Resilience among refugee and asylum-seekers: how do unaccompanied Afghan refugee minors in the UK understand their ways of coping, and how are these perceived to be developed?

Rebecca Lane

Doctorate in Clinical Psychology

2024

Resilience among refugee and asylum-seekers: how do unaccompanied Afghan refugee minors in the UK understand their ways of coping, and how are these perceived to be developed?

Rebecca Lane

Candidate Registration number: 100373525/1

Primary Supervisor: Dr Kenny Chiu

Secondary Supervisor: Dr Hannah Taylor

Thesis submitted in partial fulfilment of the degree of Doctorate in Clinical Psychology

Faculty of Medicine and Health Sciences

University of East Anglia

Medical School

Year of submission: 2024

Thesis portfolio word count: 31,507 / 40,000

This copy of the thesis has been supplied on condition that anyone who consults it is understood to recognise that its copyright rests with the author and that use of any information derived there from must be in accordance with current UK Copyright Law. In addition, any quotation or extract must include full attribution.

2

Thesis Portfolio Abstract

Background: The numbers of forcibly displaced people have been growing exponentially over the last decade, representing a global refugee crisis. By virtue of their status, many have experienced adversity and stressors during the peri-migration period, and prevalence of mental health difficulties among this group has been shown to be high.

Research exploring resilience and coping offers insight into promoters of, and pathways to, positive psychosocial adjustment and posttraumatic growth. However, the research body examining resilience and coping among forcibly displaced groups is limited by varying definitions in the literature and lack of consideration of culturally specific influences. It remains unclear if, and how, resilience may be associated with mental health in this population. In addition, little is known about how and from where coping strategies are adopted, and how culture may influence how coping strategies are employed and effective.

Aims: The current portfolio aims to quantitatively synthesise previous literature examining the association between resilience and mental health among forcibly displaced groups. The research also seeks to better understand the context in which resilience manifests through coping, and the origins of coping, in a culturally specific sample of forced migrants.

Methods: This thesis presents a systematic review with meta-analyses investigating the associations between resilience and mental health categories (PTSD, Depression, Anxiety and Psychological Distress) among forcibly displaced populations. The second paper is a qualitative study exploring barriers to, and sources of, coping among 12 Afghan former Unaccompanied Refugee Minors (URMs) using Reflexive Thematic Analysis.

Results: The findings of the systematic review and meta-analyses point to an association between resilience and mental health difficulties in forcibly displaced groups. They also highlight the challenges associated with examining resilience due to significant heterogeneity and varying conceptualisations of the construct, and identify underrepresented groups in the research area, such as URMs. The qualitative study generated three overarching themes that captured participants' difficulties, coping mechanisms, and perceptions of how coping developed over time: "Difficulties and coping: a series of cumulative challenges and vicious cycles"; "Roots to coping"; and "Coping is dynamic: the process of change". Participant narratives highlight barriers and traps to coping, and suggest a role for experiences of early attachment, culture and identity in influencing the ways coping strategies are appraised and developed.

Conclusions: The portfolio sheds light on the challenges of examining resilience in research, particularly across cultures, and suggests a key role for culture and identity in the expression of resilience, influencing the appraisals and adoption of coping strategies.

Access Condition and Agreement

Each deposit in UEA Digital Repository is protected by copyright and other intellectual property rights, and duplication or sale of all or part of any of the Data Collections is not permitted, except that material may be duplicated by you for your research use or for educational purposes in electronic or print form. You must obtain permission from the copyright holder, usually the author, for any other use. Exceptions only apply where a deposit may be explicitly provided under a stated licence, such as a Creative Commons licence or Open Government licence.

Electronic or print copies may not be offered, whether for sale or otherwise to anyone, unless explicitly stated under a Creative Commons or Open Government license. Unauthorised reproduction, editing or reformatting for resale purposes is explicitly prohibited (except where approved by the copyright holder themselves) and UEA reserves the right to take immediate 'take down' action on behalf of the copyright and/or rights holder if this Access condition of the UEA Digital Repository is breached. Any material in this database has been supplied on the understanding that it is copyright material and that no quotation from the material may be published without proper acknowledgement.

Table of Contents

Acknowledgements	9
Chapter 1 – Thesis Portfolio Introduction	10
Who are those forcibly displaced?	10
Present context of forced displacement	11
The global refugee crisis	11
Needs and vulnerability of forcibly displaced groups	11
Why study resilience and coping among forcibly displaced groups?	12
Aims of the present research	13
Outline of the thesis portfolio	13
Chapter 2 – Systematic Review and Meta-analysis	15
Abstract	16
Introduction	17
Methods	18
Search Strategy	18
Selection Criteria	19
Population Sampled	19
Measures of Resilience	19
Measures of Mental Health	21
Publication Type and Study Design	21
Selection Process	22
Data Extraction	22
Data Analysis	23
Results	24
Search outcomes	24
Study characteristics	25
Meta-analyses: Associations between resilience and mental health outcomes	32
PTSD	32
Depression	33
Anxiety	35
Psychological Distress	36
Discussion	38

Limitations and Strengths	40
Clinical Implications and Future Directions	41
Conclusion	42
References	43
Supplementary Tables	54
Supplementary Figures	55
Chapter 3 – Empirical Study	58
Abstract	59
Introduction	60
Methods	63
Study Design	63
Data Collection	63
Participants	65
Analysis	65
Reflexivity and Positionality	65
Efforts to Enhance Rigour and Credibility	66
Findings	67
Theme One: Difficulties and Coping: A Series of Cumulative Challenges ar	nd
Vicious Cycles	68
Psychosocial, Psychosomatic and Physical Pain	68
Coping: Avoiding the Past and Distracting from the Present	69
Coping through Connection	70
Barriers to coping strategies being employed or effective	71
Theme Two: The roots of coping	73
Preoccupied parents	73
Challenges to emotional, physical and relational safety	74
Services as substitute parental figures	75
Theme Three: Coping is dynamic: the process of change	76
The lens of experience	76
The importance of perspective	77
Socialisation to talking	77
Inheriting and internalising religion	78
Cultural dislocation, adaption, and identity development	78
Discussion	79

Strengths and Limitations	82
Implications and Conclusions	83
References	85
Chapter 4 – Extended methodology for the Empirical Study	93
Methodological Rationale	93
Ontology and Epistemology	93
Relativism	93
Social Constructionism	93
Methodology	94
Qualitative approach	94
Reflexive Thematic Analysis	94
Methods	95
Design	95
Recruitment	95
Participants	96
Procedure	96
Materials	97
Data Analysis	97
Patient and Public Involvement	99
Reflexivity	100
Disclosure, power and difference	100
Uncertainty in the qualitative research process	101
Ongoing conflict and the global political context	102
Ethical considerations	102
Consent	102
Coercion	103
Confidentiality and Safeguarding	103
Risk of Distress	104
Anonymity and Data Protection	104
Ethical Approval	104
Chapter 5 – Overall Discussion and Critical Evaluation	106
Thesis overview and summary of findings	106
Critical appraisal of thesis	107

Systematic review (Chapter 2)	107
Definitions	107
Exclusion criteria	107
Databases	107
Methodology	108
Heterogeneity	108
Empirical paper (Chapter 3)	108
Methodology and design	108
Language and interpreters	109
Qualitative analysis	109
Findings	110
Thesis portfolio	111
Clinical and Research Implications and Conclusions	111
References	113
Appendices	121

Acknowledgements

I would like to thank my entire supervisory team for making this research possible. In particular, I would like to thank my primary supervisors, Dr Kenny Chiu and Dr Hannah Taylor, for their continuous guidance and unwavering support, and my external supervisor, Sheila Melzak, for her expertise and enthusiasm for the project. Thank you for giving me the opportunity to undertake research that I feel is truly meaningful.

I would also like to thank all the participants who took the time to share their stories with me; the interpreters who supported with creating safe spaces and facilitated conversations with ease; and to the local collaborator, Fabrice Lyczba, for his instrumental role in recruitment. I would also like to thank the service users who supported with developing the project and materials and the clinicians who took the time to offer feedback on the findings.

Lastly, but significantly, I would like to thank my partner, Gerry, and my wonderful family and friends who have been so supportive and understanding over the last three years. I could not have completed this without them.

Chapter 1 – Thesis Portfolio Introduction

This thesis was undertaken as part of the Professional Doctorate in Clinical Psychology at the University of East Anglia¹.

This chapter offers an introduction to the thesis portfolio, providing a summary overview of the context within which this thesis is situated. It first defines the forcibly displaced populations studied and summarises the needs and complexities of this group. This chapter then presents definitions of resilience and coping, before discussing why these are helpful constructs to explore among forced migrants. Finally, the overall aims for the thesis portfolio are provided, alongside an outline of the remaining thesis portfolio.

Who are those forcibly displaced?

A forcibly displaced person is any individual forced, obliged or coerced to relocate from their home as a result of persecution, conflict, violence, human rights violations and events seriously disturbing public order, such as natural or man-made disasters, and/or development projects (UNHCR, 2023c). These include refugees, asylum seekers and internally displaced persons, amongst others, and exclude returned refugees and stateless people (UNHCR, 2024c).

According to the 1951 United Nations Convention Relating to the Status of Refugees, a refugee represents:

"a person who owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.".

Asylum seekers describe "individuals who have sought international protection and whose claims for refugee status have not yet been determined" (UNHCR, 2024b). Internally displaced persons are those who are forcibly displaced but who have not crossed an internationally recognised state border (UNHCR, 2024b).

10

¹ The portfolio builds on a thesis proposal written and submitted by this portfolio's author.

Present context of forced displacement

The global refugee crisis

In early 2022, the global numbers of forcibly displaced populations surpassed 100 million for the first time (UNHCR, 2023a), reaching a record high of over 110 million in 2023 (UNHCR, 2023d). Exponential increases in numbers of those forcibly displaced has been observed in the last decade, with numbers reported in 2023 representing more than double those reported in 2013 (UNHCR, 2023c). It is estimated that more than 1 in every 73 people worldwide are forcibly displaced and these numbers are expected to continue to rise in response to ongoing and new conflicts and humanitarian situations (UNHCR, 2024a). These staggering numbers highlight the severity and scope of forced displacement on populations globally.

Although the majority of the world's forcibly displaced groups reside in low- and middle-income countries, almost 9 in 10 (UNHCR, 2024a), numbers of forcibly displaced people in Europe and the UK have similarly been growing year on year (UK Parliament, 2023; UNHCR, 2023b). For example, between March 2022 and March 2023, the UK experienced a 33% increase in asylum applications (Home Office, 2023).

Needs and vulnerability of forcibly displaced groups

By virtue of their status, many of those forcibly displaced have experienced adversity and stressors prior to leaving their home, during flight and exile, and following resettlement (Marquez, 2016; Porter & Haslam, 2005). The circumstances leading to forced displacement can include persecution, loss and grief, torture and fear for life (Marquez, 2016). Particularly if entering Europe, the migration journey can be perilous and last many years, with many being subject to trafficking and exploitation (UNHCR, 2018). Once in a host country, forcibly displaced persons may be faced with additional stressors relating to discrimination and marginalisation, language and acculturation, socioeconomic disadvantage, lack of social support, guilt, and cultural dislocation and bereavement (Jannesari et al., 2020; Li et al., 2016; Marquez, 2016).

Exposure to traumatic events and extreme adversity can lead to persistent mental health problems and decreased psychosocial functioning (Marquez, 2016; Steel et al., 2009). Indeed, although prevalence rates for mental health disorders have been found to be variable across systematic reviews (Blackmore et al., 2020; Fazel et al., 2005; Morina et al.,

2018; Patanè et al., 2022; Steel et al., 2009), these have consistently been shown to be high among displaced populations. Mental health difficulties can also vary in presentation and interpretation across cultures, with refugees from non-Western countries presenting with high levels of somatisation or unexplained physical symptoms (Rohlof et al., 2014), in addition to the known high levels of physical health needs refugees can present with upon arrival to host countries and longer-term (Baauw et al., 2019; Kumar et al., 2021). Of concern, access to support both for physical and mental health concerns has been shown to be limited and underutilised (Lebano et al., 2020; Mitra & Hodes, 2019; Satinsky et al., 2019). Receiving appropriate support is compromised due to complexity of needs, as well as a lack of culturally sensitive care and other barriers relating to, amongst others, finances, discrimination, legal status, language, trust, and mental health stigma and literacy (Asgary & Segar, 2011; Byrow et al., 2020; Lebano et al., 2020; Satinsky et al., 2019).

Why study resilience and coping among forcibly displaced groups?

Resilience represents one's capacity and resources to anticipate, adapt, and adjust under conditions of adversity in a way which promotes and sustains physical and mental wellbeing (Connor & Davidson, 2003). Coping, under the broad umbrella of resilience, describes conscious thoughts and behaviours mobilised in the form of strategies to manage internal and external demands of situations that are considered stressful (Folkman & Moskowitz, 2004), representing active resilience processes and behaviours.

Most research conducted among forcibly displaced groups has focused on examining psychological dysfunction and poor mental health in the context of cumulative traumatic experiences (Blackmore et al., 2020; Fazel et al., 2012; Fazel et al., 2005; Hodes & Vostanis, 2019; Kien et al., 2019; Reed et al., 2012). Although a useful exercise to determine scope of need, research on negative markers of mental health has received criticism for close alignment with medical orientations at the expense of other important contextual and cultural factors (Ellis et al., 2019; McFarlane & Kaplan, 2012), for example of how mental health difficulties may be understood, experienced and helped across cultures. As a result, protective factors and resilience processes have received more attention in recent years (Sleijpen et al., 2016; Sleijpen et al., 2013; Wessells, 2012). Research in the area of resilience and coping has considerable value because it focuses on promoters of, and pathways to, positive psychosocial adjustment and posttraumatic growth, which can be bolstered or developed, and offers insight for resilience interventions and improved policies (Clay et al., 2009; Vindevogel, 2017).

Research examining resilience among forcibly displaced groups suggests that resilience levels and resources may be associated with differential patterns of mental health symptoms and difficulties (Siriwardhana et al., 2014). It also sheds light on important resiliency factors, which promote wellbeing and resilience, including social support and selfefficacy (Mitra & Hodes, 2019; Rodriguez & Dobler, 2021; Siriwardhana et al., 2014). However, the use of differing definitions and conceptualisations of resilience in the literature limits current understanding and associated benefits (Davydov et al., 2010; Siriwardhana et al., 2014), particularly the association resilience may have with mental health and the mechanisms at play. Research on coping among conflict-affected and forcibly displaced groups has found that different ways of coping may be associated with severity of mental health problems. For example, problem-focused and social support-focused coping have been associated with reduced severity of PTSD, depression and anxiety symptoms (Gorst-Unsworth & Goldenberg, 1998; Urbański et al., 2023; Woltin et al., 2018), whilst escapeavoidance and distraction coping have been associated with more severe PTSD and depression symptoms (Huijts et al., 2012; McGregor et al., 2015; Ssenyonga et al., 2013; Woltin et al., 2018). A particular gap in this area of research remains in understanding cultural differences in how coping strategies are employed and effective, and improving understanding of how coping strategies are developed.

Aims of the present research

The aims of the present research are to review research on resilience and mental health among forcibly displaced groups and examine how resilience and mental health are associated. The research also seeks to better understand the context in which resilience manifests through coping in a culturally specific sample of forced migrants and improve understanding of the sources and origins of resilience in the form of active coping.

Outline of the thesis portfolio

This thesis portfolio outlines research exploring resilience, coping, and psychological difficulties among forcibly displaced groups.

Chapter two presents a systematic review examining the association between resilience and mental health difficulties among forcibly displaced populations. The results of four meta-analyses are presented alongside clinical and research implications, highlighting pitfalls of examining resilience in research and noting under-represented groups, such as unaccompanied refugee minors (URMs). Chapter three presents the empirical research

paper, which is a qualitative exploration of difficulties and coping among URMs, and of how and from where coping strategies are perceived to be developed. This research is culturally specific, recruiting former URMs from Afghanistan, one of the largest groups of URMs arriving in Europe and applying for asylum in the UK. The fourth chapter provides further methodological detail to support the empirical research paper. The portfolio closes with a critical evaluation and discussion of the overall findings, presenting relevant limitations and implications for clinical practice.

Chapter 2 – Systematic Review and Meta-analysis

Resilience and its association with mental health among forcibly displaced populations: a systematic review and meta-analyses

Rebecca Lane ¹ , Dr Hannah Taylor ² , Dr Fiona Ellis ¹ , Dr Imogen Rushworth ¹ , Dr Kenny Chiu ¹
Affiliations:
¹ Department of Clinical Psychology, University of East Anglia, Norwich Research Park, Norwich, UK, NR4 7TJ
² Norwich and Suffolk NHS Foundation Trust

Total word count: 11,378

Word count excluding abstract, keywords, tables, figures and references: 5,522

[Manuscript prepared for *Journal of Affective Disorders*, see Appendix A for Author guidelines]

Abstract

Background: Forcibly displaced populations are at increased risk of mental health difficulties and are growing exponentially. Resilience offers a promising research area to explore how mental health may be improved. However, it remains unclear if, and how, resilience and mental health challenges are associated. This systematic review and series of meta-analyses investigated the relationship between resilience and mental health symptoms among forcibly displaced groups.

Methods: Peer-reviewed studies measuring a statistical association between resilience and mental health among forced migrants were eligible for inclusion. MEDLINE Ultimate, APA PsycInfo and SCOPUS were searched up until January 2024. Random-effects meta-analyses for each identified mental health category were conducted. Study quality was evaluated using the NIH Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies. Pre-registration was with PROSPERO (CRD42023395925).

Results: Thirty-one studies were included in the review (n = 6656). Meta-analyses revealed a significant negative association between resilience and symptoms of post-traumatic stress (k = 13, n = 2446, r = -.15, 95% CI [-0.23;-0.06]), depression (k = 14; n = 2952, r = -.34, 95% CI [-0.41; -0.26]), anxiety (k = 7, n = 1516, r = -.19, 95% CI [-0.27; -0.11]), and psychological distress (k = 10; n = 2712, r = -.29, 95% CI [-0.36; -0.23]).

Limitations: High heterogeneity was observed. In addition, studies recruited relatively small samples, collected data cross-sectionally, and used non-random sampling strategies.

Conclusions: Our findings point to an association between resilience and mental health difficulties in forcibly displaced groups. Directions for future research are discussed.

Keywords: forcibly displaced populations; refugees; resilience; mental health; systematic review; meta-analysis

Introduction

The number of refugees and asylum seekers worldwide reached a record high of 110 million people forcibly displaced in 2023 (UNHCR, 2023b), more than double the number reported in 2013 (UNHCR, 2023a). The experience of forced migration, which includes premigration trauma and post-migration resettlement adjustment challenges, has been suggested to have long-term negative effects on mental health (Bogic et al., 2015; Jannesari et al., 2020; Porter & Haslam, 2005). Indeed, studies have reported that asylum seekers and refugees have greater mental health needs than the general population, particularly post-traumatic stress disorder, anxiety and depression (Blackmore et al., 2020; Henkelmann et al., 2020; Lindert et al., 2009; Patanè et al., 2022). However, alongside these findings, refugee populations are often described as showing resilience in the face of trauma and adversity (Hodes & Vostanis, 2019; Hutchinson & Dorsett, 2012; Rodriguez & Dobler, 2021; Yaylaci, 2018).

Resilience is defined as a multidimensional and dynamic construct, representing one's capacity to anticipate, adapt, and adjust under conditions of adversity in a way which promotes and sustains physical and mental wellbeing (Connor & Davidson, 2003; Ungar, 2018). Two conceptualisations of resilience are common in the literature. Resilience is frequently formulated as an amalgamation of individual traits or skills assisting coping with adversity (i.e., single system or individual resilience, Connor & Davidson, 2003; Richardson et al., 1990). It is also conceptualised as cumulative individual, relational and contextual factors and resources (e.g., social, financial, political) which aid coping with adversity (Rodriguez & Dobler, 2021), some of which are global and some of which are culturally specific (i.e., systemic resilience; Ungar, 2018). Both resilience constructs have been researched and validated in cross-cultural samples, however community and cultural factors have been shown to contextualise how resilience is defined by and manifested in different populations (Ungar, 2008), suggesting a systemic conceptualisation may be more crossculturally reliable and relevant. Research sampling non-refugee groups has found high resilience to correlate moderately or strongly with fewer mental health difficulties, marking the promotion of resilience as an important target for mental health interventions (Färber & Rosendahl, 2018, 2020; Hu et al., 2015; Mortazavi & Yarolahi, 2015). A systematic review and narrative synthesis examining resilience and mental health difficulties among conflictdriven adult forced migrants found resilience to generally be associated with better mental health (Siriwardhana et al., 2014). However, the findings of this review are limited by the broad definition of resilience used, incorporating closely associated constructs, such as

sense of coherence, as well as indirect measures, for example social support. In addition, the review did not differentiate between different types of mental health difficulties (e.g., PTSD or depression) and included studies which do not exclusively sample forced migrants. The vast array of the research reviewed, and the broad delineations of resilience included, hindered the ability to compare and contrast across studies, an issue in wider resilience research (Davydov et al., 2010), and precluded meta-analyses. Importantly, Siriwardhana and colleagues' (2014) review highlighted that evidence for the direct association between resilience and mental health difficulties among forced migrants remains limited).

Forcibly displaced groups are growing exponentially and are known to be at increased risk of mental health difficulties. Resilience has been posited to represent a key component for epidemiological and interventional research to examine, with the aim to improve mental health outcomes among forcibly displaced groups (Siriwardhana et al., 2014). The literature investigating resilience within this population is challenging to interpret due to broad definitions and delineations of resilience and varied methodologies used. It remains unclear how different conceptualisations of resilience (i.e., individual vs. systemic resilience) are associated with mental health outcomes in cross-cultural samples. It is also not known whether the trends observed in the literature apply to different mental health challenges. To date, no research has examined the association between resilience and mental health among forcibly displaced populations using quantitative methods (e.g., meta-analysis). The present systematic review and meta-analyses aim to fill this gap and improve understanding of the strengths of association between individual and systemic resilience and aspects of mental health among forced migrants.

Methods

Findings were reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement (Page et al., 2021), using the PRISMA checklists (see Appendix B). The present review was pre-registered in PROSPERO on 14th February 2023 (registration number CRD42023395925).

Search Strategy

The strategy sought all available relevant articles in MEDLINE Ultimate, APA PsycInfo and SCOPUS bibliographic databases. Titles, abstracts and keywords were searched using search terms for forced migrants, resilience and mental health difficulties (including synonyms and closely related words; see Supplementary Table 1). A search filter

was used to include studies published up until 1st January 2024. Citation lists of identified papers and of relevant reviews were also searched (Marley & Mauki, 2019; Pieloch et al., 2016; Rodriguez & Dobler, 2021; Siriwardhana et al., 2014; Tol et al., 2013).

Selection Criteria

Population Sampled

Quantitative studies measuring a statistical association between resilience and mental health among forced migrants were eligible for inclusion. The term 'forced migrant' describes any individual forced, obliged or coerced to relocate from their home as a result of persecution, conflict, violence, human rights violations and events seriously disturbing public order, such as natural or man-made disasters, and/or development projects (UNHCR, 2023a). These include refugees, asylum seekers and internally displaced persons, amongst others, and exclude returned refugees and Stateless people (UNHCR, 2024b). Studies not reporting on samples of forced migrants or specifying forced migration were excluded.

Measures of Resilience

In order to reduce heterogeneity associated with the measure of resilience and to ensure measure quality and relevance, this review included resilience measures identified in a systematic review of resilience measures by Windle et al. (2011) as having the most optimal psychometric properties: the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003), Brief Resilience Scale (BRS; Smith et al., 2008) and Resilience Scale for Adults (RSA; Friborg et al., 2003). In addition, the Resilience Scale (RS; Wagnild & Young, 1993) was included as it was found to be the most widely used (Windle et al., 2011). The Child and Youth Resilience Measure (CYRM; Ungar & Liebenberg, 2011) was also included in this review, as it is also widely used and is highlighted as one of the most appropriate measures of resilience for cross-cultural use alongside the CD-RISC (Terrana & Al-Delaimy, 2023). Psychometric properties and details of cross-cultural and linguistic validation for each included measure is outlined below.

CD-RISC. The CD-RISC is a self-report measure of individual resilience (Connor & Davidson, 2003). Items are clustered into five factors: personal competence, trust/tolerance/strengthening effects of stress, acceptance of change and secure relationships, control, spiritual influences. The CD-RISC has been shown to have good internal consistency and construct validity (Campbell-Sills & Stein, 2007; Windle et al., 2011). The CD-RISC has been validated cross-culturally in different populations internationally (e.g., Chinese earthquake victims, older Native Americans, Nigerian student

nurses, African American men, Hong Kong and Swedish general populations, Terrana & Al-Delaimy, 2023). It has also been validated in 13 languages (Terrana & Al-Delaimy, 2023).

BRS. The BRS is a six-item individual resilience questionnaire designed to assess one's ability to 'bounce back' or recover from stress (Smith et al. (2008). It has been found to have good internal consistency and construct validity (Windle et al., 2011). Although the BRS has been validated in six languages and in different populations (e.g., German, Spanish and Polish general populations; Terrana & Al-Delaimy, 2023), it is not highlighted as one of the better measures of resilience across cultures (Terrana & Al-Delaimy, 2023). Nonetheless, it is included in the present review due to its more optimal psychometric properties (Windle et al., 2011) and wide use in international research.

RSA. The RSA (Friborg et al., 2003) is a self-report questionnaire capturing key factors which contribute to systemic resilience: personal competence; social competence; family coherence; social support; and personal structure. It contains 33-items which examine both intrapersonal and interpersonal protective factors which promote adaptation to adversity, acknowledging the relevance of perceived resources in one's social environment (Morote et al., 2017). The RSA has been found to have adequate psychometric properties (Morote et al., 2017; Windle et al., 2011). It was developed in psychiatric patients and has been validated in various populations (e.g., Norwegian, Brazilian and Lithuanian general populations, Iranian and Turkish university students, low socioeconomic status Pakistani women, Italian clinical substance abusers, Hispanic Latin Americans, South African cancer patients; Terrana & Al-Delaimy, 2023). It has been validated in 10 languages (Terrana & Al-Delaimy, 2023).

RS. The RS (Wagnild & Young, 1993) is a self-reported individual level measure of resilience, with good psychometric properties (Cajada et al., 2023). It has been validated in many international populations and clinical or social groups (e.g., German Armed Forces personnel, immigrants from the Former Soviet Union, low socioeconomic status Pakistani and Mexican women, Brazilian adolescents, Japanese, French and Nigerian students, divorced Southeast Asian women, pain patients, Haitian earthquake survivors). It has been validated in 14 languages (Terrana & Al-Delaimy, 2023) and adapted to approximately 40 languages (Cajada et al., 2023). Although not identfiied as a more optimal measure of resilience for cross-cultural use by Terrana and Al-Delaimy (2023), others highlight that the many adaptations of the RS means it is the most used and most validated measure of resilience in different cultures and age groups (Cajada et al., 2023; Windle et al., 2011), administered to over three million people in 150 countries. Nonetheless, it must be noted

that although the research reviewed by Cajada and colleagues (2023) suggests that the RS has good relibility and validity across international populations, the authors argue that research is needed to examine whether the underlying constructs of the RS remain stable across cultures and populations.

CYRM. The CYRM was developed for cross-cultural use as a culturally and contextually relevant measure of systemic resilience across four domains (individual, relational, community and culture). It is specifically a child and youth measure, with an adult counterpart: the Adult Resilience Measures (Resilience Research Centre, 2016). The internal consistency and convergent and discriminant validity of the CYRM is supported, however the literature is noted to not often include reliability and validity information and there may be variations in contextual suitability (Renbarger et al., 2020). The development of the CYRM involved multiple cross-cultural research sites (Ungar & Liebenberg, 2011), in populations in Canada, China, Palestine, Israel, Colombia, Russia, India, USA, the Gambia, South Africa and Tanzania (Terrana & Al-Delaimy, 2023), It has been validated in seven languages and in different youth groups (e.g., in Colombia, Iran, Canada, Syria, Jordan, South Africa, Palestine, Spain, Malawi, Turkey and in children exposed to armed conflict; Terrana & Al-Delaimy, 2023).

Measures of Mental Health

To reduce heterogeneity in mental health data, categories were generated based on the mental health outcome that the measures of included studies captured. Mental health measures were required to be validated psychometric questionnaires or diagnostic interviews capturing a mental health condition (e.g., PTSD, anxiety, depression). A further category of 'psychological distress' was generated to encompass measures of mental health difficulties which did not measure a specific condition or symptom, e.g., measures of general psychosocial functioning. Measures or subscales capturing aspects of a mental health disorder, for example dissociation or somatic symptoms, were excluded.

Publication Type and Study Design

Studies not available in English or with sample sizes of fewer than 30 participants were excluded, as were books, book chapters, conference presentation papers, dissertations, editorials, commentaries, or any unpublished, non-peer-reviewed articles. Reviews, meta-analyses, clinical trials, qualitative studies, case studies or series, non-empirical studies were also excluded. If data from a single sample were used across multiple publications, the study with the largest sample was included.

Selection Process

Selection of studies for inclusion was steered by our pre-specified eligibility criteria (see Figure 1 for PRISMA flowchart). In the initial screening phase, titles and abstracts of all articles identified in the search were screened individually by the first author (RL) with the assistance of ASReview (Van De Schoot et al., 2021). The third author (FE) additionally screened 10% of title and abstracts. Full text articles were retrieved for all those identified as potentially eligible in the initial screening phase and assessed for inclusion independently by two authors (RL, FE).

The quality of each included study was evaluated independently by two authors (RL, FE) using the National Institute of Health (NIH) Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies (NIH, 2023), providing a rating of "Good", "Fair" or "Poor" (See Appendix C). Disagreements between the reviewers at each stage of the screening or quality appraisal process were discussed to reach a consensus.

Corresponding authors were contacted for studies identified in the full-text review stage where measures of association were not reported but the data may be available, for example if moderator analysis was conducted. Additional data were received for five of the 20 studies where authors had been contacted (Altinay et al., 2023; Fino et al., 2020; Norton et al., 2023; O'Connor & Seager, 2021; Uysal et al., 2022).

Data Extraction

For every eligible study, the lead author (RL) extracted the authors' names, year of publication, the study sample size and country, the measures used, as well as data relating to the participants' nationality and/or ethnic background, age and gender. Additional data related to the resilience and mental health measures, such as mean scores, and associations between resilience and mental health measures, such as correlation coefficients or odds ratios, were also extracted. Mental health outcome categories were generated based on the measures used: PTSD, depression, anxiety and psychological distress. Resilience measure categories were developed depending on whether measures captured individual resilience vs. systemic resilience. Studies were divided into categories based on age of participants: children (up to 18), adults (over 18), and mixed child and adult samples. Categories were also generated based on the Gross National Income (GNI) of the country where the study was conducted and where participants were recruited using the World Bank classifications for 2022: high-income, middle-income and low-income (World Bank, 2023).

Where multiple associations were reported within the same study for the same outcome (e.g., in longitudinal studies or where multiple measures are used), association data were extracted for the largest sample (e.g., first timepoint) or the most commonly used measure. Where data were only available relating to subscales, data were extracted for the largest or most relevant subscale, if appropriate. Where only standardised Beta coefficients and odds ratios were available, these were converted to Pearson's r (Borenstein et al., 2021; Peterson & Brown, 2005). Positive correlation coefficients associated with mental health measures that are positively worded were converted to negative correlation coefficients by multiplying them by -1 to ensure consistency in directionality for inclusion in the meta-analysis.

Data Analysis

Random-effects meta-analyses for each mental health category were conducted using the "metafor" (version 4.4-0) package (Viechtbauer, 2010) and "dmetar" package (Harrer et al., 2019) in R. Pooled correlational coefficients and the 95% confidence interval (CI) were reported, alongside forest plots. As recommended by IntHout and colleagues (2016), 95% prediction intervals (PI) were also reported to provide estimates of effect sizes with considerations of study heterogeneity. Heterogeneity between studies was assessed using the Q statistic (where variation between studies is implied if Q is significant, p<.05; Huedo-Medina et al., 2006) and the I² statistic (where I² values of 25%, 50% and 75% represent small, moderate and large degree of heterogeneity, respectively; Higgins et al., 2003). Funnel plots and the Egger's test were performed to assess publication bias when more than 10 studies were available in a single meta-analysis (Egger et al., 1997; Sterne & Egger, 2001). Funnel plots are presented in Appendix D. Meta-analyses were re-run if any outliers were detected. Outliers were defined as studies where effects differed significantly from the pooled effect, i.e., 95% confidence intervals of the individual studies did not overlap with the 95% confidence interval of the pooled effect (Harrer et al., 2021).

Sources of heterogeneity between studies were investigated by moderator analyses when reported data allowed, i.e., if at least ten studies were included in the meta-analysis and subgroups had at least four observations (Fu et al., 2011; Schwarzer et al., 2015). Meta-regressions were performed for continuous moderators (publication year). Subgroup analyses were performed for categorical moderators (individual vs. systemic resilience, participant age, study country GNI, study quality).

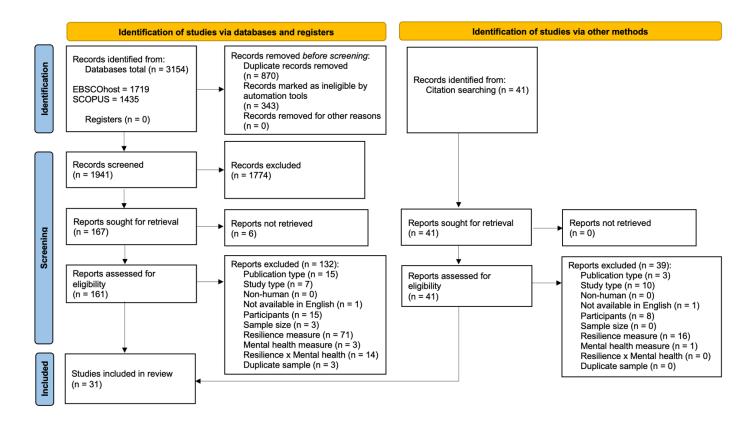
Results

Search Outcomes

The search strategy produced 3154 references. After removing duplicates, 1941 records were screened based on titles and abstracts. The screening process resulted in the exclusion of 1774 records that were deemed irrelevant. Full-text screening was then conducted with the remaining 161 studies, with 29 studies identified as eligible for inclusion. Citation searching yielded 41 potential studies, two of which were eligible for inclusion. Thirty-one published papers met the inclusion criteria for this systematic review, see Figure 1 for PRISMA flowchart.

Figure 1

PRISMA flowchart



Study characteristics

The 31 studies included in the systematic review were published between 2012-2023, reporting on a combined sample of 6,656 participants (3,050 males and 3,601 females). The key characteristics of included studies are summarised in Table 1.

