EXAMINING INTERSECTIONALITY AS A CRITICAL FRAMEWORK WHEN APPLIED TO ADOLESCENT MENTAL HEALTH

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Abstract

Intersectionality is concerned with processes of power and oppression emerging at the intersections of social categories such as gender and ethnicity. Given the psychological impact of oppression and inequality, understanding intersectional effects on health outcomes is of relevance to practice and policy. While intersectionality is a growing framework in clinical psychology, its application to adolescent mental health is still under-researched. The present thesis thus sought to examine the effects of social categories, processes, and determinants within intersectionality's framework, on adolescent mental health outcomes. Firstly, to explore mental health more deeply as experienced through the complex social category of ethnicity, a qualitative systematic review of 17 academic and non-academic studies centralising adolescents' voices was conducted. The narrative synthesis highlighted contexts, processes, and determinants affecting the mental health of adolescents from ethnically and culturally diverse backgrounds, notably discrimination, social inequalities, and interpersonal connection. However, unique intersectional effects were not explicitly examined in this study. Thus, a quantitative empirical study was conducted in an Irish secondary-school sample of 9,011 adolescents from diverse backgrounds to examine the intersectional effects of gender, sexual orientation, ethnicity, and disability on adolescent mental health. Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy (MAIHDA) examined the intersectional effects of these social categories on mental health outcomes, and a series of fixed-effects models were also conducted to investigate the individual effects of social categories and risk/protective determinants on adolescents' mental health. Significant intersectional effects were not observed for the four social categories. Instead, significant effects for determinants such as bullying, discrimination, and connectedness to school emerged, reflecting the systematic review. The present thesis demonstrated that while it is important to remain cognisant of intersectionality, there are salient determinants reflecting oppression and inequality that warrant practice and policy attention in the interest of adolescent health and wellbeing.

Statement of Original Authorship

I hereby certify that the submitted work is my own work, completed while registered as a candidate for the degree stated on the Title Page, and I have not obtained a degree elsewhere on the basis of the research presented in this submitted work.

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Chapter 1. Introduction

1.1 Adolescent mental health

Adolescence is a critical developmental stage of rapid biological, neurological, intrapersonal, and interpersonal changes as adolescents' sense of self and relationships evolve and they begin to navigate wider social systems (Bonnie & Backes, 2019; Viner et al., 2012). This period is considered to primarily occur between 11-19 years (Sawyer et al., 2012, 2018). There are exciting opportunities for positive development, learning and growth (Bonnie & Backes, 2019). However, adolescents may also face challenges, particularly regarding mental health. A recent global meta-analysis concluded that among individuals who experienced mental health difficulties, one-third first experienced difficulties by age 14 and almost half first experienced difficulties by age 18 (Solmi et al., 2021). Over the last decade, large studies in Ireland (My World Surveys 2012 and 2019; Dooley et al., 2019), the UK (Millennium Cohort Study; Patalay & Gage, 2019), and the US (National Survey on Drug Use and Health; Twenge et al., 2019) also reported increases in adolescents' mental health difficulties and risk-taking behaviours, and decreases in protective factors. Mental health difficulties impact a young person's journey through various developmental milestones including social engagement and interpersonal relationships, academic, occupational, and housing goals, and intrapersonal domains such as self-confidence and self-efficacy (American Psychological Association [APA], 2019; World Economic Forum [WEF], 2020). While there are lifespan implications, a rights-based focus in clinical practice, research, and policy also emphasises the need to prioritise adolescent mental health in the ''here and now'' (Mei et al., 2020; Nolan & Smyth, 2021, p. 14; Viner et al., 2012).

1.2 Theoretical and critical frameworks

1.2.1 Conceptualisation of mental health

'Mental health' is a broad term that varies across individuals, cultures, and contexts. Definitions have moved from a medicalised view of illness and disorder to a conceptualisation of mental health as more than the absence of difficulties, and a continuum of emotional, psychological, and social wellbeing (Keyes, 2002; World

Health Organization [WHO] et al., 2004). Furthermore, Currie & Morgan's (2020) review of almost forty years of adolescent mental health research in the international Health Behaviour in School Aged Children (HBSC) study illustrated how terminology remains varied. In addition to the term 'mental health', studies reviewed used terms capturing a range of well-being facets (e.g. mental, perceived, emotional, spiritual, social), psychological and psychosomatic symptoms or complaints, life satisfaction, anxiety and depression (Currie & Morgan, 2020). Looking to concepts used by youth mental health organisations shaped with and for adolescents, such as headspace in Australia and Jigsaw in Ireland, mental health is not solely related to individually inherent factors but also determinants within ''structural, social and societal'' contexts (O'Reilly et al., 2021, p. 4; Orygen, 2017).

The present thesis conceptualises mental health as a changeable state, related to self and others, coping with life experiences, and functioning day-to-day and in wider social contexts (Galderisi et al., 2015; Keyes, 2002; Orygen, 2017; WHO, 2020). The thesis positions mental health not as a risk inherent to individuals, but as an aspect of health arising within the context of risk and protective factors, or determinants 'upstream' in an adolescent's world (Viner et al., 2012). Viner and colleagues have referred to this as a ''complex web'' in which an adolescent develops, involving family, peers, community, society, and structural and cultural factors (Viner et al., 2012, p. 1641). Psychological research and practice thus need to situate the adolescent within these wider contexts (APA, 2019) to understand the psychosocial (e.g. family, peer and community relationships), societal (e.g. neighbourhood safety, attitudes and ideologies), and structural (e.g. national wealth, access to resources) determinants of mental health (Currie & Morgan, 2020; Galderisi et al., 2015; Orygen, 2017; Palumbo & Galderisi, 2020; Viner et al., 2012; WHO, 2020).

1.2.2 Bioecological Theory's Process-Person-Context-Time Model

Bronfenbrenner's (1994) Bioecological Theory of development proposes multiple systems operating in an individual's world, later expanded to capture the interplaying effects of processes, personal characteristics, context, and time, on development (Process-Person-Context-Time [PPCT] model; Ashiabi & O'Neal, 2015; Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Evans, 2000). This model has been applied to

adolescent mental health (Currie & Morgan, 2020; Seng et al., 2012). The adolescent is central to the model and intrapersonal processes include their characteristics, resources, and personal and socially constructed identities e.g. gender, ethnicity. However, wider systems shape outcomes through interdependent proximal and distal processes (Tudge et al., 2016; Viner et al., 2012). The microsystem, closest to the adolescent, consists of family, peers, school, and community. The mesosystem represents processes between microsystem settings i.e. ''a system of microsystem'' (Seng et al., 2012, p. 40). The exosystem reflects indirect environments influencing the adolescent through distal processes with outcomes in the microsystem, e.g. economic, political, educational, media, and healthcare systems, as well as war and climate change, the effects of which may differ across social groups (Seng et al., 2012; Viner et al., 2012). The macrosystem encapsulates societal and cultural norms, ideologies, and beliefs, as well as processes determining access to opportunities and resources (Ashiabi & O'Neal, 2015). Finally, the chronosystem reflects how the processes within and across these systems change over time.

Researchers have critiqued Bronfenbrenner's theory for lack of emphasis on the intersecting processes arising from power and oppression within systems (Santos & Toomey, 2018). The processes vary in form, content, and power (Tudge et al., 2016; Viner et al., 2012) and their operation creates social stratification and inequalities within systems and among groups based on socioeconomic, political, educational, and healthcare opportunities (Viner et al., 2012). Alternative developmental models have emerged, for example, García Coll and colleague's (1996) integrative developmental model also considers the influence of social position, discrimination and racism, and environment and culture, on the development of children from different ethnic backgrounds. However, the integrative model focuses on one social category (ethnicity) rather than social categories within and across groups (Santos & Toomey, 2018). Researchers argue that there are multiplicative effects on developmental outcomes, including mental health, that occur at particular social locations because of processes of power and oppression within and across systems (Bronfenbrenner & Ceci, 1994; Currie & Morgan, 2020; Kern et al., 2020; Seng et al., 2012; Tudge et al., 2016). Arguably the PPCT model seeks to capture the prominence of intrapersonal and

interpersonal, systemic, and structural processes, in determining developmental and health outcomes (Currie & Morgan, 2020; Tudge et al., 2016). In addition, the model benefits from integration with a critical framework concerned with the operation of power, oppression, and inequalities resulting from such processes (Bauer, 2014), namely intersectionality.

1.2.3 Intersectionality

Intersectionality is not a testable hypothesis but rather a critical framework for understanding intersecting processes of power across societies, and their influence on human experiences (Bauer et al., 2021; Collins & Bilge, 2020; Evans et al., 2018; Grzanka, 2020). The term is attributed to Kimberlé Crenshaw (Crenshaw, 1989, 1991). However, intersectionality as a concept is traceable to the 1960s, and according to some scholars it has existed for the last two hundred years, arising from the activism and narratives of Black and Indigenous women, Women of Colour, feminists, and sexually diverse identities (Buchanan & Wiklund, 2021; Collins & Bilge, 2020). These movements sought to analyse and challenge the intersections of social categories such as race and ethnicity, gender, language, class, and sexual orientation (Buchanan et al., 2020; Santos & Toomey, 2018). The intersections are referred to as 'social locations', e.g. the location between gender and ethnic identities (Bauer, 2014; Else-Quest & Hyde, 2016a). While intersectionality does not assume a deficits-based understanding of the effects of processes of privilege and oppression, as a framework it centralises the current and historical inequalities that so often occur from such processes (Buchanan & Wiklund, 2021; Cole, 2009). Thus, intersectionality is also concerned with informing practice and policy, and instigating social change (Buchanan & Wiklund, 2021; Collins & Bilge, 2020).

1.3 Implications for psychology and adolescent mental health

In psychology's history ''the individual reigns supreme as the primary unit of analysis'' (Bowleg & Bauer, 2016, p. 338). However, individual health outcomes are greatly determined by environment and context, including systems of power. The psychological impact of interpersonal and structural oppression and inequality is well-evidenced (Rosenthal, 2016) and Grzanka (2020, p. 257) argues that it is psychology's responsibility to hold systemic determinants accountable for health outcomes and not

relegate them ''to the proverbial 'implications' sections of papers or the discarded process notes of a therapy session''. An intersectional framework advocates for the interdisciplinary potential of researchers and academics, practitioners, and activists (Buchanan & Wiklund, 2020; Collins & Bilge, 2020), and the identification of intervenable processes from practice to policy level to avoid further reinforcing inequalities (Bauer, 2014). A trio of questions to guide psychological researchers integrating intersectionality into their work have been proposed by Cole (2009), i) who is included within a social category, with particular attention given to heterogeneity within groups; ii) what role does inequality play, i.e. situating adolescents within social, cultural and historical processes reflecting operations of power; iii) and what are the similarities across categories, i.e. what are the shared experiences and outcomes. Thus, intersectionality has a role in adolescent mental health research as a critical framework that ''challenges the decontextualization of individuals'' and situates psychological experiences within the layers of systems and processes constituting the PPCT model (Else-Quest & Hyde, 2016a, p. 158). Yet intersectionality is still an emerging framework in the field of clinical psychology (Buchanan & Wiklund, 2021; Grzanka, 2020; Settles et al., 2020) and its use in the context of mental health has also been limited to recent years (Fagrell Trygg et al., 2019).

1.4 Objectives of the present thesis

The overall objective of the present thesis is to examine the effects of social categories, processes, and determinants on adolescent mental health, using an intersectionality framework. The following questions guided the research:

- How do processes of power and oppression affect adolescent mental health within and between social categories/locations?
- What are the determinants of adolescent mental health within and between social categories/locations, and are there particularly salient determinants?
- How can processes and determinants impacting adolescent mental health inform practice and policy to address adolescents' mental health needs?

These questions were addressed through two studies:

1. *Systematic Review:* Firstly, a qualitative systematic review focusing on ethnicity and culture was completed. Criticisms have been made against psychological research in developed, westernised contexts for consistently under-recognising ethnically and culturally diverse groups in recent decades, limiting clinical and research understanding (Syed et al., 2018). This first study was guided deductively by the PPCT model and inductively by adolescents' voices to gain a deeper understanding of the mental health of adolescents from ethnically and culturally diverse backgrounds.
2. *Empirical Study:* Secondly, a quantitative empirical study informed by the systematic review and wider research was conducted. This study adopted a within- and between-group approach to investigate the effects of processes and determinants on the mental health of a large diverse sample of adolescents in an Irish secondary-school context.

Chapter 2. Systematic Review

Abstract

Ethnicity has been central to intersectionality research and advocacy throughout its history. As both an aspect of personal identity and a complex social category, ethnicity is embedded within contexts and processes through which an adolescent develops with implications for developmental and mental health outcomes. The present review aimed to explore the mental health of adolescents from ethnically and culturally diverse backgrounds living in developed countries with reference to the Process-Person-Context-Time (PPCT) developmental model, to gain insight into the determinants of adolescent mental health. The methodology employed an inductive and theoretically deductive narrative synthesis of qualitative studies from both academic and non-academic sources published in English from 2000, sourced from databases and internet searches. Seventeen studies meeting eligibility criteria were identified, which were assessed for quality and bias. The synthesised findings highlighted the multisystemic contexts in which adolescents from ethnically and culturally diverse backgrounds were situated and revealed risk and protective effects of processes and determinants on mental health outcomes within these systems. Adolescents identified variations in cultural norms, discrimination, social inequalities, and interpersonal conflicts, as risks to their mental health. The protective effects of connection in proximal contexts such as family and school, and adolescents' personal strengths and resources, were also highlighted. The review elicited findings regarding adolescents' experiences with mental health professionals and services, with adolescents emphasising the importance of sensitivity and understanding of, and a sense of trust in, professionals and services. Limitations to examining studies with adolescents from a variety of backgrounds included the breadth and complexity of ethnicity and culture. Cognisant of this, the review identified both shared and nuanced processes and determinants impacting the mental health of adolescents from ethnically and culturally diverse backgrounds. Findings also provide considerations for research, and practice and policy for meeting the mental health needs of adolescents from diverse backgrounds.

2.1 Introduction

Ethnicity and race have historically been central to the concept of intersectionality (Buchanan & Wiklund, 2021; Collins & Bilge, 2020; Crenshaw, 1989, 1991), representing complex and multi-faceted identifiers whose definitions are often used interchangeably (Rooney & Canavan, 2018). Definitions of race are tied with physical characteristics including skin colour, and race is now widely regarded as a social construction without a biological basis that has been used as a means of oppression (APA Task Force on Race and Ethnicity Guidelines in Psychology [APA Task Force], 2019). Ethnicity, broadly defined, relates to a person's sense of belonging to a collective people sharing common characteristics including cultures, traditions, languages, practices, beliefs, and religions, amongst other domains (APA Task Force, 2019; Rooney & Canavan, 2018). While intertwined, neither ethnicity nor culture explain the whole of the other (Dogra et al., 2012) and culture itself encompasses values, beliefs, traditions, etc. shared through generations of social groups (APA Task Force, 2019). Ethnicity when categorised has become socially constructed and situational, varying over time and place (Mulinari et al., 2018), particularly in migration contexts where continuous adaptation of ethnic identities within and across borders have a protective function for ethnically and culturally diverse groups (Fox & Jones, 2013; Jones-Correa, 2020). Such social categorisations are constantly diversifying within and between group changes occurring for many reasons including global migration, growing multigenerational families and communities, and formal recognition of indigenous groups (Alegria et al., 2019; Basu & Isaacs, 2019; Dizon et al., 2021; Fazel et al., 2012; King-O'Riain, 2007; Sundar et al., 2012). As Jones-Correa (2020) notes, ethnicity is thus ''both 'true' and 'false' depending on the context''.

2.1.1 Ethnicity in the PPCT model

Ethnicity is a core aspect of personal identity that is also connected to family, peers, community, and other entities in an adolescent's micro- and meso-systems, all of which can differ in perspectives of, and value attributed to, ethnicity (APA Task Force, 2019; Arakelyan & Ager, 2021; Rooney & Canavan, 2018). Ethnicity and culture are also prominent in the exo- and macro-systems, shaped by ideologies, practices and beliefs, and the chronosystem represents how adolescents' identities and

development shift within and across ethnic and cultural norms over time as well as context (Seng et al., 2012; Viner et al., 2012). Historically, discrimination based on ethnicity has occurred as a significantly damaging process of power and oppression (APA Task Force, 2019). With regards to ethnicity, racism is defined as ‘’any action, practice, policy, law, speech, or incident which has the effect (whether intentional or not) of undermining anyone’s enjoyment of their human rights, based on their actual or perceived ethnic or national origin or background, where that background is that of a marginalised or historically subordinated group’’ (Irish Network Against Racism [INAR], 2020, p. 2). Racism and discrimination based on ethnicity and culture remain mental health, social justice, and human rights issues reflecting intersectionality’s core tenets of oppression, which psychology and healthcare have a responsibility to address (APA Task Force, 2019; Buchanan & Wiklund, 2020; Kollins, 2021; Settles et al., 2020; Sundar et al., 2012).

2.1.2 Research, practice, and policy

As with the positioning of the present thesis, ethnicity and culture are not the determinants in disparate mental health outcomes across groups, rather risk and protective determinants related to contexts and processes impact health outcomes (Viner et al., 2012). Such determinants function across systems and time e.g. systemic inequalities faced in contexts where current and historical discrimination exists, or experiences of separations and displacement through asylum-seeking (Arakelyan & Ager, 2021; Bae, 2020; Benner et al., 2018). For example, there is extensive evidence of the impact of racism on adolescent mental health outcomes e.g. higher levels of depression, psychological distress, risk-taking behaviours, and lower levels of self-esteem and help-seeking (Benner et al., 2018; Byrow et al., 2020; Fazel et al., 2012; Gopalkrishnan, 2018; Priest et al., 2013; Trent et al., 2019). Psychologists must also exercise reflexivity and challenge deficits-based hypotheses pathologising ethnicity and culture, expecting detrimental outcomes, or assuming ethnicity and culture are relevant to an adolescent in relation to their mental health (APA Task Force, 2019).

Nonetheless, research regarding ethnicity has been problematic and there have been various permutations of definitions and categories used that imply homogeneity of diverse groups, have not been extensively inclusive, and have upheld historical

oppression or implied ‘othering’ (Austin, 2018; Bunglawala, 2019; Dogra et al., 2012; Mulinari et al., 2018). One example is the evolution of the ethnicity question in the Irish Census and the references to race, from piloting in 1999 (e.g. the ethnic group responses of *Irish, Irish Traveller, British, Other*) to the 2006 ethnic or cultural background question (e.g. *White*: Irish, Irish Traveller, Any other White background; *Black or Black Irish*: African, Any other Black background*; Asian or Asian Irish*: Chinese, Any other Asian background; *Other,* including mixed background; King-O’Riain, 2007). Recalling Cole's (2009) question of who is included in a social category, within-group ethnic and cultural variation is extensive and changeable (Viner et al., 2012), situation/context-dependent e.g. migration and displacement (Fox & Jones, 2013; Jones-Correa, 2020), and it is important to recognise diversity within groups (Buchanan & Wiklund, 2021). Census categories globally risk affirming fixed constructs of ethnicity without truly capturing nuance experiences (Jones-Correa, 2020). However, Dogra et al. (2012, p. 265) contend that ‘’despite the problems in defining these variables, it is well established that they can influence mental health problems either as proxies for socioeconomic determinants or by influencing the way mental health is understood, services are accessed and interventions are accepted'', reflecting the PPCT model. Integrating the model with an intersectional framework offers a potential remedy to this ‘research essentialism’ (Fox & Jones, 2013), highlighting the relevance of Cole's (2009) remaining questions regarding the role of inequality and shared experiences across social categories. Research involving ethnicity is warranted to bring inequalities and oppressive processes to the fore and identify varied and shared experiences to inform culturally responsive interventions and policies (APA Task Force, 2019; Bauer, 2014; Buchanan & Wiklund, 2021; Grzanka, 2020).

2.1.3 The present review

Given the complexity of ethnicity as a social category, and the intricacies of unique and shared experiences of adolescents from diverse backgrounds, the present systematic review sought to explore ethnicity and mental health more deeply through adolescents’ own voices. Thus, the following study entailed a narrative synthesis focused on qualitative methods to amplify the voices of adolescents as experts by experience (Syed et al., 2018; Willig, 2019), to explore the mental health of

adolescents from ethnically and culturally diverse backgrounds living in developed countries. The following questions will be addressed:

1. How do systems and processes impact the mental health outcomes of adolescents from ethnically and culturally diverse backgrounds?
2. What are the risk and protective determinants experienced by adolescents from ethnically and culturally diverse backgrounds?
3. What implications do the review findings have for psychological research (e.g. the empirical study), clinical practice, and policy?

2.2 Methodology

The current review followed the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) 2020 statement (Page et al., 2021) and the Enhancing Transparency in Reporting the Synthesis of Qualitative Research (ENTREQ) framework (Tong et al., 2012). The protocol was registered with Prospero in November 2020 and updated in April 2021 (published by Prospero in January 2022; see https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020211216).

The review assumed a qualitative approach prioritising adolescents' voices given the unique differences and personal meaning attributed to individual experiences of mental health, particularly in the context of diversity (Syed et al., 2018; Willig, 2019). The review was thus guided by the SPIDER (sample, phenomenon of interest, design, evaluation, and research type) framework for qualitative studies (Cooke et al., 2012).

2.2.1 Eligibility criteria

The review included studies from academic (peer reviewed journals) and non-academic sources e.g. health services, charities and non-governmental organisations.

Inclusion criteria for both academic and non-academic sources:

- Adolescent sample, predominantly aged 12-18 years.
- Participants from ethnically and culturally diverse backgrounds (see 2.2.6).
- Examining participants' lived experiences and understanding of mental health, as defined earlier in this thesis, and thus including concepts of psychological, social, and emotional wellbeing.

- Qualitative methodology, with particular focus on methodologies that centralise participant voices i.e. interviews and focus groups.
- Conducted in developed countries, defined by the United Nations (UN, 2019).
- Published in the English language, which contributed a level of bias, however this was due to limited resources for translation.
- Conducted from the year 2000 on, which situated the review in the context of global migration and health changes, including large shifts in migration into Ireland in the early 2000s (King-O'Riain, 2007), developments in the European Union asylum policy (Kaunert & Léonard, 2012) and a global focus on mental health from the WHO with the 2001 World Health Report (WHO, 2001). The period was also marked by the global recession and 'War on Terror' which both impacted policies, levels of displacement and tolerance of ethnic and cultural differences on a global scale (Schmid, 2016; UN Development Programme, 2009). It also parallels the growth of Direct Provision in Ireland, the system of seeking asylum that has received significant human rights criticisms (Irish Human Rights and Equality Commission, 2014). Increased recognition of youth mental health has also grown since 2000 with the formation of seminal services such as Orygen and headspace in Australia and Jigsaw in Ireland, and research highlighting trends in young people's mental health needs since the early 2000s (Patalay & Gage, 2019; Twenge et al., 2019).

Exclusion criteria for both academic and non-academic sources:

- Child (under-12) or adult (over-18) samples, or combined samples where adolescent participants were not the primary focus.
- Samples not prioritising ethnically or culturally diverse participants.
- Phenomenon of interest is not mental health.
- Quantitative methodologies, or mixed-method research where qualitative data is not prioritised.
- Conducted in countries not identified as 'developed' (UN, 2019), or multi-country studies where it is not possible to extract specific data.
- Not published in the English language.
- Conducted pre-2000.

2.2.2 Information sources

PsycInfo, MEDLINE, and CINAHL databases were searched for academic references on 07/07/2020, 08/11/2020 and 07/04/2021. Non-academic references, such as government or charity reports (Aromataris & Riitano, 2014), were sourced through internet searches from 23/10/2020-26/11/2020 in line with the San Francisco Declaration of Research Assessment (DORA; Raff, 2013). The voices of experts by experience are often prioritised in such literature and including non-academic references reduces the risk of publication bias and provides a broader picture of the context of the research question and existing literature (Paez, 2017). Searches were completed again on 22/02/2022 to check for new publications.

