



University of Nottingham

School of Medicine

Division of Mental Health and Clinical Neurosciences

**Investigation of the effectiveness of Narrative Exposure Therapy
in the Syrian refugee population and the potential role of it in
Self-Concept Clarity**

Fatma Aysazci-Cakar

B.A., M.Sc.

Thesis submitted to University of Nottingham

for the degree of Doctor of Philosophy

November 2023

Supervised by

Prof Thomas Schroder

Dr Nigel Hunt

Prof Stephen Regel

*I would like to dedicate this thesis to my most beloved husband Sahin and
daughter Sofya.*

Thank you for your unconditional love and support.

Abstract

Since the outbreak of the civil war in Syria, millions of Syrians have sought refuge in neighbouring countries, with Turkiye hosting the largest number of displaced Syrians globally. Among the challenges faced by this population, the prevalence of mental health disorders, particularly PTSD, depression, and anxiety, has become a pressing issue. Therefore, a systematic review was conducted fundamentally to examine the prevalence and correlates of these mental health conditions among externally displaced Syrians. Seventeen studies meeting eligibility criteria were analysed, revealing significantly elevated rates of PTSD (23.26-42.63%), depression (30.29-50.53%), and anxiety (17.66-48.93%) compared to the general population.

Despite the effectiveness of various psychological interventions, accessibility to mental health treatments remains limited, especially in post-conflict areas. Narrative Exposure Therapy (NET) has demonstrated success in treating PTSD among refugee populations, yet its application and effectiveness specifically for displaced Syrians remain unexplored. Against the backdrop of a vast number of Syrian refugee population in Turkiye and the dearth of structured mental health interventions, this study aimed to explore the feasibility and effectiveness of implementing NET within the Turkish context. In this vein, a preliminary focus group was conducted to assess potential barriers and contextual challenges to delivering NET in the Turkish setting before the main intervention of NET study. Content analysis of the focus group discussions drew a roadmap for the recruitment and delivery process of the NET intervention. Following the findings of the focus group that suggest inclusion criteria for the recruitment of NET participants, a Single Case AB design study was undertaken, involving three participants, to track changes in PTSD, anxiety, stress, and self-Concept Clarity (SCC) in NET intervention over time. The findings indicate a promising

potential of NET in reducing symptoms of PTSD, anxiety, and stress, with notable improvements in SCC observed during the intervention.

This pioneering study represents a significant step in addressing the mental health crisis among Syrian refugees in Turkiye. Its findings underscore the urgent need for evidence-based, accessible, and practical psychological interventions to cater to the specific needs of this vulnerable population. Moreover, the study emphasises the critical role of NET outlining context-specific research in informing effective mental health policies and interventions for displaced populations.

Word count: 57,149 excluding tables, figures, references, and appendices.

Dedication and Acknowledgements

No doubt, this thesis could not have been completed without the love, support, and wisdom of the people around me, serving as my main source of motivation.

First and foremost, I am deeply grateful to my principal supervisor, Prof. Thomas Schroder, for his incredible support and understanding, especially during challenging times. I consider myself fortunate to have had a supervisor like you, with profound knowledge in your research area, always guiding with your wisdom, allowing others to benefit from it. I cannot express enough gratitude for the motivation and encouragement you provided throughout this journey. Dr Nigel Hunt, I am incredibly thankful for your guidance, even though we could not spend much time together during my thesis due to unfortunate personal life circumstances. You admitted me to this program and introduced me to the NET technique, which significantly shaped my research and future career. Thank you for helping me uncover my passion for NET and for being there when I needed you. Prof. Stephen Regel, though we crossed paths in the final stages of my thesis, I want to express my heartfelt thanks for your insightful comments and advice on my work, and for sharing your incredible knowledge with me.

Many of my friends provided massive support that kept my motivation alive during the toughest periods such as the COVID-19 lockdowns, my pregnancy when my energy was limited, and the challenging times of caring for my baby while juggling meetings and thesis writing. I am deeply indebted to my dear friends Betul, Gamze, Merve, Damla, Selin, and Dilek, who became my family in Nottingham. I will be forever grateful for your sincere friendship.

To my amazing parents and in-laws, thank you for your selfless love and care, frequently calling from overseas, which never made me feel alone in the UK. I love you all!