Table 1
Summary of included studies

Variable	Category	Studies (n)
Design	Cross-sectional	29
	Prospective Cohort	2
Study country GNI	High-income	18
	Low-and-Middle-income***	13
Sample ages*	Child and adult	7
	Child	9
	Adult	16
Sample size*	<100	8
	101–300	15
	>301	9
Resilience measure	Individual	20
	Systemic	11
Mental health outcome**	PTSD	16
	Anxiety	7*
	Depression	17*
	Psychological distress	12
Quality appraisal score	Poor-or-Fair****	14
	Good	17

^{*}One study recruited two samples of refugees (Rasheed et al., 2022)

Most studies were conducted in high-income countries (k = 18) and used cross-sectional research designs (k = 29). Two cohort studies were included (Seong & Park, 2021; Wright et al., 2017); although longitudinal in design, data extracted for this review were collected at the same time point. Sample sizes varied from 36 to 556 participants, though

^{**} Seventeen studies captured multiple mental health outcomes, therefore these are not mutually exclusive

^{***} Two studies were from a low-income country, therefore low- and middle-income countries were grouped for analysis purposes

^{****} One study scored 'Poor' during the quality appraisal process, therefore 'Poor' and 'Fair' were grouped for analysis purposes

few studies included sample size calculations. Most studies recruited adults only (k = 16), whilst others recruited both children and adults (most often 'youth' studies, k = 7) or children only (k = 9). Most studies measuring individual resilience used the CD-RISC (Connor & Davidson, 2003), whilst studies measuring systemic resilience most often used the CYRM (Ungar & Liebenberg, 2011). The most common mental health disorders studied alongside resilience were PTSD, depression, and anxiety. Studies measuring psychological distress or capturing general aspects of psychosocial difficulties, for example difficulties with emotions or psychosocial functioning, were grouped together. There was significant variance in the measures used within each mental health category. See Table 2 for individual study characteristics.

Table 2

Characteristics of included studies

Study author and year	Sampling method	Participants	Sample size	Country	Age*:	Percentage male sample	Resilience measures ¹	Mental health measure(s) ²	Measure of association*	Quality appraisal
Malliarou et al. (2020)	Convenience sampling	Asylum seeker war refugees	64	Greece	m = 36 sd = 7.4	63.5%	CD-RISC	PHQ-9, HTQ	Resilience/Depression: r =26, p = .04 Resilience/PTSD: r =44, p < .001	Fair
Laufer et al. (2022)	Convenience sampling	Young adult asylum seekers and refugees	55	Germany	m = 19.47 sd = 1.45 range= 18-25	89.1%	CD-RISC 10	PHQ-9, PCL-5	Resilience/Depression: r =34, p < .05 Resilience/PTSD: r =4, p < .01	Good
Rasheed et al. (2022)	Systematic sampling (probability sampling)	Internally displaced Yadizi Iraqi refugees	Sample 1: 257 Sample 2: 165	Iraq	Sample 1: m = 29.98 sd = 12.2 Sample 2: m = 35.75 sd = 13.2	Sample 1: 63.4% Sample 2: 26.7%	BRS	DASS-21	Sample 1 Resilience/Depression: r =12, p > .05 Resilience/Anxiety: r =14, p < .05 Sample 2 Resilience/Depression: r =31, p < .001 Resilience/Anxiety:	Good
									r =17, p < .05	
Nam et al. (2016)	Non- probability snowball sampling	North Korean adult refugees	304	South Korea	m = 40.95 sd = 8.98	33.8%	K-CD- RISC	CES-D	Resilience/Depression: r =48, p < .01	Good
Poudel- Tandukar et al. (2019)	Non-random sampling	Bhutanese refugees	225	USA	m = 37.6 sd = 14.5	50.22%	RS-25	HSCL-25	Resilience/Depression: β = -0.05, p = .003 Resilience/Anxiety: β = -0.04, p = .001	Good
Wright et al. (2017)	Computer generated random sampling	Iraqi refugees	291	USA	m = 34.3 sd = 11.37	54.3%	RS-8	SCID-I	Resilience/Depression: AOR = 0.59, 95% CI [0.45; 0.77] Resilience/PTSD: AOR = 0.66, 95% CI [0.53; 0.82]	Good

Study author and year	Sampling method	Participants	Sample size	Country	Age*:	Percentage male sample	Resilience measures ¹	Mental health measure(s) ²	Measure of association*	Quality appraisal
von Haumeder et al. (2019)	Snowball sampling	Syrian refugees	127	Germany	m = 31.9 sd = 10.68 range = 18-67	66.1%	RS-11	PCL-5	Resilience/PTSD: r =25, p < .01	Good
Bang (2017)	Nonrandomi zed, snowball sampling	Chaldean Iraqi refugees	100	USA	m = 16.23 sd = 1.49 range = 14-20	53%	RS-25	PCL-C	Resilience/PTSD: $r =04$, $p > .05$	Fair
Dehnel et al. (2022)	Not reported	Syrian refugee children	339	Jordan	m = 13.4 range = 10-17	25.1%	CYRM-28	CDI-2	Resilience/Depression: r =33, p < .001	Good
Dangmann et al. (2021)	Strategic sampling	Syrian refugee children	160	Norway	m = 18.1 sd = 2.4 range = 13-24	62.5%	CYRM-12	HSCL-10, CRIES-8	Resilience/Psychological distress: r =45, p < .001 Resilience/PTSD: r =23, p < .05	Good
Uysal et al. (2022)	Not reported	Syrian refugee children	430	Turkey	m = 15.5 sd = 1.76 range = 12-18	43.02%	CYRM-R	DASS-21, CRIES-8	Resilience/Depression: r =42, p < .001 Resilience/Anxiety: r =3, p < .001 Resilience/PTSD: r =07, p = .13	Good
Wilson et al. (2021)	Purposive sampling	Palestinian refugee children	106	Palestine	m = 13.56 sd = 11-17	49%	CYRM-28	SDQ	Resilience/Psychological distress: r =7, p < .0001	Fair
Badri et al. (2020)	Not reported	Eritrean unaccompan ied refugees	45	Sudan	m = 15.36 $sd = 1.45$	62.2%	CYRM-28	HSCL-25	Resilience/Depression: r =76, p < .01 Resilience/Anxiety: r =3, p < .05	Fair
Panter-Brick et al. (2018)	Not reported	Syrian refugees	324	Jordan	m = 14.13 $sd = 1.94$	57.7%	CYRM-12	AYMH, SDQ	Resilience/Psychological distress: r =17, p < .05 Resilience/Psychological distress: r =26, p < .001	Good
McEwen et al. (2022)	Not reported	Adolescent refugees	85	Australia	m = 20.78 sd = 2.29 range = 16-25	41.2%	CYRM-R	RATS, HSCL-37A	Resilience/PTSD: r =25, p < .05 Resilience/Psychological distress: r =35, p < .01	Good

Study author and year	Sampling method	Participants	Sample size	Country	Age*:	Percentage male sample	Resilience measures ¹	Mental health measure(s) ²	Measure of association*	Quality appraisal
Seong and Park (2021)	Not reported	North Korean refugee youths	64	South Korea	m = 16.89 sd = 1.64 range = 13-23	37.5%	BRS	CES-DC	Resilience/Depression: r =58, p < .001	Fair
Park et al. (2017)	Not reported	North Korean refugee youths	131	South Korea	m = 18.47 sd = 2.82	38.93%	BRS	CDI, CRIES-13	Resilience/Depression: r =55, $p < .001Resilience/PTSD:r =51$, $p < .001$	Fair
Civan Kahve et al. (2021)	Not reported	Iraqi Turkoman refugees	101	Turkey	m = 36.03 sd = 18-68	48.5%	RSA	CAPS	Resilience/PTSD: r =62, p = .001	Fair
Miller et al. (2022)	Not reported	Adolescent refugees	322	Australia	m = 17.57 sd = 2.32 range = 14-26	36%	CD-RISC 10	K-10	Resilience/Psychological distress: r =28, p < .01	Good
Fino et al. (2020)	Convenience sampling	Asylum seekers and refugees from Middle Eastern countries	83	Albania	m = 47.7 $sd = 8.4$	91.6%	BRS	GHQ-12, HTQ	Resilience/Psychological distress: r = .075, p = .51 Resilience/PTSD: r = .35, p < .01	Fair
Kim et al. (2022)	Convenience sampling	IDPs	201	Myanmar	m = 36.9 sd = 20-65	54.23%	CD-RISC	HTQ	Resilience/PTSD: r =1, p = .149	Fair
Akcan et al. (2023)	Convenience sampling	Refugee women	288	Turkey	range = 18-68	0%	CD-RISC	WHO-5, MDI	Resilience/Psychological distress: r = .37, p < .01 Resilience/Depression: r =3, p < .01	Good
Urbański et al. (2023)	Not reported	Ukrainian displaced students	284	Poland	m = 12.04 sd = 1.78	50.7%	CYRM-R Personal subscale	CDI 2:SR, STAI-C state anxiety subscale	Resilience/Depression: r =35, p < .01 Resilience/Anxiety: r =27, p < .01	Fair
Tessitore et al. (2023)	Not reported	Nigerian male asylum seekers	36	Italy	m = 27.47 sd = 7.28	100%	CD-RISC	HTQ-R	Resilience/PTSD: r = .036, p > .05	Poor
Ziaian et al. (2023)	Convenience and snowball sampling	Refugee- Background Youth	556	Australia	m = 18.83 sd = 2.68 range = 14-26	38.12%	CD-RISC	K6	Resilience/Psychological distress: r =31, p < .01	Fair

Study author and year	Sampling method	Participants	Sample size	Country	Age*:	Percentage male sample	Resilience measures ¹	Mental health measure(s) ²	Measure of association*	Quality appraisal
Ziaian et al. (2012)	Convenience and snowball sampling	Refugee- Background Youth	170	Australia	med = 15.56 range = 12.25- 18.16	50.6%	CD-RISC	CDI, SDQ	Resilience/Psychological distress: r =39, p < .001 Resilience/Depression: r =37, p < .001	Fair
Ssenyonga et al. (2013)	Random sampling	Congolese refugees	426	Uganda	m = 35.11 sd = 12.64	48.35%	CD-RISC	PDS	Resilience/PTSD: r =017, p > .05	Fair
Altinay et al. (2023)	Snowball sampling	Ukrainian refugees	135	Slovakia	16–24: 14.8% 25–34: 19.3% 35–44: 31.9% 45–54: 17.8% 55+: 16.2%	21.5%	BRS	K10	Resilience/Psychological distress: r =286	Good
Norton et al. (2023)	Not reported	Unaccompa nied and separated migrant children	110	France	med = 19.7 range = 18-22	92.7%	CD-RISC 10	PCL-5, PHQ-9, GAD-7	Resilience/PTSD: r =04, p = .68 Resilience/Depression: r =16, p = .11 Resilience/Anxiety: r =11, p = .27	Good
Veronese et al. (2021)	Not reported	Syrian Refugee Children	311	Jordan	m = 10.49 sd = 2.16 range = 7-14	49.8%	CYRM-28	SDQ emotional problems subscale	Resilience/Psychological distress: r =154, p < .001	Good
O'Connor and Seager (2021)	Not reported	Rohingya Adolescents	361	Bangladesh	m = 16.17 range = 15-18	49.1%	CYRM-28	PHQ-9, HTQ, GHQ-12	Resilience/Psychological distress: r =15, p < .01 Resilience/Depression: r =13, p < .05 Resilience/PTSD: r =083, p = .14	Fair

^{*}mean (m); sd (standard deviation); median (med); p (significance value); r (correlation coefficient)

¹ BRS: Brief Resilience Scale (Smith et al., 2008); (K-)CD-RISC: (Korean) Connor-Davidson Resilience Scale (Baek et al., 2010; Campbell-Sills & Stein, 2007; Connor & Davidson, 2003); CYRM-28/12/R: Child and Youth Resilience Measure (Jefferies et al., 2019; Liebenberg et al., 2013; Ungar & Liebenberg, 2011); RS: Resilience Scale-25/11-8 (Wagnild & Young, 1993); RSA: Resilience Scale for Adults (Friborg et al., 2003)

² AYMH: Arab Youth Mental Health scale (Makhoul et al., 2011); CAPS: Clinician-Administered PTSD Scale (Blake et al., 1995); CDI: Children's Depression Inventory (Kovac, 2010; Kovacs & Beck, 1977); CES-D(C): Center for Epidemiologic Studies Depression (Child) Scale (Radloff, 1977; Weissman et al., 1980); CRIES-8/13: Child Revised Impact of Events Scale (Perrin et al., 2005); DASS-21: Depression, Anxiety and Stress Scale-21 (Lovibond & Lovibond, 1995); HTQ: Harvard Trauma Questionnaire (Mollica et al., 1992); HSCL-25/10/37A: GHQ-12: 12-item General Health Questionnaire (Goldberg et al., 1997); Hopkins Symptom Checklist-25/10/37A (Bean et al., 2004a; Derogatis et al., 1974; Strand et al., 2003); IES-R: Impact of Events Scale-Revised (Horowitz et al., 1979); K-6/10: Kessler Six/Ten (Kessler et al., 2002); MDI: Major Depression Inventory (Bech et al., 2001); PCL-5/C PTSD CheckList-5/Civilian (Weathers et al., 1991; Weathers et al., 2013); PDS: Posttraumatic Diagnostic Scale (Foa, 1995); PHQ-9: Patient Health Questionnaire-9 (Kroenke et al., 2001); RATS: Reactions of Adolescents to Traumatic Stress questionnaire (Bean et al., 2004b); SCID-I: Structured Clinical Interview for DSM-IV (First, 1997); SDQ: Strengths and Difficulties Questionnaire (Goodman & Goodman, 2009); STAI-C; WHO-5: World Health Organisation wellbeing scale (Bech et al., 1996)

Meta-analyses: Associations between resilience and mental health outcomes

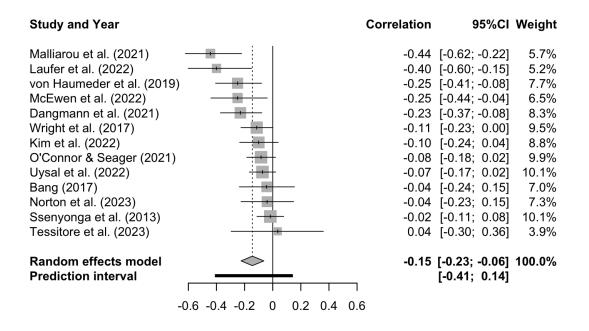
PTSD

Across the 16 studies included in the PTSD domain (n = 2761), the random-effects pooled correlation between resilience and PTSD was r = -.18 (95% CI [-0.30; -0.06]), see Supplementary Figure 1. The 95% prediction interval ranged from -0.62 to 0.34. There was substantial heterogeneity between studies (Q = 105.40, df = 15, p < .0001, $I^2 = 85.8\%$). Egger's test did not indicate the presence of funnel plot asymmetry (intercept = -2.56, p = .18).

Three outliers were detected (Civan Kahve et al., 2021; Fino et al., 2020; Park et al., 2017). The random-effects pooled correlation of the remaining studies (k = 13; n = 2446) was r = -.15 (95% CI [-0.23; -0.06]) and the 95% prediction interval was -0.41 to 0.14, see Figure 2. Heterogeneity reduced, but remained moderate (Q = 26.24, df = 12, p < .01, $I^2 = 54.3\%$). Egger's test indicated the presence of funnel plot asymmetry (intercept = -2.27, p = .04).

Figure 2

Forest plot of correlation coefficients for the association between resilience and PTSD



Subgroup analysis by study country GNI was significant (Q = 4.32, df = 1, p = .04), with high-income country studies showing stronger negative correlations between resilience and PTSD (r = -.19, 95% CI [-0.30; -0.08]) compared with low- and middle-income countries

(r = -.06, 95% CI [-0.12; -0.01]). No other significant moderating effects were observed, see Table 3.

Table 3

Moderator and subgroup analysis (resilience and PTSD)

Variable	k	r	95% CI	Q] 2	Moderation
Age group						-
Child*	2 (<4)	-0.08	[-0.15; -0.01]	0.02	0.0%	
Adult	8	-0.16	[-0.28; -0.03]	20.80	66.3%	
Mixed*	3 (<4)	-0.18	[-0.31; -0.04]	2.74	27.0%	
Resilience measure						p = .88
Individual	9	-0.15	[-0.26; -0.03]	21.25	62.3%	
Systemic	4	-0.14	[-0.23; -0.04]	4.96	39.5%	
Country GNI						p = .04
High-income	9	-0.19	[-0.30; -0.08]	16.77	52.3%	
Low- and middle-	4	-0.06	[-0.12; -0.01]	1.36	0.0%	
Quality rating						p = .42
Good	7	-0.17	[-0.27; -0.08]	11.46	47.6%	
Poor or Fair	6	-0.11	[-0.24; 0.03]	11.89	57.9%	
Publication year						p = .39

^{*}Excluded from subgroup analysis due to number of observations in subgroup

Depression

Sixteen studies (17 samples) examined the association between resilience and depression (n = 3583). The random-effects pooled correlation between resilience and depression was r = -.34 (95% CI [-0.43; -0.24]). The 95% prediction interval was -0.67 to 0.11. High heterogeneity between studies was observed (Q = 107.99, df = 16, p < .0001, $I^2 = 85.2\%$). A forest plot of all effect sizes and confidence intervals from each individual study is shown in Supplementary Figure 2. Egger's test did not indicate the presence of funnel plot asymmetry (intercept = -2.45, p = .25).

Three outliers were detected (Badri et al., 2020; O'Connor & Seager, 2021; Poudel-Tandukar et al., 2019). The random-effects pooled correlation of the remaining studies (k = 14; n = 2952) was r = -.34 (95% CI [-0.41; -0.26]) and the 95% prediction interval was -0.59 to -0.03, see Figure 3. Heterogeneity remained high (Q = 58.07, df = 13, p < .0001, $I^2 =$

77.6%). Egger's test did not indicate the presence of funnel plot asymmetry (intercept = -0.45, p = .83).

Figure 3

Forest plot of correlation coefficients for the association between resilience and depression after outliers removed

Study and Year	Correlation	95%CI	Weight
Seong et al. (2021) Park et al. (2017) Nam et al. (2016) Uysal et al. (2022) Ziaian et al. (2012) Urbański et al. (2023) Laufer et al. (2022) Dehnel et al. (2022) Rasheed et al. (2022)* Akcan et al. (2023) Malliarou et al. (2021) Norton et al. (2023) Wright et al. (2017)	-0.55 -0.48 -0.42 -0.37 -0.35 -0.34 -0.33 -0.31 -0.30 -0.26 -0.16	[-0.72; -0.38] [-0.66; -0.42] [-0.56; -0.38] [-0.49; -0.23] [-0.45; -0.24] [-0.56; -0.08] [-0.42; -0.23] [-0.44; -0.17] [-0.40; -0.19] [-0.47; -0.01] [-0.34; 0.03] [-0.25; -0.03]	8.1% 8.5% 7.3% 8.0% 4.8% 8.2% 7.2% 8.1% 5.2% 6.5%
Rasheed et al. (2022)* (1) Random effects model Prediction interval -0.6 -0.4 -0.2	-0.12 - 0.34	[-0.24; 0.00] [-0.41; -0.26] [-0.59; -0.03]	7.9%

^{*} The study by Rasheed et al. (2022) recruited two samples of refugees

Subgroup analysis showed a significant difference in the pooled effect by sample age category (Q = 3.86, df = 1, p = .0496), with studies sampling children only showing stronger negative correlations between resilience and depression (r = -.37, 95% CI [-0. 42; -0.32]) compared to studies sampling adults only (r = -.27, 95% CI [-0.36; -0.17]). No other moderating effects of were observed for the association between resilience and depression by subgroup, see Table 4.

Table 4

Moderator and subgroup analysis (resilience and depression)

Variable	k	r	95% CI	Q] 2	Moderation effect
Age group						p = 0.0496
Child	4	-0.37	[-0.42; -0.32]	2.34	0.0%	
Adult	8	-0.27	[-0.36; -0.17]	30.87	77.3%	
Mixed*	2 (<4)	-0.56	[-0.65; -0.45]	0.06	0.0%	
Resilience measure						-
Individual	11	-0.33	[-0.42; -0.23]	52.61	81.0%	
Systemic*	3	-0.37	[-0.43; -0.31]	2.33	14.3%	
Country GNI						p = .39
High-income	9	-0.36	[-0.46; -0.25]	39.41	79.7%	
Low- and middle-	5	-0.30	[-0.39; -0.20]	17.22	76.8%	
Quality rating						p = .09
Good	9	-0.30	[-0.38; -0.21]	40.48	80.2%	
Poor or Fair	5	-0.42	[-0.54; -0.30]	10.85	63.1%	
Publication year						p = .34

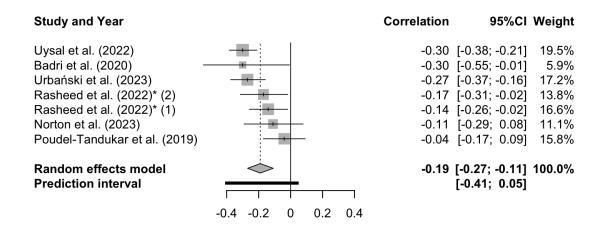
^{*}Excluded from subgroup analysis due to number of observations in subgroup

Anxiety

Across the six studies (seven samples) reporting associations between resilience and anxiety (n = 1516), the pooled correlation between resilience and anxiety was r = -.19 (95% CI [-0.27; -0.11]). The 95% prediction interval was -0.41 to 0.05. Heterogeneity was observed between studies (Q = 14.80, df = 6, p = .02, $l^2 = 59.4\%$). See Figure 4 for forest plot of all effect sizes and confidence intervals from each individual study included. No outliers were detected. With fewer than 10 studies included in this meta-analysis, tests for funnel plot asymmetry (i.e., publication bias) were not carried out due to insufficient power to distinguish real asymmetry from chance (Van der Kolk, 2005). This also precluded subgroup analyses (Schwarzer et al., 2015).

Figure 4

Forest plot of correlation coefficients for the association between resilience and anxiety



^{*} The study by Rasheed et al. (2022) recruited two samples of refugees

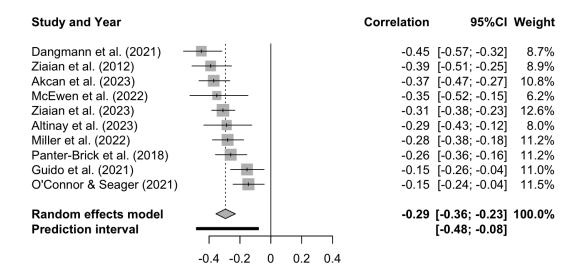
Psychological distress

Across the 12 studies reporting an association between resilience and psychological distress (n = 2901), the pooled correlation between resilience and psychological distress was r = -.31 (95% CI [-0.42; -0.20]), see Supplementary Figure 3. The 95% predictor interval was -0.67 to 0.15. Significant heterogeneity between studies was observed (Q = 70, df = 11, p < .0001, $l^2 = 84.3\%$). Egger's test did not indicate the presence of funnel plot asymmetry (intercept = -2.27, p = .4).

Two outliers were detected (Fino et al., 2020; Wilson et al., 2021). The random-effects pooled correlation of the remaining studies (k = 10; n = 2712) was r = -.29 (95% CI [-0.36; -0.23]) and the 95% prediction interval was -0.48 to -0.08, see Figure 5. Heterogeneity remained moderate (Q = 25.35, df = 9, p < .01, $I^2 = 64.5\%$). Egger's test did not indicate the presence of funnel plot asymmetry (intercept = -2.43, p = .28).

Figure 5

Forest plot of correlation coefficients for the association between resilience and psychological distress after outliers removed



Moderator analyses showed no significant differences in the association between resilience and psychological distress across subgroups, see Table 5.

Table 5

Moderator and subgroup analysis (resilience and psychological distress)

Variable	k	r	95% CI	Q	 2	Moderation effect
Age group						p = .14
Child	4	-0.23	[-0.34; -0.12]	10.07	70.2%	
Adult*	2	-0.34	[-0.43; -0.24]	0.80	0.0%	
Mixed	4	-0.34	[-0.41; -0.25]	4.42	32.1%	
Resilience measure						p = .36
Individual	5	-0.32	[-0.38; -0.27]	2.85	0.0%	
Systemic	5	-0.26	[-0.38; -0.14]	16.27	75.4%	
Country GNI						p = .09
High-income	6	-0.34	[-0.40; -0.27]	5.55	10.0%	
Low- and middle-	4	-0.23	[-0.33; -0.13]	11.79	74.6%	
Quality rating						-
Good	8	-0.30	[-0.36; -0.24]	14.99	53.3%	
Poor or Fair*	2	-0.27	[-0.48; -0.02]	8.03	87.5%	
Publication year						p = .65

^{*}Excluded from subgroup analysis due to number of observations in subgroup

Discussion

The present systematic review and meta-analyses aimed to evaluate evidence of the association between resilience and mental health difficulties among forcibly displaced groups. Results from 31 studies (32 samples) indicate that resilience is significantly negatively associated with symptoms of post-traumatic stress, depression, anxiety and psychological distress, with small-to-medium effect sizes and a large degree of heterogeneity. A significant association between resilience and broad mental health outcomes has been reported in other populations (Färber & Rosendahl, 2018, 2020; Hu et al., 2015; Mortazavi & Yarolahi, 2015). Our results corroborate and further narrative synthesis evidence by Siriwardhana and colleagues (2014), providing the first quantitative evidence for associations between resilience and mental health difficulties among forcibly displaced groups.

We found a small effect for the association between PTSD and resilience (r = -.15, 95% CI [-0.23; -0.06], 95% PI [-0.41; 0.14]). This suggests that participants across studies reporting fewer PTSD symptoms tended to report higher levels of resilience. However, the wide prediction interval suggests that this finding may not always be replicable, perhaps because trauma-related symptoms may present and be understood differently across cultures and there are cultural variations in resilience responses (Buse et al., 2013). A significantly stronger negative correlation between resilience and PTSD was found among high-income countries in comparison to low- or middle-income countries. Differences in experiences migrating to and residing in high vs. low- and middle-income countries and access to resilience resources may explain this finding. One interpretation is that participants residing in high-income countries had higher resilience and fewer difficulties relating to PTSD in comparison to those in low- or middle-income countries. Those residing in low- or middle-income countries may be closer to areas of conflict and might be exposed to ongoing threats to their security and welfare (Reed et al., 2012), contributing to symptoms of PTSD, and may have fewer resiliency resources. Conversely, refugees residing in high-income countries in comparison to low- or middle-income countries may have experienced more perilous migration journeys over greater distances, and have greater challenges with immigration and acculturation due to increased cultural difference and hostile policies (Fazel et al., 2012), all of which are associated with risk of mental health difficulties, particularly PTSD (Bogic et al., 2015; Jannesari et al., 2020; Porter & Haslam, 2005).

A medium effect for the association between resilience and depression was found (r = -.34, 95% CI [-0.41; -0.26], 95% PI [-0.59; -0.03]). This effect is perhaps unsurprising,

given resilience includes attitudes, beliefs and perceptions of skills and resources to cope (Connor & Davidson, 2003; Ungar & Theron, 2020). Depressive symptoms, on the other hand, are characterised by hopelessness, guilt, emotional numbness, fatigue, worthlessness and/or poor self-esteem (American Psychiatric Association, 2022; World Health Organization, 2019). It has also been argued that some resilience scales include items from depression scales that are positively worded (Färber & Rosendahl, 2018), for example the Resilience Scale (Wagnild & Young, 1993). Furthermore, resilience measures, such as the CD-RISC (Connor & Davidson, 2003), have been found to be strongly predictive of positive emotionality in general population samples and may be more closely aligned to difficulties characterised by disruptions in positive affect (Robinson et al., 2014). A significantly stronger negative correlation between resilience and depression was found among children in comparison to adults. This might be explained by the challenges related to trauma exposure and loss that refugee children may face across important developmental stages, increasing risk of various forms of dysregulation (e.g., emotional, behavioural and relational; (Van der Kolk, 2005)), and as such, decrease resiliency resources and increase vulnerability to depression. Children may also have had less experience of drawing on resilience. This effect might also be explained by refugee children having more resiliency resources than adult counterparts due to migrating with parents or families, buffering symptoms of depression.

We found a small effect for the association between resilience and anxiety (r = -.19, 95% CI [-0.27; -0.11], 95% PI [-0.41; 0.05]) and a small-to-medium effect for the association between resilience and psychological distress (r = -.29, 95% CI [-0.36; -0.23], 95% PI [-0.48; -0.08]). Measures of psychological distress are often broader and less symptom specific, for example also capturing relational difficulties (e.g., SDQ; Goodman & Goodman, 2009), which may position them well to capture psychological challenges cross-culturally. However, although the construct of psychological distress is multifaceted, it often incorporates symptoms of anxiety or depression. It is possible the current effect is driven by difficulties relating to depression and anxiety, overlapping with the effects described above.

Across the four meta-analyses presented, significant heterogeneity was observed between studies. Random-effects models were adopted due to their suitability to highly heterogenous data, and the meta-analysis methodology allowed for exploration of sources of heterogeneity (e.g., subgroup analyses, outlier identification). It is hypothesised high heterogeneity is driven by different measures of both resilience and mental health used among different samples (e.g., URMs; IDPs; refugees with lifelong PTSD) of different ages (e.g., child vs adult) residing in different placements (e.g., resettled or residing in camps) and

recruited in countries with different levels of income. Participants may in addition have differences in experiences of using psychometric measures and service access. Finally, and significantly, it is suggested that heterogeneity also derives from cultural variations in interpretations and conceptualisations of mental health disorders (Antić, 2021; Kleinman, 1980) and of resilience (Ungar, 2018). It is likely participants have different levels of fluency with Western-borne definitions and understandings of resilience and mental health challenges as captured by quantitative measures.

Limitations and Strengths

The present review set no exclusion criteria according to host country, country of origin, age, gender, or duration of displacement, which may have contributed to heterogeneity between studies. However, this is viewed as a strength in the present study, increasing the generalisability of findings through including different studies and samples. Subgroup analyses served to investigate differences and possible sources of heterogeneity, but these may have been underpowered (Cuijpers et al., 2021). Some subgroup variables were collapsed due to small numbers, and it was not possible to explore some areas of interest due to limited data, for instance differences according to gender or country of origin. In addition, all data included in this review were collected cross-sectionally, limiting understanding of temporal precedence between resilience and mental health symptoms. Most studies used non-probability sampling methods, which is common due to challenges associated with recruiting forcibly displaced people in research (Blackmore et al., 2020), and did not conduct power analyses. Furthermore, the majority of the resilience and mental health measures were not specifically developed for refugee populations or to be used cross-culturally, despite being widely used and validated in different cultural and linguistic contexts. Included measures were, for the most part, quantitative self-report questionnaires for specific areas of mental health difficulty, the completion of which may be affected by linguistic or cultural differences despite translations. Using such measures may offer only a limited view of the complexity and context of needs (Tessitore et al., 2023).

Studies involving participants from low-income countries are underrepresented, which could be problematic given that low- and middle-income countries collectively host almost 90% of the global refugee population (UNHCR, 2024a). Although children are well-represented in the studies included, only two studies measuring the association between resilience and mental health outcomes among unaccompanied refugee minors (URMs) were identified in this review (Badri et al., 2020; Norton et al., 2023), both with relatively small samples. There is also a lack of studies sampling older adults which met criteria for

inclusion, although this may be explained by the finding that few older adults choose or are able to be displaced (van Boetzelaer et al., 2023).

To the best of the authors' knowledge, this is the first quantitative synthesis of evidence of association between resilience and mental health outcomes among forcibly displaced populations. Despite high heterogeneity, the meta-analyses provide a comprehensive summary of the existing evidence and aggregate summaries of effect. This review explores differences across conceptualisations of resilience (individual vs. systemic), although notes that no adult only studies adopted systemic measures of resilience, despite these being argued to be more cross-culturally relevant (Ungar & Liebenberg, 2011). Measures of resilience with known psychometric properties (CD-RISC, BRS and RSA; Windle et al. (2011)), that are the most widely used (RS; Windle et al. (2011)) and cross-culturally valid (CD-RISC and CYRM; Terrana and Al-Delaimy (2023)) were included. Corresponding authors of studies with unreported association coefficients were contacted to maximise the data included. In addition, the present review reports prediction intervals, as recommended in meta-analyses (IntHout et al., 2016), aiding with the interpretation of findings.

Clinical Implications and Future Directions

Several research implications are noted. To improve the generalisability of future meta-analytic reviews, more research is needed to focus on those reside in low-income countries, older adults, or URMs. In addition, longitudinal study designs may be helpful to understand the temporal relationship between resilience and mental health in this population. Qualitative research could be employed to improve understanding of the how resilience manifests and shed light on context and the mechanisms by which resilience and mental health difficulties are associated. Due to known challenges in defining resilience both within and across cultures (Davydov et al., 2010; Hawkes et al., 2021), research may wish to explore closely related constructs representing tangible and active resiliency processes, such as coping (Rice & Liu, 2016). Exploration according to culture or country of origin was out of the scope of the review, however, is important to consider given cross-cultural differences in resilience are noted in the literature (Ungar, 2018). In addition, differences in perceptions and experiences of mental health difficulties are also reported. For example, studies have suggested that cultures within the global south may hold a heightened somatic focus and experience mental health difficulties somatically (Ma-Kellams, 2014) and may not always attune with Western-borne understandings and delineations of mental health

problems. Further investigation is warranted to understand how somatic symptoms and resilience are associated.

Regarding clinical implications, the negative correlations between resilience and mental health suggests fostering resilience could be key to improve mental health outcomes, particularly for those presenting with depressive and psychological distress symptoms. The present review found no significant differences in the association between resilience and mental health outcomes when measured by individual resilience or systemic resilience measures, supporting the idea that fostering individual resilience and systemic resilience are equally important in improving mental health outcomes among forcibly displaced populations.

Conclusion

This review found that resilience is negatively associated with anxiety, depression, PTSD, and general psychological distress among forcibly displaced groups, with the strongest correlation reported for depression.

References

- Akcan, G., Erol, E., & Kose, O. B. (2023). The mediating role of ontological well-being in the relationship between psychological resilience, psychological well-being, and depression in refugee women. *European Journal of Trauma & Dissociation*, 7(4), 100345.
- Altinay, L., Alrawadieh, Z., Hudec, O., Urbančíková, N., & Arici, H. E. (2023). Modelling social inclusion, self-esteem, loneliness, psychological distress, and psychological resilience of refugees: Does hospitableness matter? *Journal of Business Research*, 162, 113901.
- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders (5th ed., text rev.)*. https://doi.org/10.1176/appi.books.9780890425787
- Antić, A. (2021). Transcultural psychiatry: Cultural difference, universalism and social psychiatry in the age of decolonisation. *Culture, Medicine, and Psychiatry*, *45*(3), 359-384.
- Badri, A., Eltayeb, S., Mohamed, M., & Verdeli, H. (2020). Mental health and resilience status of Eritrean unaccompanied refugee minors in Sudan. *Children and Youth Services Review*, *116*, 105088.
- Baek, H.-S., Lee, K.-U., Joo, E.-J., Lee, M.-Y., & Choi, K.-S. (2010). Reliability and validity of the Korean version of the Connor-Davidson Resilience Scale. *Psychiatry investigation*, 7(2), 109.
- Bang, H. (2017). Iraqi refugee high school students' academic adjustment. *Diaspora, Indigenous, and Minority Education, 11*(1), 45-59.
- Bean, T., Eurelings-Bontekoe, E., Derluyn, I., & Spinhoven, P. (2004a). Hopkins Symptom Checklist-37 for Adolescents (Hscl-37a): User's Manual. *Oegstgeest: Centrum '45*.
- Bean, T., Eurelings-Bontekoe, E., Derluyn, I., & Spinhoven, P. (2004b). RATS user's manual. *Oegstgeest, The Netherlands: Stichting Centrum*, 45.
- Bech, P., Gudex, C., & Staehr Johansen, K. (1996). The WHO (Ten) well-being index: validation in diabetes. *Psychotherapy and psychosomatics*, *65*(4), 183-190.
- Bech, P., Rasmussen, N.-A., Olsen, L. R., Noerholm, V., & Abildgaard, W. (2001). The sensitivity and specificity of the Major Depression Inventory, using the Present State Examination as the index of diagnostic validity. *Journal of Affective Disorders*, *66*(2-3), 159-164.
- Blackmore, R., Boyle, J. A., Fazel, M., Ranasinha, S., Gray, K. M., Fitzgerald, G., Misso, M., & Gibson-Helm, M. (2020). The prevalence of mental illness in refugees and asylum seekers: A systematic review and meta-analysis. *PLoS medicine*, *17*(9), e1003337.

- Blake, D. D., Weathers, F. W., Nagy, L. M., Kaloupek, D. G., Gusman, F. D., Charney, D. S.,& Keane, T. M. (1995). The development of a clinician-administered PTSD scale.Journal of traumatic stress, 8, 75-90.
- Bogic, M., Njoku, A., & Priebe, S. (2015). Long-term mental health of war-refugees: a systematic literature review. *BMC international health and human rights*, *15*(1), 1-41.
- Borenstein, M., Hedges, L. V., Higgins, J. P., & Rothstein, H. R. (2021). *Introduction to meta-analysis*. John Wiley & Sons.
- Buse, N. A., Bernacchio, C., & Burker, E. J. (2013). Cultural variation in resilience as a response to traumatic experience. *Journal of Rehabilitation*, *79*(2), 15.
- Cajada, L., Stephenson, Z., & Bishopp, D. (2023). Exploring the psychometric properties of the resilience scale. *Adversity and Resilience Science*, *4*(3), 245-257.
- Campbell-Sills, L., & Stein, M. B. (2007). Psychometric analysis and refinement of the connor–davidson resilience scale (CD-RISC): Validation of a 10-item measure of resilience. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, 20(6), 1019-1028.
- Civan Kahve, A., Aydemir, M. C., Yuksel, R. N., Kaya, H., Unverdi Bicakci, E., & Goka, E. (2021). Evaluating the relationship between post traumatic stress disorder symptoms and psychological resilience in a sample of Turkoman refugees in Turkey. *Journal of immigrant and minority health*, *23*(3), 434-443.
- Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and anxiety*, *18*(2), 76-82.
- Cuijpers, P., Griffin, J. W., & Furukawa, T. A. (2021). The lack of statistical power of subgroup analyses in meta-analyses: a cautionary note. *Epidemiology and psychiatric sciences*, *30*, e78.
- Dangmann, C., Solberg, Ø., Myhrene Steffenak, A. K., Høye, S., & Andersen, P. N. (2021).

 Syrian refugee youth resettled in Norway: Mechanisms of resilience influencing health-related quality of life and mental distress. *Frontiers in Public Health*, *9*, 711451.
- Davydov, D. M., Stewart, R., Ritchie, K., & Chaudieu, I. (2010). Resilience and mental health. *Clinical psychology review*, *30*(5), 479-495.
- Dehnel, R., Dalky, H., Sudarsan, S., & Al-Delaimy, W. K. (2022). Resilience and mental health among Syrian refugee children in Jordan. *Journal of immigrant and minority health*, *24*(2), 420-429.
- Derogatis, L. R., Lipman, R. S., Rickels, K., Uhlenhuth, E. H., & Covi, L. (1974). The Hopkins Symptom Checklist (HSCL): A self-report symptom inventory. *Behavioral science*, 19(1), 1-15.

- Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *bmj*, *315*(7109), 629-634.
- Färber, F., & Rosendahl, J. (2018). The association between resilience and mental health in the somatically ill: a systematic review and meta-analysis. *Deutsches Ärzteblatt International*, *115*(38), 621.
- Färber, F., & Rosendahl, J. (2020). Trait resilience and mental health in older adults: A metaanalytic review. *Personality and Mental Health*, *14*(4), 361-375.
- Fazel, M., Reed, R. V., Panter-Brick, C., & Stein, A. (2012). Mental health of displaced and refugee children resettled in high-income countries: risk and protective factors. *The Lancet*, *379*(9812), 266-282.
- Fino, E., Mema, D., & Russo, P. (2020). War trauma exposed refugees and posttraumatic stress disorder: The moderating role of trait resilience. *Journal of Psychosomatic Research*, *129*, 109905.
- First, M. B. (1997). Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I),

 Clinician Version (Administration Booklet). American Psychiatric Publishing, Inc. (No Title).
- Foa, E. (1995). The posttraumatic diagnostic scale (PDS) manual Minneapolis. *MN: National Computer Systems*.
- Friborg, O., Hjemdal, O., Rosenvinge, J. H., & Martinussen, M. (2003). A new rating scale for adult resilience: what are the central protective resources behind healthy adjustment? International journal of methods in psychiatric research, 12(2), 65-76.
- Fu, R., Gartlehner, G., Grant, M., Shamliyan, T., Sedrakyan, A., Wilt, T. J., Griffith, L., Oremus, M., Raina, P., & Ismaila, A. (2011). Conducting quantitative synthesis when comparing medical interventions: AHRQ and the Effective Health Care Program. *Journal of clinical epidemiology, 64*(11), 1187-1197.
- Goldberg, D. P., Gater, R., Sartorius, N., Ustun, T. B., Piccinelli, M., Gureje, O., & Rutter, C. (1997). The validity of two versions of the GHQ in the WHO study of mental illness in general health care. *Psychological medicine*, *27*(1), 191-197.
- Goodman, A., & Goodman, R. (2009). Strengths and difficulties questionnaire as a dimensional measure of child mental health. *Journal of the American Academy of Child & Adolescent Psychiatry*, *48*(4), 400-403.
- Harrer, M., Cuijpers, P., Furukawa, T., & Ebert, D. (2021). *Doing meta-analysis with R: A hands-on guide*. Chapman and Hall/CRC.

- Harrer, M., Cuijpers, P., Furukawa, T., & Ebert, D. D. (2019). *dmetar: Companion R Package For The Guide 'Doing Meta-Analysis in R'. R package version 0.1.0.* . In http://dmetar.protectlab.org/.
- Hawkes, C., Norris, K., Joyce, J., & Paton, D. (2021). Exploring resilience, coping and wellbeing in women of refugee background resettled in regional Australia. *Frontiers in psychology*, *12*, 704570.
- Henkelmann, J.-R., de Best, S., Deckers, C., Jensen, K., Shahab, M., Elzinga, B., & Molendijk, M. (2020). Anxiety, depression and post-traumatic stress disorder in refugees resettling in high-income countries: systematic review and meta-analysis. BJPsych open, 6(4), e68.
- Higgins, J. P., Thompson, S. G., Deeks, J. J., & Altman, D. G. (2003). Measuring inconsistency in meta-analyses. *bmj*, *327*(7414), 557-560.
- Hodes, M., & Vostanis, P. (2019). Practitioner Review: Mental health problems of refugee children and adolescents and their management. *Journal of child psychology and psychiatry*, *60*(7), 716-731.
- Horowitz, M., Wilner, N., & Alvarez, W. (1979). Impact of Event Scale: A measure of subjective stress. *Psychosomatic medicine*, *41*(3), 209-218.
- Hu, T., Zhang, D., & Wang, J. (2015). A meta-analysis of the trait resilience and mental health. *Personality and Individual differences*, *76*, 18-27.
- Huedo-Medina, T. B., Sánchez-Meca, J., Marín-Martínez, F., & Botella, J. (2006). Assessing heterogeneity in meta-analysis: Q statistic or I² index? *Psychological methods*, *11*(2), 193.
- Hutchinson, M., & Dorsett, P. (2012). What does the literature say about resilience in refugee people? Implications for practice. *Journal of Social Inclusion*, *3*(2), 55-78.
- IntHout, J., Ioannidis, J. P., Rovers, M. M., & Goeman, J. J. (2016). Plea for routinely presenting prediction intervals in meta-analysis. *BMJ open*, *6*(7).
- Jannesari, S., Hatch, S., Prina, M., & Oram, S. (2020). Post-migration social—environmental factors associated with mental health problems among asylum seekers: A systematic review. *Journal of immigrant and minority health*, *22*, 1055-1064.
- Jefferies, P., McGarrigle, L., & Ungar, M. (2019). The CYRM-R: A Rasch-validated revision of the child and youth resilience measure. *Journal of Evidence-Based Social Work*, *16*(1), 70-92.
- Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S.-L., Walters, E. E., & Zaslavsky, A. M. (2002). Short screening scales to monitor population

- prevalences and trends in non-specific psychological distress. *Psychological medicine*, *32*(6), 959-976.
- Kim, G. U., Jung, E., Shim, M. S., & Kim, G. S. (2022). Association between post-traumatic stress symptoms and functional health among internally displaced people in Myanmar. *Journal of Psychiatric and Mental Health Nursing*, *29*(4), 555-567.
- Kleinman, A. (1980). Patients and healers in the context of culture: An exploration of the borderland between anthropology, medicine, and psychiatry (Vol. 3). Univ of California Press.
- Kovac, M. (2010). Children's Depression Inventory 2[™](CDI 2). North Tonawanda, NY: Multi-Health Systems. In: Inc.
- Kovacs, M., & Beck, A. T. (1977). An empirical-clinical approach toward a definition of childhood depression. *Depression in childhood: Diagnosis, treatment, and conceptual models*, 1-25.
- Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of general internal medicine*, *16*(9), 606-613.
- Laufer, A., Böttche, M., Walg, M., Khatib, A., Maoz-Dotan, C., Hassan, H., & Finkelstein, M. (2022). Salutogenic and pathogenic factors among young adult refugees in Germany: An exploratory study. *Journal of Refugee Studies*, *35*(2), 968-987.
- Liebenberg, L., Ungar, M., & LeBlanc, J. C. (2013). The CYRM-12: a brief measure of resilience. *Canadian journal of public health*, *104*, e131-e135.
- Lindert, J., von Ehrenstein, O. S., Priebe, S., Mielck, A., & Brähler, E. (2009). Depression and anxiety in labor migrants and refugees—a systematic review and meta-analysis. *Social science & medicine*, *69*(2), 246-257.
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states:

 Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck

 Depression and Anxiety Inventories. *Behaviour research and therapy*, *33*(3), 335-343.
- Ma-Kellams, C. (2014). Cross-cultural differences in somatic awareness and interoceptive accuracy: a review of the literature and directions for future research. *Frontiers in psychology*, *5*, 1379.
- Makhoul, J., Nakkash, R. T., El Hajj, T., Abdulrahim, S., Kanj, M., Mahfoud, Z., & Afifi, R. A. (2011). Development and validation of the Arab youth mental health scale.

 Community mental health journal, 47, 331-340.
- Malliarou, M., Tsapakidi, D., Gouva, M., Kotrotsiou, E., Nikolentzos, A., & Sarafis, P. (2020). Depression, resilience and post traumatic stress disorder (PTSD) in asylum-seeker war refugees.

- Marley, C., & Mauki, B. (2019). Resilience and protective factors among refugee children post-migration to high-income countries: a systematic review. *European Journal of Public Health*, *29*(4), 706-713.
- McEwen, C., Alisic, E., & Jobson, L. (2022). Moderating role of moral injury in the mental health of adolescent refugees. *Journal of Clinical Psychology*, *78*(7), 1478-1490.
- Miller, E., Ziaian, T., de Anstiss, H., & Baak, M. (2022). Ecologies of Resilience for Australian High School Students from Refugee Backgrounds: Quantitative Study. *International journal of environmental research and public health*, 19(2), 748.
- Mollica, R. F., Caspi-Yavin, Y., Bollini, P., Truong, T., Tor, S., & Lavelle, J. (1992). The Harvard Trauma Questionnaire: Validating a cross-cultural instrument for measuring torture, trauma, and posttraumatic stress disorder in Indochinese refugees. *The Journal of nervous and mental disease*, *180*(2), 111-116.
- Morote, R., Hjemdal, O., Martinez Uribe, P., & Corveleyn, J. (2017). Psychometric properties of the Resilience Scale for Adults (RSA) and its relationship with life-stress, anxiety and depression in a Hispanic Latin-American community sample. *PLoS One, 12*(11), e0187954.
- Mortazavi, N. S., & Yarolahi, N. A. (2015). Meta-analysis of the relationship between resilience and mental health. *Journal of Fundamentals of Mental Health*, *17*(3).
- Nam, B., Kim, J. Y., DeVylder, J. E., & Song, A. (2016). Family functioning, resilience, and depression among North Korean refugees. *Psychiatry research*, *245*, 451-457.
- NIH. (2023). *Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies*. https://www.nhlbi.nih.gov/health-topics/study-quality-assessment-tools
- Norton, J., Gandubert, C., Chaudieu, I., Pellissier, S., & Gaultier, S. (2023). Association between uncertainty regarding right-to-stay and mental health in unaccompanied and separated migrant children (UASC) reaching adulthood: findings from France. *Social psychiatry and psychiatric epidemiology*, 1-10.
- O'Connor, K., & Seager, J. (2021). Displacement, violence, and mental health: evidence from Rohingya adolescents in Cox's bazar, Bangladesh. *International journal of environmental research and public health*, *18*(10), 5318.
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., & Brennan, S. E. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *International journal of surgery*, 88, 105906.

- Panter-Brick, C., Hadfield, K., Dajani, R., Eggerman, M., Ager, A., & Ungar, M. (2018).

 Resilience in context: A brief and culturally grounded measure for Syrian refugee and Jordanian host-community adolescents. *Child development*, *89*(5), 1803-1820.
- Park, S., Lee, M., & Jeon, J. Y. (2017). Factors affecting depressive symptoms among North Korean adolescent refugees residing in South Korea. *nternational journal of environmental research and public health*, *14*(8).
- Patanè, M., Ghane, S., Karyotaki, E., Cuijpers, P., Schoonmade, L., Tarsitani, L., & Sijbrandij, M. (2022). Prevalence of mental disorders in refugees and asylum seekers: a systematic review and meta-analysis. *Global Mental Health*, 1-14.
- Perrin, S., Meiser-Stedman, R., & Smith, P. (2005). The Children's Revised Impact of Event Scale (CRIES): Validity as a screening instrument for PTSD. *Behavioural and Cognitive Psychotherapy*, *33*(4), 487-498.
- Peterson, R. A., & Brown, S. P. (2005). On the use of beta coefficients in meta-analysis. *Journal of Applied Psychology*, *90*(1), 175.
- Pieloch, K. A., McCullough, M. B., & Marks, A. K. (2016). Resilience of children with refugee statuses: A research review. *Canadian Psychology/psychologie canadienne*, *57*(4), 330.
- Porter, M., & Haslam, N. (2005). Predisplacement and postdisplacement factors associated with mental health of refugees and internally displaced persons: a meta-analysis. *Jama*, *294*(5), 602-612.
- Poudel-Tandukar, K., Chandler, G. E., Jacelon, C. S., Gautam, B., Bertone-Johnson, E. R., & Hollon, S. D. (2019). Resilience and anxiety or depression among resettled Bhutanese adults in the United States. *International Journal of Social Psychiatry*, 65(6), 496-506.
- Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied psychological measurement*, *1*(3), 385-401.
- Rasheed, O. S., López-Rodríguez, L., & Navas, M. (2022). Withstanding psychological distress among internally displaced Yazidis in Iraq: 6 years after attack by the Islamic State of Iraq and the Levant. *BMC psychology*, *10*(1), 262.
- Reed, R. V., Fazel, M., Jones, L., Panter-Brick, C., & Stein, A. (2012). Mental health of displaced and refugee children resettled in low-income and middle-income countries: risk and protective factors. *The Lancet*, *379*(9812), 250-265.
- Renbarger, R. L., Padgett, R. N., Cowden, R. G., Govender, K., Yilmaz, M. Z., Scott, L. M., ... & Křeménková, L. (2020). Culturally relevant resilience: A psychometric meta-

- analysis of the child and youth resilience measure (CYRM). *Journal of Research on Adolescence*, *30*(4), 896-912.
- Resilience Research Centre. (2016). The resilience research centre adult resilience measure (RRC-ARM): User's manual.
- Rice, V., & Liu, B. (2016). Personal resilience and coping with implications for work. Part I: a review. *Work*, *54*(2), 325-333.
- Richardson, G. E., Neiger, B. L., Jensen, S., & Kumpfer, K. L. (1990). The resiliency model. *Health education*, *21*(6), 33-39.
- Robinson, J. S., Larson, C. L., & Cahill, S. P. (2014). Relations between resilience, positive and negative emotionality, and symptoms of anxiety and depression. *Psychological Trauma: Theory, Research, Practice, and Policy, 6*(S1), S92.
- Rodriguez, I. M., & Dobler, V. (2021). Survivors of hell: resilience amongst unaccompanied minor refugees and implications for treatment-a narrative review. *Journal of Child & Adolescent Trauma*, *14*, 559-569.
- Schwarzer, G., Carpenter, J. R., & Rücker, G. (2015). *Meta-analysis with R* (Vol. 4784). Springer.
- Seong, Y., & Park, S. (2021). Factors affecting changes in the mental health of North Korean refugee youths: a three-year follow-up study. *International journal of environmental research and public health*, *18*(4), 1696.
- Siriwardhana, C., Ali, S. S., Roberts, B., & Stewart, R. (2014). A systematic review of resilience and mental health outcomes of conflict-driven adult forced migrants. *Conflict and health*, 8(1), 1-14.
- Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: assessing the ability to bounce back. *International journal of behavioral medicine*, *15*, 194-200.
- Ssenyonga, J., Owens, V., & Olema, D. K. (2013). Posttraumatic growth, resilience, and posttraumatic stress disorder (PTSD) among refugees. *Procedia-Social and Behavioral Sciences*, *82*, 144-148.
- Sterne, J. A., & Egger, M. (2001). Funnel plots for detecting bias in meta-analysis: guidelines on choice of axis. *Journal of clinical epidemiology*, *54*(10), 1046-1055.
- Strand, B. H., Dalgard, O. S., Tambs, K., & Rognerud, M. (2003). Measuring the mental health status of the Norwegian population: a comparison of the instruments SCL-25, SCL-10, SCL-5 and MHI-5 (SF-36). *Nordic journal of psychiatry*, *57*(2), 113-118.

- Terrana, A., & Al-Delaimy, W. (2023). A systematic review of cross-cultural measures of resilience and its promotive and protective factors. *Transcultural Psychiatry*, 13634615231167661.
- Tessitore, F., Parola, A., & Margherita, G. (2023). Mental health risk and protective factors of Nigerian male asylum seekers hosted in southern Italy: A culturally sensitive quantitative investigation. *Journal of Racial and Ethnic Health Disparities*, *10*(2), 730-742.
- Tol, W. A., Song, S., & Jordans, M. J. (2013). Annual research review: Resilience and mental health in children and adolescents living in areas of armed conflict—a systematic review of findings in low-and middle-income countries. *Journal of child psychology and psychiatry*, *54*(4), 445-460.
- Ungar, M. (2018). Systemic resilience: principles and processes for a science of change in contexts of adversity. *Ecology and society*, *23*(4).
- Ungar, M., & Liebenberg, L. (2011). Assessing resilience across cultures using mixed methods: Construction of the child and youth resilience measure. *Journal of Mixed Methods Research*, *5*(2), 126-149.
- Ungar, M., & Theron, L. (2020). Resilience and mental health: How multisystemic processes contribute to positive outcomes. *The Lancet Psychiatry*, *7*(5), 441-448.
- UNHCR. (2023a). Global statistics on forcibly displaced people.

 https://www.unhcr.org/refugee-statistics/insights/forcibly-displaced-and-stateless-persons/visualisation-world.html?situation=101
- UNHCR. (2023b). Refugee Statistics. https://www.unhcr.org/refugee-statistics/
- UNHCR. (2024a). *Data and Statistics: Mid-Year Trends 2023*. https://www.unhcr.org/mid-year-trends
- UNHCR. (2024b). What is the difference between population statistics for forcibly displaced and the population that UNHCR protects and/or assists?

 https://www.unhcr.org/refugee-statistics/insights/explainers/forcibly-displaced-pocs.html
- Urbański, P. K., Schroeder, K., Nadolska, A., & Wilski, M. (2023). Symptoms of depression and anxiety among Ukrainian children displaced to Poland following the outbreak of the Russo-Ukrainian war: Associations with coping strategies and resilience. *Applied Psychology: Health and Well-Being*.
- Uysal, B., Yanik, M., Tastekne, F., Tuzgen, E., Altinisik, E., & Acarturk, C. (2022).

 Psychological problems and resilience among Syrian adolescents exposed to war.

 European Journal of Trauma & Dissociation, 6(3), 100258.

- van Boetzelaer, E., Browne, J. L., Vaid, S., Pellecchia, U., van de Kamp, J., Franco, O. H., & Baidjoe, A. Y. (2023). Elderly people in humanitarian crises, a forgotten population: A call for action. *PLOS global public health*, *3*(7), e0002142.
- Van De Schoot, R., De Bruin, J., Schram, R., Zahedi, P., De Boer, J., Weijdema, F., Kramer, B., Huijts, M., Hoogerwerf, M., & Ferdinands, G. (2021). An open source machine learning framework for efficient and transparent systematic reviews. *Nature machine intelligence*, *3*(2), 125-133.
- Van der Kolk, B. A. (2005). Developmental trauma disorder: Toward a rational diagnosis for children with complex trauma histories *Psychiatric annals*, *35*(5), 401-408.
- Veronese, G., Pepe, A., & Giordano, F. (2021). Child psychological adjustment to war and displacement: A discriminant analysis of resilience and trauma in Syrian refugee children. *Journal of Child and Family Studies*, *30*(10), 2575-2588.
- Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, *36*(3), 1-48.
- von Haumeder, A., Ghafoori, B., & Retailleau, J. (2019). Psychological adaptation and posttraumatic stress disorder among Syrian refugees in Germany: A mixed-methods study investigating environmental factors. *European Journal of Psychotraumatology*, 10(1), 1686801.
- Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of nursing measurement*, *1*(2), 165-17847.
- Weathers, F. W., Huska, J. A., & Keane, T. M. (1991). PCL-C for DSM-IV. *Boston: National Center for PTSD-Behavioral Science Division*.
- Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). The PTSD checklist for DSM-5 (PCL-5). *Scale available from the National Center for PTSD at www. ptsd. va. gov*, *10*(4), 206.
- Weissman, M. M., Orvaschel, H., & Padian, N. (1980). Children's symptom and social functioning self-report scales comparison of mothers' and children's reports. *The Journal of nervous and mental disease*, *168*(12), 736-740.
- Wilson, N., Turner-Halliday, F., & Minnis, H. (2021). Escaping the inescapable: Risk of mental health disorder, somatic symptoms and resilience in Palestinian refugee children. *Transcultural Psychiatry*, *58*(2), 307-320.
- Windle, G., Bennett, K. M., & Noyes, J. (2011). A methodological review of resilience measurement scales. *Health and quality of life outcomes*, *9*(1), 1-18.
- World Bank. (2023). *Data for Low income, Middle income, High income*. https://data.worldbank.org/?locations=XM-XP-XD

- World Health Organization. (2019). *International statistical classification of diseases and related health problems (11th ed.).* https://icd.who.int/
- Wright, A. M., Talia, Y. R., Aldhalimi, A., Broadbridge, C. L., Jamil, H., Lumley, M. A., Pole,
 N., Arnetz, B. B., & Arnetz, J. E. (2017). Kidnapping and mental health in Iraqi
 refugees: the role of resilience. *Journal of immigrant and minority health*, 19, 98-107.
- Yaylaci, F. T. (2018). Trauma and resilient functioning among Syrian refugee children. Development and Psychopathology, 30(5), 1923-1936.
- Ziaian, T., de Anstiss, H., Antoniou, G., Baghurst, P., & Sawyer, M. (2012). Resilience and its association with depression, emotional and behavioural problems, and mental health service utilisation among refugee adolescents living in South Australia. *International Journal of Population Research*, 2012.
- Ziaian, T., Miller, E., Puvimanasinghe, T., Esterman, A., Dollard, M., & de Anstiss, H. (2023). Family Functioning and the Psychological Wellbeing of Refugee-Background Youth in Australia. *Journal of Immigrant & Refugee Studies*, 1-16.

Supplementary Tables

Supplementary Table 1

Search terms

Database	
MEDLINE Ultimate, APA PsycInfo [EBSCOhost]	"Refugee*" OR (asylum* N3 seek*) OR (unaccompanied N2 (child* OR minor*)) OR "internally displaced" OR "forcibly displaced" OR "forced migration"
	AND
	AB ("coping" OR "self-efficac*" OR "resilien*")
	AND
	"Psychological well*" OR "mental well*" OR "psychological distress" OR "mental distress" OR "mental health" OR "mental disorder*" OR "mental illness*" OR "psychological disorder*" OR "affective disorder*" OR "mood disorder*" OR "emotion*" OR "PTSD" OR "psychosis" OR "psychotic" OR "depress*" OR "anxi*" OR "schizophren*" OR "bipolar" OR "post traumatic" OR "posttraumatic" OR "psychological symptom*"
SCOPUS [Article title, abstract, keywords]	"refugee*" OR (asylum* W/3 seek*) OR (unaccompanied W/2 (child* OR minor*)) OR "internally displaced" OR "forcibly displaced" OR "forced migration"
no, no ao j	AND
	"resilien*" OR "coping" OR "self-efficac*"
	AND
	"Psychological well*" OR "mental well*" OR "psychological distress" OR "mental distress" OR "mental health" OR "mental disorder*" OR "mental illness*" OR "psychological disorder*" OR "affective disorder*" OR "mood disorder*" OR "emotion*" OR "PTSD" OR "psychosis" OR "psychotic" OR "depress*" OR "anxi*" OR "schizophren*" OR "bipolar" OR "post traumatic" OR "post-traumatic" OR "psychological symptom*"

Supplementary Figures

Supplementary Figure 1

Forest plot of correlation coefficients for the association between resilience and PTSD

Study and Year		Correlation	95%CI	Weight
Civan Kahve et al. (2021)	- :	-0.62	[-0.73; -0.49]	6.2%
Park et al. (2017)	-	-0.51	[-0.63; -0.37]	6.4%
Malliarou et al. (2021)		-0.44	[-0.62; -0.22]	5.7%
Laufer et al. (2022)		-0.40	[-0.60; -0.15]	5.5%
von Haumeder et al. (2019)	- 	-0.25	[-0.41; -0.08]	6.4%
McEwen et al. (2022)	- 	-0.25	[-0.44; -0.04]	6.0%
Dangmann et al. (2021)		-0.23	[-0.37; -0.08]	6.5%
Wright et al. (2017)	: •	-0.11	[-0.23; 0.00]	6.8%
Kim et al. (2022)	: •	-0.10	[-0.24; 0.04]	6.7%
O'Connor & Seager (2021)		-0.08	[-0.18; 0.02]	6.9%
Uysal et al. (2022)		-0.07	[-0.17; 0.02]	7.0%
Bang (2017)		-0.04	[-0.24; 0.15]	6.2%
Norton et al. (2023)		-0.04	[-0.23; 0.15]	6.2%
Ssenyonga et al. (2013)	-	-0.02	[-0.11; 0.08]	7.0%
Tessitore et al. (2023)		0.04	[-0.30; 0.36]	4.8%
Fino et al. (2020)	-	0.35	[0.15; 0.53]	6.0%
Random effects model		-0.18	[-0.30; -0.06]	100.0%
Prediction interval			[-0.62; 0.34]	

Supplementary Figure 2

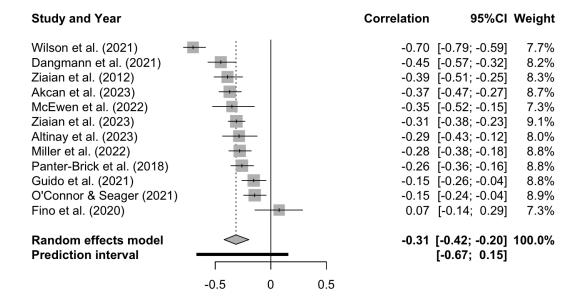
Forest plot of correlation coefficients for the association between resilience and depression

Study and Year			Correlation	95%CI	Weight
Badri et al. (2020)	—		-0.76	[-0.86; -0.60]	4.5%
Seong et al. (2021)	-		-0.58	[-0.72; -0.38]	5.0%
Park et al. (2017)	-		-0.55	[-0.66; -0.42]	5.8%
Nam et al. (2026)	-			[-0.56; -0.38]	
Uysal et al. (2022)			-0.42	[-0.49; -0.34]	6.5%
Ziaian et al. (2012)	-		-0.37	[-0.49; -0.23]	6.0%
Urbański et al. (2023)**	-			[-0.45; -0.24]	
Laufer et al. (2022)	-			[-0.56; -0.08]	
Dehnel et al. (2022)	-			[-0.42; -0.23]	
Rasheed et al. (2022)* (2)	-			[-0.44; -0.17]	
Akcan et al. (2023)	-			[-0.40; -0.19]	
Malliarou et al. (2021)				[-0.47; -0.01]	5.0%
Norton et al. (2023)		†		[-0.34; 0.03]	
Wright et al. (2017)	-			[-0.25; -0.03]	
O'Connor & Seager (2021)	-			[-0.23; -0.03]	
Rasheed et al. (2022)* (1)	-		-0.12	[-0.24; 0.00]	6.3%
Poudel-Tandukar et al. (2019)	-	-	-0.05	[-0.18; 0.08]	6.2%
Random effects model	\limits		-0.34	[-0.43; -0.24]	100.0%
Prediction interval		_		[-0.67; 0.11]	
				- ·	
	-0.5	0.5			

^{*} The study by Rasheed et al. (2022) recruited two samples of refugees

Supplementary Figure 3

Forest plot of correlation coefficients for the association between resilience and psychological distress



Chapter 3 – Empirical Study

Coping among Afghan former unaccompanied refugee children in the UK: A qualitative study exploring barriers and influences over time

Rebecca Lane¹, Dr Kenny Chiu¹, Sheila Melzak², Fabrice Lyczba², Dr Mazda Beigi³, Dr Imogen Rushworth¹, Dr Hannah Taylor⁴

Affiliations:

¹Department of Clinical Psychology, University of East Anglia, Norwich Research Park, Norwich, UK, NR4 7TJ

²The Baobab Centre for Young Survivors in Exile, London, UK

³Beigi & Chiu Clinical Psychology Ltd

⁴Norwich and Suffolk NHS Foundation Trust

Total word count: 10,454

Word count excluding abstract, keywords, figures and references: 7,786

[Manuscript prepared for *Journal of Transcultural Psychiatry*, see Appendix E for Author guidelines]

Abstract

Unaccompanied Refugee Minors (URMs) are an extremely vulnerable refugee group, at

risk of heightened adversity and trauma, as well as long-term, severe mental health difficulties.

There is a lack of research providing a contextual understanding of difficulties and active

resilience processes to inform how to promote URM wellbeing. This qualitative study explored

the difficulties and coping responses of former URMs from Afghanistan and perceptions of how

and from where coping strategies are developed. Reflexive Thematic Analysis of 12 interviews

generated three overarching themes: "Difficulties and coping: a series of cumulative challenges

and vicious cycles"; "Roots to coping"; and "Coping is dynamic: the process of change".

Participants reported multiple and compounding difficulties, often present in a triad of

physical/psychosomatic pain, mental health difficulties and social challenges. Participants

described resilience mechanisms and the barriers to coping strategies being used and effective,

revealing how the ability to employ strategies may be limited and that strategies may contribute

to further challenges. Experiences of early attachment and aspects culture and identity could be

observed to influence the ways coping strategies are appraised and developed. The importance

of prioritising belonging and providing trauma- and attachment-informed care is discussed.

Keywords: unaccompanied refugees; coping; resilience; psychological well-being; Afghanistan

59

Introduction

Numbers of children who seek asylum unaccompanied and separated from parents or guardians, or Unaccompanied Refugee Minors (URMs), are increasing in the UK (Department for Education, 2023). URMs are among the most vulnerable refugee populations, experiencing loss of key attachment figures and abstract losses of safety, culture and context. Due to family separation and young age, URMs are at heightened risk of harm before, during, and after migration (Fazel, Reed, & Stein, 2015; Von Werthern, Grigorakis, & Vizard, 2019). In comparison to accompanied refugee children, URMs are more likely to experience multiple traumas, such as abuse and parental loss (Fazel et al., 2015), and suffer from severe mental health difficulties, including Post-Traumatic Stress Disorder (PTSD) and depression (Bean, Derluyn, Eurelings-Bontekoe, Broekaert, & Spinhoven, 2007; Höhne et al., 2023). Research providing a contextual understanding of such difficulties and protective factors is urgently needed to inform clinical practice and enhance URM wellbeing (Sleijpen, Boeije, Kleber, & Mooren, 2016).

Not enough is known of URM promoters of resilience (Mitra & Hodes, 2019), conceptualised as "cumulative intra-individual traits and/or contextual factors that promote physical or mental well-being in the presence of adversity" (Rodriguez & Dobler, 2021). A recent meta-analysis found a significant link between resilience and anxiety, depression, PTSD, and psychological distress among forcibly displaced populations (see Chapter 2; Lane et al., under review). This review notes a lack of resilience and mental health research involving URMs. It also underscores the challenges of defining resilience in research, as it is multi-faceted and subject to various interpretations, consistent with broader literature on resilience (Davydov, Stewart, Ritchie, & Chaudieu, 2010) and mirroring challenges experienced by refugee populations in defining 'resilience' (Hawkes, Norris, Joyce, & Paton, 2021). Under the broader umbrella of resilience, sits coping, representing an active and conscious process by which resilience buffers distress. Studies exploring this tangible aspect of resilience (Rice & Liu, 2016) can shed light on how individual and environmental impacts of stress can be mitigated (Frydenberg, 2014), and consider how coping can be promoted.

Research exploring how URMs cope has noted strategies of avoidance and distraction, adopting positive outlooks, social connection and religiosity (Behrendt, Lietaert, Bal, & Derluyn, 2023; Ní Raghallaigh & Gilligan, 2010). However, no research to date has sought to understand how individual coping strategies are developed among URMs, as well as what might impede coping strategies being employed. Research on resilience and coping underscores the critical role of early attachment relationships (Darling Rasmussen et al., 2019). Among young refugees, quality of parenting and early relationships have been associated with mental health outcomes (Scharpf, Kaltenbach, Nickerson, & Hecker, 2021; Scharpf et al., 2023), with attachment patterns potentially mitigating the effects of trauma (Bettmann & Olson-Morrison, 2021; Eruyar, Maltby, & Vostanis, 2020). Maternal attachment has been found to moderate the effects of resilience building interventions for accompanied refugee children (Diab, Peltonen, Qouta, Palosaari, & Punamäki, 2015) and predict positive outcomes of psychological interventions (Punamäki, Peltonen, Diab, & Qouta, 2021). Parental separation and rejection at times of forced migration has been highlighted to affect levels of resilience among conflict-affected migrants long-term (Siriwardhana, Ali, Roberts, & Stewart, 2014), positioning URMs as particularly vulnerable to experience challenged resiliency resources and coping strategies. Exploring how coping strategies are developed among URMs would offer great insight for services to draw from. Previous research has highlighted an overrepresentation of psychiatric and medical lenses through which URM needs are viewed and contextualized (Wernesjö, 2012), noting a need for research gathering URM perspectives. Qualitative research, which allows for in-depth and contextually situated exploration of individual views and behaviours, is called for to understand better how ways of coping are used and perceived to be developed (Sleijpen et al., 2016; Ungar, 2004, 2008).

In addition, studies exploring coping among URMs often recruit culturally heterogenous samples and rarely explore resilience processes in more culturally homogenous groups (Sleijpen et al., 2016), limiting present understanding of the influence of culture on coping, despite the belief that responses to stress and coping strategies may be shaped by cultural and religious

norms (Ungar, 2006, 2008). Culture, another construct difficult to define and delineate (Spencer-Oatey, 2012), refers in this study to the construction and internalisation of a historical and shared system of norms, values, practices, ideas, expectations, roles, beliefs, rules and customs which influence behaviour (DiBianca Fasoli, 2020; Shweder, 1999), spanning different socioecological levels (Bronfenbrenner, 1979). Culture therefore represents a dynamic and complex system informed by societal, religious, institutional and social context and experiences which interacts with other aspects of a person's identity (e.g., gender, sexuality, spirituality). To the best of the authors' knowledge, only two UK studies include URMs from one country of origin (Chase, 2021; Nasir, 2012). However, these focus on adaptation to living in the UK, navigating asylum processes and the experience of entering adulthood, rather than considering difficulties and coping more broadly. Recruiting from one country of origin will limit cultural heterogeneity and allows for exploration of general cultural influences and frameworks informing the development and expression of coping strategies. Certainly, some cultural variation is to be expected given that culture is an intersectional and dynamic construct and diverse groups and communities may share nationality.

As the largest group of URMs applying for asylum in the UK in the year ending September 2023 (Refugee Council, 2023) and representing approximately half of URMs applying for asylum in Europe in 2021 and 2022 (European Asylum Support Office, 2022), this study will focus on the perspectives of URMs from Afghanistan. Afghan refugees represent the world's largest protracted refugee population due to decades of war and political instability (Alemi et al., 2023). Documented common experiences of growing up in Afghanistan include exposure to violence and consequences of violence, lack of freedoms and poverty, alongside the mistrust and divisions in communities generated by a range of community conflicts, various militia groups and interventions from external armies (Nascimento et al., 2022; Qamar, Rija, Vohra, Nawaz, & Essar, 2022). Research shows that common family experiences for children in Afghanistan include belonging to families where fear and violence permeate, or having lost or been separated from parents and consequently received no consistent parental care (Catani et al., 2009;

Nascimento et al., 2022). Although Afghanistan includes differing ethnic and linguistic groups with variations in culture (i.e., subcultures), coping strategies among Afghan refugees have been found to be largely embedded in one's faith and family (Alemi et al., 2023). It is important to investigate coping among URMs, for whom cultural dislocation and family separation may prevent them from drawing on these areas of coping.

The present study aimed to add to the limited evidence base and explore the difficulties and coping responses of URMs from Afghanistan using qualitative research methods, and shed light on how and from where coping strategies are understood to be developed. It will recruit former URMs (now adults) to enhance capacity for reflection and to capture coping in the context of long-term mental health difficulties, known to be a risk for this vulnerable cohort (Jensen, Skar, Andersson, & Birkeland, 2019; Vervliet, Lammertyn, Broekaert, & Derluyn, 2014).

Methods

Study design

This cross-sectional qualitative study employs semi-structured interviews to explore the difficulties experienced by Afghan former URMs, their coping mechanisms and their perceptions of how these are developed. Grounded in a social constructionist perspective (Crotty, 1998), Reflexive Thematic Analysis (RTA; Clarke & Braun, 2022) is used to support the identification and interpretation of patterns within the interview data (Braun & Clarke, 2021a). This approach facilitates inductive, data-driven coding, whilst recognising the central role and the positionality of the researcher in the analytic process (Braun, Clarke, Hayfield, & Terry, 2019). The current study was granted ethical approval by the UEA Faculty of Medicine and Health Sciences Research Ethics Committee (ETH2324-0221).

Data Collection

Participants were recruited from a service working clinically with URMs or former URMs (now adults) in England, offering psychotherapy, case work and social work, support through the asylum systems, and creative and community activities. All service users have experienced a sequence of violent experiences and human rights abuses, as well as family separation.

Service users were eligible for inclusion if they were aged 18 and above; from Afghanistan; entered or migrated to the UK as a URM; and could communicate in English or through an interpreter. Participants were not eligible for inclusion if they were not deemed to have capacity to provide informed consent, were actively suicidal or reported acute psychotic symptoms.

Eligible participants were identified and contacted by a local collaborator using a purposive sampling strategy. If interested, an interview was arranged with the lead author. Participants had not met with the researcher prior to the study but were aware the research formed part of the thesis requirements for her doctoral dissertation. The study aimed to recruit 10-14 former URMs. It is important to note that principles of data saturation, rooted in positivist paradigms (Varpio, Ajjawi, Monrouxe, O'Brien, & Rees, 2017), are not consistent with the study's social constructionist and RTA approach (Braun & Clarke, 2021b).

Once consented into the study, participants completed a demographic questionnaire and took part in a semi-structured interview, conducted online or face-to-face at the service, depending on participant preference. Interpreters were present unless participants requested otherwise. The interview explored areas of difficulties and wellbeing, ways of coping over time, and how coping strategies are perceived to be developed. Example questions include: "How do you manage when these things happen or come up for you?"; "How and from where do you think you learned to cope in this way?". The interviews took place between March and September 2023, lasting on average 39 minutes (range: 24 minutes – 1 hour 2 minutes). Interviews were audio-recorded and transcribed clean verbatim. Participants received a £20 voucher as compensation and were reminded of available mental health support services.

Participants

Twelve former URMs from Afghanistan (Mage = 23.25 years, range: 20-27) were recruited into the study, all identifying as male. Ethnicities disclosed include Afghan, Pashtun, Hazara and Tajik. Participants entered the UK between the ages of 14 and 21 years (mean = 16.17 years) and resided in the UK between 2 and 11 years (mean = 7.08 years). Two service users were approached but declined participation, while scheduling an interview time proved challenging for four others who initially agreed to participate.

Analysis

The six key phases of RTA outlined by Braun and Clarke (2006, 2022) were employed to synthesise and interpret interview data, working across and between the phases in an iterative manner until the findings were written up. Coding and analyses were completed by the lead author with consultation with the wider supervisory team and experts by profession or background.

During *data familiarisation*, the researcher became deeply immersed in the data, transcribing interviews, actively listening to interview recordings, and re-reading field notes and transcripts. *Coding of transcripts*, supported by NVivo (QSR International, 2022), deconstructed narratives into discrete semantic and latent units. Coding was inductive, allowing for the findings to be data-led, whilst acknowledging the influence of prior knowledge and researcher subjectivity, as is central to RTA (Braun & Clarke, 2019, 2021a). *Candidate themes* were generated from the codes and subsequently *developed and reviewed*. Developing and reviewing themes involved multiple stages of assessing and adjusting the thematic frame, returning to the codes, the transcripts and the research questions. Finally, themes were *refined*, *defined and named*, ensuring themes were distinctive and coherent, and *written up*.

Reflexivity and Positionality

Social constructionism and RTA both highlight the role of the researcher in the process of generating knowledge, with experiences, characteristics and prior knowledge that will influence interpretations (Braun & Clarke, 2021a; Losantos, Montoya, Exeni, Santa Cruz, & Loots, 2016). It is important to reflect that the lead author, who conducted the interviews and completed the analysis is White European, female, and undertaking doctoral level study to qualify as a Clinical Psychologist. In addition, the lead author holds no personal experience of forced migration.

Theoretical frameworks, including attachment (Bowlby, 1969), social learning (Bandura & Walters, 1977) and psychodynamic theories (e.g., object relations theory, Fairbairn (1963); Winnicott (1960)), offered important lenses influencing interpretations. Reflexivity and introspection of the lead researcher was fostered by using a reflective journal and through discussions in research supervision and consultation meetings. These were especially important to support the generation of latent themes.

Efforts to Enhance Rigour and Credibility

The project benefitted from Patient and Public Involvement (PPI), consulting on the design, materials and findings. Feedback from a PPI process involving two former URM service users, alongside project advisory meetings, was used to inform the development of participant facing documents and the interview protocol. The interview schedule was also piloted and well-received. Participants were offered the opportunity to review transcripts and the analysis, although this was not requested.

Employing a second coder in the analysis was considered, however double coding is not crucial to qualitative research (O'Connor & Joffe, 2020) and not encouraged within RTA (Braun et al., 2022; Terry et al., 2017). A consultation approach was instead used to support with reflexivity and obtain feedback on candidate themes during the analysis process. Three clinicians at the recruitment service working therapeutically with URMs and two interpreters from Afghanistan who supported with data collection were recruited to a PPI group. Each member of the PPI group individually met with the lead researcher to gather feedback on the findings and

consider how culture may influence communication and expression within the interview and the interpretation of findings. Although researcher subjectivity is a valued component of RTA (Braun & Clarke, 2023), the PPI consultation process promoted reflexivity and a form of investigator triangulation (Thurmond, 2001), and added to the breadth and depth of the analysis.

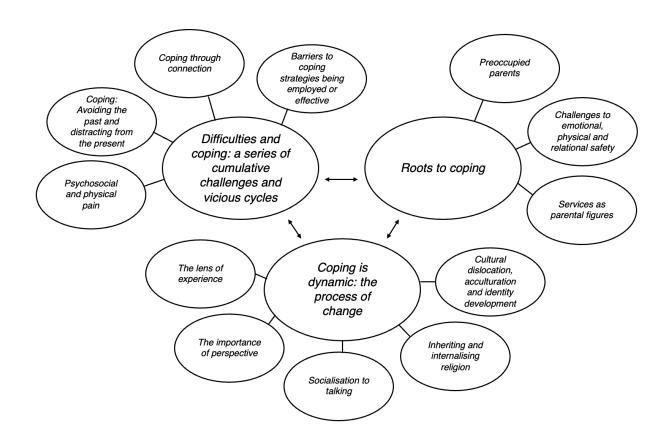
Consultation through PPI or advisory meetings allowed for discussions about potential bias and helped the researcher acknowledge important lenses of prior experience, beliefs and theory. The Consolidated criteria for reporting qualitative studies (COREQ) checklist was used for accurate and transparent reporting (Tong, Sainsbury, & Craig, 2007), see Appendix F.

Findings

Three overarching themes were generated from the data: "Difficulties and coping: a series of cumulative challenges and vicious cycles"; "Roots to coping"; and "Coping is dynamic: the process of change" (see Figure 1).

Figure 1

Themes and subthemes



Each Theme and associated subthemes are presented below, illustrated by individual accounts in verbatim extracts. Pseudonyms have been used to protect participant anonymity.

Theme One: Difficulties and Coping: A Series of Cumulative Challenges and Vicious Cycles

This theme describes the types of difficulties participants are faced with day-to-day and how they cope in response, noting a range of challenges experienced that come with or prevent from using coping strategies, perpetuating difficulties. Considering factors that improve well-being and support with coping was a new exercise for some: "I haven't talked about anything like that; I haven't noticed something like that" (Ali).

Psychosocial, Psychosomatic and Physical pain

Participants described experiencing a variety of difficulties, most of which revolved around their psychosocial and physical wellbeing: "I have stress, like I have anxiety, PTSD as well. When I'm alone, I just keep thinking about my family" (Zahir). These included experiencing difficult and intrusive thoughts, worries and memories; overcoming loss; living with shame or guilt; low mood and hopelessness; loneliness; hearing voices; difficulties with memory and learning; difficulties with sleep; and experiences of poor physical health and recurrent pain.

"My uncle died, somebody killed him.. [...] So that gives me more stress and makes me, like evening sometime when I go sleep, it's in my brain. [...] back then I couldn't sleep for one month at all. [...] since I came here, I lost a lot of people.. like my cousins, they died there. So these things gives you a lot of stress, I am not able to see them. (Habibullah)

These could be amplified by stress due to prolonged immigration processes, education/work or their living environment. For example, Said shared "The two things I'm really bothered by are the voices and the pain in my legs. [...] I also believe [hearing voices is] due with accommodation where I live." Having to look after themselves was in itself a source of difficulty for some, as Nasir shared: "my thinking from for myself at the moment, it give me stress".

Coping: Avoiding the Past and Distracting from the Present

Coping with difficulties was largely reported to involve avoidance and distraction.

Although being busy could help achieve goals, for example education, escaping from the past and difficult emotions was the key driver. As Asadullah noted "if I keep myself busy, then I don't care much about this loneliness or anything. But if I don't have a lot to do, then just, you know, these thoughts will keep coming at me".

"Since I am here, in this country, you know, it's hard. Like whenever I feel low or not good, I'll always always do something to distract me. Visiting friends, coming to [the therapeutic recruitment service], going swimming, doing exercise, go to [service] or

something there. So all these activities, all these things are to keep me busy, so I don't think about my past." (Jamal)

Physical activity, in particular going to the gym or playing cricket, were reported to be helpful to relieve stress and boost self-esteem. Zahir explained "when I was doing gym, so I just completely forget about everything, stop thinking about future. So it's like kind of building yourself, building confidence, you know?".

Participants also coped by avoiding problems or people and suppressing their emotions.

Medication, alcohol and sleep supported with avoidance. Self-harm was described by a minority as helpful with coping with difficult emotions, distracting from psychological pain.

"Sometimes I feel very hopeless and sometimes I feel that life is very meaningless. I feel that sometimes it's best to get drunk and forget about everything. [...] I don't want to go into details but sometimes hurting oneself helps. I felt better and I felt at peace afterwards." (Omar)

Coping through Connection

Social connection was a crux for many participants, who reported being more preoccupied and affected by their difficulties, particularly difficult memories, when they were alone. For example, Yousuf shared "when I'm home alone, then I know a lot of negative thoughts comes" and Jamal explained "the main thing that you know that stresses me out or upsets me is thinking about the past, and being on my own, being lonely. And that loneliness makes me think about the past".

Connection was often spoken about in the form of playing cricket, which in addition to enabling social contact, also offered a way to connect to life in Afghanistan.

"If I'm at home doing nothing, then I just call my friends, we go out to the park and play some sports, like cricket. [...] Since I was 3-4 years old, Yeah, we've been playing

cricket! [...] Back home in Afghanistan - it's like there's no other sports, only cricket." (Farhad)

For some, religious coping was central to their wellbeing: "I can't do anything without my religion and without the prayers" (Farhad) and prayer was described as grounding: "praying, you know, like just connecting to my creator, it helps me a lot as well. So if I have a lot of stress it just calms me down [...] It's disconnecting with this world like for 5-10 minutes" (Asadullah).

A few spoke of the value of having a few good friends, describing relationships in which they feel cared for and where trust and safety is established. Zahir explained "best friends, not just friends. [...] Like family, yeah. So you can share everything with them, they know about everything. They can keep your secret. You know they can help you, you can help them".

"Family's very important to have and having good friends and a network of people that you can actually rely on. You know, reach to them whenever you need to or just even have a nice conversations because I feel, you know, we are social beings and we need to talk to each other. Otherwise isolation will drive us to insanity." (Asadullah)

Talking and sharing feelings were also identified by some as an important way of managing and processing difficult emotions, mostly reported in the context of therapy. As Hamid noted, "when I talk about what's in my mind and how I feel, it really helps me".

Barriers to coping strategies being employed or effective

Participants spoke of cumulative challenges and double-edged swords which impacted on their ability to employ coping strategies and limited their effectiveness. Some difficulties impacted on others by decreasing the ability to use strategies for coping, for example a few participants described a vicious spiral of psychological and physical pain. Said expressed "It's a constant struggle. Sometimes, because of the pain in my legs, I find it hard to go out and go somewhere, especially my friends. And if I don't, I feel even worse". Asadullah also queried whether his experience of pain is psychosomatic: "Sometimes I think maybe some of my pains, it

could be all because of the stress that I have, you know? And then that is, you know, translating into physical pain".

Furthermore, social contact, although a lifeline at times, might be avoided for fear of worrying loved ones or to avoid participants themselves feeling worried and lonely.

"One thing that worries me the most is that one of my daughters and my wife are in Afghanistan and I'm thinking of them, what is going to happen to them and how they are. That upsets me. [...] When I am very upset I don't call them because my mood will affect them as well and upset them. [...] Talking to them makes you happy for a couple of days but sometimes it also makes you upset because you see your circumstances and see their problems, that makes you more upset." (Omar)

Some also recognised their need to talk, but noted they did not have anyone to talk to outside of therapy. Hamid described how not speaking English impacts his ability to connect with others and access support: "because of the language barrier, I can't even contact [my therapist] directly. It's through [my interpreter] or my brother I speak to [my therapist]".

Although social contact was described as central to wellbeing, many also reported ambivalence and barriers borne from psychological distress, lack of trust, not feeling understood, and not having the skills or practice to develop friendships as challenges to building or maintaining relationships.

"Usually I don't have any friend, or anything kind of like this. But yes, I was thinking, yes, I want to talk with anyone closely, maybe... Because my contact with people is very bad, I don't know, I can't start any relationship or anything with people. It's very difficult for me, I don't know. About this, I'm thinking it give me very stress. [...] But at the moment, not have it or not should fix because my mental [health] is so very bad." (Nasir)

In this vein, some participants contradicted themselves while sharing their experiences, oscillating between truths, which appeared to influence their emotional regulation, appraisals of

difficulties, readiness for change and ability to employ coping strategies. For example, as illustrated below, Habibullah spoke about being completely alone and lack of trust, whilst also reporting significant support and love from people close to him.

"Nothing makes me happy. [...] I don't trust anyone. There's nobody here. This country, everywhere. There are good people.. there's one lady, she loves me like her son to be honest, she gives me everything [...] the things she did for me, nobody would be able to do it. [...] But sometimes I – I don't know why – sometimes I call her and I feel like 'Okay, this is trust'. And sometimes I feel like don't trust. [...] the lady is nice, I talk to her sometimes, but I don't trust nobody. No one. It doesn't matter who they are. [...] I am really happy. I love her." (Habibullah)

Theme Two: The roots of coping

This theme describes the contexts within which the foundations of coping were learned and the significant figures in participants' journeys in learning ways of coping. Of significance, discussions of early years were limited by participants' difficulties in remembering aspects of their childhood and readiness to share difficult experiences. For example, Farhad expressed: "the most difficult days that I had in my childhood, I can't share it with you, to be honest."

"I don't remember a lot about my childhood, but when I came here I was very wounded. I was very very hurt and like, you know, damaged. [...] part of these events made me like forget some of the memories from the past. So I remember the bad things that had happened, but the good ones, whatever, in the past, I can't remember most of them."

(Jamal)

Preoccupied parents

Some participants grew up with parents who shielded them from stress and offered comfort, but who were preoccupied with fear, worry, work or raising a large family.

"My father was abducted and went missing, and since then my mother did not allow me to go outside. [...] My brother left when I was very young and came here, and I really missed at the time. [...] I used to play marbles with him and then there was no one.

Sometimes my mum would come and play with me, but not as often as my brother did."

(Hamid)

Although some described instances of being comforted by parents, only two spoke about being advised by their parents to keep busy and not be alone to manage emotions.

"[My parents] did say like, kind of like, 'be busy with yourself, don't leave yourself alone', like 'do something like doing things, like for example cooking, cricket – playing cricket, go to gym, talk to, you know, your friends'." (Zahir)

Challenges to emotional, physical and relational safety

Some participants expressed that they wouldn't share difficulties with their parents or other close relations when they were younger: "I was hiding a lot of stuff from everyone" (Yousuf). Many described growing up in a context of limited emotional safety, relating to cultural norms but also parental capacity in the wider context of fear and survival experienced by some parents as described above. Participants spoke of emotional expression not being encouraged, cultural expectations of boys, children's voices not marked as equal, and not bringing shame to the family. For example, Mohammad expressed "I would do anything just to impress Dad or Mum" and Said relayed "Don't think I shared with anyone, including my mother. [...] She would beat me if I said I had a problem or something".

"One of the reasons sometimes I suppress my emotions is because it's from a young age, like going to school and stuff, I kept, you know, whatever happened during the day to myself. You know, I don't share. For example, at school I had a fight, but I don't share it with my family, you know? [...] Because over there, they tend to say you have to stand up on your own feet, right? So if you cry as a boy and stuff, it's not a good thing. [...] from

a young age, I became this person that.. 'crying makes you weak.' [...] So if I had a bad day as well, I just kept it for myself." (Asadullah)

Some spoke about receiving love and affection from their fathers, but for most this was received from their mothers and fathers were more authoritarian and could be violent. For example, Mohammad shared: "Mum's approach is very soft" and "we could never joke with Dad", explaining "if I had a total breakdown mentally because of my dad, [my mother] would hug me, she would do all the love things that makes you feel like you're loved, you're important".

Services as substitute parental figures

Participants described warmth and being cared for in their relationships with professionals, describing a reliance and feelings of safety akin to a parent-child relationship. Therapists or caseworkers were often participants' first port of call for support.

"[My caseworker] has done a lot of things for me, he has cared for me and he's very kind.

And he's loved me, more than my parents. [...] He has done everything and anything for

me. [...] I've never met so kind in my life, and especially a stranger. He's not related to

me. He has cared for and done so much for me." (Hamid)

Therapists were described as not only offering psychological support, but also practical support. They were a medium by which participants could build a community, overcome difficulties with cultural orientation and for some, learn to communicate and make friends.

Participants spoke of a journey from dependence on services to independence.

"When I came to this country, I was like a blind person. I couldn't do anything for myself.

But he showed me ways of doing things and helped me practically, and I've learned quite
a lot. And I'm quite independent now [...] I've shared almost everything, anything I
needed help with or just needed to talk about with him. [...] I didn't know how to find a
solicitor or how to communicate with the solicitor and he helped me with that." (Ali)

Significantly, therapists were reported to be key figures in helping participants to develop coping strategies.

"I've been given some techniques by my previous therapist. She said sometimes if you're really - if you're feeling really low, you just look around your room and say the names of things loud, look out through the window and that will reassure you that you're in a safe place." (Hamid)

Input from services was described as transformational by a few participants: "If I didn't have those sessions, I'm sure 100% that I would not be coping the way I do now. [...] I would not be the same person if I didn't have that help, in every possible way" (Jamal).

Theme Three: Coping is dynamic: the process of change

The theme describes how coping is influenced over time by culture and experience, and how new coping strategies can be learned. It speaks to the importance of experiential learning and the effect this has on appraisals and perspectives. This theme also portrays how dual-culture, and religious beliefs and values are internalised and influence coping.

The lens of experience

Developing strategies to cope was sometimes described as a process of experiential learning, needing to try different things and notice, initiate and experience change: "if you say anything to me, I'll not... I'll understand it, acknowledge it, have it in the back of my head. But once I experience myself, then I will 100% put it in my house or my heart." (Mohammad). For some, developing strategies to cope and seeking help was motivated by "hitting rock bottom" (Mohammad).

"The first few years, I was like way stressed and then I would always keep in myself, never expressed how I feel. And it really like hit my immune system and [...] I thought, no, it's not the good way I think. So, yeah, I started seeing a therapist." (Yousuf)

The importance of perspective

Participants described shifts in the difficulties they experience and how difficulties are viewed, responding to changes to contextual factors (e.g., immigration stressors diminishing after visas granted). For example, Ali, for whom family unification was possible, shared "Before my family came over here, I really needed somebody to talk to and share how I felt. But since that they have come here, I can talk to them and it really helps". Difficulties were also described to change naturally as time passes and to lessen in response to receiving support.

"At the time, like when I was coming to see [my therapist], I was very close to what happened in the past. So it was really difficult. [...] whatever I went through, I will talk to her and she will give me advice and I will follow her advice. And it was a long process. It took 3 years to make me learn how to kind of escape from that situation." (Jamal)

Socialisation to talking

Talking was a new coping strategy for many, described to be learned through individual or group therapy, socialising participants to talking about themself, being heard and discovering the value of expressing themselves. Therapy also offered an opportunity to listen to others.

"Going to therapy here and there and talking, this is just made me like kind of slightly open person. Before I was just keeping everything to myself, you know. Not allowing people, probably 'this is going to judge me and that's going to judge me'." (Asadullah)

A shift was described from being closed to open as a result of therapy, as well as redirecting the focus from others to oneself. For some, practicing talking and sharing emotions generalised to other relationships. For example, Hamid shared "I think I started talking to my brother after the therapy".

"The therapist has helped me by just listening to me first of all, and talking has helped.

I've learned from her that you know if you talk it helps and also that I need to think more about myself rather than the outside world." (Said)

Opportunities outside of therapy, and certainly in childhood, were reported to be limited by the cultural norms and parental emotional capacity in the context of survival described in Theme 2. For example, Hamid, whose mother kept him at home to protect him, shared: "I haven't been with many people in my life or throughout of my life. That's why I haven't learned much social skills". Some of these opportunities may also have been influenced by cultural norms, as Farhad explained "We didn't even like talk to our elders, nothing, we were just listening, that's all".

Inheriting and internalising religion

Religion was described as socially and culturally important, passed on to children by parents and families. The significance of religion, and of religious rituals, was described to change over time, as it was internalised and owned moving from childhood to adulthood.

"I'm from Muslim family, obviously, and religion has been, you know... It's kind of bread and butter of our family, yeah. And society. So yeah, it's been part of my life all the time.

[...] as you grow, then you value the religion more in your life because initially like 16-17-18, you're praying but you're not praying wholeheartedly, you know, you're just praying for the sake of praying. You know... But yeah, as you grow and then you become more mature, you understand that there is something behind a religion." (Asadullah)

Cultural dislocation, adaption, and identity development

Cultural identity appeared to be closely linked to ways of coping and appraisals of types of coping strategies, intersecting with age, religion and gender. The integration of cultural roles, values and beliefs, in a context of cultural dislocation and acculturation, appeared to confuse identity development and coping, especially as these could be incompatible. For example, talking

and emotional expression were highlighted to be actively discouraged and socially unaccepted in Afghan culture, even within family homes and particularly for boys, which is at odds with the value of talking and therapy highlighted by participants.

"In Afghanistan [...] mental health there and this kind of thing, no one took it serious.

Everyone would probably call you like, you know, crazy talking about it. [...] I think

culturally, like emotion is not, yeah, taken very serious. [...] So to talk about it and think...

it's just a waste of time, 'what are you talking about?', you know? Like if you're having a

bad day, difficult day, 'come on man', 'what are you complaining, someone who has

badder day than you', so yeah... So it's just like comparing, and all of that..." (Asadullah)

Discussion

This qualitative study aimed to explore the difficulties and coping responses of former URMs (now adults) from Afghanistan and gather their perceptions of how and from where coping strategies were developed. RTA of 12 interviews generated three overarching themes: "Difficulties and coping: a series of cumulative challenges and vicious cycles"; "Roots to coping"; and "Coping is dynamic: the process of change". Participant narratives highlight ongoing vulnerability and mental health difficulties as adults in the UK, consistent with quantitative evidence that URMs can suffer from mental health difficulties for years after resettlement (Vervliet et al., 2014). The present findings also indicate the influence early years and relationships can have on the ways coping strategies may be appraised and developed and the mechanisms by which experiences of early attachment, dual cultural norms and identity could influence coping.

Participants reported multiple and compounding difficulties, chiming with research finding high prevalence of emotional and behavioural problems among Afghan URMs (Bronstein, Montgomery, & Dobrowolski, 2012; Bronstein, Montgomery, & Ott, 2013). Difficulties were often

present in a triad of physical/psychosomatic pain, mental health difficulties and relational challenges. This is consistent with qualitative research among Afghan and Kurdish refugees in Australia, which puts forward that rumination in the context of loneliness can rekindle traumatic memories and prolong mental health difficulties long after resettlement (Sulaiman-Hill & Thompson, 2011, 2012). A reliance on avoidance and distraction was reported by participants to cope with difficulties relating to haunting thoughts, echoing previous findings (Behrendt et al., 2023; Ní Raghallaigh & Gilligan, 2010), and congruent with participant reports of cultural norms and expectations in Afghanistan in relation to emotional expression and masculine ideals.

Religion was also a significant anchor for coping for some. Although participants belonged to different ethnic and linguistic communities in Afghanistan, the socio-political context in which they grew up resulted in some overlapping cultural beliefs and practices. These findings offer support for culturally specific influences and contexts in which coping strategies are developed and how difficulties and coping are expressed (Ungar, 2006; Ungar et al., 2007).

The present study sheds light on resilience mechanisms and barriers to resources and approaches being used and being effective, revealing how coping strategies may be limited by difficulties and even exacerbate further challenges. Although all participants have experienced violence and threat to life or livelihood, in addition to parental loss or separation, it was not in the scope of the present study to enquire about these experiences or their consequences.

Nonetheless, the confusion and fragmentation observed in the interviews are consistent with symptoms of PTSD and complex PTSD, for example loss of memory, lack of internal integration or disruption to self-organisation, and emotional lability, in addition to lack of experienced safety, problems forming relationships, and negative self-concept (Brewin et al., 2017). At times, these could be observed to affect participants' sense of wellbeing and interact with coping strategies, impeding their use, or limiting their effectiveness. In this vein, some participants were equipped with helpful coping strategies and resources and yet continued to experience difficulties and distress, echoing previous findings (Sutton, Robbins, Senior, & Sedwick, 2006), and perhaps reflecting the severity of their trauma and difficulties exacerbated by current difficult life

circumstances. These findings might help explain why the relationships between coping strategies and mental health outcomes have been found to be nuanced in conflict-affected adults (Sequin & Roberts, 2017).

Ongoing mental health difficulties have been associated with challenges with social integration and belonging among refugees with PTSD in previous research (Schick et al., 2016). A need for, and preoccupation with, social connection was apparent in participant narratives, at times as means for distraction, to tackle loneliness and to experience belonging. While some participants had established trusted relationships outside of professional services, others found this challenging or undesirable due to mistrust and uncertainty in connecting with others. The boundaries and assigned roles within relationships with professionals and the prioritisation of safety and trust may help explain the contrasting experiences described of building relationships with friends compared to therapists. Interestingly, few participants mentioned relationships with siblings, other than to express worry or loss. Siblings, according to the law of the mother, are mediums by which social worlds are learnt and navigated, extending over time to other lateral relationships such as cousins or friends (Mitchell, 2022). In addition to the relational insecurity commonly experienced following trauma (Brewin et al., 2017), lack of opportunity to develop such relationships with siblings or friends due to loss, separation/rejection or prioritisation of survival may help explain the thwarted social connection experienced by some participants.

Negotiating identities has been intrinsically linked with psychosocial wellbeing and increased risk of suicide among migrant and refugee youth following resettlement (Mude & Mwanri, 2020). Participants were recruited at a time of transition, represented by early adulthood and dual cultural integration, in which they were learning, and unlearning, ways to cope. At times, participants' identities and coping strategies were observed to be confused and fragmented, possibly reflecting complex intersectionality shaped by cultural norms and expectations of age, gender, religion and emotional expression in both their Afghan and British cultures. This complexity may obstruct the ability to learn or use coping strategies and validate emotional experiences (i.e., cognitive incongruence), and contribute to feelings of isolation, shame and

helplessness. Prolonged avoidance of experiencing emotions and lack of practice and discomfort relating to emotional expression in the context of cultural norms and beliefs in Afghanistan, in particular, sat at odds with the importance of talking and connection described by participants. This is documented in previous research as a barrier to accessing mental health support for URMs and has implications for how therapeutic interventions may be presented and approached (Demazure, Baeyens, & Pinsault, 2022; Motti-Stefanidi, 2018). Further exploration of identity formation and conflict may be valuable in light of these findings, as it may contribute to coping and how strategies are appraised and employed.

Understanding how attachment systems contribute to resilience processes among refugee youth has been highlighted as an especially useful area of research, particularly given the well documented risks of peri-migration stressors and traumatic experiences (Juang et al., 2018). Our findings suggest that cultural norms and familial relational dynamics, including critical parenting exacerbated by fear and political instability, may hinder emotional expression and challenge secure attachment. Decades of conflict and instability in Afghanistan have profoundly affected all areas of society, including religious practices, education and financial security, and laid the foundation for widespread mistrust and intergenerational trauma (Panter-Brick, 2023). Parental mental health difficulties and trauma have been shown to impact parenting styles, parent-child relationships and child mental health outcomes (Betancourt, McBain, Newnham, & Brennan, 2015; Daud, Skoglund, & Rydelius, 2005; Eruyar, Maltby, & Vostanis, 2018; Panter-Brick, Grimon, & Eggerman, 2014; Scharpf et al., 2023). Participant narratives suggest there may be further influences of cultural beliefs and values, for example high expectations of children or mental health stigma, as well as fear, hypervigilance, and limited parental emotional availability. Participants rarely spoke of parents as significant figures in supporting them to cope with difficulties, emphasising instead the central role for professional services, stepping in as parental figures, in supporting them to navigate independence and develop coping strategies by providing a secure base.

Strengths and Limitations

The present study provides qualitative exploration of difficulties and coping among Afghan former URMs, an under-researched group (Alemi, James, Cruz, Zepeda, & Racadio, 2014), providing a valuable contribution to the evidence base. It is the first study among refugee samples seeking to gain perspectives on from where and how coping strategies are developed. It importantly captures the experiences and perspectives of participants from one country of origin, reducing heterogeneity, and adheres to a quality checklist (Tong et al., 2007), ensuring important aspects of the research are reported. Given the known considerations and challenges with recruitment of refugee populations (Miller, 2004), the present study recruited a modest sample of 12 participants, suitable for RTA (Terry, Hayfield, Clarke, & Braun, 2017). The study invested considerable efforts to include Afghan community members in various phases of the research process, highlighted to be vital in research involving Afghan refugees (Alemi et al., 2014), which informed the design and supported with data interpretation.

Nonetheless, the purposive sampling strategy used increases likelihood of selection bias. For example, all participants accessed psychotherapy and were recruited via a service, which may have prompted participants to speak to professional support to a greater extent than if other recruitment strategies had been used. Although early attachment experiences are discussed in the present study, attachment was not explicitly measured, limiting understanding of the patterns and mechanisms at play linking attachment to coping. In addition, only male participants were included, despite efforts to recruit a mixed-sex sample. Future research should also aim to recruit females, whose needs may be different to males (Fazel et al., 2015) and whose attachment experiences and cultural roles may differentially influence coping. Other cultural variations, for instance by ethnic and linguistic group, were not explored due to limited numbers and the nature of the data. Finally, this study did not capture information or perspectives regarding age of separation or displacement, which may help better understand how early experiences, developmental difficulties and attachment contribute to coping.

Implications and Conclusions

The present findings underscore the importance of services offering scalable, long-term, and tailored interventions for refugees (Henkelmann et al., 2020). Given the multitude of challenges described by participants, holistic, person-centred care is warranted, considering the interplay of mental and physical health and identity formation, and subsequent effects on coping. Sensitivity to relevant cultural influences and exploration of intersectionality is required by services to promote coping and consider barriers to these being adopted or employed in a person-centred manner (Scharpf et al., 2021), i.e., subjective culture as opposed to objective culture (Minkov, 2012). Trauma- and attachment-informed care is essential, given the relational insecurity and broad impact of trauma portrayed by participants. Interventions focusing on emotion regulation and promoting coping, such as 'Problem Management' (Perera & Lavdas, 2020) or 'Skills-Training of Affect Regulation – A Culture-sensitive Approach' (Koch, Ehring, & Liedl, 2020) which have been successfully trialled among Afghan refugee groups, may be especially useful to draw from. Our findings, like others before us, emphasise coping strategies centred on avoidance and distraction (Behrendt et al., 2023; Ní Raghallaigh & Gilligan, 2010), whilst also highlighting the value of social connection, belonging and a safe base. The juxtaposition of loneliness and connection, accompanied by uncertainty and mistrust, underscores the need to prioritise fostering a sense of belonging through community-focused interventions and activities. Customised attachment-based interventions, tailored to Afghan populations and culture (e.g., El-Khani, Haar, Stojanovic, and Maalouf (2021)), could benefit staff working with URMs, whose attachment relationships may be complex as a result of childhood adversity and parental separation or rejection. Professional support, described by participants to foster feelings of relational safety, could be conceived as an antidote to neglect and to the development of emotionally avoidant defences. Nonetheless, the significance of professional support for coping and well-being, as described by participants, raises concerns for the many URMs and refugees who do not have access to trauma interventions or mental health support services (Sanchez-Cao, Kramer, & Hodes, 2013; Satinsky, Fuhr, Woodward, Sondorp, & Roberts, 2019).

References

- Alemi, Q., James, S., Cruz, R., Zepeda, V., & Racadio, M. (2014). Psychological distress in Afghan refugees: A mixed-method systematic review. *Journal of immigrant and minority health*, *16*, 1247-1261.
- Alemi, Q., Panter-Brick, C., Oriya, S., Ahmady, M., Alimi, A. Q., Faiz, H., . . . Naseri, R. (2023). Afghan mental health and psychosocial well-being: thematic review of four decades of research and interventions. *BJPsych open*, *9*(4), e125.
- Bandura, A., & Walters, R. H. (1977). *Social learning theory* (Vol. 1): Englewood cliffs Prentice Hall.
- Bean, T., Derluyn, I., Eurelings-Bontekoe, E., Broekaert, E., & Spinhoven, P. (2007).
 Comparing psychological distress, traumatic stress reactions, and experiences of unaccompanied refugee minors with experiences of adolescents accompanied by parents. The Journal of nervous and mental disease, 195(4), 288-297.
- Behrendt, M., Lietaert, I., Bal, S., & Derluyn, I. (2023). Coping strategies of unaccompanied refugee minors shortly after arrival in Belgium. *Transcultural Psychiatry*, 13634615231165138.
- Betancourt, T. S., McBain, R. K., Newnham, E. A., & Brennan, R. T. (2015). The intergenerational impact of war: longitudinal relationships between caregiver and child mental health in postconflict Sierra Leone. *Journal of child psychology and psychiatry*, *56*(10), 1101-1107.
- Bettmann, J. E., & Olson-Morrison, D. (2021). The relationship between adolescent refugees' attachment patterns and their experiences of trauma. In *Immigrant and Refugee Youth and Families* (pp. 159-175): Routledge.
- Bowlby, J. (1969). *Attachment and Loss, Vol. 1: Attachment*. London: Hogarth Press and the Institute of Psycho-Analysis.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101.
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative research* in sport, exercise and health, 11(4), 589-597.
- Braun, V., & Clarke, V. (2021a). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative research in psychology, 18*(3), 328-352.
- Braun, V., & Clarke, V. (2021b). To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative* research in sport, exercise and health, 13(2), 201-216.

- Braun, V., & Clarke, V. (2022). *Thematic analysis: a practical guide*. London; Thousand Oaks, California SAGE.
- Braun, V., & Clarke, V. (2023). Toward good practice in thematic analysis: Avoiding common problems and be (com) ing a knowing researcher. *International Journal of Transgender Health*, *24*(1), 1-6.
- Braun, V., Clarke, V., & Hayfield, N. (2022). 'A starting point for your journey, not a map':

 Nikki Hayfield in conversation with Virginia Braun and Victoria Clarke about thematic
 analysis. *Qualitative research in psychology*, *19*(2), 424-445.
- Braun, V., Clarke, V., Hayfield, N., & Terry, G. (2019). Thematic Analysis. In P. Liamputtong (Ed.), *Handbook of Research Methods in Health Social Sciences* (pp. 843-860). Singapore: Springer Singapore.
- Brewin, C. R., Cloitre, M., Hyland, P., Shevlin, M., Maercker, A., Bryant, R. A., . . . Rousseau, C. (2017). A review of current evidence regarding the ICD-11 proposals for diagnosing PTSD and complex PTSD. *Clinical psychology review, 58*, 1-15.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard university press.
- Bronstein, I., Montgomery, P., & Dobrowolski, S. (2012). PTSD in asylum seeking male adolescents from Afghanistan. *Journal of traumatic stress*, *25*(5), 551-557.
- Bronstein, I., Montgomery, P., & Ott, E. (2013). Emotional and behavioural problems amongst Afghan unaccompanied asylum-seeking children: results from a large-scale cross-sectional study. *European child & adolescent psychiatry, 22*, 285-294.
- Catani, C., Schauer, E., Elbert, T., Missmahl, I., Bette, J. P., & Neuner, F. (2009). War trauma, child labor, and family violence: Life adversities and PTSD in a sample of school children in Kabul. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, 22(3), 163-171.
- Chase, E. (2021). Transitions, capabilities and wellbeing: How Afghan unaccompanied young people experience becoming 'adult'in the UK and beyond. In *Children of the Crisis* (pp. 125-142): Routledge.
- Crotty, M. J. (1998). The foundations of social research: Meaning and perspective in the research process. *The foundations of social research*, 1-256.
- Darling Rasmussen, P., Storebø, O. J., Løkkeholt, T., Voss, L. G., Shmueli-Goetz, Y., Bojesen, A. B., . . . Bilenberg, N. (2019). Attachment as a Core Feature of Resilience: A Systematic Review and Meta-Analysis. *Psychological Reports, 122*(4), 1259-1296. doi:10.1177/0033294118785577

- Daud, A., Skoglund, E., & Rydelius, P. A. (2005). Children in families of torture victims:

 Transgenerational transmission of parents' traumatic experiences to their children. *International Journal of Social Welfare, 14*(1), 23-32.
- Davydov, D. M., Stewart, R., Ritchie, K., & Chaudieu, I. (2010). Resilience and mental health. *Clinical psychology review, 30*(5), 479-495.
- Demazure, G., Baeyens, C., & Pinsault, N. (2022). Unaccompanied refugee minors' perception of mental health services and professionals: a systematic review of qualitative studies. *Child and Adolescent Mental Health*, *27*(3), 268-280.
- Department for Education. (2023). Children looked after in England including adoptions.

 Retrieved from https://explore-education-statistics.service.gov.uk/find-statistics/children-looked-after-in-england-including-adoptions#releaseHeadlines-summary
- Diab, M., Peltonen, K., Qouta, S. R., Palosaari, E., & Punamäki, R.-L. (2015). Effectiveness of psychosocial intervention enhancing resilience among war-affected children and the moderating role of family factors. *Child abuse & neglect*, 40, 24-35.
- DiBianca Fasoli, A. (2020). Interpretive approaches to culture: Understanding and investigating children's psychological development. *Applied Developmental Science*, 24(4), 299–309. https://doi.org/10.1080/10888691.2020.1789357
- El-Khani, A., Haar, K., Stojanovic, M., & Maalouf, W. (2021). Assessing the feasibility of providing a family skills intervention, "strong families", for refugee families residing in reception centers in Serbia. *International journal of environmental research and public health*, 18(9), 4530.
- Eruyar, S., Maltby, J., & Vostanis, P. (2018). Mental health problems of Syrian refugee children: the role of parental factors. *European child & adolescent psychiatry*, *27*, 401-409.
- Eruyar, S., Maltby, J., & Vostanis, P. (2020). How do Syrian refugee children in Turkey perceive relational factors in the context of their mental health? *Clinical child psychology and psychiatry*, *25*(1), 260-272.
- European Asylum Support Office. (2022). Refugee and Migrant Children via Mixed Migration
 Routes in Europe Accompanied, Unaccompanied and Separated, Overview of
 Trends January to December 2022. Retrieved from
- Fairbairn, W. R. D. (1963). Synopsis of an object-relations theory of the personality. International Journal of psychoanalysis, 44(2), 224-225.
- Fazel, M., Reed, R., & Stein, A. (2015). Refugee, asylum seeking and internally displaced children and adolescents. *Rutter's child and adolescent psychiatry*, 573-585.

- Frydenberg, E. (2014). Coping research: Historical background, links with emotion, and new research directions on adaptive processes. *Australian Journal of Psychology, 66*(2), 82-92.
- Hawkes, C., Norris, K., Joyce, J., & Paton, D. (2021). Exploring resilience, coping and wellbeing in women of refugee background resettled in regional Australia. *Frontiers in psychology*, *12*, 704570.
- Henkelmann, J.-R., de Best, S., Deckers, C., Jensen, K., Shahab, M., Elzinga, B., & Molendijk, M. (2020). Anxiety, depression and post-traumatic stress disorder in refugees resettling in high-income countries: systematic review and meta-analysis. *BJPsych open, 6*(4), e68.
- Höhne, E., Banaschewski, T., Bajbouj, M., Böge, K., Sukale, T., & Kamp-Becker, I. (2023).

 Prevalences of mental distress and its associated factors in unaccompanied refugee minors in Germany. *European child & adolescent psychiatry, 32*(7), 1211-1217.
- Jensen, T. K., Skar, A.-M. S., Andersson, E. S., & Birkeland, M. S. (2019). Long-term mental health in unaccompanied refugee minors: pre-and post-flight predictors. *European child & adolescent psychiatry*, *28*, 1671-1682.
- Juang, L. P., Simpson, J. A., Lee, R. M., Rothman, A. J., Titzmann, P. F., Schachner, M. K., . . . Betsch, C. (2018). Using attachment and relational perspectives to understand adaptation and resilience among immigrant and refugee youth. *American Psychologist*, 73(6), 797.
- Koch, T., Ehring, T., & Liedl, A. (2020). Effectiveness of a transdiagnostic group intervention to enhance emotion regulation in young Afghan refugees: A pilot randomized controlled study. *Behaviour research and therapy, 132*, 103689.
- Lane, R., Taylor, H., Ellis, F., Rushworth, I., & Chiu, K. (under review). Resilience and its association with mental health among forcibly displaced populations: a systematic review and meta-analyses
- Losantos, M., Montoya, T., Exeni, S., Santa Cruz, M., & Loots, G. (2016). Applying social constructionist epistemology to research in psychology. *International Journal of Collaborative Practice*, *6*(1), 29-42.
- Miller, K. E. (2004). Beyond the frontstage: Trust, access, and the relational context in research with refugee communities. *American Journal of Community Psychology, 33*, 217-227.
- Minkov, M. (2012). *Cross-cultural analysis: The science and art of comparing the world's modern societies and their cultures.* SAGE publications.

- Mitchell, J. (2022). Why siblings? Introducing the "sibling trauma" and the "Law of the Mother" on the "horizontal" axis. *The Psychoanalytic Study of the Child, 75*(1), 121-139.
- Mitra, R., & Hodes, M. (2019). Prevention of psychological distress and promotion of resilience amongst unaccompanied refugee minors in resettlement countries. *Child:* care, health and development, 45(2), 198-215.
- Motti-Stefanidi, F. (2018). Resilience among immigrant youth: The role of culture, development and acculturation. *Developmental Review*, *50*, 99-109.
- Mude, W., & Mwanri, L. (2020). Negotiating identity and belonging in a new space:

 Opportunities and experiences of African youths in South Australia. *International journal of environmental research and public health, 17*(15), 5484.
- Nascimento, R. B. H., de Matos Brasil, A. G., Pires, J. P., de Moura Gabriel, I. W., Bezerra, B. L. L., Bessa, M. M. M., . . . de Alcântara, T. B. (2022). Afghan children and adolescents: the burden of poor mental health in contexts of widespread poverty, social inequality and persistent violence. *Child abuse & neglect*, *127*, 105574.
- Nasir, F. (2012). Here Alone: The role of coping and adaptation in Afghan unaccompanied minors (UAM's) living in the UK. University of Leicester,
- Ní Raghallaigh, M., & Gilligan, R. (2010). Active survival in the lives of unaccompanied minors: coping strategies, resilience, and the relevance of religion. *Child & Family Social Work*, *15*(2), 226-237.
- O'Connor, C., & Joffe, H. (2020). Intercoder reliability in qualitative research: debates and practical guidelines. *International journal of qualitative methods*, *19*, 1609406919899220.
- Panter-Brick, C. (2023). Pathways to resilience and pathways to flourishing: Examining the added-value of multisystem research and intervention in contexts of war and forced displacement. *Development and Psychopathology*, 1-12.
- Panter-Brick, C., Grimon, M. P., & Eggerman, M. (2014). Caregiver—child mental health: a prospective study in conflict and refugee settings. *Journal of child psychology and psychiatry*, *55*(4), 313-327.
- Perera, C., & Lavdas, M. (2020). Cultural and Contextual Adaptation of Problem Management Plus for Afghan Refugees and Asylum Seekers in Greece. *Athens: Terre des hommes Hellas*.
- Punamäki, R.-L., Peltonen, K., Diab, M., & Qouta, S. R. (2021). How Family Relationships Predict the Effectiveness of a Psychosocial Group Intervention among War-Affected

- Children. *Journal on education in emergencies, 7*(2), 253-288. doi:https://doi.org/10.33682/004f-n6d4
- Qamar, K., Rija, A., Vohra, L. I., Nawaz, F. A., & Essar, M. Y. (2022). Mental health implications on Afghan children: an impending catastrophe. *Global Mental Health, 9*, 397-400.
- QSR International. (2022). NVivo Mac Release 1.7.1.
- Refugee Council. (2023). Top facts from the latest statistics on refugees and people seeking asylum. Retrieved from https://www.refugeecouncil.org.uk/information/refugee-asylum-facts/top-10-facts-about-refugees-and-people-seeking-asylum/#:~:text=The%20increase%20in%20applications%20is,%2C%20Albania%2C%20India%20and%20Iraq.
- Rice, V., & Liu, B. (2016). Personal resilience and coping with implications for work. Part I: a review. *Work*, *54*(2), 325-333.
- Rodriguez, I. M., & Dobler, V. (2021). Survivors of hell: resilience amongst unaccompanied minor refugees and implications for treatment-a narrative review. *Journal of Child & Adolescent Trauma*, *14*, 559-569.
- Sanchez-Cao, E., Kramer, T., & Hodes, M. (2013). Psychological distress and mental health service contact of unaccompanied asylum seeking children. *Child: care, health and development, 39*(5), 651-659.
- Satinsky, E., Fuhr, D. C., Woodward, A., Sondorp, E., & Roberts, B. (2019). Mental health care utilisation and access among refugees and asylum seekers in Europe: a systematic review. *Health Policy*, *123*(9), 851-863.
- Scharpf, F., Kaltenbach, E., Nickerson, A., & Hecker, T. (2021). A systematic review of socio-ecological factors contributing to risk and protection of the mental health of refugee children and adolescents. *Clinical psychology review, 83*, 101930.
- Scharpf, F., Paulus, M., Christner, N., Beerbaum, L., Kammermeier, M., & Hecker, T. (2023). Intergenerational transmission of mental health risk in refugee families: The role of maternal psychopathology and emotional availability. *Development and Psychopathology*, 1-14.
- Schick, M., Zumwald, A., Knöpfli, B., Nickerson, A., Bryant, R. A., Schnyder, U., . . . Morina, N. (2016). Challenging future, challenging past: the relationship of social integration and psychological impairment in traumatized refugees. *European Journal of Psychotraumatology*, 7(1), 28057.
- Shweder, R. A. (1999). Why cultural psychology?. *Ethos, 27*(1), 62-73.

- Seguin, M., & Roberts, B. (2017). Coping strategies among conflict-affected adults in low-and middle-income countries: A systematic literature review. *Global public health*, *12*(7), 811-829.
- Siriwardhana, C., Ali, S. S., Roberts, B., & Stewart, R. (2014). A systematic review of resilience and mental health outcomes of conflict-driven adult forced migrants. *Conflict and health*, 8(1), 1-14.
- Sleijpen, M., Boeije, H. R., Kleber, R. J., & Mooren, T. (2016). Between power and powerlessness: a meta-ethnography of sources of resilience in young refugees. *Ethnicity & health*, *21*(2), 158-180.
- Spencer-Oatey, H., & Franklin, P. (2012). What is culture. A compilation of quotations. *GlobalPAD Core Concepts, 1*(22), 1-21.
- Sulaiman-Hill, C. M., & Thompson, S. C. (2011). 'Thinking Too Much': Psychological distress, sources of stress and coping strategies of resettled Afghan and Kurdish refugees. *Journal of Muslim Mental Health*, *6*(2).
- Sulaiman-Hill, C. M., & Thompson, S. C. (2012). Afghan and Kurdish refugees, 8–20 years after resettlement, still experience psychological distress and challenges to well being. *Australian and New Zealand journal of public health*, *36*(2), 126-134.
- Sutton, V., Robbins, I., Senior, V., & Sedwick, G. (2006). A qualitative study exploring refugee minors' personal accounts of post-traumatic growth and positive change processes in adapting to life in the UK. *Diversity and Equality in Health and Care, 3*(2).
- Terry, G., Hayfield, N., Clarke, V., & Braun, V. (2017). Thematic Analysis. In C. Willig & W. S. Rogers (Eds.), *The SAGE Handbook of Qualitative Research in Psychology*: SAGE.
- Thurmond, V. A. (2001). The point of triangulation. *Journal of nursing scholarship, 33*(3), 253-258.
- Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International journal for quality in health care, 19*(6), 349-357.
- Ungar, M. (2004). A constructionist discourse on resilience: Multiple contexts, multiple realities among at-risk children and youth. *Youth & society, 35*(3), 341-365.
- Ungar, M. (2006). Nurturing hidden resilience in at-risk youth in different cultures. *Journal of the Canadian Academy of Child and adolescent Psychiatry, 15*(2), 53.
- Ungar, M. (2008). Resilience across cultures. British Journal of Social Work, 38(2), 218-235.

- Ungar, M., Brown, M., Liebenberg, L., Othman, R., Kwong, W. M., Armstrong, M., & Gilgun, J. (2007). Unique pathways to resilience across cultures. *Adolescence*, *42*(166).
- Varpio, L., Ajjawi, R., Monrouxe, L. V., O'Brien, B. C., & Rees, C. E. (2017). Shedding the cobra effect: problematising thematic emergence, triangulation, saturation and member checking. *Medical education*, *51*(1), 40-50.
- Vervliet, M., Lammertyn, J., Broekaert, E., & Derluyn, I. (2014). Longitudinal follow-up of the mental health of unaccompanied refugee minors. *European child & adolescent psychiatry*, *23*, 337-346.
- Von Werthern, M., Grigorakis, G., & Vizard, E. (2019). The mental health and wellbeing of Unaccompanied Refugee Minors (URMs). *Child abuse & neglect, 98*, 104146.
- Wernesjö, U. (2012). Unaccompanied asylum-seeking children: Whose perspective? *Childhood, 19*(4), 495-507.
- Winnicott, D. W. (1960). The theory of the parent-infant relationship. *International Journal of psychoanalysis*, *41*(6), 585-595.

Chapter 4 – Extended methodology for the Empirical Study

This chapter provides additional information regarding the methodology of the empirical research paper (see Chapter 3), excluded due to space limitations. A detailed account of the methodological rationale is presented, speaking to the ontological and epistemological positioning of the research. The research methods of the study and analysis process are then presented, along with a section on researcher reflexivity and ethical considerations.

Methodological Rationale

Ontology and Epistemology

Ontological and epistemological positions are fundamental to consider in research, influencing how research questions are presented and how studies are designed and conducted (Smith & Sparkes, 2006). Ontology is "the study of being" (Crotty, 1998, p. 10) or the study of what 'is'. It focuses on conceptualisations of, and what constitutes, reality (Denzin & Lincoln, 2011). Epistemology concerns itself with what 'knowledge' is and the relationship between the inquirer and the 'known' (Denzin & Lincoln, 2011; Moon & Blackman, 2014).

This study seeks to explore experiences of difficulties and coping, as well as perceptions of how these were learned and acquired, and is approached using a relativist ontology and social constructionist epistemology.

Relativism. Relativism posits that "realities are apprehendable in the form of multiple, intangible mental constructions, socially and experientially based, local and specific in nature" (Guba & Lincoln, 1994, p. 110). According to relativist ontology, there is not one true reality; rather, reality is relative to each individual person at a given time and place (Moon & Blackman, 2014). As such, relativism recognises that people inhabit different worlds, with separate realities and truths, and different ways of knowing and constructing meaning (Crotty, 1998). What is 'reality' is therefore individually, socially and culturally rooted, dependent on individuals and groups to be constructed (Guba & Lincoln, 1994).

Social Constructionism. Social constructionism is the view that "all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context" (Crotty, 1998, p. 42). The basic

ontological assumption of social constructionism is relativism (Guba & Lincoln, 2001). It focuses on the collective generation and communication of meaning, describing a process by which individuals and groups construct meaning as they experience and engage with the environment they are interpreting (Crotty, 1998). Epistemologically, social constructionism also aligns with transactional subjectivism (Guba & Lincoln, 1994, 2001).

Transactional/subjectivist epistemology holds that the generation of meaning or knowledge depends on a transaction between the individual or group and what is to be known (Lincoln & Guba, 2016); it is mediated by prior experience, learning, and relationships, and by sociopolitical and cultural factors, including ethnicity, gender, age, sociodemographic status, beliefs and values (Lincoln & Guba, 2016). Social constructionism is therefore suited to the research questions focussing on conceptualisations and appraisals of difficulties and coping which are made within and rely on a social context.

Methodology

Qualitative approach. The social constructionist approach posits that reality and knowledge is created in and through interactions (i.e., language, representation and other social processes), with meaning collectively generated and transmitted (Braun & Clarke, 2021a). Language is central to the social construction of meaning, actively shaping and moulding reality (Frowe, 2001). The methodology appropriate to social constructionism must be one that delves into the minds and meaning-making activities (i.e., experiences, perceptions) of individuals and that accepts that meaning or "findings" develop through verbal and non-verbal interactions as the investigation proceeds (i.e., symbolic interactionism; Guba & Lincoln, 1994). The research interaction is therefore considered critical to the meaning making process. Qualitative research methods are best suited to relativist and social constructionist stances and subjective interactive methodologies given the overall aim of understanding meanings assigned by individuals and the experiences they have of their realities (Willig, 2013).

Reflexive Thematic Analysis. Social constructionism assumes that researchers are co-constructors of both the dataset and the findings, with meaning being constructed through a lens of subjective interaction and prior knowledge. The analytical approach must therefore actively involve and recognise the role of the researcher in the research process.

Reflexive Thematic Analysis (RTA) is theoretically or epistemologically flexible (Braun & Clarke, 2021a, 2021c). It supports inductive and data-driven analysis through organic and recursive coding, whilst also supporting deductive or theoretically-driven

analysis, recognising that this can be a continuum (Braun & Clarke, 2021c). It therefore allows for the findings to be data-led, whilst acknowledging the influence of prior knowledge/theory and researcher subjectivity (Braun & Clarke, 2019, 2021c), both of which are significant to the social constructionist stance. RTA positions researcher subjectivity as beneficial to the analytical process, valuing the contextual influences that affect meaning creation (Braun et al., 2019). The present study uses an inductive method, which is not shaped by existing theory but is shaped by the researcher's epistemological standpoint and theoretical lens (Clarke & Braun, 2013).

Methods

Design

This study explored refugee and asylum seekers' experiences of coping, as well as perceptions of how these were learned and acquired, and is approached using a relativist ontology and social constructionist epistemology. A qualitative research design is employed, using semi-structured interviews. A topic guide and interview schedule were developed, with close consideration to the research questions and acknowledgement of theoretical lenses applied. RTA was used to synthesise and analyse the data.

Recruitment

Research with roots in social constructionism does not align with concepts of 'data saturation' and ideal sample sizes (Alvesson & Sköldberg, 2017); these are also not consistent with the values and assumptions of RTA (Braun & Clarke, 2021d). Nonetheless, the study aimed to recruit 10-14 former URMs from Afghanistan, which is within the suggested sample size (n=6-15) for RTA outlined by Terry et al. (2017) for professional doctoral theses.

A non-probabilistic purposive sampling strategy was employed, suited to studies aiming to capture information-rich narratives from niche populations and use available resources effectively (Etikan et al., 2016). Participants were recruited from a service working with URMs and former URMs in England, offering individual psychotherapy in addition to practical and legal support and community-building activities. Recruitment was facilitated by a local collaborator and an external supervisor, who assessed eligibility criteria and shared information about the study. Service-users' clinicians were consulted before potential

participants were approached to ensure there were no concerns regarding capacity to consent and psychological wellbeing.

Service-users were eligible for inclusion if they were aged 18 and above; were from Afghanistan; entered the UK as an unaccompanied minor or migrated to the UK as an unaccompanied minor; and could communicate in English or other languages through an interpreter. -, were actively suicidal or reporting acute psychotic symptoms.

Participants

A total of 12 participants were recruited into the study, all identifying as male. Ethnicities disclosed include Afghan, Pashtun, Hazara and Tajik. Participants were aged between 20 and 27 years old (mean = 23.25 years). They entered the UK between the ages of 14 and 21 years (mean = 16.17 years) and had been in the UK between 2 and 11 years (mean = 7.08 years).

Procedure

Eligible service users were approached by local collaborators, who verbally described the study and provided them with Participant Information Sheets (PIS; see Appendix G). Eligible service users were assured that participation was voluntary and were given at least 48 hours to read through the PIS before deciding to proceed. If interested in taking part, local collaborators liaised with the lead researcher to arrange a time for the interview. Eligible service users were offered opportunities to ask questions and if satisfied and willing to participate, provided written or verbal consent (see Appendix H).

Interviews were held online or face-to-face at the service, according to participant preference. To facilitate participant involvement, interpreters were also available during interviews, as is recommended in mental health care settings when working with individuals whose first language is not English (Tribe & Lane, 2009). Interpreters were also available to support with translating questionnaires and participant information sheets/consent forms if required. The researcher worked with three Dari and/or Pashto interpreters throughout the course of the study due to the different languages native to Afghanistan and interpreter availability. Interpreters were provided with a guide (see Appendix I), along with all participant facing documents and the interview schedule prior to their involvement.

Once consented into the study, participants completed an online questionnaire via Microsoft Forms capturing demographic and background information (see Appendix J).

Semi-structured interviews were audio-recorded via Microsoft Teams. Following the interview, participants were offered the opportunity to ask further questions about the research or reflect on the interview (i.e., debrief), and were offered a £20 voucher in compensation for their time.

The interviews took place between March and September 2023 and lasted on average 38 minutes 49 seconds (range: 24 minutes – 1 hour 2 minutes). Of the 12 interviews that took place, nine were held face-to-face at the service and three were held online. Three interviews took place without an interpreter present. This was upon the request of two participants, who felt more comfortable speaking with the lead researcher directly and alone, and one who had Degree-level English and did not require interpreter support.

Materials

The interview schedule explored areas of difficulties and wellbeing, ways of coping, and perceptions on the development of coping strategies and influences of important figures, see Appendix K. Example questions include: "What are some things that you can find difficult day-to-day?"; "How do you manage when these things happen or come up for you?"; "How and from where do you think you learned to cope in this way?".

Feedback from a PPI process, which involved consulting with two former URMs from Afghanistan, in addition to project advisory meetings and research supervision, were used to inform the interview schedule and confirm the suitability of language and questions. A key area of consideration was to ensure the interview schedule aided participant safety and the development trust and rapport, which are both of significance in interactive research methods (Clarke & Braun, 2013). The interview schedule was piloted and was well-received, therefore was not subsequently amended.

Data Analysis

RTA was employed to synthesise and interpret the interview data (Braun & Clarke, 2021c). The key phases to RTA are (1) familiarisation with the dataset; (2) coding; (3) generating initial themes; (4) developing and reviewing themes; (5) refining, defining and naming themes; and (6) writing up (Braun & Clarke, 2006; Joy et al., 2023). These phases do not occur in a linear fashion; RTA is iterative in nature (Joy et al., 2023; Terry & Hayfield, 2020) and the six phases often blend together as the analysis progresses (Braun & Clarke, 2021c).

- 1. Familiarisation with the dataset was supported by the transcription and proofing process. The lead researcher conducted all interviews and transcribed all data in English manually clean verbatim. The recordings were again listened to while proofing the transcripts, in a process of active listening. Field notes from participant observations and reflexive journal entries were also reviewed. This active process involved searching for meanings and patterns (Nowell et al., 2017) and allowed for a deep immersion into the data.
- 2. In RTA, coding is both a process and an analytic output (Joy et al., 2023). Complete coding, as a systematic process, involves deconstructing the narratives shared into discretely identified units, semantic and/or latent (Braun & Clarke, 2006; Joy et al., 2023), which are foundations of what will become themes (Byrne, 2022). Each discrete unit (representing for example an idea, assumption, experience, concept, observation etc.) was labelled. Each transcript was initially coded twice with the support of NVivo (QSR International, 2022), and codes were added or refined as the analysis continued. Throughout the coding process, reflective discussions through supervision were especially helpful for drawing out latent codes.
- 3. Themes in RTA are conceptualised as patterns of shared meaning within the data, underpinned by a central organising concept (Braun et al., 2014; Clarke & Braun, 2013). Initial themes were generated, developed by grouping codes into clusters, in an effort to organise and interpret the data. The coded data was reviewed, searching for similarities and overlaps between codes, identifying patterns. Research supervision was an important space to consider candidate themes and how they mapped onto the data and research questions.
- 4. Themes were developed by reviewing and revising candidate themes, in a process of re-theming (Braun & Clarke, 2021b). This involved two stages of review (Braun & Clarke, 2006). The first involved the researcher returning to the transcripts to assess how the interpretative framework fashioned by the candidate themes fit in relation to the dataset, allowing for 'quality control' (Clarke & Braun, 2013; Terry et al., 2017). The second involved reviewing all the data, assessing whether themes captured meaning across the dataset (Braun & Clarke, 2006). In addition, the lead researcher consulted with experts by experience and profession (see Patient and Public Involvement section below).

This was significant to sense check the lead researcher interpretations and gather additional perspectives on the narratives shared. These reflexive discussions, in addition to research supervision and revisiting the data, allowed for candidate themes to be assessed, reorganised and added to and encouraged latent themes to emerge. The themes were assessed to ensure each communicated important and nuanced patterns of shared meaning across the dataset and, collectively, represented key patterns related the research questions (Joy et al., 2023; Terry et al., 2017).

- 5. Once distinctive and coherent themes were identified, these were further refined and defined until each had a clear, boundaried and specific focus (Clarke & Braun, 2013). This involved again shifting between the dataset and the themes, organising the story put forward by the data and analysis (Campbell et al., 2021).
- 6. The final phase involved developing and writing up the analytical story expressed through the refined, and now named, themes. In line with the recursive nature of RTA, the process of writing up the findings was also used to support reflexivity, document processes and assess themes throughout the analysis (Clarke & Braun, 2013). In line with interpretivist analysis, the analytic narrative was essential to present, along with sufficient data extracts to illustrate and support the interpretations put forward (Sandelowski, 1994). The final write up was reviewed by the supervisory research team to further ensure the defined thematic framework aligned with the research questions, the data and the reflexive discussions which took place during the data collection and analysis process.

Patient and Public Involvement

The present study embedded Patient and Public Involvement (PPI) throughout the design and analysis process.

Two current service users of the recruitment service were consulted with to review participant facing documents. This included gathering feedback on the presentation and language/wording used in the consent form, the PIS and the interview schedule.

During the analysis stage, a PPI group was recruited, with support of the local collaborator. Each PPI member met with the lead researcher to consult on the interpretations

made by the lead researcher and share perspectives on the data and themes. This process supported researcher reflexivity, as well as triangulation of interpretations, and validation of themes and subthemes. The PPI members included three clinicians working therapeutically with URMs at the recruitment service (clinical psychologists and psychotherapists) and two interpreters who supported with the interviews. It was also hoped to recruit two URM representatives. The two previously consulted URMs service users were not approached for their input at this stage as they remained in close contact with the recruitment service. Instead, service users with infrequent contact with the service (i.e., ex-service users belonging to the wider recruitment service community) were sought to maintain participant anonymity in the research. Unfortunately, recruiting further service user representatives was not successful.

Reflexivity

The social constructionist stance, as well as RTA as an analytical approach, both identify the researcher as an analytic resource and highlight the researcher's role in the process of generating knowledge (Braun & Clarke, 2021c; Clarke & Braun, 2013; Losantos et al., 2016). Within the interpretivist approach, it is important to make explicit and acknowledge the experiences, perspectives and biases of the researcher that influence data collection and analysis to promote validity and rigour (Patton, 2014; Yardley, 2000). Researcher supervisors, in addition to PPI members, acted as "critical friends" to the research and the lead researcher's reflexivity (Smith & McGannon, 2018, p. 113), offering different perspectives that deepened the analysis and reflexive process. The below represents important areas that arose as the lead researcher considered important questions about ideas, assumptions, social location and values that may have shaped how the dataset was constructed and interpreted.

Disclosure, power and difference. Particular thought in reflexive discussions was given to disclosure in interviews, considering what was shared and what was not. This was also thought about in the context of cultural difference, for example with 'mental health' being described by participants to be taboo in Afghanistan and some participants not having thought about coping before. Here is a short extract of the lead researcher's reflective diary: "It was difficult to gauge, at times, whether participants were able to think reflectively about coping or whether they were avoidant of disclosure. I wonder if some of the limited responses related to this being a new area for some. I noticed in these situations that I would adapt my questions to be less open or I would provide more examples, perhaps in an effort

to ease participant discomfort as well as my own". Another extract also speaks to cultural difference and issues of power: "At times, I felt my sex (female), ethnicity (White) and being non-Muslim encouraged participants to explain aspects of their culture which otherwise would not have been expressed verbally. This was important to attach experiences to cultural norms or beliefs from participant perspectives. Somehow my gaps in cultural knowledge, or difference in this sense, could help foster a connection with participants and possibly mitigate issues of power, with participants being experts. I was especially mindful of previous experiences of interviews that participants had (e.g., Home Office interviews), and how meeting me may understandably be met with caution and possibly anxiety. Positioning them as an expert, helping me understand their experience and culture, was a way of empowering participants". Interpreters were involved in the research to facilitate interviews and support with bridging areas of difference or gaps in cultural knowledge. Working with interpreters was a new experience for the lead researcher, and it took time to get used to having another person in the conversation. The lead researcher reflected: "There were times having an interpreter present aided the interview and allowed it to feel organic, as it could foster trust. But there were also other times where having an interpreter there may have affected disclosure, possibly due to interpreters being 'elders' or if the interpreter was male. As well as insight, I think shame is a key barrier to disclosure. For example, some participants did not wish to have interpreters present despite challenges with expression in English so that they could more comfortably talk to me".

Uncertainty in the qualitative research process. Although the lead researcher is not new to qualitative research, it is the first time she is analysing this without input from a second coder or wider team intimately familiar with the data. Support from supervisors and PPI members and patience was needed during the process of generating themes. Here is an extract of the lead researcher's reflective diary: "I feel quite alone in the analysis process, asking myself on a loop 'What is a theme?!". I am finding it hard to make decisions and to know when the themes are 'ready', feeling some pressure to do the data justice. Maybe I am feeling this way because I am so grateful for participants sharing their experiences with me. I hope the exercise of writing up and getting feedback will continue to refine them and make me feel more confident". The qualitative research forum, provided by the lead researcher's university, was a useful space to listen to other researcher's questions and validate experiences of uncertainty. Another difficulty experienced by the lead researcher, requiring some thought, was gathering information from participants in the role of a researcher and not a clinician, which is her role for most of the week. Here is an extract of the lead researcher's

reflective journal speaking to this experience: "I have to keep reminding myself of the remit of my role in interviews and of my position as a researcher, slipping easily into the role of a psychologist. This was especially the case as some initial interview questions do not significantly differ from questions I may ask clinically, for instance "what are some things you find difficult?" and "what helps?". It is possible that the data is skewed as I find myself focusing on developing rapport and validating experiences, but I wonder if this helped encourage disclosure and helped establish some sense of safety".

Ongoing conflict and the global political context. It is possible (and likely) that ongoing wars and conflict during the study period (e.g., Russia/Ukraine, Sudan, Israel/Palestine), as well as an earthquake and withdrawal from the US and the Taliban takeover in Afghanistan, influenced how the lead researcher's made sense of participant responses and approached interview questions. Anxiety and anger in response to global conflict, as well as international and local policies harming refugees (e.g., Pakistan no longer providing refuge to Afghan nationals; the UK implementing harsher and more hostile asylum seekers policies such as the Nationality and Borders Act (2022) and the Illegal Migration Act (2023)) may have incited a protectiveness of participants within the lead researcher, bound to her privilege of secure status, and subtly influenced role dynamics in the interview. Here is an extract of the lead researcher's reflective journal: "I am surrounded by media coverage of global conflict and pain relating to war and migration. It is so hard not to see participants' experience through the lens of pain and chaos, and for me not to feel anger or sadness. I suppose some transference is inevitable, but important to name. I often found myself feeling emotions with participants, but also for participants, particularly for those who appeared distant and numb in comparison to the difficult things they were describing. I wonder if this also extended to me mirroring some of the avoidance described by participants".

Ethical considerations

Consent. All participants had capacity to provide informed consent. Capacity to provide informed consent was assessed for each potential participant using clinical judgement and triangulation of views from staff at the service. All participant facing documents were additionally subject to PPI review by service users at the service to ensure accessibility of the information shared.

Participants were fully informed of the purpose of the study prior to deciding to take part. This included the study's aims and requirements, potential risks, how their data were collected and stored and how the data would be disseminated and shared. This was outlined

in the participant information sheet and consent form. This was expressed again verbally prior to completing the consent form. There was therefore no participant deception.

Prior to participation, participants were reminded of their right to withdraw from the study at time, without needing to provide a reason. Should they withdraw within 14 days of taking part in the interview, their data would be deleted fully. Should they withdraw after 14 days, no direct quotes would be used, but their data would be included. It was explained the time limit was due to transcription and analysis having started after this time, as familiarisation with the dataset (which included manual transcription in this study) is a key phase of RTA (Terry et al., 2017).

Consent was provided either in writing using an online consent form on MS Forms or recorded verbally at the beginning of interviews.

Coercion. Careful consideration was placed on ensuring participants were not coerced to take part in the study. Participants were reassured by local collaborators that participation was entirely voluntary and their choice regarding participation would not affect the care they received in any way. This is outlined in the PIS and consent form. Participants received a £20 voucher as compensation for their time and to cover potential travel costs incurred, reducing barriers to participation. It is ethical practice to ensure participants are not financially disadvantaged by participating (BPS, 2021). Participants were reassured that should they choose to withdraw from the study, compensation would not be rescinded.

Confidentiality and Safeguarding. Although the research was independent from the support participants receive from the recruitment service, local collaborators employed by the service supported with recruitment and as such, were aware of participation. This limited confidentiality related to participation, as outlined in the PIS. Although a local collaborator and external supervisor working within the recruitment service were part of the research team, they did not have access to raw data or to full pseudonymised transcripts. All interpreters had non-disclosure agreements in place as part of their contract with the recruitment service.

Participants were informed that what they shared in interviews was confidential to the research team, unless the lead researcher was concerned about significant or imminent risk of harm to the participant or others. This was highlighted verbally to participants prior to the interview and is outlined in the PIS. The protocol for safeguarding concerns was to bring the concern to research supervision and share this with the external supervisor located within

the recruitment service and their safeguarding lead. One incident was shared in research supervision and subsequently raised with the safeguarding lead at the service.

Risk of Distress. Asylum seekers and refugees have vulnerabilities that warrant a greater level of diligence in avoiding research-related harm (Seagle et al., 2020). A risk management plan was developed due to the vulnerability of the sample and the potentially distressing nature of the interviews. This included a risk assessment based on the clinical judgement of the lead researcher throughout the interview process. In addition, information on support services and the interview content is outlined for potential participants in advance via the PIS. Interviews were frequently scheduled on days where participants had contact with their individual psychotherapist.

There was also risk of researcher and interpreter distress. This was mitigated through the lead researcher receiving regular clinical and research supervision from clinical psychologists and interpreters having access to support through the recruitment service from psychotherapists.

Anonymity and Data Protection. All researcher data was stored on a secure drive (UEA OneDrive). Consent forms (where applicable) were password protected. Participants were allocated a randomly generated participant identification number (PIN); the document listing participant names and PINs was password-protected. Audio-recordings and transcripts were labelled using the PIN. Audio recordings were transcribed manually clean verbatim and anonymised upon transcription verification. Identifiable information in quotes (e.g., names, places) were removed. Audio-recordings were deleted following transcription. Participants were informed when their recording was permanently deleted by local collaborators to ensure transparency.

Raw data (i.e., recordings) was only accessed by the lead researcher. The wider supervisory team had access to anonymised data only. Anonymity was maintained throughout the study, including in the written report of findings.

Ethical Approval. This study obtained ethical approval from UEA FMH-REC (Faculty of Medicine and Health Sciences Research Ethics Committee) and recruitment only began following approval (see Appendix L). NHS-REC ethics or Health Research Authority (HRA) approval was not required as the study did not involve NHS bodies, staff or service users. In addition, the study received local approval from the gatekeeper and external supervisor (see

Appendix M). Principles of the Code of Human Research Ethics, provided by the British Psychological Society (BPS, 2021), were adhered to.

A number of ethics amendments were required throughout the course of the study to improve research processes. For example, the inclusion criteria were expanded during the study to also include service users who entered the UK aged 18 or over but migrated to the UK as an unaccompanied minor. This was an oversight in the initial ethics application, which did not consider that the migration journey in many cases takes several years (Huynh, 2015). Another example is enabling participants to provide verbal consent, ensuring there is no record of their name associated with the research. This was an important amendment to foster participant sense of safety. Difficulties with trust are well-documented amongst this vulnerable cohort and have been suggested to result from five key causes: past experiences; being accustomed to mistrust; being mistrusted by others; not knowing people well; and concerns about truth-telling (Ní Raghallaigh, 2014).

Chapter 5 – Overall Discussion and Critical Evaluation

This chapter presents a discussion and critical evaluation of the thesis portfolio. It begins with a summary of the findings, before presenting strengths and limitations of both studies and of the portfolio generally. The chapter concludes with the clinical implications of the portfolio findings, which are discussed alongside considerations for future research.

Thesis overview and summary of findings

The aims of the thesis were to review research on resilience and mental health among forcibly displaced groups and examine how resilience and mental health are associated. The research also sought to better understand the context in which resilience manifests through coping in a culturally specific sample of forced migrants and improve understanding of the sources and origins of resilience in the form of active coping.

The systematic review and meta-analysis (Chapter 2) investigated the relationship between resilience and various mental health difficulties among forcibly displaced populations. Thirty-one studies were analysed, revealing a significant negative association between resilience and symptoms of PTSD, depression, anxiety, and general psychological distress, with small-to-medium effect sizes and high heterogeneity. Some significant subgroup differences were observed according to study country Gross National Income (GNI) and sample age. High heterogeneity was hypothesised to be driven by variations in study sample characteristics, methodologies, and cultural interpretations of mental health and resilience.

As a result of the challenges in defining resilience and cross-cultural variations in the construct, the qualitative study (Chapter 3) focused on coping, which offers insight into active resiliency processes and behaviours. It explored the coping responses and challenges faced by former Unaccompanied Refugee Minors (URMs) from Afghanistan in the UK, gathering perceptions on the development of coping strategies and how coping may change over time. Participants reported multiple and compounding difficulties, often present in a triad of physical/psychosomatic pain, mental health difficulties and social challenges. Participants described resilience mechanisms and the barriers to coping strategies being used and effective, revealing how the ability to employ strategies may be limited and that strategies may contribute to further challenges. Experiences of early attachment, culture and identity were observed to influence the ways coping strategies are appraised and developed.

Critical appraisal of thesis

Although both studies were reported according to best practice guidelines (Page et al., 2021; Tong et al., 2007) and key limitations are described in respective chapters and extended methods, further critical appraisal of the methodologies used and of the findings are presented for consideration. Considerations for the overall thesis portfolio are also provided.

Systematic review (Chapter 2)

Definitions. Forced displacement is a term with clear definitions according to the UNCHR (UNHCR, 2023c), however can be hard to differentiate in the literature depending on how authors define their sample. For example, some studies included 'immigrants and refugees' or 'immigrants who survived conflict' but it was not clear if all had experienced forced displacement, therefore these studies were excluded.

Measures of mental health that did not capture a specific mental health disorder (e.g., depression, anxiety, PTSD) were grouped together under 'psychological distress'. Most measures included in this category measured psychological distress specifically, however some captured anxiety and depression symptoms, leading to an overlap between psychological distress and other mental health categories explored.

Defining subgroups by age category was, for the most part, a straightforward process. However, some studies who recruited 'children' or 'adolescents' included participants over the age of 18 (up to the age of 26). This resulted in a 'child and adult' subgroup, and limited explorations according to sample age.

Exclusion criteria. Our exclusion criteria stipulated including studies only available in English, limiting the available publications eligible for inclusion. This was for practical purposes, due to languages spoken by the lead researcher. Studies belonging to grey literature (e.g., dissertations) were also excluded, which limited the available studies but ensured all data included had been subject to peer review. Finally, studies were only accessible if open access or available via UEA library; although all corresponding authors of unavailable studies were contacted, few returned full texts upon request.

Databases. Three electronic databases were searched for relevant studies for inclusion, with one general and large database (Medline) and two subject-specific databases (APA PsycInfo and Scopus). Databases were selected based on their relevance to the

research area and breadth of coverage. An expert librarian was consulted regarding the three databases selected, supporting with the final selection. Due to time and resource constraints, it was not feasible to search more databases. However, expanding the search may have supported to identify further eligible research, for example if also searching Embase and Central, as suggested by Cochrane guidelines (Lefebvre et al., 2024).

Methodology. The present study used meta-analyses to provide a statistical summary of the available literature examining the association between resilience and different mental health categories. Other methodologies, such as conducting a narrative review, would have allowed more detailed examination of individual studies (e.g., methodologies, findings, implications), but would not have offered an aggregate summary of effect.

Heterogeneity. Efforts were made to reduce heterogeneity of the included research by limiting the resilience measures included and by grouping areas of mental health difficulty together. However, between-study heterogeneity remained high, possibly driven by the differences in participant host countries, countries of origin, age, gender, or duration of displacement and the different measures used.

Empirical paper (Chapter 3)

Methodology and design. Other methodologies and pattern-based analysis methods were considered, for instance grounding the research in phenomenology, or using Interpretative Phenomenological Analysis (IPA). Social constructionism was selected due to its emphasis on culture and meaning making (Crotty, 1998), suited to the research questions and area, and neither IPA nor grounded theory offered the theoretical flexibility provided by RTA. In addition, RTA encourages examination of how personal experiences are located within wider socio-cultural contexts and allows for inductive and deductive orientations to coding of data, recognising semantic and latent themes (Braun & Clarke, 2021a). However, it is recognised that IPA, and research rooted in phenomenology, may be useful for future research to consider, deepening understanding of individual narratives through detailed case-by-case analysis.

Furthermore, RTA recognises that as researchers, we play an important role in making sense of qualitative data, influenced by our prior knowledge and bound to the theories and concepts in our awareness:

"Although themes might encompass data that on the surface appears disparate, such themes unite implicit or latent meaning. Themes cannot exist separately from the researcher—they are generated by the researcher through data engagement mediated by all that they bring to this process (e.g., their research values, skills, experience and training)." (Braun & Clarke, 2021a)

It is therefore important to acknowledge the lenses and positions of the researcher, influencing interpretations, when making sense of the present findings. Reflexivity is viewed a strength of the present research, although it is acknowledged that other patterns of meaning may have been identified by other researchers or philosophical stances.

Finally, focus groups were considered but given the sensitive nature of the questions and topics discussed, and the emphasis on exploring individual understanding and perceptions, interviews were deemed more appropriate (Braun & Clarke, 2022).

Language and interpreters. Participants were encouraged to communicate in their mother tongue via interpreters, although participant preference was always respected. Although many benefitted from interpreter support, some preferred to take part in the interview in English. Interpreters remained present for interviews in English unless otherwise requested in case translation would be helpful at any point. Two participants requested to speak with the lead researcher alone, possibly to reduce shame and having a third person present. It is possible conducting interviews in English represented a form of avoidance of reminders of home and limited what could be expressed. However, some participants highlighted that they infrequently speak their mother tongue at present and felt more comfortable expressing themselves in English. Nonetheless, it is possible that conducting all interviews in participants' mother tongue via interpreters may have yielded different responses to questions and levels of disclosure.

Qualitative analysis. The lead researcher made efforts to ensure the RTA was rigorous and robust, following the 15-point checklist provided by Braun and Clarke (2006). Further guidance was also used to ensure theoretical positioning was explained, the analytic process was iterative and comprehensive, the language used was appropriate and that reflexive practice was explained in a manner that went beyond listing identities (Braun & Clarke, 2021c, 2023).

Employing a second coder was considered. However, double coding is not crucial to qualitative research (O'Connor & Joffe, 2020) and not encouraged within RTA (Braun et al.,

2022; Terry et al., 2017). In the present study, it was also considered impractical due to time and resource constraints and a risk to the richness of the analysis, diluting researcher subjectivity and affinity with the data (Morse, 1997). A second coder was therefore not employed.

Instead, the lead research invested efforts in a robust PPI process to support with reflexivity and obtain feedback on candidate themes during the analysis process. Staff members working clinically with both URMs and former URMs and interpreters at the recruitment charity formed a PPI group, and individually met with the lead research to discuss and make sense of themes. The service users recruited to consult on the study materials were not eligible to consult on the findings due to their close contact with the service and fellow service users, which may have compromised participant anonymity. Efforts were made to recruit two service users with infrequent contact with the service (i.e., ex-service users belonging to the wider recruitment service community). Unfortunately, none were recruited.

Findings. The presentation of findings included verbatim quotes from participants. Although there is limited evidence for the use of quotations in research adopting social constructionist stances (Eldh et al., 2020), the importance of presenting participants voices is recognised (Alasuutari, 1995). More broadly, the value and role of quotations is to add to the richness of the analysis, offering insight into analysis processes, and to illustrate findings (Eldh et al., 2020). The selection of quotes in the present study also serviced to portray the language used and the connections made by participants, as well as to demonstrate the intensity and complexity of participant experiences, for example emotions, confusion or hesitance (Beck, 1993).

A key consideration when interpreting the findings relates to participants' shared experience of accessing individual psychotherapy and being in contact with, and recruited through, support services. It is known that most URMs in Europe are under-served and underutilise services (Mitra & Hodes, 2019), highlighting the sampling bias of the present sample. This likely skewed the findings in two ways. Firstly, participants may be qualitatively different from former Afghan URMs not accessing psychotherapy and have different experiences. Accessing individual psychotherapy may also have increased reflexive capacity of participants. Secondly, recruiting via a service and often holding interviews at the service alongside interpreters attached to the service may have invited participants to discuss the role and value of services more prominently than if other recruitment methods had been

used. In addition, non-participation bias may be present, whereby results are distorted by the differential participation of service users who did not participate in the interview or who were not approached. However, recruiting from refugee populations offers challenges relating to lack of trust and lack of access to services and information (Miller, 2004). Using this pragmatic, practical method of non-probabilistic purposive sampling, recommended to select information-rich cases from niche populations and use available resources effectively (Etikan et al., 2016), enabled a modest sample of 12 participants to be recruited. Although recruiting more broadly may have generated a more representative sample of URMs in regard to service use, it would have been especially challenging to recruit from one country of origin and to recruit sufficiently within the timeframe available to the lead researcher.

Thesis portfolio

A limitation of the thesis portfolio is that it examines both resilience and coping. Due to challenges in defining resilience more broadly and by refugee populations (Davydov et al., 2010; Hawkes et al., 2021), coping was selected as a construct to explore in qualitative interviews. The present study conceptualises coping as an active and tangible expression of resilience (Rice & Liu, 2016), representing conscious thoughts and behaviours to manage internal and external demands of situations that are considered stressful (Folkman & Moskowitz, 2004). However, it is recognised that whilst resilience and coping are closely related and that coping falls under the broader umbrella of resilience, these do not capture identical protective mechanisms. When interpreting the findings, it must be clear that Chapter 2 speaks to individual and systemic resilience, excluding measures of coping strategies or styles, whilst Chapter 3 explores coping specifically, as an expression of resilience processes and behaviours.

Clinical and Research Implications and Conclusions

The present portfolio sheds light on the challenges of examining resilience in research, particularly across cultures. Research exploring resilience is limited by the varying definitions used (Davydov et al., 2010), particularly when used as a proxy term for not developing mental health difficulties following adversity or trauma. Our findings suggest that although resilience and mental health are associated, it is possible to have resilience and adopt coping strategies as well as experience mental health challenges. This is especially evident in the qualitative findings, which indicate how barriers to effective coping can be increased by multiple and complex difficulties. Our findings also highlight areas of gaps in evidence, whereby forcibly displaced persons residing in low-income countries, URMs and

older adults are especially underrepresented. There is also a lack of systemic measures of resilience being used in the adult forcibly displaced literature, despite culture and relationships being important factors in resilience (Ungar, 2006).

In this vein, the portfolio also suggests a key role for cultural and identity in the expression of resilience, influencing appraisals and adoption of coping strategies. Limited data precluded culture or country of origin to be explored in the systematic review, however evidence from the qualitative study would support culturally specific barriers and ways of coping. Qualitative methods allowed for exploration of the mechanisms and context of how resilience and coping relate to wellbeing. The findings support the need for culturally informed, as well as trauma- and attachment-informed, care to promote URM wellbeing and relational experiences of safety.

References

- Alasuutari, P. (1995). Researching culture: Qualitative method and cultural studies. Sage.
- Alvesson, M., & Sköldberg, K. (2017). *Reflexive methodology: New vistas for qualitative research*. sage.
- Asgary, R., & Segar, N. (2011). Barriers to health care access among refugee asylum seekers. *Journal of health care for the poor and underserved*, *22*(2), 506-522.
- Baauw, A., Kist-van Holthe, J., Slattery, B., Heymans, M., Chinapaw, M., & van Goudoever, H. (2019). Health needs of refugee children identified on arrival in reception countries: a systematic review and meta-analysis. *BMJ paediatrics open*, *3*(1).
- Beck, C. T. (1993). Qualitative research: The evaluation of its credibility, fittingness, and auditability. *Western journal of nursing research*, *15*(2), 263-266.
- Blackmore, R., Boyle, J. A., Fazel, M., Ranasinha, S., Gray, K. M., Fitzgerald, G., Misso, M., & Gibson-Helm, M. (2020). The prevalence of mental illness in refugees and asylum seekers: A systematic review and meta-analysis. *PLoS medicine*, *17*(9), e1003337.
- BPS. (2021). BPS Code of Human Research Ethics (The British psychological society, Issue.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101.
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative research* in sport, exercise and health, 11(4), 589-597.
- Braun, V., & Clarke, V. (2021a). Can I use TA? Should I use TA? Should I not use TA?

 Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Counselling and psychotherapy research*, *21*(1), 37-47.
- Braun, V., & Clarke, V. (2021b). The ebbs and flows of qualitative research: Time, change and the slow wheel of interpretation. *Temporality in Qualitative Inquiry. Theories, Methods and Practices. Clift BC, Gore J, Gustaffson S, Bekker S, Battle IC, Hatchard J, Editor. London: Routledge.*
- Braun, V., & Clarke, V. (2021c). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative research in psychology*, *18*(3), 328-352.
- Braun, V., & Clarke, V. (2021d). To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative* research in sport, exercise and health, 13(2), 201-216.
- Braun, V., & Clarke, V. (2022). Thematic analysis: a practical guide. SAGE.

- Braun, V., & Clarke, V. (2023). Toward good practice in thematic analysis: Avoiding common problems and be (com) ing a knowing researcher. *International Journal of Transgender Health*, *24*(1), 1-6.
- Braun, V., Clarke, V., & Hayfield, N. (2022). 'A starting point for your journey, not a map':

 Nikki Hayfield in conversation with Virginia Braun and Victoria Clarke about thematic
 analysis. *Qualitative research in psychology*, *19*(2), 424-445.
- Braun, V., Clarke, V., Hayfield, N., & Terry, G. (2019). Thematic Analysis. In P. Liamputtong (Ed.), *Handbook of Research Methods in Health Social Sciences* (pp. 843-860). Springer Singapore. https://doi.org/10.1007/978-981-10-5251-4_103
- Braun, V., Clarke, V., & Rance, N. (2014). How to use thematic analysis with interview data (process research) In Vossler A., Moller N.(Eds.), The counselling and psychotherapy research handbook (pp. 183–197). In: SAGE Publications.[Google Scholar].
- Byrne, D. (2022). A worked example of Braun and Clarke's approach to reflexive thematic analysis. *Quality & quantity*, *56*(3), 1391-1412.
- Byrow, Y., Pajak, R., Specker, P., & Nickerson, A. (2020). Perceptions of mental health and perceived barriers to mental health help-seeking amongst refugees: A systematic review. *Clinical psychology review*, *75*, 101812.
- Campbell, K. A., Orr, E., Durepos, P., Nguyen, L., Li, L., Whitmore, C., Gehrke, P., Graham, L., & Jack, S. M. (2021). Reflexive thematic analysis for applied qualitative health research. *The Qualitative Report*, *26*(6), 2011-2028.
- Clarke, V., & Braun, V. (2013). Successful qualitative research: A practical guide for beginners. *Successful qualitative research*, 1-400.
- Clay, R., Knibbs, J., & Joseph, S. (2009). Measurement of posttraumatic growth in young people: A review. *Clinical child psychology and psychiatry*, *14*(3), 411-422.
- Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and anxiety*, *18*(2), 76-82.
- Crotty, M. J. (1998). The foundations of social research: Meaning and perspective in the research process. *The foundations of social research*, 1-256.
- Davydov, D. M., Stewart, R., Ritchie, K., & Chaudieu, I. (2010). Resilience and mental health. *Clinical psychology review*, *30*(5), 479-495.
- Denzin, N. K., & Lincoln, Y. S. (2011). The Sage handbook of qualitative research. sage.
- Eldh, A. C., Årestedt, L., & Berterö, C. (2020). Quotations in qualitative studies: Reflections on constituents, custom, and purpose. *International journal of qualitative methods*, *19*, 1609406920969268.

- Ellis, B. H., Winer, J. P., Murray, K., & Barrett, C. (2019). Understanding the mental health of refugees: Trauma, stress, and the cultural context. *The Massachusetts General Hospital textbook on diversity and cultural sensitivity in mental health*, 253-273.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, *5*(1), 1-4.
- Fazel, M., Reed, R. V., Panter-Brick, C., & Stein, A. (2012). Mental health of displaced and refugee children resettled in high-income countries: risk and protective factors. *The Lancet*, *379*(9812), 266-282.
- Fazel, M., Wheeler, J., & Danesh, J. (2005). Prevalence of serious mental disorder in 7000 refugees resettled in western countries: a systematic review. *The Lancet*, *365*(9467), 1309-1314.
- Folkman, S., & Moskowitz, J. T. (2004). Coping: Pitfalls and promise. *Annu. Rev. Psychol.*, 55, 745-774.
- Frowe, I. (2001). Language and educational research. *Journal of philosophy of education*, *35*(2), 175-186.
- Gorst-Unsworth, C., & Goldenberg, E. (1998). Psychological sequelae of torture and organised violence suffered by refugees from Iraq: Trauma-related factors compared with social factors in exile. *The British Journal of Psychiatry*, *172*(1), 90-94.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, *2*(163-194), 105.
- Guba, E. G., & Lincoln, Y. S. (2001). Guidelines and checklist for constructivist (aka fourth generation) evaluation. In.
- Hawkes, C., Norris, K., Joyce, J., & Paton, D. (2021). Exploring resilience, coping and wellbeing in women of refugee background resettled in regional Australia. *Frontiers in psychology*, *12*, 704570.
- Hodes, M., & Vostanis, P. (2019). Practitioner Review: Mental health problems of refugee children and adolescents and their management. *Journal of child psychology and psychiatry*, *60*(7), 716-731.
- Home Office. (2023). *Immigration system statistics, year ending June 2023: Summary of latest statistics.* https://www.gov.uk/government/statistics/immigration-system-statistics-year-ending-march-2023/summary-of-latest-statistics
- Huijts, I., Kleijn, W. C., van Emmerik, A. A., Noordhof, A., & Smith, A. J. (2012). Dealing with man-made trauma: The relationship between coping style, posttraumatic stress, and quality of life in resettled, traumatized refugees in the Netherlands. *Journal of traumatic stress*, *25*(1), 71-78.

- Huynh, K. (2015). Child Forced Migrants: Bio-politics, Autonomy and Ambivalence. In K.Huynh, B. d'Costa, & K. Lee-Koo (Eds.), *Children and Global Conflict* (pp. 159-184).Cambridge University Press.
- Jannesari, S., Hatch, S., Prina, M., & Oram, S. (2020). Post-migration social—environmental factors associated with mental health problems among asylum seekers: A systematic review. *Journal of immigrant and minority health*, *22*, 1055-1064.
- Joy, E., Braun, V., & Clarke, V. (2023). Doing reflexive thematic analysis: A reflexive account. In F. Meyer & K. Meissel (Eds.), *Research methods for education and the social disciplines in Aotearoa New Zealand*. NZCER Press. .
- Kien, C., Sommer, I., Faustmann, A., Gibson, L., Schneider, M., Krczal, E., Jank, R., Klerings, I., Szelag, M., & Kerschner, B. (2019). Prevalence of mental disorders in young refugees and asylum seekers in European Countries: a systematic review. *European child & adolescent psychiatry*, 28, 1295-1310.
- Kumar, G. S., Beeler, J. A., Seagle, E. E., & Jentes, E. S. (2021). Long-term physical health outcomes of resettled refugee populations in the United States: a scoping review. *Journal of immigrant and minority health*, *23*, 813-823.
- Lebano, A., Hamed, S., Bradby, H., Gil-Salmerón, A., Durá-Ferrandis, E., Garcés-Ferrer, J., Azzedine, F., Riza, E., Karnaki, P., & Zota, D. (2020). Migrants' and refugees' health status and healthcare in Europe: a scoping literature review. *BMC public health*, 20(1), 1-22.
- Lefebvre, C., Glanville, J., Briscoe, S., Featherstone, R., Littlewood, A., Metzendorf, M.-I., Noel-Storr, A., Paynter, R., Rader, T., Thomas, J., & Wieland, L. (2024). Technical Supplement to Chapter 4: Searching for and selecting studies. In T. J. Higgins JPT, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (Ed.), Cochrane Handbook for Systematic Reviews of Interventions Version 6.4 (updated February 2024). Cochrane, 2024. Available from www.training.cochrane.org/handbook.
- Li, S. S., Liddell, B. J., & Nickerson, A. (2016). The relationship between post-migration stress and psychological disorders in refugees and asylum seekers. *Current psychiatry reports*, *18*, 1-9.
- Lincoln, Y. S., & Guba, E. G. (2016). *The constructivist credo*. Routledge.
- Losantos, M., Montoya, T., Exeni, S., Santa Cruz, M., & Loots, G. (2016). Applying social constructionist epistemology to research in psychology. *International Journal of Collaborative Practice*, *6*(1), 29-42.
- Marquez, P. V. (2016). Mental Health Among Displaced People and Refugees.

- McFarlane, C. A., & Kaplan, I. (2012). Evidence-based psychological interventions for adult survivors of torture and trauma: a 30-year review. *Transcultural Psychiatry*, *49*(3-4), 539-567.
- McGregor, L. S., Melvin, G. A., & Newman, L. K. (2015). Familial separations, coping styles, and PTSD symptomatology in resettled refugee youth. *The Journal of nervous and mental disease*, *203*(6), 431-438.
- Miller, K. E. (2004). Beyond the frontstage: Trust, access, and the relational context in research with refugee communities. *American Journal of Community Psychology*, *33*, 217-227.
- Mitra, R., & Hodes, M. (2019). Prevention of psychological distress and promotion of resilience amongst unaccompanied refugee minors in resettlement countries. *Child:* care, health and development, 45(2), 198-215.
- Moon, K., & Blackman, D. (2014). A guide to understanding social science research for natural scientists. *Conservation biology*, *28*(5), 1167-1177.
- Morina, N., Akhtar, A., Barth, J., & Schnyder, U. (2018). Psychiatric disorders in refugees and internally displaced persons after forced displacement: a systematic review. Frontiers in Psychiatry, 9, 433.
- Morse, J. M. (1997). "Perfectly healthy, but dead": the myth of inter-rater reliability. In (Vol. 7, pp. 445-447): Sage Publications Sage CA: Thousand Oaks, CA.
- Ní Raghallaigh, M. (2014). The causes of mistrust amongst asylum seekers and refugees: Insights from research with unaccompanied asylum-seeking minors living in the Republic of Ireland. *Journal of Refugee Studies*, *27*(1), 82-100.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International journal of qualitative methods*, *16*(1), 1609406917733847.
- O'Connor, C., & Joffe, H. (2020). Intercoder reliability in qualitative research: debates and practical guidelines. *International journal of qualitative methods*, *19*, 1609406919899220.
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., & Brennan, S. E. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *International journal of surgery, 88*, 105906.
- Patanè, M., Ghane, S., Karyotaki, E., Cuijpers, P., Schoonmade, L., Tarsitani, L., & Sijbrandij, M. (2022). Prevalence of mental disorders in refugees and asylum seekers: a systematic review and meta-analysis. *Global Mental Health*, 1-14.

- Patton, M. Q. (2014). *Qualitative research & evaluation methods: Integrating theory and practice.* Sage publications.
- Porter, M., & Haslam, N. (2005). Predisplacement and postdisplacement factors associated with mental health of refugees and internally displaced persons: a meta-analysis. *Jama*, *294*(5), 602-612.
- QSR International. (2022). NVivo Mac Release 1.7.1. In
- Reed, R. V., Fazel, M., Jones, L., Panter-Brick, C., & Stein, A. (2012). Mental health of displaced and refugee children resettled in low-income and middle-income countries: risk and protective factors. *The Lancet*, *379*(9812), 250-265.
- Rice, V., & Liu, B. (2016). Personal resilience and coping with implications for work. Part I: a review. *Work*, *54*(2), 325-333.
- Rodriguez, I. M., & Dobler, V. (2021). Survivors of hell: resilience amongst unaccompanied minor refugees and implications for treatment-a narrative review. *Journal of Child & Adolescent Trauma*, *14*, 559-569.
- Rohlof, H. G., Knipscheer, J. W., & Kleber, R. J. (2014). Somatization in refugees: a review. Social psychiatry and psychiatric epidemiology, 49, 1793-1804.
- Sandelowski, M. (1994). Focus on qualitative methods. The use of quotes in qualitative research. *Research in nursing & health*, *17*(6), 479-482.
- Satinsky, E., Fuhr, D. C., Woodward, A., Sondorp, E., & Roberts, B. (2019). Mental health care utilisation and access among refugees and asylum seekers in Europe: a systematic review. *Health Policy*, *123*(9), 851-863.
- Seagle, E. E., Dam, A. J., Shah, P. P., Webster, J. L., Barrett, D. H., Ortmann, L. W., Cohen, N. J., & Marano, N. N. (2020). Research ethics and refugee health: a review of reported considerations and applications in published refugee health literature, 2015-2018. Conflict and health, 14, 1-15.
- Siriwardhana, C., Ali, S. S., Roberts, B., & Stewart, R. (2014). A systematic review of resilience and mental health outcomes of conflict-driven adult forced migrants. *Conflict and health*, *8*(1), 1-14.
- Sleijpen, M., Boeije, H. R., Kleber, R. J., & Mooren, T. (2016). Between power and powerlessness: a meta-ethnography of sources of resilience in young refugees. *Ethnicity & health*, *21*(2), 158-180.
- Sleijpen, M., June ter Heide, F. J., Mooren, T., Boeije, H. R., & Kleber, R. J. (2013).

 Bouncing forward of young refugees: A perspective on resilience research directions.

 European Journal of Psychotraumatology, 4(1), 20124.

- Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International review of sport and exercise psychology*, *11*(1), 101-121.
- Smith, B., & Sparkes, A. C. (2006). Narrative inquiry in psychology: Exploring the tensions within. *Qualitative research in psychology*, *3*(3), 169-192.
- Ssenyonga, J., Owens, V., & Olema, D. K. (2013). Posttraumatic cognitions, avoidance coping, suicide, and posttraumatic stress disorder among adolescent refugees. *Procedia-Social and Behavioral Sciences*, 82, 261-265.
- Steel, Z., Chey, T., Silove, D., Marnane, C., Bryant, R. A., & Van Ommeren, M. (2009). Association of torture and other potentially traumatic events with mental health outcomes among populations exposed to mass conflict and displacement: a systematic review and meta-analysis. *Jama*, *302*(5), 537-549.
- Terry, G., & Hayfield, N. (2020). Reflexive thematic analysis. In M. R. M. Ward & S. Delamont (Eds.), *Handbook of Qualitative Research in Education*. Edward Elgar Publishing.
- Terry, G., Hayfield, N., Clarke, V., & Braun, V. (2017). Thematic Analysis. In C. Willig & W. S. Rogers (Eds.), *The SAGE Handbook of Qualitative Research in Psychology*. SAGE.
- Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International journal for quality in health care*, *19*(6), 349-357.
- Tribe, R., & Lane, P. (2009). Working with interpreters across language and culture in mental health. *Journal of mental health*, *18*(3), 233-241.
- UK Parliament. (2023). *House of Commons library: Asylum statistics*https://commonslibrary.parliament.uk/research-briefings/sn01403/
- Ungar, M. (2006). Nurturing hidden resilience in at-risk youth in different cultures. *Journal of the Canadian Academy of Child and adolescent Psychiatry*, *15*(2), 53.
- UNHCR. (2018). Desperate journeys: Refugees and migrants arriving in Europe and at Europe's borders. https://www.unhcr.org/desperatejourneys/
- UNHCR. (2023a). 2023: A Moment of Truth for Global Displacement.

 https://www.unhcr.org/spotlight/2023/01/2023-a-moment-of-truth-for-global-displacement/#:~:text=In%202023%2C%20UNHCR%20will%20enter,%2C%20Kenya%2C%20Myanmar%20and%20Thailand.
- UNHCR. (2023b). Europe: GLOBAL REPORT 2022. https://reporting.unhcr.org/europe

- UNHCR. (2023c). Global statistics on forcibly displaced people.

 https://www.unhcr.org/refugee-statistics/insights/forcibly-displaced-and-stateless-persons/visualisation-world.html?situation=101
- UNHCR. (2023d). Refugee Statistics. https://www.unhcr.org/refugee-statistics/
- UNHCR. (2024a). *Data and Statistics: Mid-Year Trends 2023*. https://www.unhcr.org/mid-year-trends
- UNHCR. (2024b). Persons who are forcibly displaced, stateless and others of concern to UNHCR. https://www.unhcr.org/refugee-statistics/methodology/definition/
- UNHCR. (2024c). What is the difference between population statistics for forcibly displaced and the population that UNHCR protects and/or assists?

 https://www.unhcr.org/refugee-statistics/insights/explainers/forcibly-displaced-pocs.html
- Urbański, P. K., Schroeder, K., Nadolska, A., & Wilski, M. (2023). Symptoms of depression and anxiety among Ukrainian children displaced to Poland following the outbreak of the Russo-Ukrainian war: Associations with coping strategies and resilience. *Applied Psychology: Health and Well-Being*.
- Vindevogel, S. (2017). Resilience in the context of war: A critical analysis of contemporary conceptions and interventions to promote resilience among war-affected children and their surroundings. *Peace and Conflict: Journal of Peace Psychology*, *23*(1), 76.
- Wessells, M. (2012). Psychosocial well-being and the integration of war-affected children:

 Toward a community resilience approach. *Re-member: Rehabilitation, reintegration and reconciliation of war-affected children*, 57-75.
- Willig, C. (2013). *EBOOK: introducing qualitative research in psychology*. McGraw-hill education (UK).
- Woltin, K.-A., Sassenberg, K., & Albayrak, N. (2018). Regulatory focus, coping strategies and symptoms of anxiety and depression: A comparison between Syrian refugees in Turkey and Germany. *PLoS ONE*, *13*(10), e0206522.
- Yardley, L. (2000). Dilemmas in qualitative health research. *Psychology and health*, *15*(2), 215-228.

Appendices

Appendix A: Author guidelines for submission to *The Journal of Affective Disorders*

Appendix B: PRISMA checklists

Appendix C: National Institute of Health (NIH) Quality Assessment Tool for Observational

Cohort and Cross-Sectional Studies

Appendix D: Funnel plots

Appendix E: Author guidelines for submission to the *Journal of Transcultural Psychiatry*

Appendix F: Consolidated criteria for reporting qualitative studies (COREQ) checklist

Appendix G: Participant information sheets

Appendix H: Consent form

Appendix I: Guide for interpreters

Appendix J: Participant questionnaire

Appendix K: Interview schedule

Appendix L: Letter of ethical approval

Appendix M: Local approval

Appendix A: Author guidelines for submission to *The Journal of Affective Disorders*

[accessed from: https://www.sciencedirect.com/journal/journal-of-affective-disorders/publish/guide-for-authors]

Description

The Journal of Affective Disorders publishes papers concerned with affective disorders in the widest sense: depression, mania, anxiety and panic. It is interdisciplinary and aims to bring together different approaches for a diverse readership. High quality papers will be accepted dealing with any aspect of affective disorders, including biochemistry, pharmacology, endocrinology, genetics, statistics, epidemiology, psychodynamics, classification, clinical studies and studies of all types of treatment.

Submission checklist

You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

Ensure that the following items are present:

One author has been designated as the corresponding author with contact details:

- E-mail address
- Full postal address

All necessary files have been uploaded:

Manuscript:

- Include keywords
- All figures (include relevant captions)
- All tables (including titles, description, footnotes)
- Ensure all figure and table citations in the text match the files provided
- Indicate clearly if color should be used for any figures in print

Author Statement Contributors, Role of the Funding Source and Acknowledgements are mandatory and must be retained in the Author Statement (submission file type) under their respective headings.

Graphical Abstracts / Highlights files (where applicable)

Supplemental files (where applicable)

Further considerations

- Manuscript has been 'spell checked' and 'grammar checked'
- All references mentioned in the Reference List are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Internet)
- A competing interests statement is provided, even if the authors have no competing interests to declare
- Journal policies detailed in this guide have been reviewed
- Referee suggestions and contact details provided, based on journal requirements

For further information, visit our Support Center.

Before you begin Ethics in publishing

Please see our information on Ethics in publishing.

Ethical Considerations

Authors of reports on human studies, especially those involving placebo, symptom provocation, drug discontinuation, or patients with disorders that may impair decision-making

capability, should consider the ethical issues related to the work presented and include (in the Methods and Materials section of their manuscript) detailed information on the informed consent process, including the method or methods used to assess the subject's capacity to give informed consent, and safeguards included in the study design for protection of human subjects. Specifically, authors should consider all ethical issues relevant to their research, and briefly address each of these in their reports. When relevant patient follow-up data are available, this should also be reported. Specifically, investigators reporting on research involving human subjects or animals must have prior approval from an institutional review board. This approval should be mentioned in the methods section of the manuscript. In countries where institutional review boards are not available; the authors must include a statement that research was conducted in accordance with the Helsinki Declaration as revised 1989. All studies involving animals must state that the authors followed the guidelines for the use and care of laboratory animals of the author's institution or the National Research Council or any national law pertaining to animal research care.

Declaration of interest

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential competing interests include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in two places: 1. A summary declaration of interest statement in the title page file (if double anonymized) or the manuscript file (if single anonymized). If there are no interests to declare then please state this: 'Declarations of interest: none'. 2. Detailed disclosures as part of a separate Declaration of Interest form, which forms part of the journal's official records. It is important for potential interests to be declared in both places and that the information matches. More information.

Declaration of generative AI in scientific writing

The below guidance only refers to the writing process, and not to the use of Al tools to analyse and draw insights from data as part of the research process.

Where authors use generative artificial intelligence (AI) and AI-assisted technologies in the writing process, authors should only use these technologies to improve readability and language. Applying the technology should be done with human oversight and control, and authors should carefully review and edit the result, as AI can generate authoritative-sounding output that can be incorrect, incomplete or biased. AI and AI-assisted technologies should not be listed as an author or co-author, or be cited as an author. Authorship implies responsibilities and tasks that can only be attributed to and performed by humans, as outlined in Elsevier's AI policy for authors.

Authors should disclose in their manuscript the use of AI and AI-assisted technologies in the writing process by following the instructions below. A statement will appear in the published work. Please note that authors are ultimately responsible and accountable for the contents of the work.

Disclosure instructions

Authors must disclose the use of generative AI and AI-assisted technologies in the writing process by adding a statement at the end of their manuscript in the core manuscript file, before the References list. The statement should be placed in a new section entitled 'Declaration of Generative AI and AI-assisted technologies in the writing process'.

Statement: During the preparation of this work the author(s) used [NAME TOOL / SERVICE] in order to [REASON]. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

This declaration does not apply to the use of basic tools for checking grammar, spelling, references etc. If there is nothing to disclose, there is no need to add a statement.

Submission Declaration

Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis, see 'Multiple, redundant or concurrent publication' for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify originality, your article may be checked by the originality detection service Crossref Similarity Check.

Preprints

Please note that preprints can be shared anywhere at any time, in line with Elsevier's sharing policy. Sharing your preprints e.g. on a preprint server will not count as prior publication (see 'Multiple, redundant or concurrent publication' for more information).

Use of inclusive language

Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Content should make no assumptions about the beliefs or commitments of any reader; contain nothing which might imply that one individual is superior to another on the grounds of age, gender, race, ethnicity, culture, sexual orientation, disability or health condition; and use inclusive language throughout. Authors should ensure that writing is free from bias, stereotypes, slang, reference to dominant culture and/or cultural assumptions. We advise to seek gender neutrality by using plural nouns ("clinicians, patients/clients") as default/wherever possible to avoid using "he, she," or "he/she." We recommend avoiding the use of descriptors that refer to personal attributes such as age, gender, race, ethnicity, culture, sexual orientation, disability or health condition unless they are relevant and valid. When coding terminology is used, we recommend to avoid offensive or exclusionary terms such as "master". "slave". "blacklist" and "whitelist". We suggest using alternatives that are more appropriate and (self-) explanatory such as "primary", "secondary", "blocklist" and "allowlist". These guidelines are meant as a point of reference to help identify appropriate language but are by no means exhaustive or definitive.

Reporting sex- and gender-based analyses Reporting guidance

For research involving or pertaining to humans, animals or eukaryotic cells, investigators should integrate sex and gender-based analyses (SGBA) into their research design according to funder/sponsor requirements and best practices within a field. Authors should address the sex and/or gender dimensions of their research in their article. In cases where they cannot, they should discuss this as a limitation to their research's generalizability. Importantly, authors should explicitly state what definitions of sex and/or gender they are applying to enhance the precision, rigor and reproducibility of their research and to avoid ambiguity or conflation of terms and the constructs to which they refer (see Definitions section below). Authors can refer to the Sex and Gender Equity in Research (SAGER) guidelines and the SAGER guidelines checklist. These offer systematic approaches to the use and editorial review of sex and gender information in study design, data analysis, outcome reporting and research interpretation - however, please note there is no single, universally agreed-upon set of guidelines for defining sex and gender.

Definitions

Sex generally refers to a set of biological attributes that are associated with physical and physiological features (e.g., chromosomal genotype, hormonal levels, internal and external anatomy). A binary sex categorization (male/female) is usually designated at birth (""sex assigned at birth""), most often based solely on the visible external anatomy of a newborn. Gender generally refers to socially constructed roles, behaviors, and identities of women,

men and gender-diverse people that occur in a historical and cultural context and may vary across societies and over time. Gender influences how people view themselves and each other, how they behave and interact and how power is distributed in society. Sex and gender are often incorrectly portrayed as binary (female/male or woman/man) and unchanging whereas these constructs actually exist along a spectrum and include additional sex categorizations and gender identities such as people who are intersex/have differences of sex development (DSD) or identify as non-binary. Moreover, the terms ""sex"" and ""gender"" can be ambiguous—thus it is important for authors to define the manner in which they are used. In addition to this definition guidance and the SAGER guidelines, the resources on this page offer further insight around sex and gender in research studies.

Author contributions

For transparency, we require corresponding authors to provide co-author contributions to the manuscript using the relevant CRediT roles. The <u>CRediT taxonomy</u> includes 14 different roles describing each contributor's specific contribution to the scholarly output. The roles are: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; and Writing - review & editing. Note that not all roles may apply to every manuscript, and authors may have contributed through multiple roles. More details and an example.

Changes to authorship

Authors are expected to consider carefully the list and order of authors before submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only before the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the corresponding author: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors **after** the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

Article transfer service

This journal uses the Elsevier Article Transfer Service to find the best home for your manuscript. This means that if an editor feels your manuscript is more suitable for an alternative journal, you might be asked to consider transferring the manuscript to such a journal. The recommendation might be provided by a Journal Editor, a dedicated <u>Scientific Managing Editor</u>, a tool assisted recommendation, or a combination. If you agree, your manuscript will be transferred, though you will have the opportunity to make changes to the manuscript before the submission is complete. Please note that your manuscript will be independently reviewed by the new journal. More information.

Copyright

Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (see <u>more information</u> on this). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. <u>Permission</u> of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations. If excerpts from other copyrighted works are included, the

author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has <u>preprinted forms</u> for use by authors in these cases.

For gold open access articles: Upon acceptance of an article, authors will be asked to complete a 'License Agreement' (<u>more information</u>). Permitted third party reuse of gold open access articles is determined by the author's choice of <u>user license</u>.

Author rights

As an author you (or your employer or institution) have certain rights to reuse your work. More information.

Elsevier supports responsible sharing

Find out how you can share your research published in Elsevier journals.

Role of the funding source

You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement, it is recommended to state this.

Open access

Please visit our <u>Open Access page</u> for more information about open access publishing in this journal.

Elsevier Researcher Academy

Researcher Academy is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

Language (usage and editing services)

Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the <u>Language Editing service</u> available from Elsevier's Language Services.

Submission

Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

Manuscript Submission

The *Journal of Affective Disorders* now proceeds totally online via an electronic submission system. Mail submissions will no longer be accepted. By accessing the online submission system, https://www.editorialmanager.com/JAFD/default.aspx, you will be guided stepwise through the creation and uploading of the various files. When submitting a manuscript online, authors need to provide an electronic version of their manuscript and any accompanying figures and tables.

The author should select from a list of scientific classifications, which will be used to help the editors select reviewers with appropriate expertise, and an article type for their manuscript. Once the uploading is done, the system automatically generates an electronic (PDF) proof, which is then used for reviewing. All correspondence, including the Editor's decision and

request for revisions, will be processed through the system and will reach the corresponding author by e-mail.

Once a manuscript has successfully been submitted via the online submission system authors may track the status of their manuscript using the online submission system (details will be provided by e-mail). If your manuscript is accepted by the journal, subsequent tracking facilities are available on Elsevier's Author Gateway, using the unique reference number provided by Elsevier and corresponding author name (details will be provided by e-mail).

Authors may send queries concerning the submission process or journal procedures to our Editors-in-Chief

Paolo Brambilla: <u>paolo.brambilla1@unimi.it</u> or Jair Soares: Jair.C.Soares@uth.tmc.edu.

Please submit your article via https://www.editorialmanager.com/JAFD/default.aspx.

Types of Papers

The Journal primarily publishes:

Full-Length Research Papers (up to 5000 words, excluding references and up to 6 tables/figures)

Review Articles and Meta-analyses (up to 8000 words, excluding references and up to 10 tables/figures)

Short Communications (up to 2000 words, 20 references, 2 tables/figures)

Correspondence (up to 1000 words, 10 references, 1 table/figure).

At the discretion of the accepting Editor-in-Chief, and/or based on reviewer feedback, authors may be allowed fewer or more than these guidelines.

Retraction Policy

It is a general principle of scholarly communication that the editor of a learned journal is solely and independently responsible for deciding which articles submitted to the journal shall be published. In making this decision the editor is guided by policies of the journal's editorial board and constrained by such legal requirements in force regarding libel, copyright infringement and plagiarism. Although electronic methods are available to detect plagiarism and duplicate publications, editors nonetheless rely in large part on the integrity of authors to fulfil their responsibilities within the requirements of publication ethics and only submit work to which the can rightfully claim authorship and which has not previously been published.

An outcome of this principle is the importance of the scholarly archive as a permanent, historic record of the transactions of scholarship. Articles that have been published shall remain extant, exact and unaltered as far as is possible. However, very occasionally circumstances may arise where an article is published that must later be retracted or even removed. Such actions must not be undertaken lightly and can only occur under exceptional circumstances, such as: • Article Withdrawal: Only used for Articles in Press which represent early versions of articles and sometimes contain errors, or may have been accidentally submitted twice. Occasionally, but less frequently, the articles may represent infringements of professional ethical codes, such as multiple submission, bogus claims of authorship, plagiarism, fraudulent use of data or the like. • Article Retraction: Infringements of professional ethical codes, such as multiple submission, bogus claims of authorship, plagiarism, fraudulent use of data or the like. Occasionally a retraction will be used to correct errors in submission or publication. • Article Removal: Legal limitations upon the publisher, copyright holder or author(s). • Article Replacement: Identification of false or inaccurate data

that, if acted upon, would pose a serious health risk. For the full policy and further details, please refer https://www.elsevier.com/about/publishing-guidelines/policies/article-withdrawal

Suggesting reviewers

Please submit the names and institutional e-mail addresses of several potential reviewers.

You should not suggest reviewers who are colleagues, or who have co-authored or collaborated with you during the last three years. Editors do not invite reviewers who have potential competing interests with the authors. Further, in order to provide a broad and balanced assessment of the work, and ensure scientific rigor, please suggest diverse candidate reviewers who are located in different countries/regions from the author group. Also consider other diversity attributes e.g. gender, race and ethnicity, career stage, etc. Finally, you should not include existing members of the journal's editorial team, of whom the journal are already aware.

Note: the editor decides whether or not to invite your suggested reviewers.

Preparation of Manuscripts

Articles should be in English. The title page should appear as a separate sheet bearing title (without article type), author names and affiliations, and a footnote with the corresponding author's full contact information, including address, telephone and fax numbers, and e-mail address (failure to include an e-mail address can delay processing of the manuscript).

Papers should be divided into sections headed by a caption (e.g., Introduction, Methods, Results, Discussion). A structured abstract of no more than 250 words should appear on a separate page with the following headings and order: Background, Methods, Results, Limitations, Conclusions (which should contain a statement about the clinical relevance of the research). A list of three to six key words should appear under the abstract. Authors should note that the 'limitations' section both in the discussion of the paper AND IN A STRUCTURED ABSTRACT are essential. Failure to include it may delay in processing the paper, decision making and final publication.

Figures and Photographs

Figures and Photographs of good quality should be submitted online as a separate file. Please use a lettering that remains clearly readable even after reduction to about 66%. For every figure or photograph, a legend should be provided. All authors wishing to use illustrations already published must first obtain the permission of the author and publisher and/or copyright holders and give precise reference to the original work. This permission must include the right to publish in electronic media.

Tables

Tables should be numbered consecutively with Arabic numerals and must be cited in the text in sequence. Each table, with an appropriate brief legend, comprehensible without reference to the text, should be typed on a separate page and uploaded online. Tables should be kept as simple as possible and wherever possible a graphical representation used instead. Table titles should be complete but brief. Information other than that defining the data should be presented as footnotes.

Please refer to the generic Elsevier artwork instructions: http://authors.elsevier.com/artwork/jad.

Preparation of supplementary data

Elsevier accepts electronic supplementary material to support and enhance your scientific research. Supplementary files offer the author additional possibilities to publish supporting applications, movies, animation sequences, high-resolution images, background datasets, sound clips and more.

Supplementary files supplied will be published online alongside the electronic version of your article in Elsevier web products, including ScienceDirect: https://www.sciencedirect.com. In order to ensure that your submitted material is directly usable, please ensure that data is provided in one of our recommended file formats. Authors should submit the material in electronic format together with the article and supply a concise and descriptive caption for each file. For more detailed instructions please visit our Author Gateway at: https://www.elsevier.com/authors.

Colour reproduction

The Journal of Affective Disorders is now also included in a new initiative from Elsevier: 'Colourful e-Products'. Through this initiative, figures that appear in black & white in print can appear in colour, online, in ScienceDirect at https://www.sciencedirect.com.

There is no extra charge for authors who participate.

For colour reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article. Please indicate your preference for colour in print or on the Web only. Because of technical complications which can arise by converting colour figures to "grey scale" (for the printed version should you not opt for colour in print) please submit in addition usable black and white versions of all the colour illustrations. For further information on the preparation of electronic artwork, please see http://authors.elsevier.com/artwork/jad.

Queries

For questions about the editorial process (including the status of manuscripts under review) or for technical support on submissions, please visit our <u>Support Center</u>.

Peer review

This journal operates a single anonymized review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. Editors are not involved in decisions about papers which they have written themselves or have been written by family members or colleagues or which relate to products or services in which the editor has an interest. Any such submission is subject to all of the journal's usual procedures, with peer review handled independently of the relevant editor and their research groups. More information on types of peer review.

Use of word processing software

It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

Highlights

Highlights are mandatory for this journal as they help increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the

novel results of your research as well as new methods that were used during the study (if any). Please have a look at the <u>example Highlights</u>.

Highlights should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point).

Abstract

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

Graphical abstract

Although a graphical abstract is optional, its use is encouraged as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum of 531×1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5×13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. You can view Example Graphical Abstracts on our information site.

Keywords

Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Formatting of funding sources

List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, it is recommended to include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Nomenclature and units

Follow internationally accepted rules and conventions: use the international system of units (SI). If other quantities are mentioned, give their equivalent in SI. You are urged to consult IUPAC: Nomenclature of Organic Chemistry for further information.

Math formulae

Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Artwork

Electronic artwork

General points

- Make sure you use uniform lettering and sizing of your original artwork.
- Embed the used fonts if the application provides that option.
- Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Size the illustrations close to the desired dimensions of the published version.
- Submit each illustration as a separate file.
- Ensure that color images are accessible to all, including those with impaired color vision.

A detailed guide on electronic artwork is available.

You are urged to visit this site; some excerpts from the detailed information are given here.

Formats

If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format.

Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

EPS (or PDF): Vector drawings, embed all used fonts.

TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi. TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.

TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi.

Please do not:

• Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;

- Supply files that are too low in resolution;
- Submit graphics that are disproportionately large for the content.

Color artwork

Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. For color reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article. Please indicate your preference for color: in print or online only. Further information on the preparation of electronic artwork.

Tables

Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

References

Citation in text

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Data references

This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

Preprint references

Where a preprint has subsequently become available as a peer-reviewed publication, the formal publication should be used as the reference. If there are preprints that are central to your work or that cover crucial developments in the topic, but are not yet formally published, these may be referenced. Preprints should be clearly marked as such, for example by including the word preprint, or the name of the preprint server, as part of the reference. The preprint DOI should also be provided.

Reference management software

Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support <u>Citation Style Language styles</u>, such as <u>Mendeley</u>. Using citation plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide. If you use reference management software, please

ensure that you remove all field codes before submitting the electronic manuscript. <u>More information on how to remove field codes from different reference management software.</u>

Reference style

Text: All citations in the text should refer to:

- 1. Single author: the author's name (without initials, unless there is ambiguity) and the year of publication;
- 2. Two authors: both authors' names and the year of publication;
- 3. *Three or more authors:* first author's name followed by 'et al.' and the year of publication. Citations may be made directly (or parenthetically). Groups of references can be listed either first alphabetically, then chronologically, or vice versa.

Examples: 'as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999).... Or, as demonstrated (Jones, 1999; Allan, 2000)... Kramer et al. (2010) have recently shown ...' *List:* References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication. *Examples:*

Reference to a journal publication:

Van der Geer, J., Hanraads, J.A.J., Lupton, R.A., 2010. The art of writing a scientific article. J. Sci. Commun. 163, 51–59. https://doi.org/10.1016/j.Sc.2010.00372.

Reference to a journal publication with an article number:

Van der Geer, J., Hanraads, J.A.J., Lupton, R.A., 2018. The art of writing a scientific article. Heliyon. 19, e00205. https://doi.org/10.1016/j.heliyon.2018.e00205.

Reference to a book:

Strunk Jr., W., White, E.B., 2000. The Elements of Style, fourth ed. Longman, New York. Reference to a chapter in an edited book:

Mettam, G.R., Adams, L.B., 2009. How to prepare an electronic version of your article, in: Jones, B.S., Smith, R.Z. (Eds.), Introduction to the Electronic Age. E-Publishing Inc., New York, pp. 281–304.

Reference to a website:

Cancer Research UK, 1975. Cancer statistics reports for the UK.

http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/ (accessed 13 March 2003).

Reference to a dataset:

[dataset] Oguro, M., Imahiro, S., Saito, S., Nakashizuka, T., 2015. Mortality data for Japanese oak wilt disease and surrounding forest compositions. Mendeley Data, v1. https://doi.org/10.17632/xwj98nb39r.1.

Reference to software:

Coon, E., Berndt, M., Jan, A., Svyatsky, D., Atchley, A., Kikinzon, E., Harp, D., Manzini, G., Shelef, E., Lipnikov, K., Garimella, R., Xu, C., Moulton, D., Karra, S., Painter, S., Jafarov, E., & Molins, S., 2020. Advanced Terrestrial Simulator (ATS) v0.88 (Version 0.88). Zenodo. https://doi.org/10.5281/zenodo.3727209.

Video

Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the file in one of our recommended file formats with a preferred maximum size of 150 MB per file, 1 GB in total. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including ScienceDirect. Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will

be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our <u>video instruction pages</u>. Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

Data visualization

Include interactive data visualizations in your publication and let your readers interact and engage more closely with your research. Follow the instructions <u>here</u> to find out about available data visualization options and how to include them with your article.

Supplementary material

Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

Research data

This journal encourages and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experimentation that validate research findings, which may also include software, code, models, algorithms, protocols, methods and other useful materials related to the project.

Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the research data page.

Data linking

If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that gives them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the <u>database linking page</u>.

For supported data repositories a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

Research Elements

This journal enables you to publish research objects related to your original research – such as data, methods, protocols, software and hardware – as an additional paper in a <u>Research Elements journal</u>.

Research Elements is a suite of peer-reviewed, open access journals which make your research objects findable, accessible and reusable. Articles place research objects into context by providing detailed descriptions of objects and their application, and linking to the associated original research articles. Research Elements articles can be prepared by you, or by one of your collaborators.

During submission, you will be alerted to the opportunity to prepare and submit a manuscript to one of the Research Elements journals.

More information can be found on the Research Elements page.

Data statement

To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the Data Statement page.

After acceptance

Author disclosure

Funding body agreements and policies Elsevier has established agreements and developed policies to allow authors whose articles appear in journals published by Elsevier, to comply with potential manuscript archiving requirements as specified as conditions of their grant awards. To learn more about existing agreements and policies please visit https://www.elsevier.com/fundingbodies

The second aspect of the Journal's new policy concerns the Conflict of Interest. ALL authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations within three (3) years of beginning the work submitted that could inappropriately influence, or be perceived to influence, their work.

Examples of potential conflicts of interest which should be disclosed include employment, consultancies, stock ownership (except for personal investment purposes equal to the lesser of one percent (1%) or USD 5000), honoraria, paid expert testimony, patent applications, registrations, and grants. If there are no conflicts of interest, authors should state that there are none.

eg, Author Y owns shares in pharma company A. Author X and Z have consulted for pharma company B. All other authors declare that they have no conflicts of interest.

Finally, before the references, the Journal will publish Acknowledgements, in a separate section, and not as a footnote on the title page.

eg, We thank Mr A, who kindly provided the data necessary for our analysis, and Miss B, who assisted with the preparation and proof-reading of the manuscript.

The submitting author is also required to make a brief statement concerning each named author's contributions to the paper under the heading Contributors. This statement is for editorial purposes only and will not be published with the article.

eg, Author X designed the study and wrote the protocol. Author Y managed the literature searches and analyses. Authors X and Z undertook the statistical analysis, and author W wrote the first draft of the manuscript. All authors contributed to and have approved the final manuscript.

NB. During the online submission process the author will be prompted to upload these four mandatory author disclosures as separate items. They will be automatically incorporated in

the PDF builder of the online submission system. Please do not include in the main manuscripts.

Copyright Transfer

Upon acceptance of an article, you will be asked to transfer copyright (for more information on copyright see http://wwww.elsevier.com/copyright). This transfer will ensure the widest possible dissemination of information. If excerpts from other copyrighted works are included in the submission, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has preprinted forms for use by authors in these cases: contact Elsevier's Rights Department, Philadelphia, PA, USA: phone (+1) 215 238 7869, fax (+1) 215 238 2239, e-mail: healthpermissions@elsevier.com.

Requests for materials from other Elsevier publications may also be completed on-line via the Elsevier homepage https://www.elsevier.com/permissions

Online proof correction

To ensure a fast publication process of the article, we kindly ask authors to provide us with their proof corrections within two days. Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors.

If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.

We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

Reprints

The corresponding author, at no cost, will be provided with a PDF file of the article via e-mail. The PDF file is a watermarked version of the published article and includes a cover sheet with the journal cover image and a disclaimer outlining the terms and conditions of use. There are no page charges.

Author enquiries: For enquiries relating to the submission of articles please visit Elsevier's Author Gateway at http://authors.elsevier.com/journal/jad. The Author Gateway also provides the facility to track accepted articles and set up e-mail alerts to inform you of when an article's status has changed, as well as detailed artwork guidelines, copyright information, frequently asked questions and more. Contact details for questions arising after acceptance of an article, especially those relating to proofs, are provided after registration of an article for publication.

Offprints

The corresponding author will, at no cost, receive a customized <u>Share Link</u> providing 50 days free access to the final published version of the article on <u>ScienceDirect</u>. The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Corresponding authors who have published their article gold open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

Author inquiries
Visit the Elsevier Support Center to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch.

You can also check the status of your submitted article or find out when your accepted article will be published.

Appendix B: PRISMA checklists

PRISMA 2020 Main Checklist

TITLE			
Title	1	Identify the report as a systematic review.	Title
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Introduction
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Introduction
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Methods, selection criteria
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Methods, search strategy
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Methods, search strategy
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Methods, selection criteria

Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	Methods, data extraction
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Methods, data extraction
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	Methods, data extraction
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Methods, selection criteria
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	Methods, data extraction
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item 5)).	Methods, data extraction

	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	Methods, data extraction
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Methods, data analysis
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	Methods, data analysis
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	Methods, data analysis
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	Methods, data analysis
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	N/A
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	Methods, data analysis
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Results, search outcomes, Figure 1
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	N/A
Study characteristics	17	Cite each included study and present its characteristics.	Results, Table 2

Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Results, Table 2
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Results, Table 2
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	Results, Tables 3-5
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	Results, Meta-analyses: Associations between resilience and mental health outcomes
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	Results, Meta-analyses: Associations between resilience and mental health outcomes
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	Results, Meta-analyses: Associations between resilience and mental health outcomes
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	Results, Meta-analyses: Associations between resilience and mental health outcomes
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	Results, Meta-analyses: Associations between resilience and mental health outcomes
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Discussion
	23b	Discuss any limitations of the evidence included in the review.	Discussion, Limitations and Strengths
	23c	Discuss any limitations of the review processes used.	Discussion, Limitations and Strengths

OTHER	23d	Discuss implications of the results for practice, policy, and future research.	Discussion, Clinical Implications and Future Directions
INFORMATION Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Abstract, Methods
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Abstract, Methods
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	N/A
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	Funding sources/sponsors
Competing interests	26	Declare any competing interests of review authors.	Conflicts of interest
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	N/A

PRIMSA Abstract Checklist

TITLE			
Title	1	Identify the report as a systematic review.	Yes
BACKGROUND			
Objectives	2	Provide an explicit statement of the main objective(s) or question(s) the review addresses.	Yes
METHODS			
Eligibility criteria	3	Specify the inclusion and exclusion criteria for the review.	Yes
Information sources	4	Specify the information sources (e.g. databases, registers) used to identify studies and the date when each was last searched.	Yes
Risk of bias	5	Specify the methods used to assess risk of bias in the included studies.	Yes
Synthesis of results	6	Specify the methods used to present and synthesize results.	Yes
RESULTS			
Included studies	7	Give the total number of included studies and participants and summarise relevant characteristics of studies.	Yes
Synthesis of results	8	Present results for main outcomes, preferably indicating the number of included studies and participants for each. If meta-analysis was done, report the summary estimate and confidence/credible interval. If comparing groups, indicate the direction of the effect (i.e. which group is favoured).	Yes
DISCUSSION			
Limitations of evidence	9	Provide a brief summary of the limitations of the evidence included in the review (e.g. study risk of bias, inconsistency and imprecision).	Yes
Interpretation	10	Provide a general interpretation of the results and important implications.	Yes
OTHER			
Funding	11	Specify the primary source of funding for the review.	No
Registration	12	Provide the register name and registration number.	Yes

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. MetaArXiv. 2020, September 14. DOI: 10.31222/osf.io/v7gm2. For more information, visit: www.prisma-statement.org

Appendix C: National Institute of Health (NIH) Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies

12/11/2017

Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies - NHLBI, NIH



Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies

Criteria	Yes	No	Other (CD, NR, NA)*
Was the research question or objective in this paper clearly stated?			
2. Was the study population clearly specified and defined?			
3. Was the participation rate of eligible persons at least 50%?			
4. Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?			
5. Was a sample size justification, power description, or variance and effect estimates provided?			
6. For the analyses in this paper, were the exposure(s) of interest measured prior to the outcome(s) being measured?			
7. Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?			
8. For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (e.g., categories of exposure, or exposure measured as continuous variable)?			
9. Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?			
10. Was the exposure(s) assessed more than once over time?			
11. Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?			
12. Were the outcome assessors blinded to the exposure status of participants?			
13. Was loss to follow-up after baseline 20% or less?			
14. Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposure(s) and outcome(s)?			

Quality Rating (Good, Fair, or Poor) (see guidance)			
Rater #1 initials:			
Rater #2 initials:			
Additional Comments (If POOR, please state why):			

^{*}CD, cannot determine; NA, not applicable; NR, not reported

Guidance for Assessing the Quality of Observational Cohort and Cross-Sectional Studies

The guidance document below is organized by question number from the tool for quality assessment of observational cohort and cross-sectional studies.

Question 1. Research question

Did the authors describe their goal in conducting this research? Is it easy to understand what they were looking to find? This issue is important for any scientific paper of any type. Higher quality scientific research explicitly defines a research question.

Questions 2 and 3. Study population

Did the authors describe the group of people from which the study participants were selected or recruited, using demographics, location, and time period? If you were to conduct this study again, would you know who to recruit, from where, and from what time period? Is the cohort population free of the outcomes of interest at the time they were recruited?

An example would be men over 40 years old with type 2 diabetes who began seeking medical care at Phoenix Good Samaritan Hospital between January 1, 1990 and December 31, 1994. In this example, the population is clearly described as: (1) who (men over 40 years old with type 2 diabetes); (2) where (Phoenix Good Samaritan Hospital); and (3) when (between January 1, 1990 and December 31, 1994). Another example is women ages 34 to 59 years of age in 1980 who were in the nursing profession and had no known coronary disease, stroke, cancer, hypercholesterolemia, or diabetes, and were recruited from the 11 most populous States, with contact information obtained from State nursing boards.

In cohort studies, it is crucial that the population at baseline is free of the outcome of interest. For example, the nurses' population above would be an appropriate group in which to study incident coronary disease. This information is usually found either in descriptions of population recruitment, definitions of variables, or inclusion/exclusion criteria.

You may need to look at prior papers on methods in order to make the assessment for this question. Those papers are usually in the reference list.

If fewer than 50% of eligible persons participated in the study, then there is concern that the study population does not adequately represent the target population. This increases the risk of bias.

${\it Question~4.~Groups~recruited~from~the~same~population~and~uniform~eligibility~criteria}$

Were the inclusion and exclusion criteria developed prior to recruitment or selection of the study population? Were the same underlying criteria used for all of the subjects involved? This issue is related to the description of the study population, above, and you may find the information for both of these questions in the same section of the paper.

https://www.nhlbi.nih.gov/health-pro/guidelines/in-develop/cardiovascular-risk-reduction/tools/cohort

12/11/2017 Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies - NHLBI, NIH

Most cohort studies begin with the selection of the cohort; participants in this cohort are then measured or evaluated to determine their exposure status. However, some cohort studies may recruit or select exposed participants in a different time or place than unexposed participants, especially retrospective cohort studies—which is when data are obtained from the past (retrospectively), but the analysis examines exposures prior to outcomes. For example, one research question could be whether diabetic men with clinical depression are at higher risk for cardiovascular disease than those without clinical depression. So, diabetic men with depression might be selected from a mental health clinic, while diabetic men without depression might be selected from an internal medicine or endocrinology clinic. This study recruits groups from different clinic populations, so this example would get a "no."

However, the women nurses described in the question above were selected based on the same inclusion/exclusion criteria, so that example would get a "yes."

Question 5. Sample size justification

Did the authors present their reasons for selecting or recruiting the number of people included or analyzed? Do they note or discuss the statistical power of the study? This question is about whether or not the study had enough participants to detect an association if one truly existed.

A paragraph in the methods section of the article may explain the sample size needed to detect a hypothesized difference in outcomes. You may also find a discussion of power in the discussion section (such as the study had 85 percent power to detect a 20 percent increase in the rate of an outcome of interest, with a 2-sided alpha of 0.05). Sometimes estimates of variance and/or estimates of effect size are given, instead of sample size calculations. In any of these cases, the answer would be "ves."

However, observational cohort studies often do not report anything about power or sample sizes because the analyses are exploratory in nature. In this case, the answer would be "no." This is not a "fatal flaw." It just may indicate that attention was not paid to whether the study was sufficiently sized to answer a prespecified question—i.e., it may have been an exploratory, hypothesis-generating study.

Question 6. Exposure assessed prior to outcome measurement

This question is important because, in order to determine whether an exposure causes an outcome, the exposure must come before the outcome.

For some prospective cohort studies, the investigator enrolls the cohort and then determines the exposure status of various members of the cohort (large epidemiological studies like Framingham used this approach). However, for other cohort studies, the cohort is selected based on its exposure status, as in the example above of depressed diabetic men (the exposure being depression). Other examples include a cohort identified by its exposure to fluoridated drinking water and then compared to a cohort living in an area without fluoridated water, or a cohort of military personnel exposed to combat in the Gulf War compared to a cohort of military personnel not deployed in a combat zone.

With either of these types of cohort studies, the cohort is followed forward in time (i.e., prospectively) to assess the outcomes that occurred in the exposed members compared to nonexposed members of the cohort. Therefore, you begin the study in the present by looking at groups that were exposed (or not) to some biological or behavioral factor, intervention, etc., and then you follow them forward in time to examine outcomes. If a cohort study is conducted properly, the answer to this question should be "yes," since the exposure status of members of the cohort was determined at the beginning of the study before the outcomes occurred.

For retrospective cohort studies, the same principal applies. The difference is that, rather than identifying a cohort in the present and following them forward in time, the investigators go back in time (i.e., retrospectively) and select a cohort based on their exposure status in the past and then follow them forward to assess the outcomes that occurred in the exposure and nonexposed cohort members. Because in retrospective cohort studies the exposure and outcomes may have already occurred (it depends on how long they follow the cohort), it is important to make sure that the exposure preceded the outcome.

Sometimes cross-sectional studies are conducted (or cross-sectional analyses of cohort-study data), where the exposures and outcomes are measured during the same timeframe. As a result, cross-sectional analyses provide weaker evidence than regular cohort studies regarding a potential causal relationship between exposures and outcomes. For cross-sectional analyses, the answer to Question 6 should be "no."

$Question\ 7.\ Sufficient\ time frame\ to\ see\ an\ effect$

Did the study allow enough time for a sufficient number of outcomes to occur or be observed, or enough time for an exposure to have a biological effect on an outcome? In the examples given above, if clinical depression has a biological effect on increasing risk for CVD, such an effect may take years. In the other example, if higher dietary sodium increases BP, a short timeframe may be sufficient to assess its association with BP, but a longer timeframe would be needed to examine its association with heart attacks.

The issue of timeframe is important to enable meaningful analysis of the relationships between exposures and outcomes to be conducted. This often requires at least several years, especially when looking at health outcomes, but it depends on the research question and outcomes being examined.

Cross-sectional analyses allow no time to see an effect, since the exposures and outcomes are assessed at the same time, so those would get a "no" response.

Question 8. Different levels of the exposure of interest

If the exposure can be defined as a range (examples: drug dosage, amount of physical activity, amount of sodium consumed), were multiple categories of that exposure assessed? (for example, for drugs: not on the medication, on a low dose, medium dose, high dose; for dietary sodium, higher than average U.S. consumption, lower than recommended consumption, between the two). Sometimes discrete categories of exposure are not used, but instead exposures are measured as continuous variables (for example, mg/day of dietary sodium or BP values).

In any case, studying different levels of exposure (where possible) enables investigators to assess trends or dose-response relationships between exposures and outcomes-e.g., the higher the exposure, the greater the rate of the health outcome. The presence of trends or dose-response relationships lends credibility to the hypothesis of causality between exposure and outcome.

For some exposures, however, this question may not be applicable (e.g., the exposure may be a dichotomous variable like living in a rural setting versus an urban setting, or vaccinated/not vaccinated with a one-time vaccine). If there are only two possible exposures (yes/no), then this question should be given an "NA," and it should not count negatively towards the quality rating.

Question 9. Exposure measures and assessment

Were the exposure measures defined in detail? Were the tools or methods used to measure exposure accurate and reliable–for example, have they been validated or are they objective? This issue is important as it influences confidence in the reported exposures. When exposures are measured with less accuracy or validity, it is

https://www.nhlbi.nih.gov/health-pro/guidelines/in-develop/cardiovascular-risk-reduction/tools/cohort

12/11/2017 Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies - NHLBI, NIH

harder to see an association between exposure and outcome even if one exists. Also as important is whether the exposures were assessed in the same manner within groups and between groups; if not, bias may result.

For example, retrospective self-report of dietary salt intake is not as valid and reliable as prospectively using a standardized dietary log plus testing participants' urine for sodium content. Another example is measurement of BP, where there may be quite a difference between usual care, where clinicians measure BP however it is done in their practice setting (which can vary considerably), and use of trained BP assessors using standardized equipment (e.g., the same BP device which has been tested and calibrated) and a standardized protocol (e.g., patient is seated for 5 minutes with feet flat on the floor, BP is taken twice in each arm, and all four measurements are averaged). In each of these cases, the former would get a "no" and the latter a "yes."

Here is a final example that illustrates the point about why it is important to assess exposures consistently across all groups: If people with higher BP (exposed cohort) are seen by their providers more frequently than those without elevated BP (nonexposed group), it also increases the chances of detecting and documenting changes in health outcomes, including CVD-related events. Therefore, it may lead to the conclusion that higher BP leads to more CVD events. This may be true, but it could also be due to the fact that the subjects with higher BP were seen more often; thus, more CVD-related events were detected and documented simply because they had more encounters with the health care system. Thus, it could bias the results and lead to an erroneous conclusion.

Question 10. Repeated exposure assessment

Was the exposure for each person measured more than once during the course of the study period? Multiple measurements with the same result increase our confidence that the exposure status was correctly classified. Also, multiple measurements enable investigators to look at changes in exposure over time, for example, people who ate high dietary sodium throughout the followup period, compared to those who started out high then reduced their intake, compared to those who ate low sodium throughout. Once again, this may not be applicable in all cases. In many older studies, exposure was measured only at baseline. However, multiple exposure measurements do result in a stronger study design.

Ouestion 11. Outcome measures

Were the outcomes defined in detail? Were the tools or methods for measuring outcomes accurate and reliable—for example, have they been validated or are they objective? This issue is important because it influences confidence in the validity of study results. Also important is whether the outcomes were assessed in the same manner within groups and between groups.

An example of an outcome measure that is objective, accurate, and reliable is death—the outcome measured with more accuracy than any other. But even with a measure as objective as death, there can be differences in the accuracy and reliability of how death was assessed by the investigators. Did they base it on an autopsy report, death certificate, death registry, or report from a family member? Another example is a study of whether dietary fat intake is related to blood cholesterol level (cholesterol level been been been been been and the cholesterol level is measured from fasting blood samples that are all sent to the same laboratory. These examples would get a "yes." An example of a "no" would be self-report by subjects that they had a heart attack, or self-report of how much they weigh (if body weight is the outcome of interest).

Similar to the example in Question 9, results may be biased if one group (e.g., people with high BP) is seen more frequently than another group (people with normal BP) because more frequent encounters with the health care system increases the chances of outcomes being detected and documented.

Question 12. Blinding of outcome assessors

Blinding means that outcome assessors did not know whether the participant was exposed or unexposed. It is also sometimes called "masking." The objective is to look for evidence in the article that the person(s) assessing the outcome(s) for the study (for example, examining medical records to determine the outcomes that occurred in the exposed and comparison groups) is masked to the exposure status of the participant. Sometimes the person measuring the exposure is the same person conducting the outcome assessment. In this case, the outcome assessor would most likely not be blinded to exposure status because they also took measurements of exposures. If so, make a note of that in the comments section.

As you assess this criterion, think about whether it is likely that the person(s) doing the outcome assessment would know (or be able to figure out) the exposure status of the study participants. If the answer is no, then blinding is adequate. An example of adequate blinding of the outcome assessors is to create a separate committee, whose members were not involved in the care of the patient and had no information about the study participants' exposure status. The committee would then be provided with copies of participants' medical records, which had been stripped of any potential exposure information or personally identifiable information. The committee would then review the records for prespecified outcomes according to the study protocol. If blinding was not possible, which is sometimes the case, mark "NA" and explain the potential for bias.

Question 13. Followup rate

Higher overall followup rates are always better than lower followup rates, even though higher rates are expected in shorter studies, whereas lower overall followup rates are often seen in studies of longer duration. Usually, an acceptable overall followup rate is considered 80 percent or more of participants whose exposures were measured at baseline. However, this is just a general guideline. For example, a 6-month cohort study examining the relationship between dietary sodium intake and BP level may have over 90 percent followup, but a 20-year cohort study examining effects of sodium intake on stroke may have only a 65 percent followup rate.

Question 14. Statistical analyses

Were key potential confounding variables measured and adjusted for, such as by statistical adjustment for baseline differences? Logistic regression or other regression methods are often used to account for the influence of variables not of interest.

This is a key issue in cohort studies, because statistical analyses need to control for potential confounders, in contrast to an RCT, where the randomization process controls for potential confounders. All key factors that may be associated both with the exposure of interest and the outcome-that are not of interest to the research question-should be controlled for in the analyses.

For example, in a study of the relationship between cardiorespiratory fitness and CVD events (heart attacks and strokes), the study should control for age, BP, blood cholesterol, and body weight, because all of these factors are associated both with low fitness and with CVD events. Well-done cohort studies control for multiple potential confounders.

Some general guidance for determining the overall quality rating of observational cohort and cross-sectional studies

The questions on the form are designed to help you focus on the key concepts for evaluating the internal validity of a study. They are not intended to create a list that you simply tally up to arrive at a summary judgment of quality.

https://www.nhlbi.nih.gov/health-pro/guidelines/in-develop/cardiovascular-risk-reduction/tools/cohort

12/11/2017 Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies - NHLBI, NIH

Internal validity for cohort studies is the extent to which the results reported in the study can truly be attributed to the exposure being evaluated and not to flaws in the design or conduct of the study-in other words, the ability of the study to draw associative conclusions about the effects of the exposures being studied on outcomes. Any such flaws can increase the risk of bias.

Critical appraisal involves considering the risk of potential for selection bias, information bias, measurement bias, or confounding (the mixture of exposures that one cannot tease out from each other). Examples of confounding include co-interventions, differences at baseline in patient characteristics, and other issues throughout the questions above. High risk of bias translates to a rating of poor quality. Low risk of bias translates to a rating of good quality. (Thus, the greater the risk of bias, the lower the quality rating of the study.)

In addition, the more attention in the study design to issues that can help determine whether there is a causal relationship between the exposure and outcome, the higher quality the study. These include exposures occurring prior to outcomes, evaluation of a dose-response gradient, accuracy of measurement of both exposure and outcome, sufficient timeframe to see an effect, and appropriate control for confounding-all concepts reflected in the tool.

Generally, when you evaluate a study, you will not see a "fatal flaw," but you will find some risk of bias. By focusing on the concepts underlying the questions in the quality assessment tool, you should ask yourself about the potential for bias in the study you are critically appraising. For any box where you check "no" you should ask, "What is the potential risk of bias resulting from this flaw in study design or execution?" That is, does this factor cause you to doubt the results that are reported in the study or doubt the ability of the study to accurately assess an association between exposure and outcome?

The best approach is to think about the questions in the tool and how each one tells you something about the potential for bias in a study. The more you familiarize yourself with the key concepts, the more comfortable you will be with critical appraisal. Examples of studies rated good, fair, and poor are useful, but each study must be assessed on its own based on the details that are reported and consideration of the concepts for minimizing bias.

Last Updated March 2014

Appendix D: Funnel plots

Figure 1. Funnel plot of studies measuring PTSD



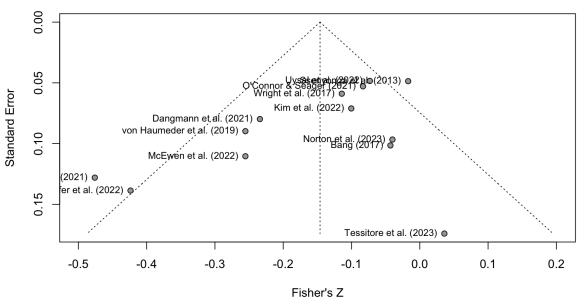


Figure 2. Funnel plot of studies measuring depression

Funnel Plot (Resilience and Depression)

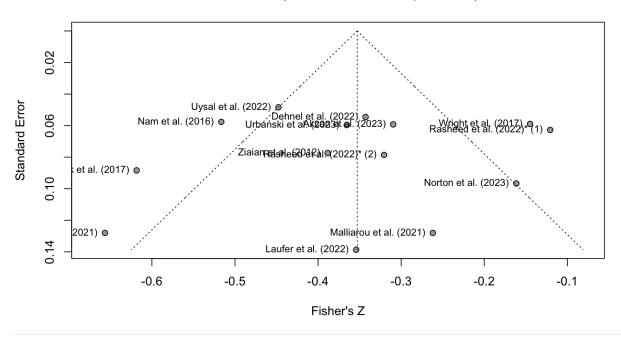


Figure 3. Funnel plot of studies measuring anxiety

Funnel Plot (Resilience and Anxiety)

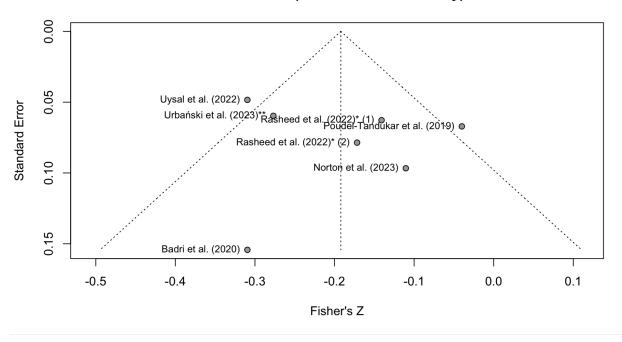
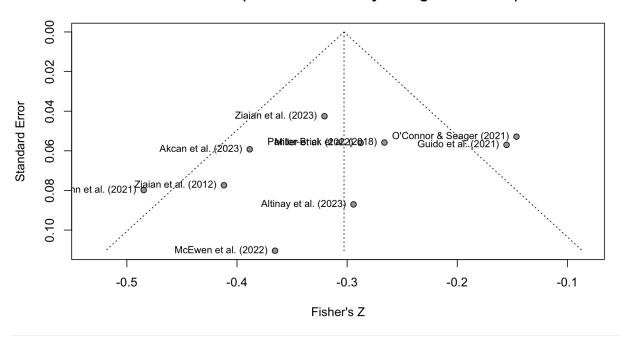


Figure 4. Funnel plot of studies measuring psychological distress

Funnel Plot (Resilience and Psychological distress)



Appendix E: Author guidelines for submission to the *Journal of Transcultural Psychiatry*

[accessed from: https://journals.sagepub.com/author-

instructions/tps#:~:text=Original%20articles%20and%20overviews%20should,figures%3A% 205%20(total)]

Manuscript Submission Guidelines:

How to submit your manuscript

Transcultural Psychiatry is hosted on Manuscript Central™, a web based online submission and peer review system - SageTRACK. Please read the Manuscript Submission guidelines below, and then simply visit http://mc.manuscriptcentral.com/TC_PSYCH to login and submit your article online.

Once an article has been accepted in the system, it is sent to the Editor-in-Chief and his team of Editors for scientific editing. We aim to keep any delays to online publication to a minimum but we are keen to ensure the best quality control for the journal.

IMPORTANT: Please check whether you already have an account in the system before trying to create a new one. If you have reviewed or authored for the journal in the past year it is possible that you will have had an account created.

All papers except for book reviews and letters to the editor must be submitted via the online system. If you would like to discuss your paper prior to submission, please refer to the contact details below.

Transcultural Psychiatry adheres to a rigorous double-blind reviewing policy in which the identity of both the reviewer and author are always concealed from both parties. All manuscripts are reviewed initially by the Editors and only those papers that meet the scientific and editorial standards of the journal, and fit within the aims and scope of the journal, will be sent for outside review. Each manuscript is reviewed by at least two referees. All manuscripts are reviewed as rapidly as possible, and an editorial decision is generally reached within 8-10 weeks of submission.

All manuscripts should follow the style of the Publication Manual of the American Psychological Association, 6th edition and must be typewritten and double-spaced.

Original articles and overviews should be accompanied by an abstract of between 150-250 words and about five key words, plus a cover sheet providing authors' postal/email addresses and tel/fax numbers.

Maximum article length:

Review Articles -- text: 5000-7000 words, abstract: 250, tables and figures: 5 (total).

Articles (original quantitative research -- text: 3500-5000 words, abstract: 250, tables and figures: 5 (total).

Articles (original qualitative or mixed-methods research) -- text: 5000- 7500, abstract: 250, tables and figures: 5 (total).

(Additional tables, figures or materials can be submitted in a separate file as supplemental data for posting online, subject to meeting the requirements stated in the :

Guidelines for Authors - Supplemental data on SJO

UK or US spellings are acceptable but must be consistent.

Section headings and subheadings should use a maximum of three levels.

Quotations over 40 words should be displayed, indented, in the text.

Notes and References should appear at the end of the text. References must be in American Psychological Association format.

Tables and figures should have short descriptive titles. Line diagrams should be supplied preferably as EPS or TIFF files, 800 dpi - b/w only. Photographs should be supplied as TIFF files, 300 dpi.

Authors are responsible for obtaining copyright permission for reproducing any illustrations, tables, figures or lengthy quotations previously published elsewhere.

Corresponding authors will receive access to a pdf of their article after publication.

Address correspondence to: L.J. Kirmayer, Editor-in-chief, Transcultural Psychiatry, Division of Social and Transcultural Psychiatry, McGill University, 1033 Pine Avenue West, Montréal, Québec, Canada H3A 1A1.

Tel: (514) 398-7302; fax (514) 398-4370 [email: transcultural.psychiatry@sagepub.com]

Please submit book reviews and letters to the editor to:

Email: transcultural.psychiatry@sagepub.com

Appendix F: Consolidated criteria for reporting qualitative studies (COREQ) checklist

COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on
Domain 1: Research team			Page No.
and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	6
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	7
Occupation	3	What was their occupation at the time of the study?	7
Gender	4	Was the researcher male or female?	7
Experience and training	5	What experience or training did the researcher have?	7
Relationship with			
participants			
Relationship established	6	Was a relationship established prior to study commencement?	6
Participant knowledge of	7	What did the participants know about the researcher? e.g. personal	
the interviewer	nterviewer goals, reasons for doing the research		6
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator?	7-8
		e.g. Bias, assumptions, reasons and interests in the research topic	17-0
Domain 2: Study design			
Theoretical framework			
Methodological orientation	9	What methodological orientation was stated to underpin the study? e.g.	
and Theory		grounded theory, discourse analysis, ethnography, phenomenology,	5, 7
		content analysis	
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience,	6
		consecutive, snowball	0
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail,	6
		email	
Sample size	12	How many participants were in the study?	6
Non-participation	13	How many people refused to participate or dropped out? Reasons?	6-7
Setting			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	6
Presence of non-	15	Was anyone else present besides the participants and researchers?	6
participants			<u> </u>
Description of sample	16	What are the important characteristics of the sample? e.g. demographic	6
		data, date	
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	6, 8
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	N/A, 6
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	6
Field notes	20	Were field notes made during and/or after the inter view or focus group?	8
Duration	21	What was the duration of the inter views or focus group?	6
Data saturation	22	Was data saturation discussed?	6
Transcripts returned	23	Were transcripts returned to participants for comment and/or	8

Topic	Item No.	Guide Questions/Description	Reported on	
			Page No.	
		correction?		
Domain 3: analysis and				
findings				
Data analysis				
Number of data coders	24	How many data coders coded the data?	7	
Description of the coding	25	Did authors provide a description of the coding tree?	A1/A	
tree			N/A	
Derivation of themes	26	Were themes identified in advance or derived from the data?	7	
Software	27	What software, if applicable, was used to manage the data?	7	
Participant checking	28	Did participants provide feedback on the findings?	8	
Reporting				
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings?	0.04	
		Was each quotation identified? e.g. participant number	9-21	
Data and findings consistent	30	Was there consistency between the data presented and the findings?	9-21	
Clarity of major themes	31	Were major themes clearly presented in the findings?	9-21	
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	9-21	

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

Once you have completed this checklist, please save a copy and upload it as part of your submission. DO NOT include this checklist as part of the main manuscript document. It must be uploaded as a separate file.

Appendix G: Participant information sheet





Participant information sheet

A study exploring ways of coping among young unaccompanied refugees and asylum seekers

What is the purpose of this study?

We would like to improve understanding of ways young unaccompanied refugee and asylum seekers in the UK cope with day to day life. To find this out, we will ask people how they overcome challenges in life and how they developed ways of coping. We hope the findings of this study will help services better serve the refugee and asylum seeker community.

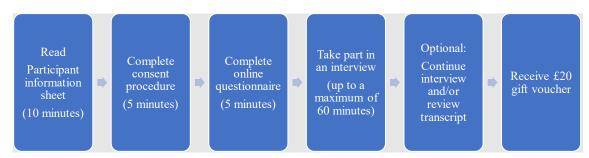
You are being invited to take part.

If you are receiving this information sheet, you will be in contact with the Baobab Centre and will have entered the UK as a refugee or asylum seeker. We are asking for your permission to take part.

Taking part will involve providing recorded verbal or written consent and then taking part in a short questionnaire and an interview. An interpreter who is separate to the research team will be present at each stage of the study to provide translation support. The questionnaire will take a maximum of 5 minutes to complete. Interviews usually last between 25-40 minutes but may last up to an hour depending on how much you would like to share. The interview will discuss your ways of coping today as well as when you were younger. You can choose if you would like your interview to be held in person or via video or telephone call. The interview will not be about your experiences of support from the Baobab Centre.

Following the interview, you can choose to take part in a second interview if you feel there is more you would like to share or if you would like to divide the interview into two sections. This is optional. You will also be asked if you would like to review and add to your transcript.

<u>Taking part is completely voluntary.</u> Following the interview, we will offer you a £20 voucher in compensation for your time.



It is up to you to decide if you would like to take part or not.

Participant Information Sheet V1.0 16.02.23

This research is independent to the support you receive from the Baobab Centre or other services. Some members of staff at the Baobab Centre will be involved in recruitment and interview arrangement. However, information shared during the interview that can personally identify you will not be available to them. If you choose not to take part, this will not affect the care you receive in any way.

You are the expert and we would like to learn from you. It is important you feel you can answer questions honestly. We want to know about positive and negative experiences; there are no right or wrong answers. You are able to skip any questions you don't feel comfortable answering.

You are free to no longer participate in the study at any time, without giving a reason. If you choose to withdraw your data in the two weeks following your interview (before data is anonymised), all your data will be deleted. If you choose to withdraw your data after 14 days, the data analysis process will have started and as such, it won't be possible to delete all your data. However, in this case, we will not include any direct quotes in the findings.

Potential benefits of participating

- Having an opportunity to express your experiences and feeling listened to
- Having an impact on policy and services
- Helping others better understand how unaccomanied refugee minors cope

Potential risks of participating

- Participating will use time and resources
- Interview discussions may be upsetting

What will happen to my data?

All information we collect is confidential and kept securely. Once you complete the questionnaire, your data will be automatically saved. Interview data will be audio-recorded and transcribed for analysis. Interview data will be pseudonymised at point of transcription. Although verbatim quotes from the interviews may be included in the study write up/report, your real name will not be used and identifiable information will be removed (e.g. names of people, places).

All data will be stored electronically on a secure drive associated with UEA, who is a registered data controller. Rebecca Lane and Dr Kenny Chiu (primary research supervisor) will have access to all data, including personally identifiable information. Other research supervisors, including Sheila Melzak from Baobab Centre, will have access to anonymised data only. To support with data interpretation, some anonymised data will also be shared with individuals who previously received support from the Baobab Centre (experts by experience).

In order to protect your anonymity, we will assign a unique code to your responses to the questionnaire and interview so that your name does not appear alongside any of your data. We will store your proof of consent separately and store the log linking your proof of consent to your data in a password-protected file. To ensure that personal information is not stored unnecessarily, audio recordings will be deleted once they have been transcribed and

Participant Information Sheet V1.0 16.02.23

anonymised. Proof of consent and the password-protected file will be deleted once the study is complete. The anonymised data set will be kept for 10 years after the end of the project, after which it will be deleted.

All information we collect from you is strictly confidential, though we may have to break confidentiality in the event that we are concerned that you or others are at risk of harm. In this event, we inform you that there is a need to share this information with others.

What will happen to the results of the research?

Results of the study will be published and may include anonymised quotes from interviews. You will not be identified in any report. At the end of the study, the Baobab Centre will receive the findings of the research and will share these with you if you are interested.

Contact details:

If you have any questions or if anything is unclear, or if you have a complaint you would like to raise, please contact: Dr Kenny Chiu (kenny.chiu@uea.ac.uk) or Rebecca Lane (rebecca.lane@uea.ac.uk) or Sheila Melzak (sheila.melzak@baobabsurvivors.org).

If you feel upset by any of the questions in this study, please stop taking part and speak to a member of staff at your service. If you need help or have any concerns regarding your mental health, please contact:

NHS urgent mental health support helpline for London - tel: 0800 023 4650

Samaritans – tel: 116 123 website: www.samaritans.org SANEline – tel: 0300 304 7000 website: www.sane.org.uk

If you would like to make an independent complaint, please contact Dr Sian Coker (s.coker@uea.ac.uk)

An Ethics Committee has checked the study

All research is looked at by an independent group of people, called a Research Ethics Committee, to protect your interests. This research has been reviewed and given a XYZ outcome by the Faculty of Medicine and Health Sciences Research Ethics Committee at the University of East Anglia (REF:).

Thank you for taking the time to read this information sheet.

Appendix H: Consent form





Consent form

A study exploring ways of coping among young unaccompanied refugees and asylum seekers

Thank you for your interest in taking part in this research study. Please complete this form after you have read the Participant Information Sheet (V1.1_13.03.23). This consent forms and any personal details (such as your name) will be kept separate from your questionnaire and anonymised transcript. All information will be stored on a secure computer server which only the research team have access to.

Pleas	se tick each box below if you agree with the sentences below:	
1.	I confirm that I have read and understood the Participant Information Sheet (V1.1_13.03.23) for the above study. I have had the opportunity to consider the information and understand what will be expected of me. I have also had the opportunity to ask questions which have been answered to my satisfaction.	
2.	I consent to participate in the study with the presence of an interpreter and for my interview to be recorded. I understand that my personal information will be used for the purposes explained to me.	
3.	I understand that this study is conducted in collaboration with the Baobab Centre for Young Survivors in Exile, and members of staff at the Baobab Centre who are involve in recruitment and interview arrangement will be aware of my participation, but they will not be able to access any personally identifiable information I disclose during the interview.	
4.	I understand that all efforts will be made to make sure I cannot be identified. I understand that my data collected in this study will be stored securely on a university shared drive. I understand that my signed consent form and audio recording will be accessed by Rebecca Lane (the principal investigator) and Dr Kenny Chiu (the primary research supervisor) only. Audio recordings will be deleted after they have been transcribed and anonymised. Consent form will be destroyed once the study is complete. It will not be possible to identify me in any publications.	
5.	I understand that my participation is voluntary and that I am free to withdraw up to 14 days after my interview (when all anonymised data will be analysed), without giving any reason and without this having any impact on my relations with the Baobab Centre for Young Survivors in Exile.	
6.	I understand the potential risks of participating and the support that will be available to me should I become distressed during the course of the research.	
7.	I understand that the data will not be made available to any commercial organisations but is solely the responsibility of the researcher(s) undertaking this study.	
8.	I understand that I will receive a £20 voucher in compensation for my time and efforts. I will otherwise not benefit financially from this study or from any possible outcome it may result in in the future.	
	u don't want to take part, don't sign your name! If you do want to take part, please w name below:	rite
My r	name Date Signature	
Cons	sent form_V.1.0_14.11.2022	1

Appendix I: Guide for interpreters

Interpreter guidance

- 1. Familiarise yourself with the research project: Ahead of the interpretation work, make sure you understand the goals of the project and what is expected of you as an interpreter.
- Obtain informed consent: It is important to ensure that all participants in the research project understand the purpose of the study and agree to participate. As an interpreter, you may need to assist with obtaining informed consent from participants.
- 3. Interviews will be recorded via Microsoft Teams and transcribed. Please speak loud and clearly enough for the recording to capture.
- Maintain confidentiality: All information shared during the research project must be kept confidential.
- 5. Consecutive interpretation is likely the most appropriate method of interpretation for the study, but please do adapt based on the needs of the participants.
- 6. Translate all words and phrases: When translating questions and answers verbatim, it is important to translate all words and phrases, even those that may seem insignificant or redundant. This includes hesitations, fillers, and non-verbal cues. Verbatim translation is important in qualitative research because it helps to ensure that the original meaning of the participant's responses is accurately captured. This can be especially important when analysing data to identify patterns or themes.
- 7. Avoid summarizing or paraphrasing: To ensure that the original meaning of the participant's responses is accurately captured, it is important to avoid summarizing or paraphrasing their responses. Stick to translating their exact words as closely as possible.
- 8. Use accurate and impartial interpretation: Your role as an interpreter is to convey the messages of participants accurately and impartially, without adding your own opinions or biases
- 9. Clarify misunderstandings: If you are unsure of the meaning of a particular word or phrase, or if you suspect there may be a misunderstanding, it is important to clarify with the speaker before interpreting.
- 10. Document your interpretations: Keeping accurate records of your interpretations can help the research team to better understand the data and ensure that all participants are accurately represented.

Appendix J: Participant questionnaire

Demographic and background information

What is your gender?	prefer not to disclose	
What is your ethnicity?	prefer not to disclose	
What is your age?	prefer not to disclose	
How old were you when you entered	the UK?	prefer not to disclose

Interview schedule

This document outlines the interview process and topic guide. Follow up questions and prompts are suggested, but the specific content of each section will be shaped around what the interviewee has to say on the topics, in line with the semi-structured interview format.

Thank you for agreeing to take part in this interview and for completing the consent form and the questionnaire. This interview should take around one hour to complete. This interview will be audio recorded to ensure that your responses to the questions are accurately captured.

As stated in the information sheet, the purpose of this interview is to understand how young asylum seekers of refugees from Afghanistan cope with difficulties. To understand this, we will discuss your views on your ways of coping today and where you feel these have come from. We are interested in coping when very difficult things happen, but also coping day-to-day in response to tricky situations or daily stress.

We are interested in your individual experience and opinions so there are no right or wrong answers to the questions; please do feel you can answer as honestly as possible. I might ask some questions that you find difficult or that you feel you don't want to discuss today. You are welcome to answer as much or as little as you would like and skip any questions that you don't want to answer. Just in case the interview brings up difficult feelings, do you have something you do that is usually helpful that I can remind you of? [...] Is there anything else I can do to support you in the moment? [...] Is there someone I can call on your behalf? [...] I also want to remind you that we have listed some mental health support services in the information sheet that you can contact if you need.

We would just like to re-iterate that all participation is voluntary and taking part will not affect the support you receive from the Baobab Centre. It's important for you to understand that some staff members at Baobab Centre (Sheila and Fabrice) are part of the research team so they may have access to your data after it is anonymised. All data collected during the interview will be confidential within the research team unless we feel that there is a risk of harm either to yourself or to others. If such a situation arises, we will follow usual safeguarding procedures and

may need to pass this information on. All data will be anonymised when recordings are transcribed, and you will not be identifiable from the interview content or through the final write up of findings.

You may stop participating in the interview at any time and again, you can skip any questions which you are not comfortable answering. If you choose to withdraw from the study before data anonymisation and analysis commences (i.e. within 14 days of completing the interview), your data will not be included and any existing data will be destroyed. If you withdraw later than 14 days after the interview has taken place, we will ensure that no direct anonymised quotes are used, but we will not be able to exclude your data completely.

Do you have any questions before we begin the interview?

I will now begin the audio recording.

1. What is important for you to have or do in order to feel well in yourself, both physically and psychologically?

- a. Rephrase: What sort of things make a difference to your mood and general wellbeing?
- b. Prompt: contextual factors, social factors, behaviours

2. What are some things that you can find difficult day-to-day?

- a. Rephrase: By this I mean: what sort of things can stress you out or bring up difficult emotions?
- b. Prompt: across different areas, e.g. self, work, school, relationships?

3. How do you manage when these things happen or come up for you?

- a. Rephrase: What do you normally do when things are difficult or stop working for you?
- b. Prompt: For example, if you missed a train, if your phone runs out of battery, if you had an important exam, if you have an argument with a friend, if someone doesn't answer your text..?
- c. Follow up: What are the immediate effects of [coping strategy]? prompt good and bad Rephrase: What difference does [coping strategy] make in the short term?

- d. How might [coping strategy] affect you in the long term? Rephrase: Are there any positive or negative effects of [coping strategy] a few days/weeks after you have used them?
- 4. How and from where do you think you learned to cope in this way [name different coping strategies]?
 - a. Prompt: People learn things in different ways, for example through listening to others, through reading, or through observing others around them or on TV.
 - b. Follow up: Is this something you've always done? Do you remember when you began using this as a strategy?
 - c. [consider the different ways of coping mentioned]
- 5. Thinking back, what would happen when you had a bad day when you were younger?
 - a. Prompt: By a bad day, I mean anything like somebody saying something mean to you or you losing a game?
 - b. Follow up: How would you cope back then? For example, would you tell anyone? How would others respond if you did tell them?
- 6. Can you think of anyone in your life who has helped you or showed you how to cope?
 - a. Prompt: for example a role model giving you ideas or advice on ways to manage difficult times or situations.
 - b. Follow up: in what way?
 - c. Follow up: Do you think this has influenced how you manage things today?
- 7. Is there anything that I haven't asked about that you would like to share about your experiences of managing when things are difficult?
- 8. What do you think would be important for others to know to help them with coping day-to-day?

Appendix L: Letter of ethical approval



University of East Anglia Norwich Research Park Norwich. NR4 7TJ

Email: ethicsmonitor@uea.ac.uk Web: www.uea.ac.uk

Study title: A qualitative study exploring views of unaccompanied refugees or asylum seekers from Afghanistan on ways of coping and how these were developed

Application ID: ETH2223-0069

Dear Rebecca,

Your application was considered on 20th February 2023 by the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee).

The decision is: approved.

You are therefore able to start your project subject to any other necessary approvals being given.

If your study involves NHS staff and facilities, you will require Health Research Authority (HRA) governance approval before you can start this project (even though you did not require NHS-REC ethics approval). Please consult the HRA webpage about the application required, which is submitted through the IRAS system.

This approval will expire on 30th September 2024.

Please note that your project is granted ethics approval only for the length of time identified above. Any extension to a project must obtain ethics approval by the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) before continuing.

It is a requirement of this ethics approval that you should report any adverse events which occur during your project to the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) as soon as possible. An adverse event is one which was not anticipated in the research design, and which could potentially cause risk or harm to the participants or the researcher, or which reveals potential risks in the treatment under evaluation. For research involving animals, it may be the unintended death of an animal after trapping or carrying out a procedure.

Any amendments to your submitted project in terms of design, sample, data collection, focus etc. should be notified to the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) in advance to ensure ethical compliance. If the amendments are substantial a new application may be required.

Approval by the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) should not be taken as evidence that your study is compliant with the UK General Data Protection Regulation (UK GDPR) and the Data Protection Act 2018. If you need guidance on how to make your study UK GDPR compliant, please contact the UEA Data Protection Officer (dataprotection@uea.ac.uk).

Please can you send your report once your project is completed to the FMH S-REC (fmh.ethics@uea.ac.uk).

I would like to wish you every success with your project.

On behalf of the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee)

Yours sincerely,

Dr Paul Linsley

Appendix M: Local approval



To Ms Rebecca Lane East Anglia University August 4th 2022

Dear Ms Lane,

Further to our discussions I would like to confirm that the Baobab Centre aims to fully support your Doctoral dissertation research by both giving you access to our young community members who would like to participate in your research including those who will advise you about open questions and forms of questions.

For my part specifically I will be available to offer you regular external supervision, clinical supervision and support.

With best wishes

Sheila Melzak

Consultant Child and Adolescent Psychotherapist Director Baobab Centre for Young Survivors in Exile