2.2.3 Search strategy

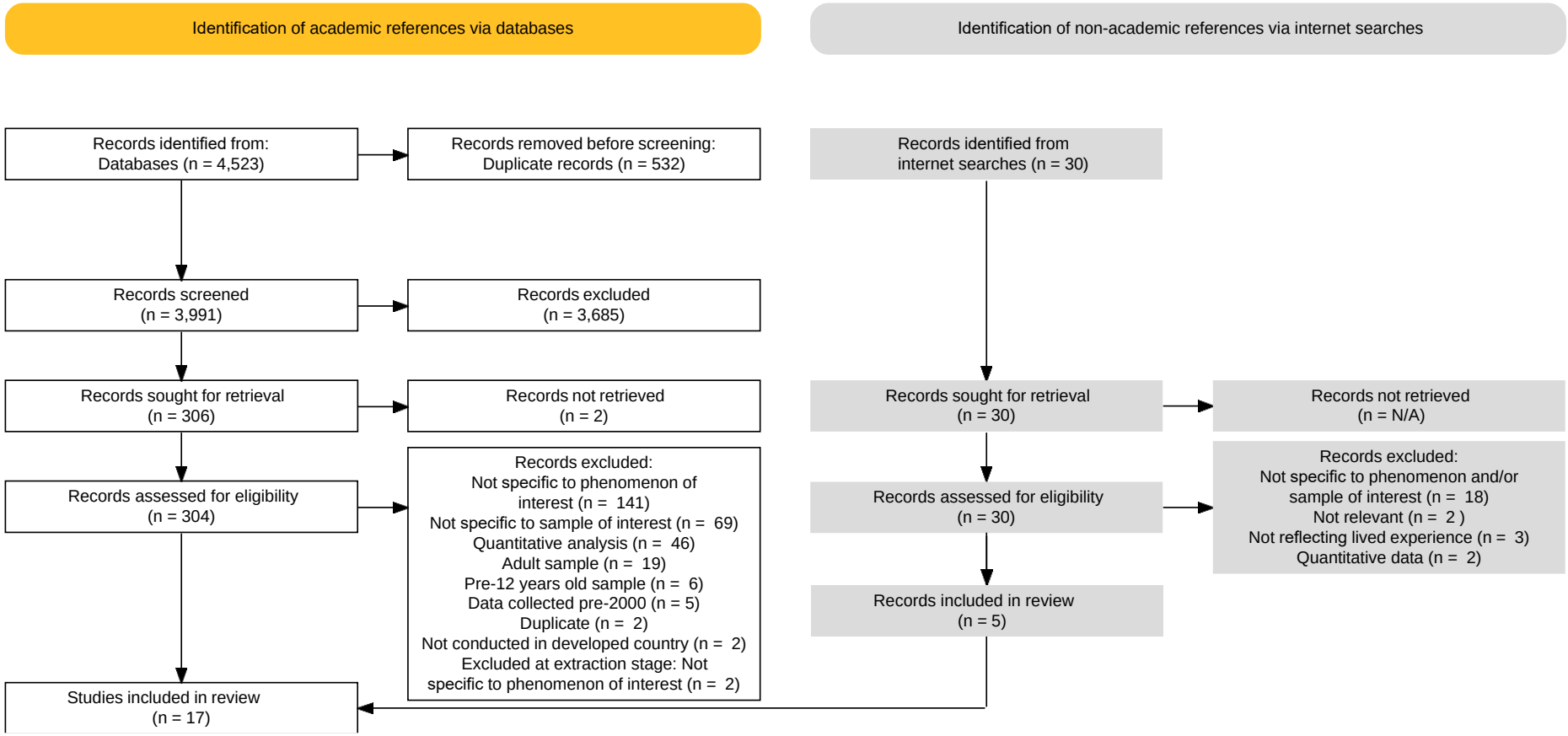
Search terms related to ''adolescents'', ''ethnicity'', ''culture'', ''developed countries'', ''mental health'', ''experiences'' and ''qualitative'' methods were developed and checked against the controlled vocabulary terms for each database. Non-academic searches were identified using a systematic and funnelled approach with a select range of keywords, first specifying global sources followed by English-speaking developed countries. Search strategies are included in Appendix 1. The author (AD) completed all searches and collated all references for screening and data extraction.

2.2.4 Selection process

Academic references were screened using *Covidence*. AD completed title-abstract, and full-text, screening for all references. A second reviewer (DL) independently completed 20% title-abstract, and total full-text, screening. Conflicts were discussed with academic supervisor BD. AD completed initial screenings of non-academic searches prior to downloading studies. AD and BD independently screened 100% of the non-academic studies using Microsoft Excel and discussed any conflicting results. Figure 1 (Haddaway & McGuinness, 2020) illustrates the study selection process.

Figure 1

PRISMA flow diagram of the study selection process.



2.2.5 Data extraction

AD developed an extraction and quality assessment form in Microsoft Excel that was used by all authors. Extracted data included information on the study aims, sample, temporal and contextual characteristics, study design and theoretical/analytical approaches, and findings from study results sections. AD extracted 100% of academic and non-academic references. Independent extractions were completed by DL for 50% of the academic references and by BD for 100% of the non-academic references, and conflicting extraction results were discussed by the authors. All authors had previous academic experience with qualitative and youth mental health research.

2.2.6 Quality and bias assessments

Given the lack of consensus on appropriate quality procedures in qualitative systematic reviews (de Jong et al., 2021), the present review employed checklist, reporting standards and reflective approaches to assess quality and bias of the individual studies and overall review. These were the ENTREQ framework (de Jong et al., 2021; Tong et al., 2012) and COREQ (COnsolidated criteria for REporting Qualitative research) checklist (de Jong et al., 2021; Tong et al., 2007), which considers the domains of the research team and reflexivity, study design, and analysis and findings, in studies using focus groups and interviews. A COREQ score out of 32 was calculated for each study. Data from studies of poor quality were critically reviewed, however, they were not excluded given that they may still contribute relevant findings (Popay et al., 2006; Syed et al., 2018). DL completed the COREQ for 50% of academic references. The COREQ was adapted for one non-academic reference that used large-scale open-ended survey questions. BD completed the COREQ for 100% of non-academic references. Including non-academic references also contributed to the reduction of publication bias (Aromataris & Riitano, 2014; Paez, 2017). The GRADE-CERQual tool (Lewin et al., 2018), the Confidence in the Evidence from Reviews of Qualitative research (CERQual) approach from the Grading of Recommendations Assessment, Development and Evaluation (GRADE) tools, was used to assess the level of confidence in the review findings. The tool considers individual studies' methodological limitations, coherence with review findings, adequacy of the data, and relevance of the synthesised findings to the review's objectives. The concluded level

of confidence in whether the review finding is a reasonable representation of the phenomenon of interest ranges from high (highly likely), moderate (likely), low (possible), and very low (not clear). AD completed GRADE-CERQual for all studies and discussed findings with BD.

Recognised by the COREQ, author reflexivity is important in qualitative research and within an intersectionality framework (Galdas, 2017). The present author reflected on her own biases as a White Irish female academic from a developed and westernised country, with social privileges providing the opportunity to complete the present research (Johnstone et al., 2018; Roberts et al., 2020). To self-inform, AD attended talks and workshops related to ethnic and cultural experiences in clinical practice, racism, and mental health. DL completed a clinical placement in the Direct Provision system. AD and BD also consulted with a Doctoral Studies Panel member with clinical and academic experience in these areas. Particular attention was paid to the power of language in upholding oppressive perspectives and systems e.g. 'minority' implies White populations are the default and majority; 'BAME' (Black, Asian and Minority Ethnic) is criticised for limited inclusivity and implying homogeneity (Bunglawala, 2019; Dogra et al., 2012). Campbell-Stephens (2020) pioneered 'Global Majority', to refer to individuals from Asian, Black, Brown, dual-heritage, and global south indigenous communities. However, the current review sought to include experiences of adolescents from other indigenous communities such as Irish Travellers. Therefore, the descriptor of 'ethnically and culturally diverse backgrounds' was employed. The authors acknowledge the continued limitations of terms such as ethnicity when attributed to fixed constructs and the use of 'diverse backgrounds' in the descriptor reflects an effort to capture the malleable, ''fluid, context-driven and contiguous'' nature of ethnicity and culture (Jones-Correa, 2020; Fox & Jones, 2013, p. 386).

2.2.7 Synthesis method

A narrative synthesis, with a focus on the use of words and texts to synthesise and explain the review findings (Popay et al., 2006), was conducted. Narrative approaches recognise heterogeneity and diversity in data, and the importance of each study's context (Popay et al., 2006). Data were synthesised in four stages. Firstly, the review was theoretically informed by the PPCT model (Bronfenbrenner & Ceci, 1994;

Bronfenbrenner & Evans, 2000) in the context of adolescent mental health (Currie & Morgan, 2020). Secondly, a preliminary synthesis of study findings was tabulated from initial review and extraction. Thirdly, data were critically investigated using an deductive theoretical approach with the PPCT model, and an inductive approach led by adolescents' voices. A visual summary and in-text synthesis were generated. Finally, robustness of the synthesised findings was assessed with GRADE-CERQual.

2.3 Results

2.3.1 Study identification and characteristics

Searches retrieved 4,523 academic records and 3,991 were screened at title-abstract stage after duplicates were removed. Initially 306 records were identified for full-text screening. However, two were excluded at this stage as they were not retrieved from searches through university and health service libraries, and emails to authors. Of the 304 assessed for eligibility, twelve academic records were included in the review. Of the 30 non-academic records assessed, five were included (Fleming et al., 2020; Hanson, 2019; Jones et al., 2018; Pavee Point, 2015; Street et al., 2005). At the full text screening stage, records were excluded for a variety of reasons (see Figure 1). Records identified as not specific to phenomenon of interest (i.e. mental health) included studies related to experiences of conflict and violent, identity development and acculturation, stress and resilience, help-seeking and accessing healthcare, parenting and attachment, other health issues (e.g. HIV, asthma), and alternative therapies (e.g. music, drama). Records identified as not specific to sample of interest included studies in which findings for adolescent samples were combined with child or adult sample findings, or with samples not from ethnically or culturally diverse backgrounds in the study's country of origin. In these instances, it was not possible to extract data relevant to the current systematic review's sample of interest. The characteristics of the included studies are presented in Table 1.

Most studies were conducted in England (*n*=8). In terms of methodology, most studies involved focus groups and interviews, except Fleming et al. (2020), which involved a large-scale survey with open-ended questions, and Pavee Point (2015), in which workshops and photographic engagement were used. Participants' ethnic and cultural backgrounds, and contextual characteristics, varied within and between studies.

Table 1

Study characteristics.

Study	Type and aims	Country	Methods	Research timeframe	Sample demographics	COREQ score
Ali et al. (2017)	Peer reviewed paper. To obtain a deeper understanding of Pakistani young people's views on barriers to accessing mental health services and inform improvements to accessing services.	England	Focus groups. Framework and thematic analysis.	2012-2013	*N*=33; 11-19 years; 16 female, 17 male; British Pakistani, Pakistani, Pakistani/Kashmiri; first-generation Pakistani adolescents from a multigenerational community.	23
Arora & Khoo (2020)	Peer reviewed paper. To examine sources of stress that may contribute to mental health concerns among Asian immigrant-origin youth, and perceptions of barriers to mental health service use.	USA	Focus groups. Grounded theory, multistage coding.	Not reported	*N*=33; 14-20 years (*n*=2 aged 19 and 20 years); 19 female, 14 male; Chinese (*n*=25), Pakistani (*n*=2), Bangladeshi, Burmese, Indian, Korean, Malaysian, Taiwanese (each *n*=1); first- and second-generation Asian immigrant-origin young people who had resided in the US from ages 0-13 years.	24
Austin (2018)	Doctoral thesis. To explore how peers and friends influence the ethnic identity and mental health of multiracial adolescent girls.	England	Interviews. Pragmatism and constructivism, thematic analysis.	Nov 2017	*N*=12; age *mean*=14.3, *SD*=0.31; females only; adolescents identified as multiracial.	26
de Anstiss et al. (2010)	Peer reviewed paper. Part of a wider investigation of mental health service utilisation, to add information to findings regarding help-seeking and mental health service utilisation.	Australia	Focus groups. Thematic approach.	Not reported	*N*=85; 13-17 years; 41 female, 44 male; Afghan, Bosnian, Iraqi, Liberian, Persian, Serbian, Sudanese; refugee and asylum-seeking adolescents who arrived in Australia over ten years prior to the research study.	18
Dogra et al. (2007)	Peer reviewed paper. To explore Gujarati adolescents' and parents' perceptions of services and service characteristics.	England	Interviews. Exploratory, content analysis.	Sept 2003 – Sept 2004	*N*=15 (youth sample); 12-16 years; 7 female, 8 male; first-generation Gujarati adolescents born to parents from India, Kenya, Tanzania, and Uganda.	20
Fleming et al. (2020)	Multi-university and Adolescent Health Research Group study. Part of a larger study, to explore the health and wellbeing of New Zealand adolescents, with added focus on rangatahi wellbeing.	New Zealand	Survey with open-ended questions. Thematic coding.	2019	Most details not explicit; 13-17 years (overall study sample); Rangatahi Māori (Māori youth); Pacific; Asian; Pākehā (white NZ youth), European; indigenous communities and multi-generation cohorts.	N/A

Garcia & Saewyc (2007)	Peer reviewed paper. To explore perceptions of mental health of Mexican-origin immigrant adolescents to inform design and delivery of preventive services and interventions.	USA	Interviews. Ethnography.	Not reported	*N*=14; 15-20 years (*mean*=16.86); 9 female, 5 male; Mexican young people who emigrated to the US between three months and three years prior to the research study.	23
Gonçalves et al. (2015)	Peer reviewed paper. To explore the family-school-primary care triangle and access to mental health care for migrant and ethnically diverse families in Portugal.	Portugal	Focus groups. Mayring method, content analysis.	2009, application of findings in 2010-2012	*N*=16 (youth sample); 12-17 years; 5 female, 11 male; Portuguese/African descendent, Cape-Verde (each *n*=4), Brazil, Angola (each *n*=3), Other (*n*=2); adolescents migrated to Portugal a mean of 5.1 years prior to the research study.	12
Goodkind et al. (2015)	Peer reviewed paper. To describe a community-based participatory research approach to understanding Diné perspectives on coping, healing and treating, and translate findings to meaningful change through a community project.	USA	Interviews. Grounded theory community-based participatory research.	Not reported	*N*=14 (youth sample); 12-17 years; 8 female, 6 male; American Indian and Alaskan Native adolescents from the indigenous Diné community.	26
Groark et al. (2011)	Peer reviewed paper. To explore the psychological and mental health strengths and needs of unaccompanied asylum-seeking children and adolescents in the post-migratory stage, to guide therapeutic interventions.	England	Interviews. Interpretative phenomenological analysis.	Not reported	*N*=6; 16-18 years; 2 female, 4 male; African countries (*n*=5), Asia (*n*=1); unaccompanied asylum-seeking adolescents who were cared for under the Children's Act and were resident in the UK for six months to a year at the time of the research.	22
Gurpinar-Morgan et al. (2014)	Peer reviewed paper. To explore the views and experiences of Black and ethnic minority young people accessing mental health services in the NHS, with reference to ethnicity and the therapeutic relationship.	England	Interviews. Interpretative phenomenological analysis.	Not reported	*N*=5; 16-18 years; 4 female, 1 male; Black and other not-specified ethnic groups; multi-generational adolescents accessing therapy in a specialised mental health service.	15
Hanson (2019)	Research report commissioned by Leeds City Council and National Health Service (NHS) Leeds Clinical Commissioning Group. To complete a Health Needs Assessment (HNA) of the mental health needs of Black and minority ethnic young people in Leeds to inform service development.	England	Focus groups. Themes.	Not reported	*N*=31; 12-18 years; 20 female, 11 male; multigenerational African Caribbean and Mixed Caribbean/White, Bangladeshi, Chinese, Pakistani adolescents.	13

Jones et al. (2018)	Research report by the Education Authority Children & Young People's Services. To learn about the mental health needs of newcomer children and young people in Northern Ireland, and how the Education Authority Youth Service can contribute to improving their health and wellbeing.	Northern Ireland	Focus groups. Interpretivist paradigm, coding, network analysis.	Jan-Apr 2018	Most details not explicitly reported for focus group sample. 9-13 years and 14-18 years (both focus groups); Bangladeshi, Bulgarian/Roma, Chinese, Hungarian, Indian, Lithuanian, Philippino, Polish, Portuguese, Romanian, Russian, Slovakian, Somalian, Syrian, Thai (from survey data); newcomer children and young people who had arrived in Northern Ireland several months prior to the research.	17
Kingi et al. (2017)	Peer reviewed paper. To explore the experiences of rangatahi Māori who self-injure in familial and cultural terms.	New Zealand	Focus groups. Thematic analysis.	Not reported	*N*=25 (youth sample); 13-18 years; 20 female, 5 male; rangatahi Māori.	19
Majumder et al. (2015)	Peer reviewed paper. To explore unaccompanied refugee and asylum-seeking adolescents' views and perceptions of mental health and mental health services.	England	Interviews. Thematic analysis.	Not reported	*N*=15; 15-18 years; 1 female, 14 male; Afghanistan (*n*=11), Eritrea, Iran, Somalia (each *n*=1); refugee and asylum-seeking adolescents who had been in the UK for different timeframes and were engaged with the service in which the research was conducted for at least six months.	13
Pavee Point (2015)	Research report by Pavee Point, the Irish Traveller and Roma Centre. To explore the topic of mental wellbeing with young Travellers in Ireland, to inform the development of an online resource to provide a pathway to supports to decrease suicide.	Ireland	Workshops and photographs. Themes.	Mar-May 2014	*N*=88; 13-23 years; 33 female, 55 male; young people from the Irish Traveller community.	22
Street et al. (2005)	Research report commissioned by The Diana Princess of Wales Memorial Fund, The Henry Smith Charity, Department of Health, National Institute for Mental Health in England (NIMHE) and Children and Young People's Unit (CYPU). To give 'voice' to young people from Black and minority ethnic backgrounds in relation to their experience of, and wishes, for mental health services.	England	Interviews. Thematic analysis.	2001	*N*=76; 12-25 years (majority 16-18 years); Black African, White and Black Caribbean, Black other, Bangladeshi, Indian, Pakistani, White and Asian, Asian other, White British, White Irish, White other; young people from refugee and asylum-seeking backgrounds, socioeconomically vulnerable neighbourhoods, looked-after young people, and young people engaged with mental health services.	15

Samples included young people from multigenerational ethnic communities (*n*=8; Ali et al., 2017; Arora & Khoo, 2020; Austin, 2018; Dogra et al., 2007; Fleming et al., 2020; Gurpinar-Morgan et al., 2014; Hanson, 2019; Street et al., 2005), refugee and asylum-seeking young people (*n*=5; de Anstiss et al., 2010; Groark et al., 2011; Jones et al., 2018; Majumder et al., 2015; Street et al., 2005), young people who had immigrated to the country in which the study was conducted (*n*=4; Arora & Khoo, 2020; Garcia & Saewyc, 2007; Gonçalves et al., 2015; Jones et al., 2018), and young people from indigenous communities (*n*=4; Fleming et al., 2020; Goodkind et al., 2015; Kingi et al., 2017; Pavee Point, 2015). Several studies included perspectives of other family members and/or service providers, however only findings related to adolescents' experiences were extracted and synthesised. Findings reflected both adolescent participants' personal experiences and their wider perspectives on their peer groups.

Studies varied in methodological quality with COREQ scores ranging from 12-26 (Appendix 2 Table 2.1). A score for Fleming et al. (2020) was not interpretable due to the use of open-ended survey questions. Using the COREQ and GRADE-CERQual methodological limitations domain (Munthe-Kaas et al., 2018), studies were concluded to be of no or minor (*n*=10), moderate (*n*=4), and serious (*n*=3) concern, with most studies evidencing good methodological quality (Appendix 2 Table 2.2).

2.3.2 Synthesis of findings and aims of the review

Findings were synthesised with reference to the PPCT model and the aims of the present review, visualised in Figure 2. Details of the individual studies corresponding to the synthesis are included in Appendix 2 Table 2.3. Findings represented processes, personal characteristics of the adolescent, contexts across the macrosystem ('Mac'), exosystem ('Exo'), and microsystem ('Mic'), personal characteristics ('Per'), and time.

2.3.2.1 Processes

Processes were integral to the other components of the PPCT model and are discussed in the following sections with particular reference to the contexts component of the PPCT model. Discrimination was identified as a powerful distal process (Process 1) spanning macro-, exo-, and micro-system contexts with significant implications for adolescent mental health, e.g.

> ''*Many people who were born here, they bully. They say things to Asians like, "You're from Asia not American! So why did you come here?" Like they're teasing us like this. It's kind of stressful*'' (Student; Arora & Khoo, 2020, p. 2595)

Adolescents also identified psychosocial and socioeconomic inequalities operating distally (Process 2) through resource inequalities and social issues, situated in the exosystem. Their relevance to adolescent mental health is evidenced by how such processes manifested for adolescents e.g. inequalities in accessing mental health services and a lack of felt safety. These processes demonstrate oppression and inequality at a societal and structural level, which affect mental health outcomes by creating barriers to help-seeking and disrupting adolescents' sense of security during a crucial developmental period.

Within the microsystem, the system that holds a wealth of interactions, roles and activities directly relating to the adolescent, processes move from distal to proximal processes (Process 3). Findings highlighted processes and determinants that are both protective, i.e. connection, and risk, i.e. conflict, for mental health. The function of the mesosystem is also reflected in these processes in terms of how connected or conflicted various components of the adolescents' microsystem are. For example, adolescents in the included studies spoke about the challenges experienced when parent/family versus peer perspectives are in conflict.

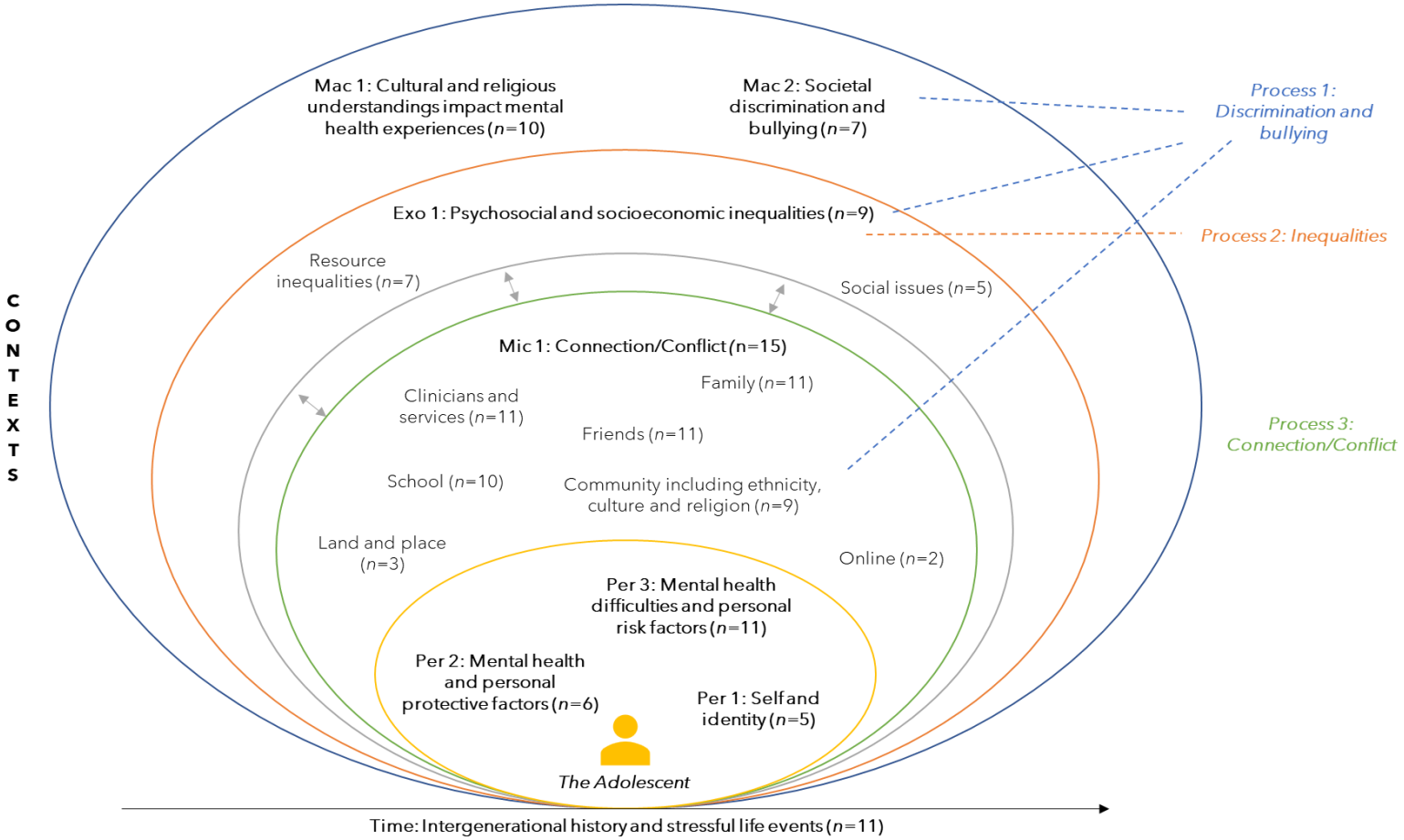
2.3.2.2 Person

At a personal level, aspects of the self and identity (*n*=5; Per 1) and protective (*n*=6; Per 2) and risk (*n*=10; Per 3) determinants for mental health outcomes were identified by adolescents. Reflecting mesosystem processes, adolescents spoke about the interplay of mental health experiences and identity connections/conflicts between parents, family, culture, and the desire to 'fit in' (Austin, 2018; Fleming et al., 2020; Gurpinar-Morgan et al., 2014; Hanson, 2019; Jones et al., 2018) summed up by 'Laila' (Gurpinar-Morgan et al., 2014, p. 717):

> *''Yeah it's like where do I fit in…do I fit in with them or do I fit in with them and you're in the middle and you're just trying to make everyone happy.''*

Figure 2

Study findings as the PPCT model (adapted from Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Evans, 2000).



Note. *n* = count of studies; Mac = macrosystem; Exo = exosystem; Mic = microsystem; Per = person.

In the Garcia & Saewyc (2007) study adolescents referred to feeling ''mentally healthy'' (Per 2a) and ''mentally unhealthy'' (Per 3a). Across six studies mental health was conceptualised as wellbeing, self-esteem, happiness, contentment, resilience, confidence, goal setting, striving, autonomy, self-love and self-care (Austin, 2018; Garcia & Saewyc, 2007; Gonçalves & Moleiro, 2012; Groark et al., 2011; Hanson, 2019; Jones et al., 2018). Coping skills identified as protective for mental health (*n*=4; Per 2b) included cognitive strategies, expressing and accepting emotions, solitude, and engaging in a variety of creative and physical hobbies and activities (Gonçalves & Moleiro, 2012; Groark et al., 2011; Hanson, 2019; Kingi et al., 2017). Across eight studies ''mentally unhealthy'' (Garcia & Saewyc, 2007) was conceptualised as psychological and physical manifestations of anxiety, depression and low mood, stress, intrusive thoughts, anger, trauma, self-injury (Arora & Khoo, 2020; Garcia & Saewyc, 2007; Goodkind et al., 2015; Groark et al., 2011; Hanson, 2019; Kingi et al., 2017; Majumder et al., 2015; Street et al., 2005), and risky behaviours e.g. alcohol and drug use (Fleming et al., 2020). Internalised stigma and shame about mental health difficulties (Per 3c) were identified as risk factors in five studies (Arora & Khoo, 2020; Hanson, 2019; Majumder et al., 2015; Pavee Point, 2015; Street et al., 2005). While these conceptualisations reflect common definitions of mental health, nuanced experiences of isolation, loss, and grief (Arora & Khoo, 2020; Garcia & Saewyc, 2007; Groark et al., 2011; Hanson, 2019; Jones et al., 2018; Kingi et al., 2017; Majumder et al., 2015; Street et al., 2005) also emerged as significant determinants for mental health difficulties in eight studies. Variations in these experiences that were unique to some ethnically and culturally diverse backgrounds related to adolescents' experiences of migration and asylum-seeking (e.g. Arora & Khoo, 2020; Groark et al., 2011; Jones et al., 2018; Majumder et al., 2015), e.g.

> *''Cuz I had a difficult journey and you know for me it was difficult to cope or live alone''* (Respondent 10; Majumder et al., 2015, p.131)

> *''You are all alone, you have to go through it and come out of it by yourself''* (P1 16 12–14, Groark et al., 2011, p.427)

2.3.2.3 Contexts

Macrosystem: Findings from 11 studies related to the impact of variances in adolescents' understandings of mental health, and cultural and religious norms (Macro 1; Ali et al., 2017; Arora & Khoo, 2020; de Anstiss & Ziaian, 2010; Gonçalves & Moleiro, 2012; Gurpinar-Morgan et al., 2014; Hanson, 2019; Kingi et al., 2017; Majumder et al., 2015; Pavee Point, 2015; Street et al., 2005). Macro-level negative connotations about mental health either varied from adolescents' own perspectives, or assimilated into adolescents' understandings of mental health, e.g.

> *''Sometimes craziness maybe come from devil cos I've known a lot of people from my cultural background (who have been victims). We have like – I don't know how to say it in English – witches, we have something like that''* (Sudanese male; de Anstiss & Ziaian 2010, p. 35)

Variances in understanding also resulted in cultural stigma and shame impacting adolescents' help-seeking for mental health difficulties, e.g.

> *''…what other people would think if mental illness was disclosed and consequently people that have the problems, don't express the views, they keep it inside them, they don't tell anyone … for the best''* (FG3, Boy 6; Ali et al., 2017, p. 7).

Bullying and discrimination based on ethnicity and culture, at a macro-level (Macro 2), were identified in seven studies (Arora & Khoo, 2020; Austin, 2018; de Anstiss & Ziaian, 2010; Fleming et al., 2020; Hanson, 2019; Jones et al., 2018; Pavee Point, 2015), reflected on by one adolescent in Austin (2018, p.88), *''racism is always a thing isn't it?''*. In the seven studies, risks to adolescents' mental health outcomes and help-seeking arose from societal attitudes and within- and between-group stereotypes regarding ethnicity (Arora & Khoo, 2020; Austin, 2018; de Anstiss & Ziaian, 2010; Fleming et al., 2020; Jones et al., 2018; Pavee Point, 2015), gender (Austin, 2018; Hanson, 2019), sexuality (Fleming et al., 2020; Pavee Point, 2015), religion (Fleming et al., 2020), image (Hanson, 2019) and mental health (Hanson, 2019; Pavee Point, 2015).

Exosystem: Processes of psychosocial and socioeconomic inequalities were described as operating through resource inequalities (*n*=7; Exo 1a) and social issues (*n*=5; Exo

1b) in the exosystem. Inequalities in accessing resources including mental health services were identified (de Anstiss & Ziaian, 2010; Fleming et al., 2020; Gonçalves & Moleiro, 2012; Goodkind et al., 2015; Hanson, 2019; Pavee Point, 2015; Street et al., 2005), which were often due to socioeconomic and financial reasons (*n*=6; de Anstiss & Ziaian, 2010; Fleming et al., 2020; Gonçalves & Moleiro, 2012; Goodkind et al., 2015; Hanson, 2019; Pavee Point, 2015), as well as informational and logistical (Street et al., 2005), educational (Pavee Point, 2015) and language barriers (Gonçalves & Moleiro, 2012; Street et al., 2005). Adolescents highlighted risks related to lack of safety in three studies (Goodkind et al., 2015; Groark et al., 2011; Majumder et al., 2015), including the context of healthcare services reflected in Majumder et al.'s (2015) study title: *''This doctor, I not trust him. I'm not safe''* (Respondent 8), as well as the risk effects of addiction in the community (*n*=1; Pavee Point, 2015) and climate change (*n*=1; Fleming et al., 2020, p. 3), e.g. "*The climate and how polluted the environment is… you can't really be happy if the environment is sad*" (Pacific Islander female, decile 1, age 15).

Microsystem and meso-system: Adolescents identified diverse and inter-related components of the microsystem, at play in the mesosystem. Through processes of connection and/or conflict, these components have proximal effects on development and health outcomes.

Family (*n*=11): Connection and communication with family, particularly parents, were protective for adolescents' mental health in eight studies (Austin, 2018; Dogra et al., 2007; Garcia & Saewyc, 2007; Gonçalves & Moleiro, 2012; Goodkind et al., 2015; Hanson, 2019; Jones et al., 2018; Kingi et al., 2017). Conversely, conflicts with parents related to risk for adolescents' mental health, coping, and help-seeking in five studies (Arora & Khoo, 2020; de Anstiss & Ziaian, 2010; Gonçalves & Moleiro, 2012; Hanson, 2019; Street et al., 2005). Conflicts often related to parents' stigma towards, or varying understandings of, mental health (Arora & Khoo, 2020; de Anstiss & Ziaian, 2010; Hanson, 2019; Street et al., 2005) e.g. *''They* [parents] *see me as [an] average girl [and say] "I don't know why you want to see a counselor; you have done nothing wrong*" (Student; Arora & Khoo, 2020, p. 2596).

Friends (*n*=11): Connections to friends and peers were protective for adolescents in eleven studies. (Ali et al., 2017; Austin, 2018; de Anstiss & Ziaian, 2010; Dogra et al., 2007; Garcia & Saewyc, 2007; Gonçalves & Moleiro, 2012; Goodkind et al., 2015; Groark et al., 2011; Hanson, 2019; Jones et al., 2018; Kingi et al., 2017). In three of these studies adolescents emphasised the importance of trusting and relating to friends, often linked to shared ethnic and cultural factors (Austin, 2018; Groark et al., 2011; Hanson, 2019), e.g. ''*That's why most Asian Bengali girls like to confide in their friends cos they know they won't be judged like that as they can be honest and not be worried''* (Hanson, 2019, p. 86). Conflicts with friends related to identity invalidation (Austin, 2018), gender norms and reluctance to disclose difficulties to friends (de Anstiss & Ziaian, 2010), and perceiving friends as negative or disloyal (Hanson, 2019), which negatively impacted adolescents' mental health.

Clinicians and services (*n*=11): Adolescents identified formal sources of help as protective in five studies (Dogra et al., 2007; Garcia & Saewyc, 2007; Gonçalves & Moleiro, 2012; Groark et al., 2011; Gurpinar-Morgan et al., 2014). However, for some adolescents in two studies, accessing formal supports was dependent on cultural sensitivity or similarity in the therapeutic alliance, and the therapists'/services' understanding of cultural differences (Gonçalves & Moleiro, 2012; Gurpinar-Morgan et al., 2014), e.g. ''*they can learn a few words in order to understand each other better.*'' (Young participant; Gonçalves & Moleiro, 2012, p. 686). Studies also reflected the conflicting processes experienced by adolescents with formal sources, with adolescents reporting a lack of trust in clinicians and services (*n*=6; Ali et al., 2017; Arora & Khoo, 2020; de Anstiss & Ziaian, 2010; Hanson, 2019; Majumder et al., 2015; Street et al., 2005), and a sense that clinicians did not understand or relate to them due to variations in ethnic and cultural backgrounds (*n*=7; Arora & Khoo, 2020; de Anstiss & Ziaian, 2010; Dogra et al., 2007; Gurpinar-Morgan et al., 2014; Hanson, 2019; Majumder et al., 2015; Street et al., 2005), e.g. ''*If the counsellor, she wasn't like from your culture or religion, she won't understand you . . . you don't feel like she's (the) same as you*'' (Iraqi female participant; de Anstiss & Ziaian, 2010, p.34). In two studies, adolescents highlighted that centralising ethnicity in the therapeutic space was not always relevant or helpful (Gurpinar-Morgan et al., 2014; Street et al., 2005).

Adolescents also reported limited knowledge of services as a barrier to accessing help and contributing to stigma in three studies (Arora & Khoo, 2020; de Anstiss & Ziaian, 2010; Street et al., 2005), e.g. *"I was in hospital after taking an overdose and the hospital said I had to stay until I saw a psychiatrist. I didn't know what a psychiatrist was or what they would do, I thought they worked with mad people, not me."* (Young person with experience of using Child & Adolescent Mental Health Services [CAMHS]; Street et al., 2005, p. 26).

School (*n*=10): School, and schools' supports, were identified as protective for mental health in eight studies (Ali et al., 2017; Austin, 2018; Dogra et al., 2007; Gonçalves & Moleiro, 2012; Groark et al., 2011; Hanson, 2019; Jones et al., 2018; Street et al., 2005), including teachers and tutors (*n*=2; Dogra et al., 2007; Groark et al., 2011) and having access to education as a means of gaining autonomy (*n*=2; Groark et al., 2011; Jones et al., 2018). For example, an adolescent in Austin's (2018, p. 87) study shared: *"I feel like in school it's very, everyone is different so it's easy to fit in. Which sometimes sounds weird, but because everyone comes from different places, it doesn't make a difference to anyone really."* School-related determinants posing risks to adolescents' mental health included academic and occupational pressures (*n*=4; Arora & Khoo, 2020; Austin, 2018; Groark et al., 2011; Hanson, 2019) and educational difficulties (de Anstiss & Ziaian, 2010), e.g. *''We want to [go to a] good college, in order to be success[ful], get [a] job, so we have to be, you know, at the top. And [our parents] want you get higher score in the test, get higher score in the college…It has a lot of pressure''* (Student, Arora & Khoo, 2020, p.2595)

Community (*n*=9): Connection to community occurred for adolescents in eight studies through religion (*n*=5; Ali et al., 2017; Goodkind et al., 2015; Groark et al., 2011; Gurpinar-Morgan et al., 2014; Hanson, 2019), e.g. *''Yeah because in the Quran there are certain verses that you can read to help you.''* (FG2, Girl 7), and cultural traditions and identity (*n*=4; Austin, 2018; Goodkind et al., 2015; Jones et al., 2018; Kingi et al., 2017) e.g. Māori traditional tattoos covering self-injury scars functioning as reminders of personal strengths (Kingi et al., 2017). However conflicting processes including variations in cultural norms (*n*=2; Ali et al., 2017; de Anstiss & Ziaian, 2010), stigma regarding mental health (*n*=1; Hanson, 2019), and community-level discrimination

(*n*=1; Austin, 2018) were challenging for adolescents' mental health. For example, a young person in the Street et al. (2005, p.26) study shared the following in relation to living in a closely-knit ethnic community: *"It was daunting because I didn't like to think anyone would see me going into the CAMHS, especially as it is very close to where I live. Didn't want people to think I was mad or weird, it's a stigma.''*

Land and place (*n*=3): Connection to land and place was spiritually protective for indigenous adolescents in Diné (Goodkind et al., 2015) and Māori (Kingi et al., 2017) communities. Being outdoors was also protective for adolescents in the Hanson (2019) study. Online community (*n*=2): In Austin (2018) and Hanson (2019), adolescents discussed the benefits of online supports such as chatrooms, however they also identified risks including cyber-bullying and image pressures.

2.3.4.4 Time

Finally, time-related processes reflected contexts and histories involving experiences of stressful life events (*n*=11), which had significant effects on adolescents' mental health. In the Pavee Point (2015) study adolescents in the Irish Travelling community reported intergenerational family feuds as sources of stress. In five other studies adolescents explicitly spoke of their intergenerational migration experiences and resulting cultural identity conflicts between their personal identity and that of their families (Garcia & Saewyc, 2007; Goodkind et al., 2015; Groark et al., 2011; Gurpinar-Morgan et al., 2014; Hanson, 2019). As shown through adolescents' experiences of isolation, loss and grief, life events resulting in family separation, trauma and stress significantly impacted adolescents' mental health (*n*=9; Arora & Khoo, 2020; de Anstiss & Ziaian, 2010; Groark et al., 2011; Jones et al., 2018; Majumder et al., 2015; Street et al., 2005). Again, these were often more nuanced experiences among adolescents exposed to migration or asylum-seeking, reflected in quotes from unaccompanied minors seeking asylum in the UK (Groark et al., 2011):

> *''My biggest worry is that if I return to my country, you understand, then I will be fighting for my life''* (P4 14 13–14; p. 427)
>
> *''There it [the asylum system] is knocking at your door coming to get you, I'm the system, I'm coming to get you''* (P1 11 4–5, p. 428).

2.3.3 Confidence in review findings

The GRADE-CERQual assessment generally concluded high levels of confidence in synthesised findings, summarised in Table 2 (see Appendix 2 Table 2.4 for the GRADE-CERQual evidence profile). Levels of confidence in a small number of findings were impacted by the low sum of contributing studies (Glenton et al., 2018). These findings were still reported as they reflected adolescents' lived experiences. Across all studies there were moderate concerns for methodological limitations, with many studies failing to discuss researcher reflexivity and confirm participant checking and sampling methods. Overall, there were generally very little concerns for coherence, adequacy, and relevance of individual study findings with the synthesised findings.

Table 2

Summary of synthesised findings and GRADE-CERQual assessment.

Synthesised findings (count of corresponding studies)	**Confidence**
Mac 1: Cultural/religious understandings (*n*=10)	High
Mac 2 & Process 1: Societal bullying and discrimination (*n*=7)	Moderate
Exo 1 & Process 2: Psychosocial and socioeconomic inequalities (*n*=9)	
Exo 1a: Resources inequalities (*n*=7)	Moderate
Exo 1b: Social issues (*n*=5)	Moderate
Mic 1 & Process 3: Connection/conflict (*n*=15)	
Mic 1a: Family (*n*=11)	High
Mic 1b: Friends (*n*=11)	High
Mic 1d: Clinicians and services (*n*=11)	High
Mic 1c: School (*n*=10)	High
Mic 1e: Community (*n*=9)	High
Mic 1f: Land and place (*n*=3)	Low
Mic 1g: Online (*n*=2)	Very low
Per 1: Self and identity (*n*=5)	Moderate
Per 2: Mental health and personal protective factors (*n*=6)	
Per 2a: ''Mentally healthy'' (*n*=6)	High
Per 2b: Protective factors (*n*=4)	High
Per 3: Mental health difficulties and personal risk factors (*n*=10)	
Per 3a: ''Mentally unhealthy'' (*n*=9)	High
Per 3b: Isolation, loss, and grief (*n*=8)	High
Per 3c: Stigma and shame (*n*=5)	High
Time: Intergenerational history and stressful life events (*n*=11)	High

Note. *n* = count of studies; Mac = macrosystem; Exo = exosystem; Mic = microsystem; Per = person.

2.4 Discussion

The present review explored the mental health of adolescents from ethnically and culturally diverse backgrounds in developed countries through adolescents' own voices of their lived experiences. A narrative synthesis of findings from seventeen qualitative studies across academic and non-academic fields highlighted systems, processes, and determinants impacting mental health outcomes for adolescents from multigenerational ethnic communities, seeking refuge and asylum, immigration backgrounds, and indigenous communities. Assessment of the quality, coherence, adequacy, and relevance of the synthesised findings concluded that there were generally high levels of confidence across most review findings. Clinical implications for practice and policy were also evident in the synthesis.

2.4.1 Addressing the aims of the present review

Systems and processes: Findings from adolescents' lived experiences illustrated the multiple contexts affecting their mental health. At macro-level, cultural norms and perspectives of mental health varied from adolescents' own perspectives, affecting help-seeking due to perceived stigma (Abdullah & Brown, 2011; Byrow et al., 2020). Adolescents' voices highlighted the powerful processes of bullying and discrimination, which have both proximal effects on adolescent mental health and distal, oppressive effects impacting access to opportunities (APA Task Force, 2019; Ashiabi & O'Neal, 2015; Viner et al., 2012). These distal processes were also identified in the exosystem, the effects of which are experienced across different contexts and groups (Alegría et al., 2014; Alegria et al., 2019; Viner et al., 2012). Channelling Cole's (2009) intersectionality question regarding the role inequality plays, adolescents discussed the impact of difficulties in accessing resources such as healthcare, and social challenges including lack of safety, on their wellbeing and functioning. Such inequalities further emphasise the impact of power and oppression on health outcomes (Kern et al., 2020; Seng et al., 2012).

Adolescents' microsystems included proximal processes typical of the PPCT model and many adolescents' developmental experiences (Cole, 2009) e.g. family, friends, clinicians and services, school, the wider community (Currier & Morgan, 2020; Viner et al., 2012). More nuanced processes were also identified such as the importance of

land and place to adolescents from indigenous communities (Goodkind et al., 2015; Kingi et al., 2017). Synthesised findings also highlighted intrapersonal-level processes such as identity conflict, reflecting an experience considered typical to adolescent development (Erikson, 1968). However, there were also contextual factors particular to adolescents in the included studies who were navigating identity development through differing family, peers, and community perspectives, in some cases related to changes in contexts through migration and displacement (Arakelyan & Ager, 2021; Basu & Isaacs, 2019; Fazel et al., 2012; Sundar et al., 2012). The chronosystem represents such changes evident in the findings, as well as stressful life events experienced by adolescents across time and contexts.

Risk and protective determinants: The processes highlighted a range of risk and protective effects impacting adolescents' mental health. Some were shared, while others reflected experiences unique to adolescents in certain contexts (Cole, 2009). Risk related to social determinants such as resource inequalities, stigma, lack of safety, and discrimination, were repeatedly emphasised by adolescents (Orygen, 2017; Viner et al., 2012) impacting coping and help-seeking for mental health difficulties. Adolescents' reports of the risk of bullying and discrimination on their mental health reflects existing extensive evidence (Basu & Isaacs, 2019; Benner et al., 2018; Byrow et al., 2020; Fazel et al., 2012; Gopalkrishnan, 2018; Priest et al., 2013; Seng et al., 2012; Trent et al., 2019). Similarly, findings demonstrated the risk of stressful life events such as migration, asylum-seeking, and intergenerational conflicts, for adolescents' mental health (Meeker et al., 2021; Mersky et al., 2021).

Connection within the microsystem e.g. to family, friends, school, etc. was an important protective factor for adolescents' mental health and related factors such as help-seeking. Interpersonal connection is a universal protective factor for adolescents' health (Fazel et al. 2012; Rickwood and Thomas 2019). However, findings regarding connection to school and services may reflect nuanced experiences of marginalisation and discrimination of ethnically and culturally diverse adolescents, with recent studies noting the particularly protective role of these sources for vulnerable and marginalised youth (Sapiro & Ward, 2020; Steiner et al., 2019). Findings also highlighted the unique connections adolescents valued with their religion, traditions,

land and place, and ethnic and cultural identity (Curtis et al. 2018; Rickwood and Thomas, 2019). As evidenced in the findings, adolescents' perspectives of parents and family as help-seeking sources often vary from protective and well-sought, to conflictual due to stigma, levels of understanding, and variation in cultural norms regarding mental health (Dooley et al., 2019; Gopalkrishnan, 2018; Lu et al., 2021). Where adolescents had conflicting relationships with other aspects of the microsystem, the risks to mental health outcomes were also identified. For example, lack of trust in informal (e.g. friends) and formal sources (e.g. clinicians) significantly affected adolescents' help-seeking for mental health difficulties (Fazel et al., 2012).

Synthesised findings identified a range of adolescents' individual protective factors including coping skills and personal resources. Curtis et al. (2018) also documented the protective effects for mental health of resilience and coping among migrant young people. However, Gopalkrishnan (2018) noted that culturally nuanced coping mechanisms prioritising striving and resilience can be both risk and protective. In addition, adolescents' feelings of isolation, loss, and grief, further reflected the stressful life experiences of migration, displacement and asylum-seeking distinct to some ethnic and cultural backgrounds (Arakelyan & Ager, 2021; Fazel et al., 2012).

Implications for research, practice, and policy: At a systems-level, adolescents may be faced with barriers in accessing services, e.g. financial. As Cole (2009) posed, understanding what role inequality plays in mental health outcomes places psychologists and other professionals in a position to pursue systemic and social change (Bauer, 2014; Grzanka, 2020). Findings also highlighted the relevance of the identities of mental health professionals, as cultural differences may pose challenges to adolescents' help-seeking due to distrust of professionals, power imbalances, and language barriers (Byrow et al. 2020; Lu et al.). Best-practice now emphasises a move away from cultural 'competency', which assumes 'expertise' is achievable (Buchanan et al., 2020), to cultural humility and responsivity (APA Task Force, 2019; Gopalkrishnan, 2018; Sundar et al., 2012). Cultural humility considers structures and systems, and wider intersectional locations not solely based on ethnicity, and accepts individuals' mental health experiences within these contexts (Buchanan et al., 2020). Research has demonstrated that multiculturally orientated and responsive, trusted

professionals are intrinsically linked with the therapeutic experiences of service users from many diverse backgrounds (Owen et al. 2011; Sundar et al. 2012).

2.4.2 Strengths and limitations

The present review was embedded in theory and was guided by adolescents' lived experiences. Best-practice guidelines were used to establish methodological rigour and multiple approaches were employed to address quality and risk of bias. These included sourcing non-academic records, which often strive to amplify the lived experience of lesser-heard groups (Paez, 2017; Raff, 2013), and assessing methodological limitations and confidence in synthesised findings. Second reviewers were involved from screening to quality assessment, however due to limited capacity full second reviews were not feasible at all stages. There are several further limitations to the present review. Searches were limited to English-language only, restricting generalisability of findings and resulting in a UK-centric sample of countries. While contributors were conscious of their own biases, inequalities in privilege underlie the opportunity to complete the present research and undetected biases based on the similar backgrounds of the author and reviewers likely persisted. The present review also involved secondary analysis of data, and the contributors were thus a further step away from the original data. Bias may also have existed in the included studies given that participant checking and confirmation of findings with adolescents was limited. Furthermore, the broad eligibility criteria resulted in a synthesis of studies with diverse and unique samples and contexts.

Ethnicity and culture reflect very broad social constructs, and there are limitations to discussing findings relating to diverse groups. However, as Cole (2009) emphasised it is also important to identify similarities within and across groups. Nonetheless diverse experiences across contexts in which adolescents were situated, e.g. asylum-seeking adolescents or indigenous communities, likely resulted in nuanced experiences that were not fully uncovered by the review. As such collective interpretation of the findings is presented with caution.

2.4.3 Conclusion

Examining adolescent mental health with reference to ethnicity and culture highlights the complexity and contextually dependent nature of these constructs, and the difficulties that arise from categorisation for research purposes that risks masking multi-faceted, nuanced lived experiences (Jones-Correa, 2020). However, despite these limitations, considering ethnicity and culture in mental health research is warranted given the various marginalising and oppressive processes often disproportionality experienced by ethnically and culturally diverse groups in particular social contexts (Dogra et al., 2012). The present review provides insight into shared and nuanced contexts, processes and determinants impacting the mental health of adolescents from ethnically and culturally diverse backgrounds. Such findings have both practice and policy implications. The findings also contributed to the following empirical study, emphasising that to fully understand adolescents' mental health needs, the contexts in which adolescents are situated and the processes operating as determinants of mental health must be considered (Currie & Morgan, 2020; Galderisi et al., 2015; Orygen, 2017; Palumbo & Galderisi, 2020; Viner et al., 2012; WHO, 2020).

Chapter 3. Transition to Empirical Study

The previous chapter involved an in-depth exploration of the mental health of adolescents from ethnically and culturally diverse backgrounds living in developed countries. Many social categories reflect macro-level ideologies and perspectives in society, and some are shared among peers in the microsystem. However, ethnicity and culture are distinct in that their definitions and concepts are complex and changeable, and they are shaped by multiple groups across multiple contexts with varying perspectives of ethnicity and culture contributing to nuanced life experiences. (APA Task Force, 2019; Arakelyan & Ager, 2021; Rooney & Canavan, 2018). The systematic review thus focused on ethnicity and culture to gain a deeper understanding of the intricacies of adolescents' lived experiences of mental health in the context of ethnicity and culture, using qualitative methods to amplify the voices of adolescents themselves. In line with the thesis aims, the systematic review findings highlighted processes affecting the mental health of adolescents from ethnically and culturally diverse backgrounds and identified pertinent determinants with both risk and protective functions for mental health. However, as intersectionality maintains, unique multiplicative effects on health outcomes may arise at the intersection of multiple social categories such as gender and ethnicity (Bauer et al., 2021; Collins & Bilge, 2020; Grzanka, 2020).

3.1 Brief rationale for the forthcoming quantitative study

While intersectionality research of multiplicative effects may appear more suited to qualitative approaches, there is increasing argument for quantitative intersectional research examining the 'complex web' in which adolescents are situated and the multiplicative effects of social categories on mental health outcomes more stringently (Bowleg & Bauer, 2016; Else-Quest & Hyde, 2016a; Evans, 2019; Evans et al., 2018; Viner et al., 2012). Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy (MAIHDA) advances quantitative research to meet the stipulations of intersectionality as a critical research framework (Evans, 2019; Evans et al., 2018; Merlo, 2018). MAIHDA was used in the following study to examine the effects of gender, sexual orientation, ethnicity, and disability on adolescent mental health. Determinants reflecting contexts and processes of the PPCT model relevant to

adolescent mental health were also investigated for their risk/protective effects (Ashiabi & O'Neal, 2015; Currie & Morgan, 2020; Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Evans, 2000), namely discrimination, bullying, stressful life events, parental criticism, connectedness to school, optimism, and self-esteem.

3.1.2 Situating the study in Ireland

For research to involve an intersectionality framework, contexts including the country and setting in which the research is conducted must be acknowledged (Bowleg & Bauer, 2016). The following study was conducted in Ireland with adolescents attending secondary school. Ireland has a complicated history with gender, sexual orientation, ethnicity, and disability and while societal attitudes have progressed significantly, inequalities associated with social categories and mental health remain. For example, the Growing Up in Ireland (GUI) study (Nolan & Smyth, 2021) noted that social-emotional difficulties among adolescents are socially structured and impacted by socio-economic disadvantage. Ireland's national policies for mental health, *Sharing the Vision* (Department of Health, 2020) and *Better Outcomes Brighter Futures* for children and young people (BOBF; Department of Children & Youth Affairs, 2014; Department of Children Equality Disability Integration and Youth, 2022), recognise these inequalities and the effects of processes and determinants such as safety, economic security, connection, and respect, on the mental health of diverse groups in Ireland. The policies' guiding principles include equity, equality, and prioritising the needs of marginalised at-risk groups, reflecting key concepts of intersectionality. BOBF also highlights that for services and policies to be effective they must be evidence-based and outcomes-focused.

There are important research studies examining adolescent mental health in Ireland, and Ireland has been included within a multi-country intersectional analysis of adolescent mental health (Kern et al., 2020). However, there have been no direct examinations of the mental health of secondary education-level adolescents in Ireland within an intersectionality framework or using MAIHDA. Applying intersectionality to adolescent mental health research in Ireland can further inform practice and policy in terms of identifying salient and intervenable determinants and highlighting the wider processes and inequalities impacting adolescents in Ireland today. With these

possibilities in mind, and guided by existing research and the previous review findings, the following study investigated the mental health of a diverse secondary-school sample of adolescents in Ireland using MAIHDA, exploring the individual and multiplicative effects of social categories and the processes and determinants that may be intervenable through clinical practice and policy.

Chapter 4. Empirical Study

Abstract

Adolescents develop in a web of multiple contexts, e.g. family and society, and social categories, e.g. gender, sexual orientation, ethnicity, and disability. Intersectionality represents the complex ways in which these contexts and categories interact resulting in processes and determinants affecting mental health. In Ireland, there is a lack of quantitative research applying intersectionality to adolescent mental health. The present study sought to address this by examining the effects of social categories, processes, and determinants, on the mental health of adolescents in an Irish secondary-school cohort. In a sample of 9,011 adolescents (55.65% female) the novel and robust method of Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy (MAIHDA) was used to examine multiplicative intersectional effects of social categories on the mental health outcomes of self-harm, suicide attempt, anxiety, and depression. A series of fixed-effects regression models were also conducted to investigate individual effects of social categories and risk/protective determinants on adolescents' mental health. No significant multiplicative effects emerged in the MAIHDA models indicating that intersectionality was not a significant contributor to mental health outcomes in the present study. Instead, a fixed effects model of risk/protective determinants identified significant effects on mental health outcomes for adolescents identifying as female, LGBAP (lesbian, gay, bisexual, asexual, pansexual), Black or Black Irish, and having a disability. Experiences of oppressive processes of bullying, discrimination, and stressful life events were also significantly associated with mental health outcomes. Protective effects were observed for connectedness to school, optimism, and self-esteem. Possible explanations for failing to find evidence of intersectionality effects were discussed, including the complexity of social categories, limitations of the research methods, and the present study's context. Nonetheless, findings demonstrated the detrimental effects of oppressive processes and highlighted salient factors affecting adolescent mental health with implications for intervention targeting and wider adolescent mental health policy.

4.1 Introduction

The APA (2019)'s resolution on child and adolescent mental health noted that gender, sexual orientation, ethnicity, and disability continue to be pertinent to adolescent mental health. However, as the PPCT model highlights (Ashiabi & O'Neal, 2015; Currie & Morgan, 2020; Seng et al., 2012), adolescents' mental health and experiences within social categories are influenced by contexts and processes in which the adolescent is situated (O'Reilly et al., 2012; Orygen, 2017; Viner et al., 2012). The following section examines the relationship between these factors and mental health outcomes.

4.1.1 Social categories, processes, and mental health

Intersectionality suggests that these processes are represented by social categories, proxies for the 'isms' and 'phobias' of inequality and discrimination e.g. ethnicity and racism, sexual orientation and homophobia (Collins & Bilge, 2020; Evans & Erickson, 2019). Historically intersectionality research has focused on the social locations of gender/sex and ethnicity/race (Bauer et al., 2021). The terms gender and sex are often used interchangeably, however, gender as an identity can be both chosen and socially constructed and is the term used in the present thesis (Fehrenbacher & Patel, 2020). Gender differences in adolescent mental health are frequently reported in research, with higher levels of psychological and psychosomatic difficulties and lower levels of personal protective factors reported among females, and higher levels of externalising difficulties reported among males (Currie & Morgan, 2020; Patalay & Gage, 2019; Twenge et al., 2019). In terms of ethnicity, as seen in the previous study, mental health outcomes of adolescents from diverse ethnic backgrounds are impacted by processes and determinants such as stressful life events, discrimination, and inequalities (APA Task Force, 2019; Currie & Morgan, 2020; Seng et al., 2012).

With growing research interest in intersectionality, other social categories and variables have also been analysed including age, ability, education, nationality, religion, socioeconomic status, and sexual orientation (Choo & Ferree, 2010; Collins & Bilge, 2020; Fagrell Trygg et al., 2019; Kern et al., 2020; Mulinari et al., 2018). Sexual orientation typically emerges in adolescence with the onset of puberty and exploration of identity, and despite changing societal attitudes, adolescents who identify as lesbian, gay, bisexual, asexual, non-binary, and other sexually fluid

identities report higher levels of mental health difficulties (Currie & Morgan, 2020; Költő et al., 2021; Mcadam et al., 2018), and bullying and discrimination (Garnett et al., 2014), than heterosexual peers and adolescents questioning their sexuality. Research has less frequently examined disability with reference to intersectionality (Collins & Bilge, 2020). Fagrell Trygg et al. (2019) note that difficulties have arisen for researchers in distinguishing mental health difficulties/disabilities as predictor variables versus mental health outcomes. However as with mental health and other prominent social categories, movement towards the social model conceptualises disability as a socially constructed experience impacted by contexts and processes of discrimination (Collins & Bilge, 2020). Research studies also report that adolescents with long-term disabilities experience poorer mental health and increased bullying (Currie & Morgan, 2020; Mcadam et al., 2018).

4.1.2 Determinants of mental health

As noted above and in the previous study, discrimination is frequently identified in mental health research. Discrimination, unjust treatment based on social categories, remains one of the most powerful processes of inequality and oppression operating from micro to macro levels (Buchanan & Wiklund, 2021; Seng et al., 2012). Legislation exists in many countries to protect against such processes, however discrimination continues to impact mental health outcomes (Ashiabi & O'Neal, 2015; Garnett et al., 2014; Viner et al., 2012). Bullying also involves an imbalance of power and unfair treatment of a person at a more interpersonal level (Anti-Bullying Centre, n.d.), occurring most frequently in an adolescent's microsystem. However, bullying among youth is now understood as a stressful life event as opposed to a typical adolescent experience (Arseneault et al., 2010). Bullying is important within an intersectional framework as it often relates to attitudinal and structural discrimination (Garnett et al., 2014). It is a significant risk factor for mental health difficulties including depression, anxiety, self-harm, and suicidality (Arseneault et al., 2010; Garnett et al., 2014; Koyanagi et al., 2019). Further stressful life events, also referred to as Adverse Childhood Experiences (ACEs) significantly impact adolescent mental health experiences and psychological wellbeing (Kessler et al., 1997; Meeker et al., 2021), including increased risk for self-harm as evidenced in an Irish second-level sample

(McMahon et al., 2020). Events such as experiencing violence or abuse, parental mental health or addiction difficulties, conflict, and separation at home, and living in an unsafe neighbourhood, occur at different levels of the PPCT model. Thus, stressful life events also operate as proxies for systemic and structural processes (Buchanan & Wiklund, 2021).

Parents play a key role in an adolescent's micro-system, where the interpersonal processes of parenting style, levels of connectedness and support in the parent-adolescent relationship impact levels of depression, self-harm, suicidal ideation, and self-esteem (Eriksson et al., 2010; Foster et al., 2017; Nolan & Smyth, 2021). Relationships with parents have also been found to mediate the relationship between stressful life events and mental health outcomes of Irish adolescents in the GUI study (McMahon et al., 2020). Schools are also a developmental context within an adolescent's microsystem where adolescents spend a significant amount of their waking hours (Eccles & Roeser, 2011; Verhoeven et al., 2019). The systematic review findings highlighted the potentially protective role of school aside from academic pressures (Currie & Morgan, 2020), and research has demonstrated that connectedness to school is a protective factor for adolescents' mental health (Eriksson et al., 2010; Foster et al., 2017; Joyce & Early, 2014; Nolan & Smyth, 2021).

Adolescents' personal characteristics are also important determinants of mental health. Research has demonstrated that optimism buffers adolescents' mental health experiences (Eriksson et al., 2010) including against depression (Uribe et al., 2021) and suicidality (Clement et al., 2020). In addition, how an individual feels about themselves and their identity, i.e. self-esteem, also has a protective role (Eriksson et al., 2010). While Keane & Loades (2017) note the possible bidirectionality of self-esteem and mental health, low self-esteem has been linked with depression when other variables such as stressful life events were controlled for (Orth et al., 2014), and has been identified as a risk factor for youth suicide (Cha et al., 2017; McMahon et al., 2010).

4.1.3 The Irish context

Ireland ranks joint second with Switzerland across the UN's Human Development Indicators (HDI), showing considerable advancements in equality, health, access to education and knowledge, and the standard of living, from 1990 to the present (UN

Development Programme, n.d.). Ireland is also one of the highest-ranking countries in the world for enrolment in education with an expected mean of approximately eighteen school years for young people (OECD, 2022; United Nations Development Programme, n.d.). UN figures also report little inequality in education (United Nations Development Programme, n.d.) and the Department of Education and Skills' DEIS initiative, *Delivering Equality of Opportunity in Schools* (DEIS) Action Plan for Educational Inclusion, has sought to reduce inequalities and disadvantage in the public school system from preschool to second-level. Government policies such as *Better Outcomes Brighter Futures* (BOBF) are also prioritising youth mental health outcomes, including the needs of diverse groups (Department of Children & Youth Affairs, 2014; Department of Children Equality Disability Integration and Youth, 2022).

However, inequalities remain, evidenced in the change in Ireland's HDI figures when adjusted for inequality (UN Development Programme, n.d.). The BOBF update for 2021 also concluded that young people in Ireland's experiences of discrimination and bullying have increased (Department of Children Equality Disability, Integration and Youth, 2022). Gender differences in mental health experiences prevail with Irish adolescent females reporting significantly higher levels of emotional difficulties than males (Dooley et al., 2019; Nolan & Smyth, 2021). Attitudes towards sexual diversity have shifted in the last decade, e.g. the vote on Marriage Equality in 2015. However, the highest levels of discrimination in Ireland have been reported by adults identifying as Lesbian, Gay, Bisexual, Transgender, Intersex (LGBTI+; CSO, 2019) and there are continuing concerns for the mental health of LGBTI+ youth (Költő et al., 2021). Ireland has a unique migration history in Europe, with many Irish people emigrating through the centuries followed by significant increases in global immigration in the 1990s and early 2000s making Ireland an increasingly ethnically and culturally diverse society (Hannigan et al., 2019; King-O'Riain, 2007). Ireland's indigenous Traveller community has also received official recognition as an ethnic group. However, the UN has raised concerns about continued structural racism and ethnic and cultural inequality in Ireland (UN Committee on the Elimination of Racial Discrimination, 2020) and discrimination based on ethnicity, skin colour, and nationality is one of the top-five reasons for perceived discrimination (CSO, 2019). Discrimination experienced by

people with disabilities also remains in the top five (CSO, 2019) and long-term health conditions and disabilities requiring educational support have been associated with mental health difficulties among youth in Ireland (Nolan & Smyth, 2021). While experiences of social categories and effects of processes such as discrimination are evident, little is known about the multiplicative experiences of these social categories among adolescents in Ireland today.

4.1.4 Quantitative intersectionality research

Most individuals occupy social locations of both privilege and marginalisation depending on a variety of social categories and how they are regarded within social structures (Bauer, 2014). The use of social categories as intersectionality variables in quantitative research has limitations, reflected in McCall (2005)'s anti-categorical approach, which considers social life, processes, and positions as too complex to be accurately captured through categorisation and suggests that using such categories to interpret outcomes risks perpetuating existing unequal processes. However, McCall (2005) also presents the inter-categorical approach that accepts the use of categories as a means for researchers to investigate the effects of processes such as discrimination and inequalities of power in a tangible way (Merlo, 2018). Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy (MAIHDA) is growing in popularity in intersectionality research as it allows for multiple comparisons within and between groups simultaneously. This moves beyond the reductionist approaches of other statistical methods where reference groups are often the majority in a social context and likely hold most power and privilege (Choo & Ferree, 2010; Else-Quest & Hyde, 2016b). Using MAIHDA, possible effects of experiences arising at intersecting 'social locations' on mental health outcomes, can be investigated (Evans et al., 2018; Merlo, 2018). Predicted effects at these intersections are non-equivalent to the sum of each category (Bowleg & Bauer, 2016) and MAIHDA accounts for these multiplicative effects of intersecting social locations on mental health outcomes. The discriminatory accuracy component also informs intervention and policy targeting from universal to specified groups (Axelsson Fisk et al., 2021; Merlo et al., 2019).

4.1.4 The present study

Given the absence of intersectional mental health research in Ireland, the present study aimed to provide the first investigation of adolescent mental health in Ireland within an intersectionality framework using MAIHDA. To achieve this, the following questions were examined in a large and diverse secondary-school sample of adolescents in Ireland:

1. What are the individual and multiplicative effects on mental health of the social categories of gender, sexual orientation, ethnicity, and disability?
2. What are the most salient risk and protective determinants for adolescents' mental health in Ireland?
3. What do the findings contribute to clinical practice and policy?

4.2 Methodology

4.2.1 Participants

Participants were adolescents from 83 Irish second-level schools sampled in My World Survey 2 (MWS-2; Dooley et al., 2019), a national study of self-reported youth mental health in Ireland (for further information see http://myworldsurvey.ie/). The sample consisted of young people who participated in the MWS-2 Second Level (MSW-2-SL) study during the 2018/2019 academic year. Schools were randomly sampled to reflect the overall distribution of second-level schools in Ireland. Of the 175 schools that were contacted, 83 (47% response rate) across the nine Irish Community Healthcare Organisation (CHO) areas participated. The sample included at least one school in every county in the Republic of Ireland. Schools were classified as mixed sex (*n*=55, 66%) and single sex (males *n*=11, 13%; females *n*=17, 21%). School types were secondary (*n*=45, 54%), vocational (*n*=27, 33%) and community (*n*=11, 13%). Twenty-nine schools (35%) were part of the *Delivering Equality of Opportunity in Schools* (DEIS) initiative. Initial data were gathered from 10,014 adolescents aged 11-19 (*Mean*=14.85, *SD*=1.66), who identified as female (*n*=5725, 57.2%) or male (*n*=4289, 42.8%). The sample was dispersed across school years from 1st (*n*=1832, 18.3%), 2nd (*n*=2396, 23.9%), 3rd (Junior Certificate; *n*=1593, 15.9%), 4th (Transition Year; *n*=1295, 12.9%), 5th (*n*=1761, 17.6%), and 6th (Leaving Certificate; *n*=1137, 11.4%).

4.2.2 Variables

The present study investigated the effects of eleven predictor variables, which were organised into i) a set of intersectional explanatory variables, and ii) a set of determinants, on four mental health outcomes.

4.2.2.1 Intersectional explanatory variables

Intersectional explanatory variables were the social categories of gender, sexual orientation, ethnicity, and long-term health difficulty/disability (referred to as disability for brevity). These contributed to intersecting locations i.e. gender*sexual orientation*ethnicity*long-term health difficulty/disability. Responses were:

- *Gender:* Female, I'm not sure/Questioning, Male, Other (text), Prefer Not to Say.
- *Sexual orientation:* Asexual, Bisexual, Gay, Heterosexual, I'm not sure/Questioning, Lesbian, Other (text), Prefer Not to Say.
- *Ethnicity:* Any White background other than Irish, Asian or Asian Irish, Black or Black Irish, Irish Traveller, Mixed background, Other (text), Roma, and White Irish.
- *Disability* (binary item with free-text responses, which were then coded): No Long-Term Health Difficulty/Disability; Mental Health Difficulty; Physical Health Difficulty; Both Mental and Physical Health Difficulty.

Discrimination is not a social category; however, it was also included as an explanatory variable. Social categories such as ethnicity or gender are contingent on processes that ''make them meaningful in some contexts but render them invisible and irrelevant in other'' (Fox & Jones, 2013, p. 394), and discrimination represents a proxy for processes of power and oppression, central to intersectionality and with significant implications for mental health outcomes. Its inclusion in the initial explanatory component of the analyses thus recognises its integral role in intersectionality research from the outset.

- *Discrimination* (binary item): Yes/No response to the item '*Have you ever been treated unfairly because of your identity (e.g., sexual orientation, ethnicity, race, minority group, status)?*'.

4.2.2.2 Risk and protective determinant variables

Determinants with risk and protective effects on adolescent mental health outcomes included in the present study were bullying, stressful life events, connectedness to

school, parental criticism, optimism, and self-esteem. Measures and responses for these variables were:

- *Bullying*: Yes/No response to the item *'Have you ever been bullied?'*.
- *Stressful life events:* Nine stressful life event items were adapted from the National Longitudinal Study of Children and Youth in Canada (Statistics Canada, 2010). These included moving house in Ireland, moving country, staying in a foster home or residential care, own home being broken into, parental conflict, violence in a romantic relationship, violence in the home, and someone close dying. A further four MWS-2-SL questions were identified as capturing ACEs data (Eriksson et al., 2010; Meeker et al., 2021). These included not living with both parents, a parent/guardian having long-term mental health difficulties, a parent/guardian having long-term alcohol or drug addiction difficulties, and living in an unsafe neighbourhood. These items were merged with the original nine items. Items were scored as present (1) or absent (0). A total stressful life events score was calculated, ranging from 0-13.
- *Parental criticism:* Parental criticism items included in MWS-2 were obtained from the Network Relationships Inventory – Relationship Qualities Version (NRI-RQV; Furman & Buhrmester, 2009). Three items asked participants how often their parent points out their faults or puts them down, criticises them, or says mean or harsh things to them. Total scores were calculated for mothers and fathers separately. Responses were on a five-point scale ranging from 'never or hardly at all' (1) to 'always or extremely' (5). Total scores ranged from 3-15. Higher scores indicated greater levels of parental criticism. The NRI-RQV has shown good internal consistency in an Irish adolescent sample (Kenny et al., 2013), including the present study (computed with original dataset; mother criticism α=.85; father criticism α=.87).
- *Connectedness to school:* The Hemingway Measure of Adolescent Connectedness (MAC; Karcher, 2011) six-item school subscale was used to measure school connectedness. Items referred to participants' work in, and enjoyment of, school. Responses were on a five-point scale from 'not at all true' (1) to 'very true' (5). Item 3 was reverse coded. Total scores ranged from 6-30, with greater levels of

school connectedness reflected by higher scores. The MAC has demonstrated good invariance across diverse adolescent samples (Karcher & Sass, 2010) and internal consistency in the present study (computed with original dataset*;* α=.80).

- *Optimism:* The Life Orientation Test Revised (LOT-R; Scheier et al., 1994) was used to measure optimism. The LOT-R includes six positively and negatively weighted items about participants' expectations of themselves and the things that happen to them. Responses were on a five-point scale from 'I disagree a lot' (0) to 'I agree a lot' (4). Items 2, 4, and 5 were reverse scored. Total scores range from 0-24. Higher scores reflected greater levels of dispositional optimism. The LOT-R has demonstrated acceptable internal consistency across various samples (Hinz et al., 2021) including in the present study (computed with original dataset*;* α=.76).
- *Self-esteem:* The Rosenberg Self-Esteem scale (RSE; Rosenberg, 1965) was used to assess self-esteem. The ten items asked participants about their satisfaction with themselves, perceived good qualities and attitudes towards themselves. Responses are on a four-point scale from 'strongly disagree' (1) to 'strongly agree' (4). Items 2, 5, 6, 8, and 9 were reverse scored. Total scores range from 10-40, with higher scores indicating greater levels of self-esteem. The RSE has demonstrated strong psychometric properties across a variety of samples (Gnambs et al., 2018) including the present sample (computed with original dataset*;* α=.90).

4.2.2.3 Mental health outcome variables

Mental health outcomes were assessed using binary self-harm and suicide attempt items, and continuous depression and anxiety scales. Measures and responses were:

- *Self-harm and Suicide attempt:* Yes/No response to the self-harm item '*Have you ever deliberately hurt yourself without wanting to take your life?*', and the suicide attempt item '*Have you ever made an attempt to take your life?*'.
- *Anxiety and Depression:* The Depression and Anxiety seven item subscales of the Depression, Anxiety & Stress Scale Short Form (DASS-21; Lovibond & Lovibond, 1995) were used to assess adolescents' experiences of negative emotions over the previous week. The DASS-21 has consistent evidence of good psychometric properties with adolescents (Mellor et al., 2015). The Anxiety subscale had very good internal consistency in the present study (computed with original dataset*;*

α=.83), with items capturing self-reported autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Depression subscale had excellent internal consistency (computed with original dataset*;* *α*=.91), with items capturing self-reported dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. Responses were on a four-point scale ranging from 'does not apply to me at all' (0) to 'applies to me most of the time' (3). Total scores ranged from 0-42. Initial scores were transformed to allow for approximation with the longer DASS-42. Higher scores indicated more severe levels of anxiety/depression.

4.2.3 Procedure

The overall MWS-2 procedures were approved by the University College Dublin Human Research Ethics Committee (UCD HREC) – Humanities in July 2018. For MWS-2-SL, principals in the initial random sample of 175 schools were contacted via email and follow-up phone-call with the study details. For interested schools, with a final total of 83 participating, a contact person within the school was identified to liaise with the research team. Students and parents/guardians were provided with information letters and assent/consent forms. Data were collected anonymously using standardised protocols via paper and online surveys from October 2018 to May 2019 based on each school's preference. Students either completed the survey during class-time or a researcher came to the school to support survey completion. Twenty-eight schools chose the online survey option, delivered via Qualtrics (Provo, UT), with a third (33%) of participants completing the survey online. Paper surveys were presented in a youth-friendly and accessible booklet. All students were provided with a card with contact details for mental health support services following data collection. The present study author (AD) received exemption from full ethical review from UCD HREC – Science in May 2020 (see Appendix 3) to analyse the MWS-2-SL anonymous data specifically with reference to diversity among adolescents in Ireland, under the supervision of the MWS-2 Principal Investigator (BD).

4.2.4 Data analysis

4.2.4.1 Missing data

Prior to the present study, MWS-2 data were screened for missingness. To follow best practice and avoid risk of bias given the complexity of the dataset, the MWS-2 research team consulted with a statistician with expertise in determining optimal statistical methods for dealing with missing data in large-scale research, who then addressed the MWS-2 missing data using the following criteria. As MWS-2 included questions of a highly sensitive nature, it is highly possible that data were Missing Not at Random (MNAR). Multiple Imputation (MI) was used to handle missing data for any variables included in primary and secondary analyses (Lee et al., 2021). As there is a risk that MI will produce biased results with data that are MNAR or Missing At Random (MAR), auxiliary variables (covariates) were included to improve the performance and reduce risk of bias from MI. Auxiliary variables were selected by identifying high correlations, and low levels of overlap, between covariates and variables of interest. Up to ten covariates were included in the imputation model for a given variable of interest. MI was completed using multiple imputation by chained equations (MICE) in the *R* statistical software package. The level of measurement for each variable of interest determined the imputation method used (predictive mean matching, *pmm*, for continuous variables; polytomous regression model, *polyreg*, for categorical variables, and logistic regression, *logreg*, for binary variables; (Grund et al., 2018; van Buuren, 2007). Twenty imputed datasets were generated with 100 iterations (Graham et al., 2007), exported to a csv and re-imported to SPSS for analysis.

4.2.4.2 Data preparation and descriptive statistics

Data were analysed using SPSS Version 27. A pooled sample of 9,011 from the 20 imputations was investigated in the present study. Given the large sample size the dataset was considered adequately robust for further analyses and observations were independent as the data consists of single responses for each participant. Data from the 20th imputation were also initially inspected for multicollinearity, normality, and outliers. The findings were as follows:

- *Multicollinearity:* No highly correlated predictor variables were detected from Pearson's correlations. A moderate significant correlation between optimism and

self-esteem was observed (*r*=.67; Schober et al., 2018), reflective of existing research demonstrating the interconnectedness of optimism and self-esteem (e.g. Scheier et al., 1994). Marginal significant correlations for optimism (*r*=.43) and self-esteem (*r*=.44) with connectedness to school, and between critical mother and critical father (*r*=.47) were also observed. Further investigation of the Variance Inflation Factor (VIF) and Tolerance determined that multicollinearity was not an issue (all VIF values <3; all Tolerance values >.40; O'Brien, 2007).

- *Normality*: Inspection of the histograms for depression and anxiety clearly indicated that the distributions departed from normal, with scores skewed to the left indicating lower levels of depression and anxiety in general. Such non-normality is expected in a non-clinical sample. However, values for skewness <2 (depression = 1.30; anxiety = 1.29) and kurtosis <7 (depression = 1.02; anxiety = 1.29) indicated that this was not substantial (Kim, 2013).
- *Outliers:* Outliers above 3 were detected in the residuals for scores for depression (standardised -3.67–5.22; studentised -3.62–5.22), and anxiety (standardised -3.76–5.02; studentised -3.77–5.02). However, inspection of Cook's Distances (Cook, 1979) with a cut-off of 4.44 (4/*N*) for depression (0-.0007) and anxiety (0-.0005) determined that there were no outliers that would unduly impact the results. Continuous predictor variables were also centred using grand mean centring, controlling for covariates at the first level of the models and any further influences of multicollinearity (Enders, 2013).

In the pooled dataset (*N*=9,011), the following preparation steps were completed:

- *'Other', 'Prefer Not to Say'*: These responses were excluded for all variables due vagueness and to avoid bias from inferring meaning (Evans & Erickson, 2019).
- *Sexual orientation*: Responses for Asexual, Bisexual, Gay, Lesbian, and Pansexual were combined into one category (LGBAP) due to small *n*s in individual categories (.1-2.1% of total responses from original dataset). While combining categories is a limitation in that it compromises the heterogeneity between groups, combining the categories facilitated their inclusion in the present study with an acceptable *n* for the purposes of analyses.

- *Ethnicity*: Responses for Irish Traveller and Roma were excluded due to very small samples (.9% combined, of total responses, original dataset).
- *Disability*: Responses for the combined category of both Mental and Physical Health Difficulty were excluded due to an extremely small sample (.6% of total responses, original dataset).

Binary and categorical data were then recoded for analyses (Appendix 4 Table 4.1). While there are limitations with some of the most privileged social categories assuming the reference categories in within-group analyses (Choo & Ferree, 2010), reference groups for fixed effects models in the present study were determined by largest subsample size.

4.2.4.3 Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy

The present study employed Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy (MAIHDA) to examine the multiplicative effects of the intersectional explanatory variables of gender, sexual orientation, ethnicity, and disability, which were analysed using interaction terms for ninety intersectional combinations of gender*sexual orientation*ethnicity*disability (2x3x5x3; *n*=90). MAIHDA considers i) averages within groups as fixed effects and ii) individual heterogeneity, or variance, of the averages across interaction terms, as random effects (Evans et al., 2018; Merlo, 2018). Discriminatory accuracy (DA) analysis considers how well the model correctly discriminates between the predicted probability of the outcome occurring or not occurring (Axelsson Fisk et al., 2021; Evans et al., 2018; Evans & Erickson, 2019; Merlo et al., 2019). DA aligns with anti-categorical intersectional research as it provides information as to whether a predictor variable is robust enough to account for within-group outcome variations (Mulinari et al., 2018). MAIHDA can also function with large amounts of higher-level strata and smaller samples within the strata (Evans & Erickson, 2019). Firstly, a null multilevel model was computed with only the intercept included in the fixed effects, and the multiplicative interaction term (gender*sexual orientation*ethnicity*disability) in the random effects. The null model provided a baseline for further examination of variance between groups. Then using Frequentist estimation methods, a series of fixed effects, two-level MAIHDA, and single-level Analysis of Individual Heterogeneity and

Discriminatory Accuracy (AIHDA) models were implemented as follows (see Appendix 4 for codes and calculations):

1. *Explanatory Model*: Firstly, the intersectional explanatory variables of gender, sexual orientation, ethnicity, disability, and discrimination formed a fixed effects model with an intercept.
2. *Determinants Model*: Then, risk and protective determinants were added to the model in a stepwise approach involving five stages based on research evidence regarding adolescent mental health. Variables were retained for level of significance and improvement of model fit. Significance levels for the intersectional explanatory variables were mixed. However stepwise removal of these variables did not improve model fit and Fehrenbacher & Patel (2020) argue that to utilise multilevel modelling to investigate higher-level intersectional processes, quantitative researchers must go beyond the typical approach of removing non-significant variables. This process resulted in a second fixed effects model comprising intersectional explanatory variables, risk and protective determinants, and an intercept.
3. *MAIHDA:* Then to adjust for the multiplicative interaction effects of the intersectional explanatory variables, a random effects model was generated. The MAIHDA model analysed fixed effects for the predictor variables in the Determinants Model, and the random effects of between-group variance for ninety intersectional combinations as detailed above.
4. *AIHDA:* Finally, to confirm MAIHDA observations, a set of fixed effects single-level AIHDA models were conducted where the interaction terms for the intersectional explanatory variables were included in the fixed effects (Axelsson Fisk et al., 2021; Wemrell et al., 2021).

Models were assessed using the following fit-statistics, inspections of fixed and random effects of the predictor variables, and measures of DA.

<u>*Binary outcome variables* (self-harm and suicide):</u>

- *Binary logistic regressions* and the area under the receiver operating characteristic curve (AU-ROC) were computed. Model fit was estimated using:

i. -2 log likelihood statistic (*-2LL*) for deviance (McCullagh & Nelder, 1989), i.e. the discrepancy between observed and expected predictor variable values. Lower *-2LL* values indicate better fit.

ii. Chi-square tests of significance, whether predictor variables added to the model accounted for a significant amount of variance in outcomes.

iii. Hosmer & Lemeshow chi-square test, with lower values and non-significance indicating better model fit (Hosmer & Lemeshow, 2000).

iv. Nagelkerke R^2 (Nagelkerke, 1991), providing an approximation of variance accounted for. Values closer to 1.0 indicate better fit.

v. AUC-ROC, which is a measure of DA. AUC-ROC was assessed for values ranging from absent/very small (0.50-0.60), moderate (0.61-7.0), large (0.71- 0.80), and very large (≥0.81; Hosmer & Lemeshow, 2000).

vi. Odd Ratios (OR; Exp(B)) of the fixed effects were then examined.

- *MAIHDA* were conducted using the Generalised Linear Mixed Models (GLMM) function with binary logistic regressions and Scaled Identity covariance type. The model was investigated using *-2LL*, equivalent ORs (Exp(Coefficient)) for fixed and random effect, and the AU-ROC.
- *AIHDA* were conducted by adding a final step to the logistic regression models. Fit statistics, AU-ROC and fixed effects were examined.

<u>*Continuous outcome variables* (anxiety and depression):</u>

- *Multiple linear regressions* were initially computed to test for fixed effects of the Explanatory and Determinant Models. Model fit was investigated using:

  i. Residuals, which were examined for homoskedasticity. The very large sample size (>500, Lumley et al., 2002) was robust enough to overcome non-normality and heteroskedasticity in accordance with the Central Limit Theory (Lumley et al., 2002; Pek et al., 2018; Schmidt & Finan, 2018).

  ii. Adjusted R^2, the amount of variance in the outcome variable that is determined by the model. Values closer to 1.0 indicate better fit.

  iii. *F* tests, testing the significance of the R^2 statistic (Seng et al., 2012).

  iv. Estimates of fixed effects were then examined.

- *MAIHDA* were conducted using the Mixed Models Linear function with Scaled Identity covariance type and Maximum Likelihood estimation method. The model was investigated using *-2LL*, and Intraclass Correlation Coefficients, fixed and random effects were examined. ICC is a measure of DA, computed for the null and MAIHDA models using formulas from multilevel intersectionality studies (Axelsson Fisk et al., 2018; Evans et al., 2018; Merlo, 2018; see Appendix 4). Higher values indicate greater discrimination, and proportions (%) used by Axelsson Fisk et al. (2018, p. 336) were followed with values of non-existent (0–1), poor (>1–≤5), fair (>5–≤10), good (>10–≤20), very good (>20–≤30), excellent (>30).
- *AIHDA* were conducted using General Linear Models (GLM) with the Univariate function. Model fit was reviewed against previous models and fixed effects were examined. Partial *eta*-squared values for the interaction term were also reviewed. These values represent the proportion of variance explained by the interaction term, of the total variance remaining, after variance explained by other variables in the model has been accounted for. Higher values indicate a higher proportion of variance explained by the interaction term.

4.3 Results

4.3.1 Description of explanatory, determinant, and outcome variables

Descriptions of the explanatory and determinant variables, and mental health outcomes are displayed in Table 3. Some counts include decimals due to pooling.

Intersectional explanatory variables and discrimination: More adolescents identified as female (55.65%), heterosexual (92.33%), white Irish (85.75%), and did not report having a long-term health difficulty or disability (86.59%). For 12% of adolescents, they had experienced discrimination at some point in their life and 81.03% of these adolescents found their experiences stressful (a little *n*=600.70; very *n*=275.80).

Risk and protective determinants: Over one third of adolescents (37.91%) had experienced bullying, 73.05% of whom (*n*=2495.50) were bullied in school. The mean number of stressful life events experienced was approximately 2, with 16.56% of adolescents reporting no experiences of stressful life events (*n*=1492.60). Levels of stressful life events experienced by adolescents were: 1) someone close dying (*n*=5072; 56.29%), 2) moving house within Ireland (*n*=2801; 31.08%), 3) conflict

between parents (*n*=2762; 30.65%), 4) not living with both mother and father (*n*=1804.50; 20.02%), 5) serious illness/injury of a friend (*n*=1555; 17.20%), 6) parent/guardian experiencing mental health difficulties (*n*=1164; 12.92%), 7) living in an unsafe neighbourhood (*n*=1059.30; 11.76%), 8) moving country (*n*=888; 9.85%), 9) home broken into (*n*=821; 9.11%), 10) parent/guardian experiencing alcohol or drug addiction difficulties (*n*=602; 6.68%), 11) experiencing violence in the home (*n*=510; 5.66%) or 12) violence in a romantic relationship (*n*=208; 2.31%), and 13) staying in a foster home or residential care (*n*=86; 0.95%). Mean levels of criticism from either parent were similarly low. The mean score for connectedness to school was relatively high and while the mean optimism score was approximately half the possible total score (*M*=12.95 of a possible total of 24), mean levels of self-esteem were also high.

Mental health outcomes: Over a fifth of adolescents had-self-harmed (21.89%) and 6.80% had attempted suicide at some point in their life. Mean scores for levels of anxiety and depression indicated that the sample were experiencing relatively low levels of anxiety and depression (see Table 3).

4.3.2 Application of the intersectionality framework and model outcomes

Findings for all models across the four mental health outcomes are presented in Tables 4 for self-harm, 5 for suicide attempt, 6 for anxiety, and 7 for depression.

1. *Explanatory Model:* The initial model performed poorly across all four mental health outcome variables. Discriminatory accuracy was moderate.
    - *Self-harm: -2LL*=8784.79; x^2(10)=686.92, *p*<.001; Hosmer & Lemeshow x^2(4.95)=11.42, *p*=.07; Nagelkerke R^2=.11; AU-ROC=.67, *p*<.001. There were no significant associations between prevalence of self-harm and identifying as mixed ethnicity, Black or Black Irish, or Asian or Asian Irish.
    - *Suicide attempt: -2LL*=4085.71; x^2(10)=392.29, *p*<.001; Hosmer & Lemeshow x^2(4.1)=5.15, *p*=.328; Nagelkerke R^2=.12; AU-ROC=.70, *p*<.001. There were no significant associations between prevalence of suicide attempt and questioning sexual orientation, identifying as mixed ethnicity, Black or Black Irish, or Asian or Asian Irish.

- *Anxiety:* Adjusted R^2=.10; F(10)=104.20, p<.001. Levels of anxiety were not significantly associated with identifying as mixed ethnicity, Black or Black Irish, or Asian or Asian Irish.
- *Depression:* Adjusted R^2=.37; F(7)=536.41, p<.001. As per anxiety, identifying as mixed ethnicity, Black or Black Irish, or Asian or Asian Irish, were not significantly associated with levels of depression.

Table 3

Descriptive statistics for explanatory, determinant, and outcome variables.

Variable		***N***	***% sample***	***Mean (SD)***	***Range***
Intersectional explanatory variables					
Gender	Female	5015	55.65%		
	Male	3996	44.35%		
Sexual orientation	Heterosexual	8320	92.33%		
	LGBAP	367	4.07%		
	Not sure/questioning	324	3.60%		
Ethnicity	White Irish	7727.10	85.75%		
	Any other White background	479	5.32%		
	Mixed background	238	2.64%		
	Black or Black Irish	347.90	3.86%		
	Asian or Asian Irish	219	2.43%		
Disability	None	7803	86.59%		
	Mental health	882	9.79%		
	Physical health	326	3.62%		
Discrimination	Experienced discrimination	1081.70	12.00%		
Risk and protective determinant variables					
Bullying	Experienced bullying	3416	37.91%		
Stressful life events				2.15 (1.79)	1-12
Parental criticism	Criticism from mother			5.25 (2.72)	3-15
	Criticism from father			5.21 (2.79)	3-15
Connectedness to school				20.14 (4.62)	6-30
Optimism				12.95 (4.73)	0-24
Self-esteem				26.57 (5.19)	10-37
Mental health outcomes					
Self-harm	Have self-harmed	1972.90	21.89%		
Suicide	Have attempted suicide	612.90	6.80%		
Anxiety				9.06 (8.71)	0-42
Depression				9.51 (10.17)	0-42

Note. Total pooled sample from 20 iterations = 9011; LGBAP = Lesbian, Gay, Bisexual, Asexual, and Pansexual; Disability refers to long-term health difficulty or disability.

Table 4. *Models for self-harm.*

	Fixed effects		**Null Model (0)**			**Explanatory Model (1)**			**Determinant Model (2)**		
			OR/Est.	**95% CI[1]**	***p***	**OR**	**95% CI[1]**	***p***	**OR**	**95% CI[1]**	***p***
		Constant/Intercept	.57	.13, 2.54	.458	.24**	0.22, 0.26	<.001	.148**	.13, .17	<.001
Explanatory variables	Gender	Male				.57**	0.51, 0.64	<.001	.818**	.72, .94	.003
	Sexual orientation	LGBAP				3.89**	3.09, 3.90	<.001	2.40**	1.86, 3.10	<.001
		Not sure/questioning				1.57**	1.23, 2.02	<.001	1.32	.99, 1.75	.057
	Ethnicity	Any other White background				1.60**	1.28, 1.99	<.001	1.30	1.00, 1.68	.050
		Asian or Asian Irish				.94	0.66, 1.33	.715	.97	.66, 1.43	.889
		Black or Black Irish				.94	0.67, 1.32	.720	.96	.65, 1.42	.843
		Mixed background				1.23	0.93, 1.64	.151	1.11	.81, 1.53	.504
	Disability	Mental health				2.82**	2.40, 3.31	<.001	1.68**	1.39, 2.02	<.001
		Physical health				1.63**	1.25, 2.13	<.001	1.31	.97, 1.77	.075
	Discrimination	Yes				2.26**	1.92, 2.66	<.001	1.55**	1.29, .186	<.001
Determinant variables	Bullying	Yes							1.66**	1.46, 1.88	<.001
	Stressful life events								1.15**	1.11, 1.19	<.001
	Parental criticism	Mother							1.07**	1.05, 1.09	<.001
		Father							1.04**	1.01, 1.06	.003
	Connectedness to school								.97**	.95, .98	<.001
	Optimism								.98**	.96, .99	.006
	Self-esteem								.88**	.86, .90	<.001
		AU-ROC	*.65***	*.64, .67*	*<.001*	*.67***	*.65, .68*	*<.001*	*.81***	*.80, .82*	*<.001*
	Random effects		**MAIHDA (3)**								
		Between-group variance	.03	.01, .25	.168						
		AU-ROC	*.81***	*.80, .82*	*<.001*						
	Fixed effects		**AIHDA (4)**								
		Constant	0.15**	0.13, 0.17	<.001						
		Intersectionality interactions	No significant interactions								
		AU-ROC	*0.81***	*0.80, 0.82*	*<.001*						

Note: OR = Odds Ratio; CI = Confidence Interval, [1]95% CI for Exp(coefficient); $p<.05$ (**$p<.01$, *$p<.05$); AUC-ROC = area under the curve. Reference: Female; Heterosexual; White Irish; No disability; No discrimination/bullying. See Appendix 4 for MAIHDA effects.

Table 5. *Models for suicide attempt.*

	Fixed effects		**Null Model (0)**			**Explanatory Model (1)**			**Determinant Model (2)**		
			OR/Est.	**95% CI[1]**	***p***	**OR**	**95% CI[1]**	***p***	**OR**	**95% CI[1]**	***p***
		Constant/Intercept	.13*	.03, .83	.030	.05**	.04, .06	<.001	.021**	.02, .03	<.001
Explanatory variables	Gender	Male				.69**	.57, .84	<.001	1.09	.87, 1.35	.452
	Sexual orientation	LGBAP				2.83**	2.12, 3.78	<.001	1.57**	1.14, 2.15	.005
		Not sure/questioning				1.11	.73, 1.68	.639	.85	.54, 1.34	.486
	Ethnicity	Any other White background				1.50*	1.06, 2.11	.021	1.07	.73, 1.57	.718
		Asian or Asian Irish				1.08	.64, 1.83	.775	1.31	.74, 2.31	.358
		Black or Black Irish				1.14	.69, .19	.609	1.22	.09, 2.11	.472
		Mixed background				1.26	.83, 1.93	.285	1.11	.70, 1.76	.657
	Disability	Mental health				4.42**	3.59, 5.45	<.001	2.45**	1.95, 3.09	<.001
		Physical health				1.64*	1.07, 2.49	.021	1.34	.86, 2.09	.201
	Discrimination	Yes				2.37**	1.89, 2.98	<.001	1.52**	1.18, 1.95	.001
Determinant variables	Bullying	Yes							2.05**	.66, 2.54	<.001
	Stressful life events								1.19**	1.14, 1.26	<.001
	Parental criticism	Mother							1.03	1.00, 1.07	.059
		Father							1.04*	1.01, 1.08	.014
	Connectedness to school								.94**	.92, .97	<.001
	Optimism								.96**	.94, .99	.007
	Self-esteem								.91**	.88, .93	<.001
	AU-ROC		*.64**	*.63, .66*	*<.001*	*.70**	*.67, .72*	*<.001*	*.84**	*.83, .86*	*<.001*
	Random effects		**MAIHDA (3)**								
		Between-group variance	.06	.10, 3.03	.227						
	AU-ROC		*.84**	*.83, .86*	*<.001*						
	Fixed effects		**AIHDA (4)**								
		Constant	.02**	.02, 03	<.001						
		Intersectionality interactions	No significant interactions								
	AU-ROC		*.84**	*.83, .86*	*<.001*						

Note: OR = Odds Ratio; Est. = Estimate; CI = Confidence Interval, [1]95% CI for Exp(coefficient); $p<.05$ (**$p<.01$, *$p<.05$); AUC-ROC = area under the curve. Reference: Female; Heterosexual; White Irish; No disability; No discrimination/bullying. See Appendix 4 for MAIHDA effects.

Table 6. *Models for anxiety.*

	Fixed effects		**Null Model (0)**			**Explanatory Model (1)**			**Determinant Model (2)**		
			Est.	**95% CI**	***p***	**Est.**	**95% CI**	***p***	**Est.**	**95% CI**	***p***
		Constant/Intercept	9.07**	8.88, 9.25	<.001	9.06**	8.79, 9.32	<.001	8.50**	8.24, 8.76	<.001
Explanatory variables	Gender	Male				-3.03**	-3.38, -2.67	<.001	-1.10**	-1.44, -.76	<.001
	Sexual orientation	LGBAP				4.56**	3.64, 5.47	<.001	1.31**	.52, 2.09	.001
		Not sure/questioning				2.01**	1.07, 2.94	<.001	.92*	.13, 1.72	.023
	Ethnicity	Any other White background				1.29**	.507, 2.08	.001	.20	-.48, .87	.564
		Asian or Asian Irish				.04	.95, -1.14	.951	-.01	-1.01, .98	.980
		Black or Black Irish				.74	.21, -.42	.553	.79	-.20, 1.79	.118
		Mixed background				.29	-.67, .13	.212	-.16	-.96, .64	.691
	Disability	Mental health				4.84**	4.22, 5.45	<.001	1.94**	1.39, 2.46	<.001
		Physical health				2.58**	1.63, 3.53	<.001	1.45**	.64, 2.27	<.001
	Discrimination	Yes				3.52**	2.89, 4.15	<.001	1.42**	.88, 1.95	<.001
Determinant variables	Bullying	Yes							1.41**	1.07, 1.74	<.001
	Stressful life events								.59**	.49, .68	<.001
	Parental criticism	Mother							.17**	.10, .23	<.001
		Father							.12**	.05, .20	.001
	Connectedness to school								-.07**	-.11, -.03	.001
	Optimism								-.23**	-.27, -.18	<.001
	Self-esteem								-.56**	-.61, -.51	<.001
		ICC %	16.23%								
	Random effects		**MAIHDA (3)**								
			Est.	**95% CI**	***p***						
		Intercept	12.18**	9.95, 13.67	<.001						
		Random variance	.20	.05, .86	.183						
		Residual variance	68.97**	66.98, 71.01	<.001						
		ICC%	.29%								
	Fixed effects		**AIHDA (4)**								
			Est.	**95% CI**	***p***						
		Intercept	11.12	-5.05, 27.27	.178						
		Intersectionality interactions	No significant interactions								
		Partial *eta*-squared	.01								

Note: Est. = Unstandardised Coefficients; CI = Confidence Interval; *p*<.05 (**p*<.01, **p*<.05); ICC = Intraclass Correlation Coefficient. Reference: Female; Heterosexual; White Irish; No disability; No discrimination/bullying. See Appendix 4 for MAIHDA effects.

Table 7. *Models for depression.*

	Fixed effects		**Null Model (0)**			**Explanatory Model (1)**			**Determinant Model (2)**		
			Est.	**95% CI**	***p***	**Est.**	**95% CI**	***p***	**Est.**	**95% CI**	***p***
		Constant/Intercept	13.99**	4.54, 23.44	.004	9.276**	8.96, 9.57	<.001	8.82**	8.55, 9.08	<.001
Explanatory variables	Gender	Male				-3.05**	-3.46, -2.64	<.001	-.28	-.64, .07	.114
	Sexual orientation	LGBAP				6.73**	5.68, 7.79	<.001	2.10**	1.30, 2.89	<.001
		Not sure/questioning				2.21**	1.12, 3.29	<.001	.66	-.14, 1.47	.105
	Ethnicity	Any other White background				1.19*	.26, 2.11	.012	.01	-.70, .72	.972
		Asian or Asian Irish				.19	-1.20, 1.58	.791	.22	-.83, 1.27	.681
		Black or Black Irish				1.06	-.30, 2.43	.127	1.45**	.41, 2.49	.006
		Mixed background				.07	-1.13, 1.29	.914	-.41	-1.34, .52	.383
	Disability	Mental health				5.86**	5.17, 6.56	<.001	1.76**	1.23, 2.29	<.001
		Physical health				2.09**	.99, 3.18	<.001	.62	-.22, 1.46	.146
	Discrimination	Yes				4.08**	3.35, 4.81	<.001	1.29**	.70, .19	<.001
Determinant variables	Bullying	Yes							.88**	.52, 1.23	<.001
	Stressful life events								.53**	.43, .63	<.001
	Parental criticism	Mother							.23**	.16, .31	<.001
		Father							.21**	.14, .28	<.001
	Connectedness to school								-.13**	-.18, -.09	<.001
	Optimism								-.35**	-.40, -.30	<.001
	Self-esteem								-.87**	-.92, -.83	<.001
		ICC %		19.52%							

	Random effects		**MAIHDA (3)**		
			Est.	**95% CI**	***p***
		Intercept	12.55**	9.85, 15.233	<.001
		Random variance	.32	.08, 1.29	.156
		Residual variance	93.79**	91.09, 96.58	<.001
		ICC %		.34%	

	Fixed effects		**AIHDA (4)**		
			Est.	**95% CI**	***p***
		Intercept	7.572	-.932, 24.47	.329
		Intersectionality interactions	No significant interactions.		
		Partial *eta*-squared		.01	

Note: Est. = Unstandardised Coefficients; CI = Confidence Interval; *p*<.05 (**p*<.01, **p*<.05); ICC = Intraclass Correlation Coefficient. Reference: Female; Heterosexual; White Irish; No disability; No discrimination/bullying. See Appendix 4 for MAIHDA effects.

2. *Determinant Model:* When risk and protective determinants were added to the first model, the fit improved across all mental health outcomes. Discriminatory accuracy also improved.
    - *Self-harm: -2LL*=7393.44; x^2(17)=2078.27, *p*<.001; Hosmer & Lemeshow x^2(8)=11.90, *p*=.188; Nagelkerke R^2=.32; AU-ROC=.81, *p*<.001. There were no significant associations between self-harm and questioning sexual orientation, any ethnic background, or physical health disability.
    - *Suicide attempt: -2LL*=3434.10; x^2(17)=1043.90, *p*<.001; Hosmer & Lemeshow x^2(8)=10.38, *p*.329; Nagelkerke R^2=.28; AU-ROC=.84, *p*<.001. There were no significant associations between suicide attempt and the following variables: gender, questioning sexual orientation, ethnic backgrounds, and physical health disability.
    - *Anxiety:* Adjusted R^2=.10; *F*(10)=105.37, *p*<.001. Ethnic background was not significantly associated with levels of anxiety.
    - *Depression:* Adjusted R^2=.52; *F*(7)=1122.80, *p*<.001. The inclusion of risk and protective factors at this step revealed a significant effect between levels of depression and identifying as Black / Black Irish. There were no significant associations between levels of depression and the following variables: gender, questioning sexual orientation, all other ethnic backgrounds except for Black or Black Irish, and physical health difficulty.
3. *MAIHDA:* Multiplicative effects for intersections of gender, sexual orientation, ethnicity, and disability did not significantly predict mental health outcomes across outcome variables. Model fit did not improve (self-harm *-2LL*=45751.78; suicide attempt *-2LL*=56385.81; anxiety *-2LL*=63737.48; depression *-2LL*=66506.45), nor did AU-ROC values for the self-harm and suicide attempt models. For the anxiety and depression models, ICC was very low compared with the null model, further illustrating that MAIHDA findings did not provide further information beyond the fixed effects model. Random effects are presented in Appendix 4 Table 4.4.
4. *AIHDA:* The AIHDA models confirmed the absence of significant multiplicative effects across intersecting social locations, for all mental health outcomes. AU-ROC did not improve for the self-harm and suicide attempt models. The partial *eta*-squared effect sizes were very small (.01) for the anxiety and depression

models, further confirming that the intersectional interaction terms did not account for much variance in the overall model.

4.3.2.1 Significant variables

As the effects did not greatly differ from those in the Determinants Model (2) when MAIHDA was applied, the effects of the predictor variables on mental health outcomes in the second model were further investigated (see Tables 4-7).

- *Self-harm:* Risk factors associated with occurrence of self-harm, from largest to smallest main effects, were identifying as LGBAP, experiencing long-term mental health difficulties, bullying, discrimination, stressful life events, and parental criticism. Higher levels of connectedness to school, optimism, and self-esteem, were protective factors significantly associated with lower levels of self-harm.
- *Suicide:* Suicide attempts were predominantly driven by the main risk factor effects, from largest to smallest, of experiencing long-term mental health difficulties, bullying, identifying as LGBAP, experiencing discrimination, experiencing stressful life events, and criticism from father. Higher levels of connectedness to school, optimism, and self-esteem, were also significantly associated with lower prevalence of suicide attempts, as protective factors.
- *Anxiety:* Experiencing long-term mental health difficulties, long-term physical health difficulties, discrimination, or bullying, were significant risk factors for adolescents' current anxiety levels. Identifying as LGBAP, or as female, also significantly predicted levels of anxiety. While significant, effects of other risk and protective factors on current anxiety levels ranged from very low (connectedness to school) to moderate (experiencing stressful life events, self-esteem).
- *Depression:* Current levels of depression in the week prior to adolescents completing MWS-2 were significantly associated with identifying as LGBAP, experiencing long-term mental health difficulties, identifying as Black or Black Irish, experiencing discrimination, and bullying. Higher levels of self-esteem were a significant protective factor associated with current levels of depression. Remaining risk and protective determinants were significantly associated with depression, however, effects ranged from very low (connectedness to school) to moderate (experiencing stressful life events).

4.4 Discussion

The present study aimed to investigate the mental health of adolescents in a second-level sample in Ireland using an intersectionality framework with multilevel analysis of individual heterogeneity and discriminatory accuracy (MAIHDA). While significant intersectionality effects did not emerge in the present sample across the intersections of gender, sexual orientation, ethnicity, and disability, findings were consistent with the PPCT model and provided insight into processes and determinants impacting the mental health of adolescents in Ireland.

4.4.1 Addressing the aims of the present study

Individual and multiplicative effects: The MAIHDA models did not identify significant multiplicative effects across the ninety social category interactions, for all mental health outcome variables. A lack of intersectional effects was confirmed through single-level analyses of individual heterogeneity and discriminatory accuracy (AIHDA) models, in which the interaction term was included in the fixed effects. Neither MAIHDA nor AIHDA models greatly improved beyond the second model investigated in the present study, the fixed effects Determinant Model. Findings suggest that most of the variation between intersecting social locations was accounted for by main effects in the Determinant Model, similar to other studies using MAIHDA (Axelsson Fisk et al., 2018; Evans & Erickson, 2019; Persmark et al., 2020). Fagrell Trygg et al.'s (2019) scoping review highlighted the variability in results when intersectionality is applied to mental health research. Reflecting Cole's (2009) intersectionality research questions, Evans & Erickson (2019, p. 9) note that there are both similarities and differences in day-to-day experiences of social locations and while experiences may be uniquely intersectional, ''this does not guarantee that this uniqueness will translate into statistically significant interaction effects.'' However, a comment on context is also warranted here. Kern et al. (2020) compared adolescent wellbeing across thirty-three countries including Ireland using MAIHDA and did not observe intersectional effects for immigration, socioeconomic status, and gender in countries such as Ireland with immigration and integration policies, and income and gender equality.

In the Determinants Model, which included explanatory and determinant variables representing social categories and processes, personal characteristics, and contexts of

the PPCT model, significant within-variable effects were observed for individual social category variables. Females reported significantly higher levels of self-harm and anxiety, reflecting previous research (Currie & Morgan, 2020; Nolan & Smyth, 2021; Twenge et al., 2019), however there were no observed significant gender differences for suicide attempt and depression outcomes. Patalay & Gage (2019) reported similar findings, concluding that adolescent mental health difficulties were comparatively increasing for both females and males over a ten-year period. Regarding sexual orientation, significantly higher levels for all mental health outcomes were reported by adolescents identifying as lesbian, gay, bisexual, asexual, or pansexual (LGBAP), and while at a lower level to LGBAP peers, significantly higher levels of anxiety were reported by adolescents questioning their sexual identity versus heterosexual peers. Existing research suggests such disparities result from ongoing stigma, discrimination and bullying experienced by LGBAP youth, resulting in increased risk for self-harm and suicidality (Bonnie & Backes, 2019; Cha et al., 2017; Garnett et al., 2014).

Overall, there were few differences in mental health outcomes between ethnic identities when risk and protective determinants were added to the models, except for adolescents identifying as Black or Black Irish who emerged with significantly higher levels of depression in the Determinants Model. As discussed in the preceding systematic review, ethnicity is a complex and diverse term and there are considerable limitations to ethnic categorisation. The within-group diversity may account for the general non-significance across ethnicity categories in the present study and previous research (Garnett et al., 2014; Mulinari et al., 2018; Persmark et al., 2020). For example, in the GUI data for 17 year olds, Nolan & Smyth (2021) also reported no differences in levels of emotional difficulties between adolescents with mothers from native and migratory backgrounds. The present study did not include socioeconomic status (SES) in the models, as it can be difficult to capture in adolescent samples without parent reports (Bonnie & Backes, 2019). SES reflects processes of power and oppression in society and is often interlinked with ethnicity, which if included may have provided a different picture than the present findings (Evans & Erickson, 2019; Mulinari et al., 2018). As might be expected, adolescents experiencing long-term mental health difficulties reported significantly higher levels for all outcome variables.

Adolescents experiencing long-term physical health difficulties also reported significantly higher levels of anxiety than peers without a long-term health condition, which may be related to stressful experiences in hospital, long-term prognoses, concerns about life-threatening outcomes, and loss of control (Pao & Bosk, 2011).

Risk and protective determinants: The findings regarding the social category variables were observed when a set of determinants with relevance to adolescent mental health were included in the models. Discrimination was included from the first model given its representation of power and oppression. Effects for discrimination were consistently significant across all outcome variables thus indicating significantly higher risk for self-harm, suicide attempt, anxiety, and depression, among adolescents who have experienced discrimination. Bullying was also a consistently significant predictor of mental health outcomes and was the determinant variable with the highest effect for suicide attempt, second only to the explanatory variable of long-term mental health difficulty. Bullying and discrimination represent similar processes, related to intersectional power and oppression from intrapersonal to macro-levels (Garnett et al., 2014; Viner et al., 2012). The present findings confirm the detrimental effects of discrimination and bullying of any kind on adolescent mental health (Arseneault et al., 2010; Benner et al., 2018; Garnett et al., 2014; Koyanagi et al., 2019; Seng et al., 2012). They show a different picture to the contextual explanation of equality in Ireland mentioned previously and demonstrate ongoing inequalities and oppressive processes experienced by young people in Ireland today. Further to discrimination and bullying, additional stressful life events were significantly associated with all mental health outcomes, however, effects were far greater for self-harm and suicide attempt than anxiety and depression, similar to McMahon et al.'s (2010) GUI findings.

While effects were not as large as with the previously mentioned determinants, similar differences between self-harm/suicide and anxiety/depression outcome variables were also observed for parental criticism, connectedness to school, optimism, and self-esteem. However, mother's criticism was not significantly associated with suicide attempt. While parents are an important support, adolescents' autonomy and independence develops in this period and their world broadens beyond their parents (Bonnie & Backes, 2019), which may explain the less influential parental

effects. The significant effects of connectedness to school on adolescents' mental health were greater for self-harm and suicide attempt, than anxiety and depression, which may reflect the role of connectedness/loneliness in suicidality (Cha et al., 2017). The association between optimism and suicidality may also explain why levels of optimism had greater effects on self-harm and suicide attempt, than anxiety and depression (Clement et al, 2020). Higher levels of self-esteem were consistently associated with lower rates across all outcome variables, reflecting existing research (Cha et al., 2017; McMahon et al., 2010; Orth et al., 2014). Including these determinants improved the discriminatory accuracy of the models, i.e. the ability of the models to accurately discriminate between adolescents who have self-harmed or attempted suicide (Axelsson Fisk et al., 2021; Evans et al., 2018; Evans & Erickson, 2019; Merlo et al., 2019). This improved accuracy is valuable for distinguishing the benefit of universal versus targeted interventions, and thus informs both practice and policy initiatives.

Implications for practice and policy: At the social category level, significant difficulties were observed among adolescents identifying as female, LGBAP, and Black or Black Irish. While females often report higher levels of mental health difficulties than males, this may also be related to socially constructed and appropriated gender differences in openness to disclosing difficulties, and expression of difficulties through externalising behaviours versus socioemotional experiences (Campbell et al., 2021; Patalay & Gage, 2019; Smith et al., 2018). Thus, clinical practice must consider the many ways adolescents express mental health difficulties and resist bias for socially constructed gendered expressions of distress (Smith et al., 2018). Difficulties reported by adolescents identifying as LGBAP and Black and Black Irish were likely as a result of the context of risk and protective determinants. The present findings highlight that processes such as discrimination and bullying have a greater impact on mental health outcomes than the multiplicative effect of social categories (Seng et al., 2012). Thus, processes described in intersectionality and the PPCT model are more informative for practice and policy than the specific social locations (Ashiabi & O'Neal, 2015; Evans & Erickson, 2019; Merlo, 2018; Tudge et al., 2016).

Specific interventions and policy initiatives tackling discrimination and bullying appear to be the most important for addressing adolescents' mental health difficulties. Schools are an ideal context for delivering such interventions (Dunn et al., 2015; Garnett et al., 2014). Previous research has reported lower mental health difficulties, and higher levels of happiness, life satisfaction, and confidence among adolescents attending schools with health promotion initiatives (Currie & Morgan, 2020). Evidence from youth mental health services' engagement with teachers and schools in Ireland (e.g. Jigsaw's One Good School, O'Reilly et al., 2021) provides further support for an emphasis in school curricula and government policies on addressing adolescents' mental health and wellbeing needs in a school context. In practice, it is important for clinicians to address experiences of stressful life events through trauma-informed approaches given their significant risk for self-harm and suicide attempt (McMahon et al., 2020; Meeker et al., 2021). Such events are often disproportionately experienced by oppressed and discriminated groups, representing intersectional processes of power and inequality (Buchanan & Wiklund, 2021; Mersky et al., 2021). Thus, addressing the effects of stressful life events requires trauma- and intersectionality-informed systems and social change initiatives (Johnstone & Boyle, 2018; Meeker et al., 2021; Mersky et al., 2021). At the level of the adolescent, individual and group interventions for self-esteem may have universal benefits for anxiety and depression, based on present findings. Again, schools may offer a suitable context, as well as group settings in services and community organisations.

4.4.2 Strengths and limitations

There were several strengths and limitations to the present study reflecting Cole's (2009) research questions of who was included in social categories, what role did inequality play, and what are the similarities and shared experiences. The dataset was representative of adolescents attending secondary schools in Ireland. While efforts were made to include hard-to-reach groups, given the nature of large-scale random sampling and use of a school-based survey (Bowleg & Bauer, 2016b; Else-Quest & Hyde, 2016), sufficient numbers of these groups were not captured to allow for further analysis e.g. Irish Travellers and Roma young people. However, the sample of Irish Travellers in the present study was comparable to the Irish Traveller sample in the

overall population (0.7%; CSO, 2021). Nonetheless, given the relatively homogenous sample more nuanced effects may not have been detected, thus limiting the accuracy of the generalisability of the findings, and falling short of fully answering Cole's (2009) question of similarities and shared experiences, versus varied experiences, among the sample. Furthermore, as context is important in intersectionality research the present study reflected on its Irish setting from the outset. However, while Ireland shares similarities with other developed countries, generalisability of the findings to other countries is also somewhat limited given Ireland's unique socio-political history.

The analysis of individual effects also involved reference groups, which can risk maintaining the majority/minority comparative divide (Choo & Ferree, 2010; Else-Quest & Hyde, 2016b). However, a considerable strength of the present study was the use of MAIHDA, a comprehensive and robust approach to intersectionality research that does not give one intersecting social location 'social primacy' over any other (Axelsson Fisk et al., 2018; Bauer et al., 2021; Fehrenbacher & Patel, 2020; Evans & Erickson, 2019). Discriminatory accuracy also incorporated an anti-categorical approach in the study, challenging social categories and providing more accurate information for intervention proportioning and targeting (Axelsson Fisk et al., 2018; Bauer et al., 2021; Mulinari et al., 2018; Persmark et al., 2020). There were limitations to conducting MAIHDA using SPSS, such as slow processing and unsuccessful convergences for some approaches and while MAIHDA can account for small samples within social locations, some intersections had very small or no samples which may also have impacted findings (Evans & Erickson, 2019).

Applying quantitative research to intersectionality is complex given it is a social phenomenon changing within and across multiple contexts (McCall, 2005; Persmark et al., 2020; Seng et al., 2012). Fox & Jones (2013) refer to the 'big three' social categories as ethnicity, gender, and class. As discussed previously the lack of an SES variable was a significant limitation in the present study (Mulinari et al., 2018; Persmark et al., 2020). Attempts to address this limitation were made, including seeking a proxy DEIS school variable. However, this was not feasible due to data-recording issues prior to the present study commencing and overall, this omission most likely impacted the findings. Categorising is also problematic particularly for the

complexity of ethnicity and effects are not standalone. However, there is value in compromising with categorisation problems to conduct research to better understand and address the mental health needs of diverse groups (Dogra et al., 2012).

The present research was grounded in theoretical and critical frameworks and included determinants across contexts in which an adolescent is situated. However, as this was not a longitudinal study processes in the PPCT model's chronosystem were not explicitly investigated, an implication for future research to consider (Tudge et al., 2016). A particular strength of the present study was the inclusion of proxy measures for oppressive processes and inequalities regarding discrimination, bullying, and stressful life events variables. While these variables identified the inequalities and similarities in adolescents' mental health experiences. However, the use of binary responses for the discrimination and bullying variables is a limitation in that the findings do not provide more detailed information on the context, nature and type of discrimination e.g. sexism versus racism, an intersecting discriminatory or bullying experience, or indeed and experience in which the social categories included in the present study are not relevant. Future research would also further advance the investigation of adolescent mental health in Ireland within an intersectionality framework by conducting MAIHDA with structural and societal-level variables of these processes (e.g. gender and migration equality indices; Kern et al., 2020).

4.4.3 Conclusions

There are unique challenges to examining social categories in research, given their complexity and relationship with inequality and oppression. However, the present study identified significant determinants impacting the mental health of adolescents across diverse backgrounds in Ireland. These findings are in line with anti-categorical arguments for focusing on the processes of power and oppression over and above the meaning of social categories in intersectionality research, practice, and policy (McCall, 2005; Merlo, 2018). Most importantly, the present study highlighted a need for clinical practice and policy initiatives to account for the impact of discrimination, bullying and stressful life events, on adolescents' mental health in Ireland today.

Chapter 5. Discussion

There are multiple contexts affecting adolescent developmental and health outcomes, and processes of power and oppression operating in these contexts contribute to disparate mental health outcomes among certain groups (Ashiabi & O'Neal, 2015; Currie & Morgan, 2020; Seng et al., 2012; Viner et al., 2012; WHO, 2020). Intersectionality challenges these processes and advocates for clinical psychology and health and social sciences to address processes of power and oppression through practice, policy, and research (Bauer, 2014; Buchanan & Wiklund, 2020; Collins & Bilge, 2020; Grzanka, 2020; Rosenthal, 2016). However, intersectionality is still emerging as an applied framework in clinical psychology and quantitative adolescent mental health research (Buchanan & Wiklund, 2021; Fagrell Trygg et al., 2019; Grzanka, 2020). Guided by the theoretical and critical frameworks of the PPCT model and intersectionality, the present thesis investigated the mental health of adolescents from diverse backgrounds in two studies, a qualitative systematic review exploring mental health through the voices of adolescents from ethnically and culturally diverse backgrounds, and a quantitative multilevel analysis of contexts, processes and determinants effecting the mental health of a large sample of adolescents in Ireland.

In the systematic review described in Chapter 2, a narrative synthesis elicited the risk and protective effects of processes and determinants on mental health, from the voices of adolescents from diverse ethnic and cultural backgrounds in developed countries. These included cultural variations in understandings of mental health, discrimination, social inequalities, and connectedness versus conflict in interpersonal relationships. The systematic review focused on ethnicity and culture as core aspects of an adolescent's development, given their relevance to intersectionality's origins and in recognition of the complexity and diversity of the terms as social categories (Buchanan & Wiklund, 2021; Bunglawala, 2019; Collins & Bilge, 2020; Dogra et al., 2012). However, there are other factors such as gender and sexual orientation that are associated with varying mental health outcomes. Thus, while providing deeper insight into mental health in the context of ethnicity and culture, a limitation of the synthesised findings of the systematic review is the narrowed focus on one social category. To further understand the intersectionality of multiple social categories on

adolescent mental health, the quantitative study extended the analysis to four social category variables, namely gender, ethnicity, sexual orientation, and disability. These were investigated in conjunction with processes and determinants related to mental health outcomes, using a novel and robust method of analysis (Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy; MAIHDA).

5.1 Evidence for, and critiques of, quantitative intersectionality research

While the empirical study examined intersectionality in a large sample using robust methods, the study failed to find evidence for multiplicative effects of the intersections of gender, ethnicity, sexual orientation, and disability, among adolescents in an Irish context. Most quantitative applications of intersectionality have occurred in public health research and despite the very large and diverse samples in many studies, non-significant findings similar to the present study have been observed. For example, MAIHDA applied to chronic obstructive pulmonary disease (Axelsson Fisk et al., 2018), body mass index (Evans et al., 2018), and opioid use (Persmark et al., 2020) examined various intersectional effects for gender, ethnicity, income, education, living circumstances, and age, concluding that multiplicative effects were inconsistent or that the main effects in the models explained most if not all the variance in outcome risk. Evans & Erikson (2019) applied MAIHDA to depression, investigating similar variables and while modest intersectional effects were observed, the majority of variance in outcome was explained by the main effects. However, this was a longitudinal study with a very large sample and the authors noted that modest effects remained informative for large-scale public health research.

Replication of the empirical study in a full population sample or over time may yield different results. However, Kern et al.'s (2020) scaling up to include both country and individual level variables in a multi-country application of MAIHDA to adolescent mental health outcomes similarly did not observe significant intersectional effects for immigration background, socioeconomic status (SES), and gender across national contexts. When country-level variables were included in the models, significant intersectional effects emerged, however, these were neither consistent nor substantial in terms of variance accounted for in mental health outcomes. Buchanan & Wiklund (2021) suggest that non-significant intersectional effects may be due to the

selection of variables. All the aforementioned studies included a variable representing SES (e.g. education, income, household status) and single-level intersectionality analyses also demonstrated significant fixed, and some multiplicative, effects when SES variables were included (Axelsson Fisk et al., 2021; Mulinari et al., 2018; Wemrell et al., 2021). Thus, as SES appears to be a primary driver in intersectional differences in health outcomes, absence of an SES variable in the empirical study is a limitation.

However, critical scholars also note that non-significant findings may reflect the unsuitability of quantitative approaches or measurement methods for intersectional research questions (Buchanan & Wiklund, 2021; DeBlaere et al., 2018; Kelly et al., 2021). Recent commentaries on quantitative intersectional research have noted that survey studies may fail to capture unique and nuanced lived experiences and contexts (Evans & Erickson, 2019; Grabe, 2020), reflecting what DeBlaere et al. (2018) refer so to as the ongoing 'unresolved criticisms' of intersectionality's application to research, such as intersectionality's ambiguous definitions and lack of coherence with lived experiences. Such experiences are fluid and contextual, changing positions of advantage/disadvantage throughout an individual's life, again calling into question the validity of quantifying intersectionality at a specific point in time (DeBlaere et al., 2018) considering intersectionality is what it does, not what it 'is' (Kelly et al., 2021).

Furthermore, Lizotte et al. (2020) argue that MAIHDA estimates are not solely dependent on random effects, with fixed effects providing meaning to interpretations and potentially leaving far less variance to be explained by a further interaction term (DeBlaere et al., 2018). Indeed, meaningful effects for the intersectionality variables in the present study were only observed in a fixed, 'additive' effects model. Higher risk for mental health outcomes emerged for adolescents identifying as female, sexually diverse, and having a long-term mental health or physical health difficulty, replicating existing evidence (Currie & Morgan, 2020; Mcadam et al., 2018). Findings regarding ethnicity were less definitive, however significantly higher levels of depression were observed among adolescents identifying as Black or Black Irish when determinants were included in the analysis. This finding potentially reflects higher levels of discrimination and racism experienced by adolescents identifying as Black. For example, a large systematic review by Priest et al. (2013) documented a much greater

number of significant associations between reported racial discrimination and health among African American youth than other ethnic backgrounds except the 'Other' grouping. In Ireland in a representative population sample of adults, the Equality Authority (Russell et al., 2008) reported higher levels of modelled risk for discrimination (40%) among people identifying as Black or Black Irish than any other ethnic background, or other groups investigated (e.g. disability, employment, religion) and these findings persist in the CSO (2019) data on discrimination. This illustrates an environment in which exposure to direct, and indirect discrimination e.g. through family or friends' experiences, is a reality for Black adolescents. While ethnic categorisation is problematic in that it equates skin colour with ethnic identity, and grouping overlooks the heterogeneity of diverse communities and identities (Bunglawala, 2019; King-O'Riain, 2007; Rooney & Canavan, 2018), these findings are pertinent to practice and policy given the implications of discrimination for mental health, with child and adolescent mental health professionals arguing for these lived and potentially traumatic experiences to be considered in formulation, intervention, and staff training (Ayodeji et al., 2021).

5.2 Processes and determinants affecting adolescent mental health

Further to the individual social categories, meaningful effects of processes and determinants on adolescent mental health were observed both in adolescents' reports in the systematic review, and in the fixed effects model in the empirical study. The pervasiveness of bullying and discrimination was evident throughout the present thesis. These oppressive processes operate distally in the macrosystem as reflected by one adolescent's comment in the review that racism seems to always exist, to more proximal levels in schools and communities, and even closer through experiences of family and internalised stigma. This highlights the effects of the 'upstream' wider contexts and social determinants on adolescent mental health outcomes (Viner et al., 2012). In the systematic review, inequalities in accessing services, and opportunities to grow up in secure and nurturing circumstances, were highlighted by adolescents from ethnically and culturally diverse backgrounds. These inequalities reflect societal and structural oppressions, which are often disproportionately experienced by oppressed and marginalised groups (Buchanan & Wiklund, 2021; Johnstone & Boyle,

2018; Meeker et al., 2021; Mersky et al., 2021). Therefore, the importance of addressing both equity and equality is reflected in this finding. Financial challenges and lack of information are often shared barriers to accessing help in adolescence (Radez et al., 2021) and equality of opportunity would thus benefit all adolescents' access to mental health supports. In addition, issues regarding language barriers and cultural differences of clinicians highlight the need for services to be equitable in their response to differing needs of adolescents from diverse backgrounds.

The sampling of adolescents in secondary school in the empirical study elicits an interesting reflection on equality. One aspect of the systematic review's school-related findings positioned school as a protective context where difference was not exacerbated, and this is possibly confirmed by the empirical study findings. Without dismissing the significant effects of bullying and discrimination, most adolescents felt reasonably connected with their school and multiple initiatives have sought to address inequalities in academic and psychosocial opportunities in secondary school in Ireland (e.g. the DEIS initiative; emphasis on wellbeing in the curricula, Nolan & Smyth, 2021). Experiences of more vulnerable groups such as early-school leavers (McHugh, 2015) and Traveller and Roma adolescents were not captured in the present study due to sampling. This limited further understanding, for example, of the mental health of Irish Traveller youth given that the systematic review illustrated nuanced intergenerational challenges affecting the wellbeing of this cohort. Thus, while reflecting a large proportion of the adolescent population, the empirical findings are not fully representative of mental health experiences of all adolescents in Ireland.

Connections within the microsystem evidenced across both studies have implications for adolescents' present and future health outcomes (Steiner et al., 2019) and protective effects against oppressive processes such as discrimination (Sapiro & Ward, 2020). The importance of family and school were particularly evident in the findings, confirming existing research (Foster et al., 2017; Nolan & Smyth, 2021; Steiner et al., 2019) and offering avenues for systemic and school-based interventions in which group interventions targeting discrimination, bullying and mental health can be delivered, and mental health services can upskill and empower parents and teachers to further support adolescent mental health (e.g. One Good School, see

https://jigsaw.ie/one-good-school/; the Transnational Collaboration on Bullying, Migration and Integration at School Level [TRIBES] project, see http://www.tribesproject.com/). While peers were not investigated in the present empirical study, Foster et al. (2017) reported that, for vulnerable young people, connection to peers was less important than family and school and Nolan & Smyth (2021) also reported discrepancies in the effects of peer relationships on adolescent socio-emotional difficulties in the Irish GUI data. Connection to mental health professionals was also important for adolescents' mental health in the systematic review findings, echoing Sapiro & Ward's (2020) review which highlighted the particular significance of this connection for marginalised youth who have experienced discrimination and stressful life events. However, both studies emphasised that such connection arises from adolescents' felt sense of, and trust in, mental health professionals' sensitivity and responsivity to their unique and diverse experiences (Radez et al., 2021). Finally, the strengths and personal factors of adolescents cannot be overlooked. Sapiro & Ward (2020) noted the tendency for adolescent mental health research to orient to deficits and emphasised the value of microsystem connections in bolstering adolescents' strengths as protective factors in themselves, as seen in the effects of optimism and self-esteem in the empirical study.

5.3 Practice and policy implications

Intersectionality as a framework has spurred necessary societal and professional reflections on processes of power, oppression, and inequality, including clinical psychology where 'White' norms and discrimination persist within the field (Ahsan, 2020; Odusanya et al., 2018; Wood & Patel, 2019). Such reflections are vital for clinical humility and sensitivity to the diverse and nuanced needs of individuals engaging with clinical psychologists, and for appropriately responsive interventions, services, and policies (APA, 2019; APA, 2019; BPS, 2017; Buchanan et al., 2020; Grzanka, 2020). However, as some adolescents in the systematic review noted, bringing intersectionality or social categories into the therapeutic space may not always be beneficial. Furthermore, the application of intersectionality to adolescent mental health in the present thesis obtained inconclusive findings regarding intersectional effects. Hence practice and policy can neither dismiss, nor solely focus on, the

intersections of social categories as explanations for mental health outcomes. Rather, in the context of the generally consistent non-significant multiplicative effects in intersectionality research, ''it may be the separate discrimination experiences themselves that are most relevant to distress'' rather than intersectional social categories (DeBlaere et al., 2018, p. 570). Thus, while remaining cognisant of both the contributions of intersectionality to clinical practice and the risks of the term becoming an ambiguous and misused 'buzzword' in clinical psychology (DeBlaere et al., 2018; Kelly et al., 2021; Grzanka, 2020), the present thesis highlights more salient determinants that offer clinically relevant avenues for intervention and policy to address processes of power and oppression that affect adolescent mental health.

Reflecting on power is important in clinical practice and DeBlaere et al. (2018, p. 576) propose that the ''it is critical to acknowledge the implicit and explicit power imbalance in the therapist–client relationship as a microcosm of the macro power dynamics experienced in society''. McClelland (2014) argues that power can play out in formulation and diagnosis. She proposes a formulation approach that captures the impact of social inequalities, power, and social justice. The Power Threat Meaning Framework (Johnstone & Boyle, 2018) has furthered the movement against pathologising lived experiences of inequalities and oppression. Indeed, even DSM-5 and ICD diagnostic manuals have attempted to capture social determinants and inequalities (DSM-5 V codes, ICD Z codes) and while such codes may be seen as further pathologising lived experiences, Kinderman and colleagues argue that better documentation of same would improve provision of care and inform policy by evidencing that these determinants underlie mental health presentations to services (Allsopp & Kinderman, 2017; Kinderman et al., 2021). Given that psychologists work frontline with the results of oppressive processes such as discrimination and social inequalities, the field is well placed to provide evidence, contribute to policy, and advocate for social change (Buchanan & Wiklund, 2020, 2021; Grzanka, 2020). Arguably, intersectionality's greatest clinical contribution is in its recontextualisation of an individual or community within simultaneous experiences of privilege and oppression (Else-Quest & Hyde, 2016a; Kelly et al., 2021).

5.4 Further limitations and recommendations for future research

While the present thesis employed multiple methods to ensure the analyses were as unbiased as possible, there are limitations that may inform future research. As a social category, defining ethnicity is problematic given the diversity within and between groups and the risks of upholding socially constructed, oppressive categories (Buchanan & Wiklund, 2021; Bunglawala, 2019; Dogra et al., 2012). While it is not possible to capture all 'intersectional' factors, additional variables may have contributed further understanding to multiplicative effects regarding adolescents' mental health, e.g. socioeconomic status or family structure, and future research may also consider methods to quantify processes of power such as looking 'upstream' at societal and structural variables (Cole, 2009; Grzanka, 2020; Viner et al., 2012).

The present thesis would have benefitted from a collaboration with adolescents as experts by experiences to cross-check findings from both studies as a means of further reducing researcher bias. Integration of quantitative and qualitative research appears to be the most robust approach to examining intersectionality. This co-creation of research adds a richer layer to understanding lived experiences and nuanced intersectional effects less detectable with statistical analyses and addresses researcher-participant power imbalances (Else-Quest & Hyde, 2016a; Grabe, 2020; Rosenthal, 2016). Future research should consider approaches such as community-based participatory action research (CBPAR; e.g. Bailey et al., 2019) and knowledge translation (KT; e.g. Kelly et al., 2021), and continue to consider processes of power and oppression within the context under investigation (Else-Quest & Hyde, 2016b).

5.5 Self-reflection

The present thesis arose from my experiences during clinical training on placements in diverse, and in some cases disadvantaged, communities. I became increasingly aware of my own social categories and identities, whether named or unnamed in the therapeutic space, and began to question my own privilege and biases and how they manifest in formulation and practice. I found myself frustrated at my lack of action in the face of contexts and processes similar to those discussed in the present thesis and sought out research and scholarship that petitioned advocacy and social change. While ''using intersectionality can be uncomfortable'' (Kelly et al., 2021, p. 6),

consolidating intersectionality into my practice and research as a clinical psychologist in training has encouraged me to continuously recognise the wider contexts and systems at play in an individual's life, which contribute to both strengths and difficulties through the lifespan. I was particularly struck by adolescents in the transitionary stage from home and family as haven or hardship, to adulthood, independence, and responsibility. At a time of identity exploration and development that can be exciting and transformative, I felt we were not mobilising enough as a field to investigate and address the oppressive processes and inequalities impacting adolescent mental health. As training progresses towards qualification, Collins & Bilge's (2020) words resonate and remind me that simply because a piece of research examines social processes and inequalities within an intersectional framework, it does not mean it is contributing to social change. Whether through this research or clinical practice, I look forward to the pursuit of social change as a clinical psychologist.

5.6 Conclusion

The present thesis applied intersectionality as a critical framework to the investigation of adolescent mental health through two studies, a qualitative systematic review, and a quantitative multilevel analysis. While findings regarding intersectional effects were inconclusive, eliciting discussions on the suitability of quantitative approaches in intersectional research, both studies evidenced significant processes and determinants affecting the mental health of adolescents from diverse backgrounds and highlighted the imperative need for practice and policy to address processes of oppression and inequality in the interest of adolescent developmental health.

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Appendices for Systematic Review

Appendix 1. Search strategies

Table 1.1

Search strategies for academic references.

SPIDER framework	**Search terms (for all three databases)**
Sample	(12-18 year* OR Adolescen* OR aged 12-18 OR High school student* OR Juvenile* OR Minor* OR Second level student* OR Secondary school student* OR Teen* OR Under 18 OR Young people OR Young person OR Youth) AND (Acculturation OR Asylum* OR Cross-cultur* OR Cultur* OR Divers* OR Ethnic* OR Foreign* OR Immigrant* OR Immigrat* OR Indigenous OR Intercult* OR Migrant* OR Migrat* OR Minorit* OR Multicult* OR Non-national* OR Race* OR Racial OR Refuge* OR Transcultur*) AND (Developed countr* OR America OR Australia OR Austria OR Belgian OR Britain OR Bulgaria OR Canada OR Croatia OR Cyprus OR Czech Republic OR Denmark OR England OR Estonia OR Finland OR France OR German OR Greece OR Hungary OR Iceland OR Ireland OR Italy OR Japan OR Latvia OR Lithuania OR Luxembourg OR Malta OR Netherlands OR New Zealand OR Northern Ireland OR Norway OR Poland OR Portugal OR Romania OR Scotland OR Slovakia OR Slovenia OR Spain OR Sweden OR Switzerland OR UK OR United Kingdom OR United States* OR USA OR Wales) AND
Phenomenon of interest	(Affective disorder* OR Affective symptom* OR Anxiet* OR Depress* OR Distress* OR Emoti* OR Mental disorder* OR Mental health* OR Mental ill* OR Mental problem* OR Mood OR Mood disorder* OR Post traumatic stress* OR Post-traumatic stress* OR Psychiatric* OR Psychological* OR Psychosocial OR PTSD OR Resilience OR Stress* OR Trauma* OR Well being OR Wellbeing OR Well-being) AND
Design / research type Evaluation	(Interview* OR Focus group* OR Qualitative*) AND (Attitude* OR Belie* OR Circumstan* OR Emotion* OR Event* OR Experience* OR Feeling* OR Happen* OR Know* OR Lived experience* OR Opinion* OR Perceiv* OR Perception* OR Personal OR Subjective OR Understand* OR View*)
Databases	**Filters (for individual databases)**
PsycInfo	Limit to: Peer Review; Publication date: Start January 1 2000; Record Type: Peer Reviewed Journal; Language: English; Age group: Adolescence (only); Population: Female, Male, Human, Inpatient, Outpatient.
MEDLINE	Limit to: Peer reviewed, Humans, Females, Males; Publication date: Start January 1 2000; Language: English; Age group: Adolescent.
CINAHL	Search modes: Boolean/Phrase; Search modes: Apply equivalent subjects; Publication year: 2000; Peer reviewed; English language; Human; Age groups: Child, Adolescence; Language: English.

Table 1.2

Search strategy for non-academic references.

Domain	**Terms**
Search phrases	youth mental health research [country/source]
	ethnic and cultural minority research [country/source]
Sources and countries	United Nations
	UNICEF
	World Health Organisation
	World Economic Forum
	World Health Organisation Europe
	Australia
	Canada
	Ireland
	New Zealand
	United Kingdom
	England
	Northern Ireland
	Scotland
	Wales
	United States of America

Appendix 2. Appraisal of study quality and review findings

Table 2.1.

COREQ scoring for individual studies.

COREQ Domains and items	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
Domain 1: Research team and reflexivity																	
Personal Characteristics																	
1. Interviewer / facilitator	X	X	X		X		X		X	X	X		X				
2. Credentials	X		X		X		X		X	X		X					
3. Occupation	X		X		X				X	X		X					
4. Gender	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
5. Experience and training	X	X	X							X				X		X	
Relationship with participants																	
6. Relationship established	X	X	X		X				X				X	X		X	X
7. Participant			X						X								
8. Interviewer characteristics	X	X	X						X	X						X	
Domain 2: study design																	
Theoretical framework																	
9. Methodological orientation and theory	X	X	X	X	X	n/a	X	X	X	X	X		X	X	X	X	X
Participant selection																	
10. Sampling	X	X	X	X	X	X	X		X			X	X	X		X	X
11. Method of approach	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
12. Sample size How many participants were in the study?	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
13. Non-participation			X			X	X			X			X		X	X	
Setting																	
14. Setting of data collection	X	X	X			X			X		X	X	X		X	X	
15. Presence of non-participants		X		X		n/a	X			X				X	X	X	

16. Description of sample	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Data collection																	
17. Interview guide	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
18. Repeat interviews							X		X					X		X	
19. Audio/visual recording	X	X	X	X	X	n/a	X		X	X	X		X	X	X	X	
20. Field notes		X		X	X	n/a	X		X	X				X		X	
21. Duration	X	X	X			n/a	X				X						
22. Data saturation	X			X	X	n/a					X				X		
23. Transcripts returned				X		n/a				X				X			
Domain 3: analysis and findings																	
Data analysis																	
24. Number of data coders	X	X	X		X		X	X	X				X				X
25. Description of the coding tree		X	X						X			X				X	
26. Derivation of themes	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
27. Software		X	X			X	X		X								
28. Participant checking				X			X		X	X				X			X
Reporting																	
29. Quotations presented	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
30. Data and findings	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
31. Clarity of major themes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
32. Clarity of minor themes	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Total	23	24	26	18	20	n/a	23	12	26	22	15	13	17	19	13	22	15

Note. 1. Ali et al. (2017); 2. Arora and Khoo (2020); 3. Austin (2018); 4. de Anstiss and Ziaian (2010); 5. Dogra et al. (2007); 6. Fleming et al. (2020); 7. Garcia and Saewyc (2007); 8. Gonçalves and Moleiro (2012); 9. Goodkind et al. (2015); 10. Groark et al. (2011); 11. Gurpinar-Morgan et al. (2014); 12. Hanson (2019); 13. Jones et al. (2018); 14. Kingi et al. (2017); 15. Majumder et al. (2015); 16. Pavee Point (2015); 17. Street et al. (2005).

Table 2.2

GRADE-CERQual methodological limitations domain for individual studies.

Studies	Level of concern	Explanation
Ali et al. (2017)	Minor concerns	Data saturation not addressed however this is noted, no response validation or participant checking, no coding tree.
Arora and Khoo et al. (2020)	Minor concerns	No discussion of reflexivity, researcher taking notes during groups, no response validation or participant checking.
Austin (2018)	No/minor concerns	No response validation or participant checking, no discussion of data saturation.
de Anstiss and Ziaian (2010)	No/minor concerns	Limited relationship with participants, no coding tree.
Dogra et al. (2007)	Minor concerns	No response validation or participant checking, no coding tree reported.
Fleming et al. (2020)	Moderate concerns	Survey with open-ended items. No response validation or participant checking, only most prevalent themes reported.
Garcia and Saewyc (2007)	No/minor concerns	No discussion of relationship with participants, no response validation.
Gonçalves and Moleiro (2012)	Serious concerns	No discussion of reflexivity, sampling and data collection methods not detailed, no response validation or participant checking.
Goodkind et al. (2015)	No/minor concerns	No discussion of data saturation, no response validation.
Groark et al. (2011)	No/minor concerns	Small sample however this was appropriate for the methodology, no coding tree.
Gurpinar-Morgan et al. (2014)	Moderate concerns	No discussion of reflexivity or relationship with participants, small sample however this was appropriate for the methodology, no response validation or participant checking, no coding tree reported.
Hanson (2019)	Serious concerns	No discussion of reflexivity or relationship with participants, sampling and data collection methods not detailed, no response validation or participant checking.
Jones et al. (2018)	Moderate concerns	No discussion of reflexivity, no discussion of data saturation, no response validation or participant checking.
Kingi et al. (2017)	No/minor concerns	No discussion of data saturation, however N=25.
Majumder et al. (2015)	Serious concerns	No discussion of reflexivity or relationship with participants, no response validation or participant checking, rephrased quotes reported questioning credibility, no coding tree.
Pavee Point (2015)	No/minor concerns	No discussion of data saturation, no response validation or participant checking however study involved reflective engagements with participants and community members.
Street et al. (2005)	Moderate concerns	No discussion of reflexivity, sampling and data collection methods not detailed, no response validation, no coding tree.

Table 2.3

Synthesised findings and corresponding studies.

Synthesised findings	Studies	
Mac 1: Cultural and religious understandings impact mental health experiences (*n*=10)		
	1; 2; 4; 8; 11; 12; 14; 15; 16; 17	
Mac 2 & Process 1: Societal bullying and discrimination (*n*=7)		
	2; 3; 4; 6; 12; 13; 16	
Exo 1 & Process 2: Psychosocial and socioeconomic inequalities (*n*=9)		
Exo 1a: Resources inequalities (*n*=7)	4; 6; 8; 9; 12; 16; 17	
Exo 1b: Social issues (*n*=5)	6; 9; 10; 15; 16	
Mic 1 & Process 3: Connection/conflict (*n*=15)		
	Connection	**Conflict**
Mic 1a: Family (*n*=11)	3; 5; 7; 8; 9; 12; 13; 14	2; 4; 8; 12; 17
Mic 1b: Friends (*n*=11)	1; 3; 4; 5; 7; 8; 9; 10; 12; 13; 14	3; 4; 12
Mic 1d: Clinicians and services (*n*=11)	5; 7; 8; 10; 11	1; 2; 4; 5; 11; 12; 15; 17
Mic 1c: School (*n*=10)	1; 3; 5; 8; 10; 12; 13; 17	2; 3; 4; 10; 12
Mic 1e: Community (*n*=9)	1; 3; 9; 10; 11; 12; 13; 14	1; 3; 4; 12
Mic 1f: Land and place (*n*=3)	9; 12; 14	
Mic 1g: Online (*n*=2)	3; 12	3; 12
Per 1: Self and identity (*n*=5)		
	3; 6; 11; 12; 13.	
Per 2: Mental health and personal protective factors (*n*=6)		
Per 2a: ''Mentally healthy'' (*n*=6)	3; 7; 8; 10; 12; 13	
Per 2b: Protective factors (*n*=4)	8; 10; 12; 14	
Per 3: Mental health difficulties and personal risk factors (*n*=11)		
Per 3a: ''Mentally unhealthy'' (*n*=9)	2; 6; 7; 9; 10; 12; 14; 15; 17	
Per 3b: Isolation, loss, and grief (*n*=8)	2; 7; 10; 12; 13; 14; 15; 17	
Per 3c: Stigma and shame (*n*=5)	2; 12; 15; 16; 17	
Time: Intergenerational history and stressful life events (*n*=11)		
	2; 4; 7; 9; 10; 11; 12; 13; 15; 16; 17	

Note. 1. Ali et al. (2017); 2. Arora and Khoo (2020); 3. Austin (2018); 4. de Anstiss and Ziaian (2010); 5. Dogra et al. (2007); 6. Fleming et al. (2020); 7. Garcia and Saewyc (2007); 8. Gonçalves and Moleiro (2012); 9. Goodkind et al. (2015); 10. Groark et al. (2011); 11. Gurpinar-Morgan et al. (2014); 12. Hanson (2019); 13. Jones et al. (2018); 14. Kingi et al. (2017); 15. Majumder et al. (2015); 16. Pavee Point (2015); 17. Street et al. (2005). *n* = count of studies; Mac = macrosystem; Exo = exosystem; Mic = microsystem; Per = person.

Table 2.4

GRADE-CERQual Evidence Profile.

Synthesised findings	Contributing studies	Methodological limitations (Table 2.2)	Coherence	Adequacy	Relevance	Confidence in review findings (CERQual)
Mac 1: Cultural/religious understandings impacting mental health						
	Ali et al. (2017); Arora & Khoo (2020); de Anstiss & Ziaian (2010); Gonçalves & Moleiro (2012); Gurpinar-Morgan et al. (2014); Hanson (2019); Kingi et al. (2017); Majumder et al. (2015); Pavee Point (2015); Street et al. (2005)	Moderate limitations No/minor: 5 Moderate: 2 Serious: 3	No or very minor concerns	Minor concerns (most studies offer rich data, some with limited data)	No concerns (all either directly or indirectly relevant, e.g. some focused on help-seeking in context of mental health needs)	High confidence (Moderate concerns for methodological limitations, no or minor concerns for all other domains)
Mac 2 & Process 1: Societal bullying and discrimination						
	Arora & Khoo (2020); Austin (2018); de Anstiss & Ziaian (2010); Fleming et al. (2020); Hanson (2019); Jones et al. (2018); Pavee Point (2015)	Moderate limitations No/minor: 4 Moderate: 2 Serious: 1	No or very minor concerns.	Moderate concerns (some studies offering rich data, some studies with limited data)	Minor concerns (most studies directly relevant, one with broader sample)	Moderate confidence (Moderate concerns for methodological limitations and adequacy, no or minor concerns for other domains)
Exo 1 & Process 2: Psychosocial / socioeconomic inequalities						
Exo 1a: Resources inequalities	de Anstiss & Ziaian (2010); Fleming et al. (2020); Gonçalves & Moleiro (2012); Goodkind et al. (2015); Hanson (2019); Pavee Point (2015); Street et al. (2005)	Moderate limitations No/minor: 3 Moderate: 2 Serious: 2	No or very minor concerns	Moderate concerns (some studies offer rich data, some studies with limited data)	Minor concerns (most studies directly relevant, some partially relevant e.g. wider community sample)	Moderate confidence (Moderate concerns for methodological limitations and adequacy, no or minor concerns for other domains)
Exo 1b: Social issues	Fleming et al. (2020); Goodkind et al. (2015); Groark et al. (2011); Majumder et al. (2015); Pavee Point (2015)	Moderate limitations No/minor: 3 Moderate: 1 Serious: 1	No or very minor concerns	Moderate concerns (some studies offer rich data, some studies with limited data)	Minor concerns (most studies directly relevant, some partially relevant e.g. wider community sample)	Moderate confidence (Moderate concerns for methodological limitations and adequacy, no or minor concerns for other domains)
Mic 1 & Process 3: Connection/conflict						
Mic 1a: Family	Arora & Khoo (2020); Austin (2018); de Anstiss & Ziaian (2010); Dogra et al. (2007); Garcia & Saewyc (2007); Gonçalves & Moleiro (2012); Goodkind et al. (2015); Hanson (2019); Jones et al. (2018); Kingi et al. (2017); Street et al. (2005)	Moderate limitations No/minor: 7 Moderate: 2 Serious: 2	No or very minor concerns	Minor concerns (most studies offer rich data, some with limited data)	No concerns (all directly or indirectly relevant)	High confidence (Moderate concerns for methodological limitations, no or minor concerns for all other domains)
Mic 1b: Friends	Ali et al. (2017); Austin (2018); de Anstiss & Ziaian (2010); Dogra et al. (2007); Garcia & Saewyc (2007); Gonçalves & Moleiro (2012); Goodkind et al. (2015); Groark et al. (2011); Hanson (2019); Jones et al. (2018); Kingi et al. (2017)	Moderate limitations No/minor: 8 Moderate: 2 Serious: 1	No or very minor concerns	Minor concerns (most studies offer rich data, some with limited data)	No concerns (all directly or indirectly relevant)	High confidence (Moderate concerns for methodological limitations, no or minor concerns for all other domains)

Mic 1d: Clinicians and services	Ali et al. (2017); Arora & Khoo (2020); de Anstiss & Ziaian (2010); Dogra et al. (2007); Garcia & Saewyc (2007); Gonçalves & Moleiro (2012); Groark et al. (2011); Gurpinar-Morgan et al. (2014); Hanson (2019); Majumder et al. (2015); Street et al. (2005)	Moderate limitations No/minor:6 Moderate: 2 Serious: 3	Minor concerns (some variations in study findings)	No or very minor concerns	No concerns (all directly or indirectly relevant)	High confidence (Moderate concerns for methodological limitations, no or minor concerns for all other domains)
Mic 1c: School	Arora & Khoo (2020); Ali et al. (2017); Austin (2018); de Anstiss & Ziaian (2010); Dogra et al. (2007); Gonçalves & Moleiro (2012); Groark et al. (2011); Hanson (2019); Jones et al. (2018); Street et al. (2005)	Moderate limitations No/minor: 6 Moderate: 2 Serious: 2	No or very minor concerns	No or very minor concerns	No concerns (all studies either directly or indirectly relevant)	High confidence (Moderate concerns for methodological limitations, no or minor concerns for all other domains)
Mic 1e: Community	Ali et al. (2017); Austin (2018); de Anstiss & Ziaian (2010); Goodkind et al. (2015); Groark et al. (2011); Gurpinar-Morgan et al. (2014); Hanson (2019); Jones et al. (2018); Kingi et al. (2017)	Moderate limitations No/minor: 6 Moderate: 2 Serious: 1	No or very minor concerns	No or very minor concerns	No concerns (all directly or indirectly relevant)	High confidence (Moderate concerns for methodological limitations, no or minor concerns for all other domains)
Mic 1f: Land and place	Goodkind et al. (2015); Hanson (2019); Kingi et al. (2017)	Moderate limitations No/minor: 2 Moderate: Serious: 3	Moderate concerns (variation in study findings and fit with present review)	Minor concerns (relatively rich data but only 3 studies)	Moderate concerns (only 2 studies directly relevant)	Low confidence (Moderate concerns for all domains bar adequacy, only three studies contributing)
Mic 1g: Online	Austin (2018); Hanson (2019)	Serious limitations No/minor: 1 Moderate: Serious: 1	Moderate concerns (single study, findings)	Serious concerns (only 1 study)	Serious concerns (only 1 study directly relevant)	Very low confidence (Serious concerns for all domains bar coherence, only two studies contributing)
Per 1: Self and identity	Austin (2018); Fleming et al. (2020); Gurpinar-Morgan et al. (2014); Hanson (2019); Jones et al. (2018).	Moderate limitations No/minor: 1 Moderate: 3 Serious: 1	Minor concerns (some variations in study findings and fit with present review)	Minor concerns (most studies offer rich data)	Moderate concerns (only 2 studies directly relevant)	Moderate confidence (Moderate concerns for methodological limitations and relevance, minor concerns for other domains)
Per 2: Mental health and personal protective factors						
Per 2a: ''Mentally healthy''	Austin (2018); Garcia & Saewyc (2007); Gonçalves & Moleiro (2012); Groark et al. (2011); Hanson (2019); Jones et al. (2018)	Moderate limitations No/minor: 3 Moderate: 1 Serious: 2	Minor concerns (some variation in study findings and fit with present review)	No or very minor concerns	Minor concerns (all studies directly or indirectly relevant, some variations)	High confidence (Moderate concerns for methodological limitations, no or minor concerns for all other domains)
Per 2b: Protective factors	Gonçalves & Moleiro (2012); Groark et al. (2011); Hanson (2019); Kingi et al. (2017)	Moderate limitations No/minor: 2 Moderate: Serious: 2	No or very minor concerns	No or very minor concerns	Minor concerns (all studies directly or indirectly relevant, some variations)	High confidence (Moderate concerns for methodological limitations, no or minor concerns for all other domains)
Per 3: Mental health difficulties and personal risk factors						
Per 3a: ''Mentally unhealthy''	Arora & Khoo (2020); Fleming et al. (2020); Garcia & Saewyc (2007); Goodkind et al. (2015); Groark et al. (2011); Hanson (2019); Kingi et al. (2017); Majumder et al. (2015); Street et al. (2005)	Moderate limitations No/minor: 5 Moderate: 2 Serious: 2	Minor concerns (some variation in study findings and fit with present review)	No or very minor concerns	Minor concerns (all studies directly or indirectly relevant, some variations)	High confidence (Moderate concerns for methodological limitations, no or minor concerns for all other domains)

Per 3b: Isolation, loss, and grief	Arora & Khoo (2020); Garcia & Saewyc (2007); Groark et al. (2011); Hanson (2019); Jones et al. (2018); Kingi et al. (2017); Majumder et al. (2015); Street et al. (2005)	Moderate limitations No/minor: 4 Moderate: 2 Serious: 2	No or very minor concerns	No or very minor concerns	No concerns (all directly or indirectly relevant)	High confidence (Moderate concerns for methodological limitations, no or minor concerns for all other domains)
Per 3c: Stigma and shame	Arora & Khoo (2020); Hanson (2019); Majumder et al. (2015); Pavee Point (2015); Street et al. (2005)	Moderate limitations No/minor: 2 Moderate: 1 Serious: 2	Minor concerns (some variation in study findings and fit with present review)	No or very minor concerns	No concerns (all directly or indirectly relevant)	High confidence (Moderate concerns for methodological limitations, no or minor concerns for all other domains)
Time: Intergenerational history and stressful life events	Arora & Khoo (2020); de Anstiss & Ziaian (2010); Garcia & Saewyc (2007); Goodkind et al. (2015); Groark et al. (2011); Gurpinar-Morgan et al. (2014); Hanson (2019); Jones et al. (2018); Majumder et al. (2015); Pavee Point (2015); Street et al. (2005)	Moderate limitations No/minor: 5 Moderate: 2 Serious: 3	Minor concerns (some variation in study findings and fit with present review)	No or very minor concerns	No concerns (all directly or indirectly relevant)	High confidence (Moderate concerns for methodological limitations, no or minor concerns for all other domains)

Note. Mac = macrosystem; Exo = exosystem; Mic = microsystem; Per = person.

Appendices for Empirical Study

Appendix 3. Confirmation of exemption from full ethical review

UCD CONNECT

Alanna Donnelly <alanna.donnelly@ucdconnect.ie>

LS-E-20-58-Donnelly-Dooley Exemption
2 messages

exemptions.ethics@ucd.ie <exemptions.ethics@ucd.ie> 1 May 2020 at 16:33
To: Alanna Donnelly <alanna.donnelly@ucdconnect.ie>
Cc: Barbara Dooley <barbara.dooley@ucd.ie>

Dear Alanna,

Thank you for notifying the Human Research Ethics Committee – Sciences (HREC-LS) of *your declaration* that you are exempt from a full ethical review. Should the nature of your research change and thereby alter your exempt status you will need to submit an application form for full ethical review. Please note for future correspondence regarding this study and its exemption that your Research Ethics Exemption Reference Number is: **LS-E-20-58-Donnelly-Dooley.**
This exemption from full ethical review is being accepted by the Office of Research Ethics on the condition that you observe the following:

- **External REC Approval and/or Permission to Access/Recruit Human Participants/or their Data:** *(if applicable)* Please be aware that recruitment of participants or data collection should not begin until written permissions are secured from external organisations/individuals.

- **UCD Insurance Requirement:** I confirm that the public liability insurance cover is in place for this project.

- **Researcher Duty of Care to Participants:** please ensure that ethical best practice is considered and applied to your research projects.

Any additional documentation should be emailed to exemptions.ethics@ucd.ie quoting your assigned reference number (provided above) in the subject line of your email.

Please note that your research does not require a committee review and also note that this is an acknowledgment of your declared exemption status. All Exemptions from Full Review are subject to Research Ethics Compliance Review.

Regards,

Tom

Tom Seaver

Office of Research Ethics

Roebuck Castle

Belfield

Appendix 4. Supplementary methodology and results

Table 4.1

Recoded variable responses.

Variable	**Response code**
Gender	0. Female; 1. Male
Sexual orientation	0. Heterosexual 1. Lesbian, Gay, Bisexual, Asexual, Pansexual (LGBAP) 2. I'm not sure/Questioning
Ethnicity	0. White Irish 1. Any White background other than Irish 2. Black or Black Irish 3. Mixed background 4. Asian or Asian Irish
Long-term health difficulty or disability	0. No long-term health difficulty/disability 1. Mental health difficulty 2. Physical health difficulty
Discrimination; Bullying Self-harm; Suicide attempt	0. No 1. Yes

Table 4.2 *SPSS codes for self-harm / suicide attempt**

Model	Model code	AU-ROC code
Explanatory Model	LOGISTIC REGRESSION VARIABLES delib_hurt /METHOD=ENTER gender_femalemale sex_orient_3CATS ethnic_5CATS LTCONDITION_code been_discrim /CONTRAST (gender_femalemale)=Indicator(1) /CONTRAST (sex_orient_3CATS)=Indicator(1) /CONTRAST (ethnic_5CATS)=Indicator(1) /CONTRAST (LTCONDITION_code)=Indicator(1) /CONTRAST (been_discrim)=Indicator(1) /SAVE=PRED /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).	ROC PRE_DSH_1 PRE_DSH_2 PRE_DSH_3 BY delib_hurt (1) /PLOT=CURVE(REFERENCE) /PRINT=SE /CRITERIA=CUTOFF(INCLUDE) TESTPOS(LARGE) DISTRIBUTION(FREE) CI(95) /MISSING=EXCLUDE.
Determinants Model	LOGISTIC REGRESSION VARIABLES delib_hurt /METHOD=ENTER gender_femalemale sex_orient_3CATS ethnic_5CATS LTCONDITION_code been_discrim been_bullied CRITICAL_mother_centred CRITICAL_father_centred STRESS_tot_13_centred ESTEEM_tot_centred OPTIMISM_tot_centred CONNECTEDSCHOOL_tot_centred /CONTRAST (gender_femalemale)=Indicator(1) /CONTRAST (sex_orient_3CATS)=Indicator(1) /CONTRAST (ethnic_5CATS)=Indicator(1) /CONTRAST (LTCONDITION_code)=Indicator(1) /CONTRAST (been_discrim)=Indicator(1) /CONTRAST (been_bullied)=Indicator(1) /SAVE=PRED /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).	
AIHDA	LOGISTIC REGRESSION VARIABLES delib_hurt /METHOD=ENTER gender_femalemale sex_orient_3CATS ethnic_5CATS LTCONDITION_code been_discrim been_bullied CRITICAL_mother_centred CRITICAL_father_centred STRESS_tot_13_centred ESTEEM_tot_centred OPTIMISM_tot_centred CONNECTEDSCHOOL_tot_centred LTCONDITION_code*ethnic_5CATS*gender_femalemale*sex_orient_3CATS /CONTRAST (gender_femalemale)=Indicator(1) /CONTRAST (sex_orient_3CATS)=Indicator(1) /CONTRAST (ethnic_5CATS)=Indicator(1) /CONTRAST (LTCONDITION_code)=Indicator(1) /CONTRAST (been_discrim)=Indicator(1) /CONTRAST (been_bullied)=Indicator(1) /SAVE=PRED /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).	

MAIHDA	GENLINMIXED /FIELDS TARGET=delib_hurt TRIALS=NONE OFFSET=NONE /TARGET_OPTIONS DISTRIBUTION=BINOMIAL LINK=LOGIT /FIXED EFFECTS=gender_femalemale sex_orient_3CATS ethnic_5CATS LTCONDITION_code been_discrim been_bullied CRITICAL_mother_centred CRITICAL_father_centred STRESS_tot_13_centred ESTEEM_tot_centred OPTIMISM_tot_centred CONNECTEDSCHOOL_tot_centred USE_INTERCEPT=TRUE /RANDOM EFFECTS=gender_femalemale*sex_orient_3CATS*ethnic_5CATS*LTCONDITION_code USE_INTERCEPT=TRUE COVARIANCE_TYPE=IDENTITY SOLUTION=TRUE /BUILD_OPTIONS TARGET_CATEGORY_ORDER=DESCENDING INPUTS_CATEGORY_ORDER=ASCENDING LCONVERGE=0.000001(ABSOLUTE) MAX_ITERATIONS=100 CONFIDENCE_LEVEL=95 DF_METHOD=RESIDUAL COVB=MODEL PCONVERGE=0.000001(ABSOLUTE) SCORING=0 SINGULAR=0.000000000001 /EMMEANS_OPTIONS SCALE=ORIGINAL PADJUST=LSD /SAVE PREDICTED_PROBABILITY(PredictedProbability_DSH_MLM) MAX_CATEGORIES(25)	ROC PredictedProbability_DSH_MLM_01 BY delib_hurt (1) /PLOT=CURVE(REFERENCE) /PRINT=SE /CRITERIA=CUTOFF(INCLUDE) TESTPOS(LARGE) DISTRIBUTION(FREE) CI(95) /MISSING=EXCLUDE.
Null Model	GENLINMIXED /FIELDS TARGET=delib_hurt TRIALS=NONE OFFSET=NONE /TARGET_OPTIONS DISTRIBUTION=BINOMIAL LINK=LOGIT /FIXED USE_INTERCEPT=TRUE /RANDOM EFFECTS=gender_femalemale*sex_orient_3CATS*ethnic_5CATS*LTCONDITION_code USE_INTERCEPT=TRUE COVARIANCE_TYPE=IDENTITY SOLUTION=TRUE /BUILD_OPTIONS TARGET_CATEGORY_ORDER=DESCENDING INPUTS_CATEGORY_ORDER=ASCENDING MAX_ITERATIONS=100 CONFIDENCE_LEVEL=95 DF_METHOD=RESIDUAL COVB=MODEL PCONVERGE=0.000001(ABSOLUTE) SCORING=0 SINGULAR=0.000000000001 /EMMEANS_OPTIONS SCALE=ORIGINAL PADJUST=LSD /SAVE PREDICTED_PROBABILITY(PredictedProbability_DSH_Null) MAX_CATEGORIES(25)	ROC PredictedProbability_DSH_Null_01 BY delib_hurt (1) /PLOT=CURVE(REFERENCE) /PRINT=SE /CRITERIA=CUTOFF(INCLUDE) TESTPOS(LARGE) DISTRIBUTION(FREE) CI(95) /MISSING=EXCLUDE.

Note. *Self-harm code reported in table.

Table 4.3 *SPSS codes and calculations for anxiety / depression**

Model	Model code
Explanatory & Determinants Model	REGRESSION /DESCRIPTIVES MEAN STDDEV CORR SIG N /MISSING LISTWISE /STATISTICS COEFF OUTS CI(95) BCOV R ANOVA COLLIN TOL CHANGE /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT ANXIETY_tot /METHOD=ENTER gender_femalemale sex_orient_HETERO sex_orient_LGBAP sex_orient_NOTSURE ethnic_WhiteIrish ethnic_AnyWhite ethnic_Black ethnic_Mixed ethnic_Asian LTCONDITION_code_None LTCONDITION_code_Mental LTCONDITION_code_Physical been_discrim /METHOD=ENTER been_bullied CRITICAL_mother_centred CRITICAL_father_centred STRESS_tot_13_centred ESTEEM_tot_centred OPTIMISM_tot_centred CONNECTEDSCHOOL_tot_centred /SCATTERPLOT=(*ZRESID ,*ZPRED) /RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID) /CASEWISE PLOT(ZRESID) OUTLIERS(3) /SAVE ZPRED MAHAL COOK LEVER ZRESID SDBETA SDFIT COVRATIO.
AIHDA	UNIANOVA ANXIETY_tot BY gender_femalemale sex_orient_3CATS ethnic_5CATS LTCONDITION_code been_discrim been_bullied WITH CRITICAL_mother_centred CRITICAL_father_centred STRESS_tot_13_centred ESTEEM_tot_centred OPTIMISM_tot_centred CONNECTEDSCHOOL_tot_centred /CONTRAST(gender_femalemale)=Simple(1) /CONTRAST(sex_orient_3CATS)=Simple(1) /CONTRAST(ethnic_5CATS)=Simple(1) /CONTRAST(LTCONDITION_code)=Simple(1) /CONTRAST(been_discrim)=Simple(1) /CONTRAST(been_bullied)=Simple(1) /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /SAVE=ZRESID COOK LEVER /PRINT ETASQ DESCRIPTIVE PARAMETER OPOWER /CRITERIA=ALPHA(.05) /DESIGN=gender_femalemale sex_orient_3CATS ethnic_5CATS LTCONDITION_code been_discrim been_bullied CRITICAL_mother_centred CRITICAL_father_centred STRESS_tot_13_centred ESTEEM_tot_centred OPTIMISM_tot_centred CONNECTEDSCHOOL_tot_centred gender_femalemale*sex_orient_3CATS*ethnic_5CATS*LTCONDITION_code.

MAIHDA

```
MIXED ANXIETY_tot BY gender_femalemale sex_orient_3CATS ethnic_5CATS LTCONDITION_code been_discrim
    been_bullied WITH CRITICAL_mother_centred CRITICAL_father_centred STRESS_tot_13_centred
    ESTEEM_tot_centred OPTIMISM_tot_centred CONNECTEDSCHOOL_tot_centred
  /CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(1000) MXSTEP(100) SCORING(100)
    SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0, ABSOLUTE) PCONVERGE(0.000001,
ABSOLUTE)
  /FIXED=gender_femalemale sex_orient_3CATS ethnic_5CATS LTCONDITION_code | SSTYPE(3)
  /METHOD=ML
  /PRINT=COVB G  R SOLUTION TESTCOV
  /RANDOM=INTERCEPT gender_femalemale*sex_orient_3CATS*ethnic_5CATS*LTCONDITION_code | COVTYPE(ID)
    SOLUTION
  /SAVE=PRED.
```

Null Model

```
MIXED ANXIETY_tot BY gender_femalemale sex_orient_3CATS ethnic_5CATS LTCONDITION_code
  /CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(1000) MXSTEP(100) SCORING(100)
    SINGULAR(0.000000000001) HCONVERGE(0, ABSOLUTE) LCONVERGE(0, ABSOLUTE) PCONVERGE(0.000001,
ABSOLUTE)
  /FIXED=| SSTYPE(3)
  /METHOD=ML
  /PRINT=COVB G  R SOLUTION TESTCOV
  /RANDOM=INTERCEPT gender_femalemale*sex_orient_3CATS*ethnic_5CATS*LTCONDITION_code | COVTYPE(ID)
    SOLUTION
  /SAVE=PRED.
```

MAIHDA / Null Model Proportion of variance calculation

$$\frac{random\ variance}{random\ variance + residual\ variance}$$

Note. *Anxiety code reported in table.

Table 4.4. *Sample size and predicted effects for the outcome variables across the 90 intersectional social locations.*

						Self-harm	Suicide	Anxiety	Depression
Term	**Gender**	**Sexual orientation**	**Ethnicity**	**Long-term disability**	**Sample size (*n*)**	**Odds Ratios**		**Estimates**	
1	F	Heterosexual	White Irish	No LT disability	3505.3	-.13	-.15	-.54	-.61
2	F	Heterosexual	White other than Irish	No LT disability	197	-.08	-.18	.19	-.15
3	F	Heterosexual	Black or Black Irish	No LT disability	90	-.09	.03	.02	.08
4	F	Heterosexual	Mixed background	No LT disability	142.8	.07	-.03	.23	.45
5	F	Heterosexual	Asian or Asian Irish	No LT disability	82	.01	-.04	-.12	-.09
6	F	LGBAP	White Irish	No LT disability	117.9	.21	.03	-.05	.14
7	F	LGBAP	White other than Irish	No LT disability	23	-.06	.02	-.16	-.01
8	F	LGBAP	Black or Black Irish	No LT disability	5	-.02	-.05	.02	.12
9	F	LGBAP	Mixed background	No LT disability	10.1	.01	-.01	.02	.02
10	F	LGBAP	Asian or Asian Irish	No LT disability	5	.02	.07	-.13	-.07
11	F	Not sure/Questioning	White Irish	No LT disability	130.9	.10	.17	.11	.05
12	F	Not sure/Questioning	White other than Irish	No LT disability	22	.02	.04	-.07	.01
13	F	Not sure/Questioning	Black or Black Irish	No LT disability	6	-.03	-.03	-.01	.08
14	F	Not sure/Questioning	Mixed background	No LT disability	8.2	-.05	-.03	-.10	-.12
15	F	Not sure/Questioning	Asian or Asian Irish	No LT disability	10	.01	.03	-.01	.11
16	M	Heterosexual	White Irish	No LT disability	2761.1	-.07	.03	.46	.01
17	M	Heterosexual	White other than Irish	No LT disability	169	.09	.02	-.02	.13
18	M	Heterosexual	Black or Black Irish	No LT disability	110	.08	-.09	.08	.01
19	M	Heterosexual	Mixed background	No LT disability	125.0	.03	.27	-.03	-.08
20	M	Heterosexual	Asian or Asian Irish	No LT disability	89	.09	-.16	.08	.01
21	M	LGBAP	White Irish	No LT disability	95.3	-.06	.14	.01	-.06
22	M	LGBAP	White other than Irish	No LT disability	5	.01	-.02	-.08	-.01
23	M	LGBAP	Black or Black Irish	No LT disability	0	n/a	n/a	n/a	n/a
24	M	LGBAP	Mixed background	No LT disability	1.8	-.02	-.01	.01	.07
25	M	LGBAP	Asian or Asian Irish	No LT disability	7	-.03	.02	.10	.17
26	M	Not sure/Questioning	White Irish	No LT disability	62.4	-.11	-.05	-.03	.02
27	M	Not sure/Questioning	White other than Irish	No LT disability	9	.05	-.03	-.003	.02
28	M	Not sure/Questioning	Black or Black Irish	No LT disability	2	-.01	.06	-.02	.04
29	M	Not sure/Questioning	Mixed background	No LT disability	6.6	.01	-.02	.04	.04
30	M	Not sure/Questioning	Asian or Asian Irish	No LT disability	5	-.03	-.02	.01	.05
31	F	Heterosexual	White Irish	LT MH difficulty	351.4	.08	.16	.36	.36

32	F	Heterosexual	White other than Irish	LT MH difficulty	17	.09	.13	.19	.37
33	F	Heterosexual	Black or Black Irish	LT MH difficulty	10	.02	.08	.08	.22
34	F	Heterosexual	Mixed background	LT MH difficulty	22.7	-.08	-.13	-.05	-.06
35	F	Heterosexual	Asian or Asian Irish	LT MH difficulty	6	-.01	.01	-.01	.04
36	F	LGBAP	White Irish	LT MH difficulty	44	-.04	-.03	.13	.07
37	F	LGBAP	White other than Irish	LT MH difficulty	7	-.01	-.10	.03	.13
38	F	LGBAP	Black or Black Irish	LT MH difficulty	0	n/a	n/a	n/a	n/a
39	F	LGBAP	Mixed background	LT MH difficulty	2	-.01	-.05	-.02	-.01
40	F	LGBAP	Asian or Asian Irish	LT MH difficulty	0	n/a	n/a	n/a	n/a
41	F	Not sure/Questioning	White Irish	LT MH difficulty	22.8	.07	-.11	.19	.27
42	F	Not sure/Questioning	White other than Irish	LT MH difficulty	3	-.001	.06	-.04	-.001
43	F	Not sure/Questioning	Black or Black Irish	LT MH difficulty	0	n/a	n/a	n/a	n/a
44	F	Not sure/Questioning	Mixed background	LT MH difficulty	1.3	.03	-.01	-.01	.01
45	F	Not sure/Questioning	Asian or Asian Irish	LT MH difficulty	1	-.01	-.003	-.05	.01
46	M	Heterosexual	White Irish	LT MH difficulty	311.3	.02	.12	-.70	.78
47	M	Heterosexual	White other than Irish	LT MH difficulty	13	-.04	-.02	-.06	.12
48	M	Heterosexual	Black or Black Irish	LT MH difficulty	3	-.02	-.01	-.07	.003
49	M	Heterosexual	Mixed background	LT MH difficulty	17.7	-.01	.02	-.08	-.08
50	M	Heterosexual	Asian or Asian Irish	LT MH difficulty	4	-.03	-.03	.09	.05
51	M	LGBAP	White Irish	LT MH difficulty	26	-.02	-.04	.07	.02
52	M	LGBAP	White other than Irish	LT MH difficulty	1	.002	.02	.05	.10
53	M	LGBAP	Black or Black Irish	LT MH difficulty	0	n/a	n/a	n/a	n/a
54	M	LGBAP	Mixed background	LT MH difficulty	0	n/a	n/a	n/a	n/a
55	M	LGBAP	Asian or Asian Irish	LT MH difficulty	0	n/a	n/a	n/a	n/a
56	M	Not sure/Questioning	White Irish	LT MH difficulty	17	-.01	-.12	-.07	.02
57	M	Not sure/Questioning	White other than Irish	LT MH difficulty	1	-.01	.06	-.02	.03
58	M	Not sure/Questioning	Black or Black Irish	LT MH difficulty	0	n/a	n/a	n/a	n/a
59	M	Not sure/Questioning	Mixed background	LT MH difficulty	0	n/a	n/a	n/a	n/a
60	M	Not sure/Questioning	Asian or Asian Irish	LT MH difficulty	0	n/a	n/a	n/a	n/a
61	F	Heterosexual	White Irish	LT PH difficulty	133.7	-.08	-.14	-.02	-.06
62	F	Heterosexual	White other than Irish	LT PH difficulty	4	-.01	.02	-.01	.09
63	F	Heterosexual	Black or Black Irish	LT PH difficulty	8	.04	.02	-.11	-.17
64	F	Heterosexual	Mixed background	LT PH difficulty	3.4	-.003	.03	.02	.12
65	F	Heterosexual	Asian or Asian Irish	LT PH difficulty	5	.002	.10	-.02	-.003
66	F	LGBAP	White Irish	LT PH difficulty	6	-.02	-.01	-.05	-.09

67	F	LGBAP	White other than Irish	LT PH difficulty	1	.01	.05	-.01	.07
68	F	LGBAP	Black or Black Irish	LT PH difficulty	0	n/a	n/a	n/a	n/a
69	F	LGBAP	Mixed background	LT PH difficulty	0	n/a	n/a	n/a	n/a
70	F	LGBAP	Asian or Asian Irish	LT PH difficulty	0	n/a	n/a	n/a	n/a
71	F	Not sure/Questioning	White Irish	LT PH difficulty	9	-.01	.08	-.04	.12
72	F	Not sure/Questioning	White other than Irish	LT PH difficulty	1	-.02	-.01	-.02	.03
73	F	Not sure/Questioning	Black or Black Irish	LT PH difficulty	0	n/a	n/a	n/a	n/a
74	F	Not sure/Questioning	Mixed background	LT PH difficulty	0	n/a	n/a	n/a	n/a
75	F	Not sure/Questioning	Asian or Asian Irish	LT PH difficulty	1	.01	-.02	.05	.10
76	M	Heterosexual	White Irish	LT PH difficulty	122.4	.04	.01	.07	.21
77	M	Heterosexual	White other than Irish	LT PH difficulty	5	-.03	-.03	.02	.03
78	M	Heterosexual	Black or Black Irish	LT PH difficulty	3	.04	.01	-.01	.04
79	M	Heterosexual	Mixed background	LT PH difficulty	5.7	.03	-.03	-.02	.07
80	M	Heterosexual	Asian or Asian Irish	LT PH difficulty	3	-.02	-.01	.001	.06
81	M	LGBAP	White Irish	LT PH difficulty	8	.04	-.06	.03	.13
82	M	LGBAP	White other than Irish	LT PH difficulty	1	.01	-.02	.02	.06
83	M	LGBAP	Black or Black Irish	LT PH difficulty	0	n/a	n/a	n/a	n/a
84	M	LGBAP	Mixed background	LT PH difficulty	0	n/a	n/a	n/a	n/a
85	M	LGBAP	Asian or Asian Irish	LT PH difficulty	1	-.01	.05	.01	.04
86	M	Not sure/Questioning	White Irish	LT PH difficulty	3	-.01	-.02	.08	.07
87	M	Not sure/Questioning	White other than Irish	LT PH difficulty	0	n/a	n/a	n/a	n/a
88	M	Not sure/Questioning	Black or Black Irish	LT PH difficulty	1	.01	-.02	.01	.06
89	M	Not sure/Questioning	Mixed background	LT PH difficulty	1	-.01	-.01	.001	.03
90	M	Not sure/Questioning	Asian or Asian Irish	LT PH difficulty	0	n/a	n/a	n/a	n/a

Note. F = female; M = male; MH difficulty = Long-term mental health difficulty/disability; LT PH difficulty = Long-term physical health difficulty/disability.