I would also like to express my gratitude to the Syrians in Turkey and around the world who inspired my research and endured the hardships of war and migration. Special thanks to Banu, Sibel, and Hamza, who courageously volunteered to participate in my research and shared their life stories.

Endless gratitude to the Republic of Turkiye Ministry of National Education for financially supporting me throughout my PhD research and offering me an opportunity pursue my career in abroad.

Last but certainly not least, to my husband Sahin- Thank you for your love, affection, humour, support, and understanding, which helped me reach the end of this thesis. Once again, I consider myself fortunate to have a life partner like you. Thank you for being in my life and being my love. And to my beloved daughter, Sofya- Words cannot express how much I love you and care for you. Having you during my PhD was one of the bravest decisions I have ever made, and undoubtedly, you were the reason I persevered until the end. Thank you for being the sunshine of my life. My dearest husband and daughter, without you, this thesis would not have been possible. I love you both.

Contributions

- **Project design:** Fatma Aysazci-Cakar, Thomas Schroder, Nigel Hunt
- **Application for ethical approval:** Fatma Aysazci-Cakar
- **Recruiting participants:** Fatma Aysazci-Cakar
- **Focus Group Moderator:** Fatma Aysazci-Cakar
- **Conducting Focus Group Interview:** Sahin Cakar
- **Interrater reliability checks for the Focus Group Content Analysis:** Fatma Aysazci-Cakar, Thomas Schroder, Nigel Hunt
- **Scoring measures:** Fatma Aysazci-Cakar
- **Data Collection, Entry and Analysis:** Fatma Aysazci-Cakar
- **Delivery of Narrative Exposure Therapy sessions:** Fatma Aysazci-Cakar
- **Conducting Change Interviews:** Sahin Cakar
- **Treatment fidelity checks:** Thomas Schroder
- **Write up:** Fatma Aysazci-Cakar, supervised by Thomas Schroder and Stephen Regel
- **Grammar Check and Language Clarification:** ChatGPT 3.5

TABLE OF CONTENTS

<i>Abstract</i>	3
<i>Dedication and Acknowledgements</i>	5
<i>Contributions</i>	7
<i>Table of Contents</i>	<i>Error! Bookmark not defined.</i>
<i>List of Tables</i>	13
<i>List of Figures</i>	14
<i>List of Abbreviations</i>	15
<i>List of Appendices</i>	18
Chapter 1: General Introduction and Literature Review	19
1.1. Concept of War and Civil War	19
1.1.1. Impact of War on Society.....	20
1.1.2. Impact of War on Individuals.....	20
1.1.3. Migration and Refugees	21
1.1.4. Mental Health of Refugees.....	23
1.2. Syrian Civil War	40
1.2.1. Background of Syrian Civil War	40
1.2.2. Socio-Political Impact of the Syrian Civil War.....	41
1.2.3. Psychological Impact of the Syrian Civil War	42
1.2.4. Turkiye’s Position in Syrian Civil War	43
1.3. Rationale of the Study	44
Chapter 2: A systematic review of prevalence and correlates of Post-Traumatic Stress Disorder, Depression and Anxiety in the displaced Syrian population*	48

2.1. Introduction	48
2.2. Method	52
2.2.1. Search Strategy.....	52
2.2.2. Selection and Screening Process	53
2.2.3. Data extraction.....	55
2.2.4. Quality appraisal.....	56
2.2.5. Data synthesis.....	60
2.3. Results	60
2.3.1. Sex and PTSD, Depression and Anxiety	61
2.3.2. Marital status and PTSD, Depression and Anxiety	70
2.3.3. Educational level and PTSD, Depression and Anxiety	71
2.3.4. Economic Status and PTSD, Depression and Anxiety	72
2.3.5. Traumatic Events Experienced (TEE) and PTSD, Depression and Anxiety	73
2.3.6. Resettlement period and country and PTSD, Depression and Anxiety	74
2.3.7. Legal status of the population and settlement type and PTSD, depression and anxiety	75
2.4. Discussion	76
2.5. Limitations	82
2.6. Conclusion	85
<i>Chapter 3: Practical Feasibility of Narrative Exposure Therapy in Syrian Refugee population residing in Turkiye: A Focus Group Study</i>	87
3.1. Introduction	87
3.2. Materials and Methods	92
3.2.1. Participants.....	92

	10
3.2.2. The Role of the Moderators	92
3.2.3. Data Collection.....	92
3.2.4. Data Analysis Method.....	93
3.3. Results	96
3.3.1. Code “Research”.....	98
3.3.1.1. Delivery of NET.....	98
3.3.2. Code “Recruitment”.....	99
3.3.3. Code “Therapy”.....	104
3.3.4. Code “Remarks”.....	107
3.4. Discussion	108
3.5. Conclusion	114
<i>Chapter 4: Feasibility and effectiveness of Narrative Exposure Therapy in the Syrian refugee population and the potential role of it in Self-Concept Clarity</i>	<i>115</i>
4.1. Introduction	115
4.1.1. Background of Syrian Civil War, Numbers, and Emergency	115
4.1.2. Syrian Refugees in Turkiye.....	117
4.1.3. Psychological Interventions for displaced Syrian Refugees	123
4.1.4. Western Healthcare in Non-Western Population:.....	123
4.1.5. Narrative Exposure Therapy.....	124
4.1.6. Memory	130
4.1.7. Self	133
4.1.8. Rationale of the intervention study.....	139
4.2. Method	140
4.2.1. Research Philosophy	141

4.2.2.	Rationale for Single Case Design	142
4.2.3.	Participants	145
4.2.4.	Procedure.....	158
4.3.	Analysis	173
4.3.1.	Visual Analysis.....	174
4.3.2.	Simulation Modelling Analysis	178
4.3.3.	Reliable Change Index and Clinically Significant Change	179
4.4.	Results	181
4.4.1.	Means, Medians, and Standard Deviations of Questionnaires	182
4.4.2.	Visual Analysis of Outcomes	182
4.4.3.	Simulation Modelling Analysis Outcomes	200
4.4.4.	Reliable Change Index and Clinically Significant Change Outcomes	206
4.4.5.	Change Interviews	213
4.4.6.	Results from Within-Case Perspective	221
4.4.7.	Results from Across-Case Perspective	229
4.5.	Discussion	229
4.5.1.	Summary and Discussion.....	229
4.5.2.	Implications and Research Strengths	234
4.5.3.	Limitations.....	238
4.5.4.	Future Directions	242
4.6.	Conclusion	244
Chapter 5: General Discussion and Conclusion		243
5.1.	Implications of Mental Health Research in Syrian Refugees	245
5.2.	Implications of NET in Syrian Refugees	246

5.3. Implications for Self-Concept Clarity	249
5.4. Implications of NET in the context of Turkiye	252
<i>Reflexivity</i>	254
Prospective Reflexivity.....	255
Retrospective Reflexivity	259
<i>Conclusion</i>	262
<i>References</i>	264
<i>Appendices</i>	329
<i>Publications and Academic Studies</i>	370

List of Tables

Table 1: Search strategy and key terms used in databases.....	53
Table 2: Inclusion and Exclusion criteria of studies.....	54
Table 3: <i>JBI's Quality Appraisal scores for included studies</i>	57
Table 4: Demographics of the included studies.....	63
Table 5: Outcomes of PTSD, Depression and Anxiety prevalence and characteristics of studies.....	68
Table 6: Distribution of codes, categories, and subcategories.....	96
Table 7: NET participants' demographics.....	148
Table 8: Frequency of measurements for each participant.....	150
Table 9: Characteristics and Psychometric properties of measurements.....	152
Table 10: Mean and SD of measurements.....	182
Table 11: Summary of criteria for change between phases.....	184
Table 12: SMA Lag correlations between IES-R and DASS-21 subscales.....	201
Table 13: SMA Lag correlations between DASS-21 subscales.....	203
Table 14: SMA Lag correlations between SCCS, IES-R and DASS-21 subscales.....	204
Table 15: RCI and CSC values.....	206
Table 16: Normative and Clinical data referenced when calculating the RCI and CSC.....	209
Table 17: Content Analysis of Change Interview	212
Table 18: Content of Change Interviews.....	214

List of Figures

Figure 1: PRISMA 2009 Flow Diagram.....	59
Figure 2: Phases of Content Analysis.....	94
Figure 3: Steps of Scoping Review to identify eligible studies having self-related scales in NET search.....	137
Figure 4: Data collection Process of NET study.....	165
Figure 5: Steps in NET intervention.....	171
Figure 6: Calculation of RCI.....	179
Figure 7A: Visual Analysis of Banu’s IES-R.....	185
Figure 7B: Visual Analysis of Banu’s DASS-21 subscales.....	186
Figure 7C: Visual Analysis of Banu’s SCCS.....	189
Figure 8A: Visual Analysis of Sibel’s IES-R.....	190
Figure 8B: Visual Analysis of Sibel’s DASS-21 subscales.....	191
Figure 8C: Visual Analysis of Sibel’s SCCS.....	194
Figure 9A: Visual Analysis of Hamza’s IES-R.....	195
Figure 9B: Visual Analysis of Hamza’s DASS-21 subscales.....	196
Figure 9C: Visual Analysis of Hamza’s SCCS.....	199

List of Abbreviations

ANS	Autonomic Nervous System
AM	Autobiographical Memory
APA	American Psychological Association
CBT	Cognitive Behavioural Therapy
CDC	Conservative Dual Criterion
CiQQ-S	Short form of Changes in Outlook Questionnaire
CI	Change Interviews
CPT	Cognitive Processing Therapy
CSC	Clinically Significant Change
DASS-21/42	Depression, Anxiety and Stress Scale-21/42
DSM	Diagnostic and Statistical Manual of Mental Disorders
e-NET	Online NET
EMDR	Eye-Movement Desensitisation and Reprocessing
EPT	Emotionally Processing Therapy
ES	Effect Size
EU	European Union
FG	Focus Group
gPM+	Group Program Management Plus
GDPR	General Data Protection Regulation

IC	Informed Consent
ICD	International Classification of Disease
IES-R	Impact of Event Scale-Revised
JBI	Joanna Briggs Institute
LEC-5	Life Events Checklist-5
MU	Meaning Unit
NET	Narrative Exposure Therapy
NGO	Non-Governmental Organisation
NICE	National Institute for Health and Care Excellence
PE	Prolonged Exposure
PEM	Percentage of Data points Exceeding the Median
PIS	Participant Information Sheet
PM+	Program Management Plus
PND	Percentage of Non-overlapping Data
PRISMA	Preferred Reporting items for Systematic Reviews and Meta-Analysis
PTG	Posttraumatic Growth
PTSD	Posttraumatic Stress Disorder
RCI	Reliable Change Index
RCT	Randomised Controlled Trial
SAM	Situationally Accessible Memory

SC	Self-Concept
SCC	Self-Concept Clarity
SCCS	Self-Concept Clarity Scale
SCD	Single-Case Design
SD	Standard Deviation
SEM	Standard Error of Measurement
SMA	Simulation Modelling Analysis
TEE	Traumatic Events Experiences
TFCBT	Trauma-Focused Cognitive Behavioural Therapy
TT	Testimony Therapy
VA	Visual Analysis
VAM	Verbally Accessible Memory
UNHCR	United Nations High Commissioner
WHO	World Health Organisation
WW	World War

List of Appendices

Appendix A: Journal Guidelines JAD-Reports	328
Appendix B: JBI Critical Appraisal Checklist	331
Appendix C: Ethics Committee Approval Letter	332
Appendix D: Journal Guideline IJSS	336
Appendix E: Focus Group Semi-Structured Interview Questions	336
Appendix F: Elements of fear structure in NET	337
Appendix G: Change Interview Structure and Questions	338
Appendix H: Ethics Committee Amended Approval Letter	338
Appendix I: Consent Form	341
Appendix J: Participant Information Sheet	343
Appendix K: Study Outline	347
Appendix L: Data Management Plan	352
Appendix M: Intervention Study Advertisement Leaflet	361
Appendix N: NET Participants' Lifelines	363
Appendix O: Fidelity Checklist (Psychoeducation)	365
Appendix P: Fidelity Check (Lifeline)	366
Appendix R: Fidelity Check (Narration)	367
Appendix S: Fidelity Check (Final Session/ Renarration)	368

Chapter 1: General Introduction and Literature Review

1.1. Concept of War and Civil War

War, a man-made disaster, inflicts more severe damage on people than natural disasters, and its history dates back as far as humanity itself. Unfortunately, it persists in the modern world. Over the past few decades, more than 200 wars and conflicts have been documented worldwide, disproportionately affecting impoverished communities and marginalised ethnic groups. These conflicts manifest in various forms, including violent clashes, gun warfare, and even genocide. While both war and civil war involve armed conflicts, they differ significantly in terms of the parties involved, the scale of the conflict, origins, and the extent of events. Civil war, also known as non-international armed conflicts, refers to a violent situation that arises within the borders of a nation and involves prolonged armed clashes between government forces and one or more organised armed groups, or between such organisations themselves (Kalyvas & Kenny, 2017). Thus, a civil war should not be mistaken for isolated acts of violence, riots, chaos, massacres, or revolutions. For instance, while the large-scale violence in Iraq from 2006 to the present day has not been officially classified as a civil war, primarily due to its genesis in the US invasion of Iraq, the conflicts in Syria that began in 2011 have been recognised as a civil war due to the intensity of armed conflicts, the involvement of numerous government forces, and the severity of casualties (Gaub, 2013). Wars possess the potential to influence global geopolitics, economics, and relationships, whereas civil wars primarily impact specific regions, causing significant humanitarian and political consequences. Despite the widely recognised detrimental impacts of war and civil conflicts on individuals, societies, and specific ethnic groups, insufficient attention has been paid to their localised patterns of terror and distress, long-term effects on physical and mental health, and psychosocial impacts (Pedersen, 2002; Tol et al., 2010).

1.1.1. Impact of War on Society

War has been a persistent affliction throughout human history, leaving lasting and permanent impacts on societal structures. Its destructive influence disrupts the social, economic, and cultural fabrics of communities, with consequences that reverberate for generations (Murthy & Lakshminarayana, 2006). Countries ravaged by conflict often witness soaring rates of injuries, diseases, economic instability, and mental health issues. The repercussions of war are far-reaching, hindering access to essential resources, impeding agricultural productivity, disrupting transportation, and diminishing human capital. Consequently, societies grapple with malnutrition, starvation, and a substantial economic burden (Murthy & Lakshminarayana, 2006). Culturally and sociologically, the collective memory of a society is profoundly shaped by the traumatic events and memories of war, leading to psychosocial afflictions and identity crises among the affected populace. The devastation caused by wars severely impacts healthcare systems in afflicted regions. Moreover, the absence of proper sanitation infrastructure, a common aftermath of warfare, fosters an environment conducive to the spread of diseases such as cholera, typhoid fever, dysentery, and malaria. The upheaval caused by war induces restlessness and apprehension about the future of society. One of the far-reaching social impacts of war is the phenomenon of mass migration, significantly altering the landscape of societies (Arslan & Kotan, 2021; Hjertman et al., 2018; Modell & Haggerty, 1991; Murthy & Lakshminarayana, 2006; Sheather, 2022).

1.1.2. Impact of War on Individuals

The impact of war on individuals encompasses both direct and indirect effects resulting from armed conflicts. Direct consequences include the loss of life and physical injuries, which can occur due to bomb blasts, gunshot wounds, or other forms of violence. These injuries not only affect individuals but also profoundly impact entire communities,

particularly those with limited access to medical facilities. Such injuries can lead to lifelong disabilities or even loss of life. Furthermore, the devastation caused by bombing raids during wars inflicts immense suffering on those who lose their homes. Additionally, the destruction of crucial infrastructure, such as hospitals and schools, disrupts the daily lives of affected communities (Vonk, 2022).

The psychological impact of war, though often concealed and indirect, can be equally or even more devastating than the physical effects. Individuals frequently grapple with traumatic experiences resulting from their exposure to and witnessing of conflict-related atrocities (Silver et al., 2013). This can lead to the development of mental health disorders such as Post-Traumatic Stress Disorder (PTSD), depression, and anxiety (De Jong et al., 2003; Fazel et al., 2005). Individuals may exhibit symptoms such as flashbacks, heightened startle reactions, hyperarousal, and avoidance. Furthermore, individuals with war-related mental health disorders may also experience various physical symptoms such as headaches, digestive issues, and insomnia (Jensen et al., 2013; Vonk, 2022). The emotional scars resulting from war defy easy quantification but leave enduring impacts on the lives of survivors. Those who have endured violent conflicts often express fear of further attacks, ambivalent emotions, and emotional dysregulation as their lives have been under constant threat (Erdener, 2017; Nickerson et al., 2015). It is evident that war and conflicts have far-reaching consequences on individuals, affecting generations long after peace is restored.

1.1.3. