Ireland study. *Dublin: ESRI*.
- McGorry, P., Gunasiri, H., Mei, C., Rice, S., & Gao, C. X. (2025). The youth mental health crisis: analysis and solutions. *Frontiers in Psychiatry*, 15, 1517533.
- McKay, M. T., Cannon, M., Chambers, D., Conroy, R. M., Coughlan, H., Dodd, P., ... & Clarke, M. C. (2021). Childhood trauma and adult mental disorder: A systematic review and meta-analysis of longitudinal cohort studies. *Acta Psychiatrica Scandinavica*, 143(3), 189-205.
- McKay, M. T., Kilmartin, L., Meagher, A., Cannon, M., Healy, C., & Clarke, M. C. (2022). A revised and extended systematic review and meta-analysis of the relationship between childhood adversity and adult psychiatric disorder. *Journal of Psychiatric Research*, 156, 268-283.
- McLaughlin, K. A., Hatzenbuehler, M. L., Xuan, Z., & Conron, K. J. (2012). Disproportionate exposure to early-life adversity and sexual orientation disparities in psychiatric morbidity. *Child Abuse & Neglect*, 36(9), 645-655.
- Merrick, M.T., Ford, D.C., Ports, K.A., & Guinn, A.S. (2018). Prevalence of adverse childhood experiences from the 2011–2014 Behavioral Risk Factor Surveillance System in 23 states. *JAMA Pediatrics*, 172, 1038–1044.
- Mock, S. E., & Smale, B. (2023). The relationship of diverse leisure activities with flourishing. *Frontiers in Psychology*, 14, 1130906.
- McNamara, E., Murray, A., & Williams, J. (2019). Growing Up in Ireland. *Longitudinal and Life Course Studies*, 10(4), 531-546.
- Nelson, C. A., Sullivan, E. F., & Valdes, V. (2025). Early adversity alters brain architecture and increases susceptibility to mental health disorders. *Nature Reviews Neuroscience*, 26(10), 642-656.
- Nolan, A., & Smyth, E. (2021). Risk and protective factors for mental health and wellbeing in childhood and adolescence, ESRI Research Series 120, Dublin: ESRI, <https://doi.org/10.26504/rs120>



- Nguyen, T. T. P., Nguyen, T. T., Dam, V. T. A., Vu, T. T. M., Do, H. T., Vu, G. T., ... & Ho, C. S. (2022). Mental wellbeing among urban young adults in a developing country: A Latent Profile Analysis. *Frontiers in Psychology*, 13, 834957.
- Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling: A Multidisciplinary Journal*, 14(4), 535-569.
- Nylund-Gibson, K., & Choi, A. Y. (2018). Ten frequently asked questions about latent class analysis. *Translational Issues in Psychological Science*, 4(4), 440.
- OECD (2025), *OECD Guidelines on Measuring Subjective Well-being (2025 Update)*, OECD Publishing, Paris, <https://doi.org/10.1787/9203632a-en>.
- Oh, D. L., Jerman, P., Silvério Marques, S., Koita, K., Purewal Boparai, S. K., Burke Harris, N., & Bucci, M. (2018). Systematic review of pediatric health outcomes associated with childhood adversity. *BMC pediatrics*, 18(1), 83.
- Panchal, U., Salazar de Pablo, G., Franco, M., Moreno, C., Parellada, M., Arango, C., & Fusar-Poli, P. (2023). The impact of COVID-19 lockdown on child and adolescent mental health: systematic review. *European Child & Adolescent Psychiatry*, 32(7), 1151-1177.
- Patel, V. (2018). Acting early: the key to preventing mental health problems. *Journal of the Royal Society of Medicine*, 111(5), 153-157.
- Philippe, K., Sloan, S. & Neville, R.D. (2025). What we know from Growing Up in Ireland (GUI) 2008-2024: Key Well-being Factors for Children and Young People. Retrieved from: https://assets.gov.ie/static/documents/271b9f83/20251031_What_We_Know_GUI.pdf
- Pitchforth, J., Fahy, K., Ford, T., Wolpert, M., Viner, R. M., & Hargreaves, D. S. (2019). Mental health and well-being trends among children and young people in the UK, 1995–2014: analysis of repeated cross-sectional national health surveys. *Psychological Medicine*, 49(8), 1275-1285.
- Poole, J. C., Dobson, K. S., & Pusch, D. (2017). Childhood adversity and adult depression: The protective role of psychological resilience. *Child Abuse & Neglect*, 64, 89-100.
- Reupert, A. (2017). A socio-ecological framework for mental health and well-being. *Advances in Mental Health*, 15(2), 105-107.
- Rule, A., Abbey, C., Wang, H., Rozelle, S., & Singh, M. K. (2024). Measurement of flourishing: a scoping review. *Frontiers in Psychology*, 15, 1293943.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52(1), 141-166.
- Ryff, C. D., Boylan, J. M., & Kirsch, J. A. (2021). Eudaimonic and hedonic well-being. *Measuring Well-being*, 92-135.



- Sacco, R., Camilleri, N., Eberhardt, J., Umla-Runge, K., & Newbury-Birch, D. (2024). A systematic review and meta-analysis on the prevalence of mental disorders among children and adolescents in Europe. *European Child & Adolescent Psychiatry*, 33(9), 2877-2894.
- Sales, W. B., Maranhão, E. F., Ramalho, C. S. T., Macêdo, S. G. G. F., Souza, G. F., & Maciel, Á. C. C. (2024). Early life circumstances and their impact on health in adulthood and later life: a systematic review. *BMC Geriatrics*, 24(1), 978.
- Sawyer, S. M., Azzopardi, P. S., Wickremarathne, D., & Patton, G. C. (2018). The age of adolescence. *The Lancet Child & Adolescent Health*, 2(3), 223-228.
- Schreiner, L. A. (2010). Thriving in community. *About Campus*, 15(4), 2-11.
- Schoon, I., & Lyons-Amos, M. (2017). A socio-ecological model of agency: The role of psycho-social and socioeconomic resources in shaping education and employment transitions in England. *Longitudinal and Life Course Studies*, 8(1), 35-56.
- Schotanus-Dijkstra, M., Pieterse, M. E., Drossaert, C. H., Westerhof, G. J., De Graaf, R., Ten Have, M., ... & Bohlmeijer, E. T. (2016). What factors are associated with flourishing? Results from a large representative national sample. *Journal of Happiness Studies*, 17(4), 1351-1370.
- Seligman, M. E. (2011). *Flourish: A visionary new understanding of happiness and well-being*. Simon and Schuster.
- Shanahan L., Copeland W. E., Worthman C. M., Erkanli A., Angold A. & Costello E. J. (2013). Sex-differentiated changes in C-reactive protein from ages 9 to 21: The contributions of BMI and physical/sexual maturation. *Psychoneuroendocrinology*, 38(10), 2209-2217.
- Sheikh, M. A. (2018). Childhood disadvantage, education, and psychological distress in adulthood: a three-wave population-based study. *Journal of Affective Disorders*, 229, 206-212.
- Silke, C., Brady, B., Devaney, C., O'Brien, C., Durcan, M., Bunting, B., & Heary, C. (2023). Youth suicide and self-harm: latent class profiles of adversity and the moderating roles of perceived support and sense of safety. *Journal of Youth and Adolescence*, 52(6), 1255-1271.
- Silke, C., Heary, C., Bunting, B., Devaney, C., Groarke, A., Major, E., ... & Brady, B. (2024). Examining the relationship between adversity and suicidality and self-harm in Irish adolescents from 2020 to 2022. *Journal of Affective Disorders*, 349, 234-243.
- Slimmen, S., Timmermans, O., Lechner, L., & Oenema, A. (2024). A socio-ecological approach of evidence on associations between social environmental factors and mental health outcomes of young adults: A systematic review. *Social Sciences & Humanities Open*, 10, 101068.
- Sölva, K., Haselgruber, A., & Lueger-Schuster, B. (2023). Resilience in the face of adversity: classes of positive adaptation in trauma-exposed children and adolescents in residential care. *BMC Psychology*, 11(1), 30.



- Spratt, J. (2017). Conceptualising wellbeing. In *Wellbeing, Equity and Education: A Critical Analysis of Policy Discourses of Wellbeing in Schools* (pp. 35-56). Cham: Springer International Publishing.
- Standley, C. J. (2020). Expanding our paradigms: Intersectional and socioecological approaches to suicide prevention. *Death Studies*, 1–9. <https://doi.org/10.1080/07481187.2020.172593>
- State, T. M., & Kern, L. (2017). Life satisfaction among high school students with social, emotional, and behavioral problems. *Journal of Positive Behavior Interventions*, 19(4), 205-215.
- Stavrou, P.D. & Kourkoutas, E. (2017). School based programs for socio-emotional development of children with or without difficulties: promoting resilience. *American Journal of Education Research*, 5(2), 131–7.
- Szűcs, P. (2024). Demographic Shifts and Economic Challenges in the European Union. *Európai Tükör*, 27(1), 87-106.
- Totsika, V., Liew, A., Absoud, M., Adnams, C., & Emerson, E. (2022). Mental health problems in children with intellectual disability. *The Lancet Child & Adolescent Health*, 6(6), 432-444.
- Turner, R. J., Thomas, C. S., & Brown, T. H. (2016). Childhood adversity and adult health: Evaluating intervening mechanisms. *Social Science & Medicine*, 156, 114-124.
- Twenge, J., & Blanchflower, D. G. (2025). *Declining life satisfaction and happiness among young adults in six English-speaking countries* (No. w33490). National Bureau of Economic Research.
- Ungar, M., & Theron, L. (2020). Resilience and mental health: How multisystemic processes contribute to positive outcomes. *The Lancet Psychiatry*, 7(5), 441-448.
- Ungar, M., Ghazinour, M., & Richter, J. (2013). Annual research review: What is resilience within the social ecology of human development?. *Journal of Child Psychology and Psychiatry*, 54(4), 348-366.
- UNICEF. (2018). UNICEF Programme Guidance for the Second Decade: Programming With and for Adolescents. Retrieved from: <https://www.unicef.org/lac/media/38521/file/Programme%20Guidance%20for%20the%20Second%20Decade.pdf>
- van der Velden, P. G., Das, M., & Muffels, R. (2019). The stability and latent profiles of mental health problems among Dutch young adults in the past decade: A comparison of three cohorts from a national sample. *Psychiatry Research*, 282, 112622.
- Van Lissa, C. J., Garnier-Villarreal, M., & Anadria, D. (2024). Recommended practices in latent class analysis using the open-source R-package tidySEM. *Structural Equation Modeling: A Multidisciplinary Journal*, 31(3), 526-534.
- VanderWeele, T. J. (2017). On the promotion of human flourishing. *Proceedings of the National Academy of Sciences*, 114(31), 8148-8156.



- VanderWeele, T. J., Johnson, B. R., Bialowolski, P. T., Bonhag, R., Bradshaw, M., Breedlove, T., ... & Yancey, G. (2025). The Global Flourishing Study: Study profile and initial results on flourishing. *Nature Mental Health*, 3(6), 636-653.
- Villanueva, L., Adrián, J. E., & Gomis-Pomares, A. (2024). The effect of childhood adversity on mental health in young adults: A longitudinal study. *Current Psychology*, 43(7), 6418-6429.
- Voss, M. L., Claeson, M., Bremberg, S., Peterson, S. S., Alfvén, T., & Ndeezi, G. (2023). The missing middle of childhood. *Global Health Action*, 16(1), 2242196.
- Waigel, N. C., & Lemos, V. N. (2023). A systematic review of adolescent flourishing. *Europe's Journal of Psychology*, 19(1), 79.
- Walsh C, Bunting L, Davidson G, Mulholland C, McCartan C, Doherty N, & Shevlin M. (2025). Prevalence and impact of adverse childhood experiences and extrafamilial violence: a representative survey of adults in Northern Ireland. *BMJ Public Health*, 3(2), e003360. doi:10.1136/bmjph-2025-003360
- Wang, L., Yu, Z., Chen, W., Zhang, J., & Bettencourt, A. F. (2022). Higher exposure to childhood adversity associates with lower adult flourishing. *BMC Public Health*, 22(1), 612.
- Warner, T. D., Leban, L., Pester, D. A., & Walker, J. T. (2023). Contextualizing adverse childhood experiences: the intersections of individual and community adversity. *Journal of Youth and Adolescence*, 52(3), 570-584.
- Wasserman, D., Carli, V., Iosue, M., Javed, A., & Herrman, H. (2021). Suicide prevention in childhood and adolescence: a narrative review of current knowledge on risk and protective factors and effectiveness of interventions. *Asia-Pacific Psychiatry*, 13(3), e12452.
- Webster, E. M. (2022). The impact of adverse childhood experiences on health and development in young children. *Global Pediatric Health*, 9, 2333794X221078708.
- West, J. S., & Kamis, C. (2022). The long-term impact of childhood disability on mental health trajectories in mid-to late-life. *Journal of Aging and Health*, 34(6-8), 818-830.
- Westphaln, K. K., Lee, E., Fry-Bowers, E. K., Kleinman, L. C., & Ronis, S. D. (2022). Examining child flourishing, family resilience, and adversity in the 2016 National Survey of Children's Health. *Journal of Pediatric Nursing*, 66, 57-63.
- Wilkinson, Richard, Marmot, Michael & World Health Organization. Regional Office for Europe. Social determinants of health: the solid facts, 2nd ed (en). World Health Organization. Regional Office for Europe; 2003. <https://iris.who.int/handle/10665/326568>.
- Wong Y, Cheng H. L., McDermott R. C., Deng K., McCullough K. M. (2019). I believe in you! Measuring the experience of encouragement using the academic encouragement scale. *The Journal of Positive Psychology*, 14(6), 820-828. <https://doi.org/10.1080/17439760.2019.1579357>



- World Health Organization; WHO. (2018). Adolescent Health and Development in the WHO European Region: Can we do better? Retrieved from: [https://iris.who.int/server/api/core/bitstreams/c0ceea03-e30d-4b5e-aa21-ff63b4d3d34e/content#:~:text=ABSTRACT,health%20\(2015%E2%80%932020\).](https://iris.who.int/server/api/core/bitstreams/c0ceea03-e30d-4b5e-aa21-ff63b4d3d34e/content#:~:text=ABSTRACT,health%20(2015%E2%80%932020).)
- World Health Organization; WHO. (2021). Comprehensive mental health action plan 2013–2030. Geneva: World Health Organization; 2021. Retrieved from: <https://iris.who.int/server/api/core/bitstreams/69921758-6229-49ba-bd3d-c24736e35829/content>
- Wright, M. O. D., Masten, A. S., & Narayan, A. J. (2012). Resilience processes in development: Four waves of research on positive adaptation in the context of adversity. In *Handbook of resilience in children* (pp. 15-37). Boston, MA: Springer US.
- Yen, H. Y., Lin, G. H., & Huang, H. Y. (2024). Leisure participation for mental health promotion in later life: a six-year longitudinal study. *Journal of Applied Gerontology*, 43(6), 650-656.
- Yeo, G., Lansford, J. E., Hirshberg, M. J., & Tong, E. M. (2024). Associations of childhood adversity with emotional well-being and educational achievement: A review and meta-analysis. *Journal of Affective Disorders*, 347, 387-398.
- Zimmerman, M. A., Stoddard, S. A., Eisman, A. B., Caldwell, C. H., Aiyer, S. M., & Miller, A. (2013). Adolescent resilience: Promotive factors that inform prevention. *Child Development Perspectives*, 7(4), 215-220.



Appendix I

Detailed Overview Measures

1. Risk Factors

In total, 11 variables were selected as indicators of early-life vulnerability.

Parent or Friend Death. Two single items were merged to create this variable. Primary caregivers were asked to indicate whether the study child had ever experienced the ‘death of a parent’ or the ‘death of a close friend’, with responses coded as 1=Yes for both items. Responses were merged to create one variable which indicated whether the study child had experienced the death of a parent or friend, with responses on this variable coded as 2=No, 1=Yes.

Parent Conflict. Parent conflict was measured through the use of a single item. The primary caregiver indicated whether the study child had ever experienced ‘conflict between parents’. Responses were coded as 2=No, 1=Yes.

Parent Health Issues. Parent health was assessed through a single item. The primary caregiver indicated whether they ‘have any chronic physical or mental health problem, illness or disability’. Responses were coded as 1=Yes, 2=No.

Single Parent Household. This was assessed using a GUI derived variable. The variable indicates whether there is a partner in the household. Responses were coded as 1=Yes, 2=No.

Extended Family Issues. Three single items were merged to create this variable. Primary caregivers were asked to indicate whether the study child had ever experienced ‘serious illness/injury of a family member’, ‘mental disorder in immediate family’ or ‘drug taking/alcoholism in the immediate family’, with responses coded as 1=Yes across the three items. Responses were merged to create one variable which indicated whether the study child had experienced any of these family issues, with responses on this variable coded as 2=No, 1=Yes.

Family Financial Difficulties. Household financial difficulties were measured by a single item examining the degree of ease/difficulty in which the household could make ends meet. The primary caregiver responded to the question: ‘Concerning your household’s total monthly or weekly income, with which degree of ease or difficulty is the household able to make ends meet?’. Responses were originally coded on a scale of 1 (with great difficulty) to 7 (very easily), with these options merged to create a new binary variable. Specifically, the response options ‘with great difficulty’, ‘with difficulty’ and ‘with some difficulty’ were recoded into one category (1=Difficult), while the options ‘fairly easily’, ‘easily’ and ‘very easily’ were coded into another category (2=Easy), to form a new variable which indicated whether the household found it easy/difficult to make ends meet.



Unsafe Neighbourhood. Neighbourhood safety was assessed through a single item. The primary caregiver indicated whether they agreed or disagreed with the statement ‘it is safe for children to play outside during the day in this area’. The response options of ‘strongly agree’ and ‘agree’ were recoded as 2=Safe, while options ‘strongly disagree’ and ‘disagree’ were recoded as 1=Not safe, to form a new binary variable indicating whether the neighbourhood was safe/unsafe for the child to play in.

Victim of Bullying. Victimization was assessed through a single item. The primary caregiver indicated whether ‘to your knowledge, has the study child been a victim of bullying in the last year?’. Responses were coded as 1=Yes, 2=No.

School Performance Difficulties. Three independent items were merged to assess school performance difficulties. The teacher of the study child was asked to rate the study child’s academic performance relative to children in his/her age group for ‘Mathematics’, ‘Reading’ and ‘Writing’. Teachers indicated whether the child was below average, average or above average in these three areas. If the teacher indicated that the child was below-average in maths, reading or writing they were coded as 1=Below Average, and if they indicated that the child was average or above-average in all three areas they were coded as 2=Average or Above, to indicate whether the study child was having difficulty in any of the three areas.

Learning or Health Problems. Five independent items were merged to measure learning or health problems in the study child. First, the primary caregiver was asked to indicate whether ‘the study child usually requires ongoing support to be able to move around?’, with responses coded as 1=Yes, 2=No. The primary caregiver responded two other questions indicating whether the study child has or ever had: ‘any sort of sight problem requiring correction’ or ‘any sort of hearing problem requiring correction’. Response options included ‘yes, currently’, ‘yes in the past’ or ‘no’, which were recoded into binary responses 1=Yes (past or present) or 2= No. The caregiver was also asked whether they ‘have any concerns about how the study child talks and makes speech sounds?’. ‘No’ responses were coded as 2, while ‘Yes a little’ or ‘yes a lot’ responses were recoded as 1=Yes. Finally, the primary caregiver was asked to indicate whether ‘the study child has a specific learning difficulty, communication or co-ordination disorder?’, with responses coded as 1=Yes, 2=No. Responses across the five items were combined – if a primary caregiver responded yes to any of the above items they were categorised as 1=Yes (indicating that the child has experienced a learning or health problem), and those that responded ‘no’ to all five questions were categorised as 2=No (indicating that the child has no experience of learning or health problems).

Peer, Conduct, Emotional or Hyperactivity Problems. Behavioural problems were measured using the total difficulties sub-scales from the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). The primary caregiver responded to 25 items assessing their perception of the study child’s peer, emotional, conduct and hyperactivity problems and prosocial behaviour. Each item is rated 0 (‘Not true’), 1 (‘Somewhat true’), or 2 (‘Certainly true’). Items across the four ‘difficulties’ sub-scales (e.g. peer, emotional, conduct and hyperactivity) are summed to create a total difficulty score, with scores categorised as follows: 0-13 (Normal), 14-16 (Borderline), 17-40 (High/Abnormal). For the current research scores categorised as High/Abnormal were coded as 1 (Yes), and scores categorised as Normal/Borderline were coded as 2 (No).



2. Wellbeing

In total, 10 variables were selected as indicators of six forms of wellbeing at age 25.

Social Relationships. Quality social relationships was assessed through two indicators: Trust and Friendship Quality. These indicators map onto the domain of social wellbeing, and were informed by the ‘Social Connectedness’ aspect of Flourishing (VanderWeele, 2017), which aims to assess the extent to which young people have supportive, trusting relationships with others.

- **Trust.** Youth responded to a single-item assessing the extent they agreed with the statement ‘generally speaking, would you say that most people can be trusted?’. Youth provided responses on a scale from 0 (you can’t be too careful) to 10 (Most people can be trusted).
- **Friendship Quality.** Youth responded to a single-item assessing the extent they agreed with the statement ‘Would you say that you can count on your close friends when you need them?’. Youth provided responses on a scale from 1 (Always/Most of the time) to 3 (Rarely/Never). Responses were reverse coded so that higher scores reflected more supportive friendships.

Civic Engagement. Civic engagement was assessed by examining the number of political or civic activities young people engaged in. This indicator maps onto the domain of community wellbeing, and was informed by the ‘Character & Virtue’ aspect of Flourishing (VanderWeele, 2017), which explores the extent to which young people give back to their communities, engage in prosocial behaviour or act with integrity. Specifically, youth indicated whether they had been involved in the below activities over the last 12 months. Responses were scored as 0=No or 1=Yes. Scores were summed to reflect the number of activities engaged in.

- Contacted a politician or councillor
- Worked (on a voluntary basis or otherwise) in a political party
- Worked (on a voluntary basis or otherwise) with an environmental group
- Worn or displayed a campaign badge/sticker
- Signed a petition (paper, email, online) about a political or social issue
- Took part in a public demonstration
- Boycotted certain products for political, social or environmental reasons
- Posted or shared anything about politics online

Mental & Physical Health. Health was assessed through three indicators: Stress, Depression and Health status. These indicators map onto the domain of physical and mental wellbeing, and were informed by the ‘Health’ aspect of Flourishing (VanderWeele, 2017), which aims to assess the extent to which young people show the absence of physical or mental illness.

- **Depression.** Depression status was assessed through the short form of the Centre for Epidemiological studies (CES) depression scale. Youth responded to 8 items assessing the extent to which they experienced various depressive symptoms. Youth provided responses



on a scale from 1 (rarely) to 4 (Most of the time). Responses across the 8 items were summed to create a total depression score, where higher scores reflected higher depressive symptoms.

- **Stress.** Stress was measured using the stress subscale of the Depression and Stress Scale (DASS). Youth responded to 7 items assessing the extent to which they experienced stress symptoms, including difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Youth provided responses on a scale from 1 (Did not apply to me at all) to 4 (Applied to me to a considerable degree). Responses across the 7 items were summed to create a total stress score. Higher scores reflect higher stress levels.
- **Health Status.** Youth responded to a single-item assessing their current level of health. Youth responded to the question ‘In general, how would you say your current health is?’ on a scale from 1 (Excellent) to 5 (Poor). Responses were recoded so that higher scores reflected greater health levels.

Happiness. Happiness was assessed by examining life satisfaction amongst youth respondents. This indicator maps onto the domain of emotional wellbeing, and was informed by the ‘Happiness & Life Satisfaction’ aspect of Flourishing (VanderWeele, 2017), which aims to explore youth’s sense of contentment or satisfaction with life. Specifically, youth indicated how satisfied they are with their own life in general on a scale of 0 (not at all satisfied) to 10 (extremely satisfied). Higher scores reflect higher levels of life satisfaction.

Meaning. Meaning in life was assessed through two indicators: Self-Esteem and Optimism for the Future. These indicators map onto the domain of cognitive wellbeing, and were informed by the ‘Meaning and purpose’ aspect of Flourishing (VanderWeele, 2017), which aims to assess the extent to which young people believe they are valuable and that their life has meaning.

- **Self-Esteem.** Self-esteem was measured using six-items from the Rosenberg Self-Esteem (RSE) scale (Rosenberg, 1965). Youth provided responses on a scale from 1 (strongly disagree) to 4 (strongly agree). Higher scores on this scale reflect higher levels of self-esteem.
- **Optimism for the Future.** Youth responded to a single-item assessing the extent they agreed with the statement “I am optimistic about the future”. Youth provided responses on a scale from 1 (strongly agree) to 5 (strongly disagree). Responses were recoded so that higher scores reflect higher levels of optimism for the future.

Financial Security. Financial security was assessed by examining the degree of ease/difficulty in which youth’s income covers their expenses. This indicator maps onto the domain of material wellbeing, and was informed by the ‘Financial and material stability’ aspect of Flourishing (VanderWeele, 2017), which aims to explore whether youth have sufficient economic resources to meet basic needs and feel secure. Youth responded to the question “Concerning your total monthly or weekly income, with which degree of ease or difficulty are you able to make ends meet?” on a scale of 1 (very easily) to 7 (cannot make ends meet). Scores were recoded so that higher scores reflect greater financial stability.



3. Protective Factors

Five variables reflecting social and contextual protective factors present at waves 2, 3 and 5 were included in this research as moderator variables.

Parent-Child Relationships. At wave 3, conflictual parent-child relationships (when study child was aged 17/18) were measured through self-reports from the study child about their relationship with their mother, across two items on the 'Conflict' scale taken from measures used by the German PAIRFAM study (Thonnissen et al., 2014). Items were scored on a scale ranging from 1 (Never) to 5 (Always). Items were summed to create a scale total, where higher scores reflect more conflictual relationships between the study child and their mother at the time of the Wave 3 survey. Low levels of parent-child conflict were regarded as a protective factor in this instance.

Peer Attachment. At wave 3, youth's relationship with their peers (when aged 17/18 years) was assessed through the Inventory of Parent and Peer Attachment (IPPA) scale. Youth responded to 25 items assessing three broad dimensions of peer attachment: degree of mutual trust; quality of communication and extent of anger and alienation. Responses were provided on a scale of 1 (Almost never) to 5 (Almost always true). Negative items were recoded and all items were summed to create a scale total, where higher scores reflect greater levels of peer attachment at wave 3.

Extracurricular Participation. At wave 2, youth participation in extracurricular activities was assessed through a single-item measure. The primary caregiver of the study child responded to the question 'Does the child participate in regular leisure activity?'. Responses were coded as either 0 (No) or 1 (Yes).

Teacher Support. At wave 3, the level of perceived support provided by teachers at school (at age 17/18 years) was assessed through a single-item measure. Youth responded to the statement 'I could talk to my teachers if I had a problem'. Responses were provided on a scale of 1 (Strongly Agree) to 4 (Strongly Disagree). Responses were recoded so that higher scores reflected greater teacher support at wave 3.

Educational Attainment. Educational attainment was operationalised as the highest level of education achieved by the young person at age 25. At wave 5, youth reported the level of educational qualifications they had received. Responses were scored on a scale ranging from Level 3 (or lower) to Level 10.



Appendix II

Table Showing Sample-Weighted Spearman's Rho Correlations between all Risk Factors, Protective Factors, Covariates and Wellbeing.

	Gender	Edu	Extra	Peer	Res	Well	SH	SES
Educational Attainment (Edu)	.01							
Extracurricular Participation (Extra)	-.03	.13**						
Peer Attachment (Peer)	.18**	.03	-.01					
Conflictual Parent-Child Relationship (Res)	.10**	.003	.04*	-.15**				
Doing Well (Well)	-.10**	.20**	.13*	.14**	-.11**			
Social-Health Risk Class (SH)	-.01	-.32**	-.12**	-.07**	.04*	-.19**		
Family SES Risk Class (SES)	.06**	-.20**	-.08**	-.03	.04	-.17**	.59**	
Teacher Support (Sup)	.001	.08**	.04*	.20**	-.07**	.12**	-.07**	-.09**



**An Roinn Leanaí, Míchumais
agus Comhionannais**
Department of Children,
Disability and Equality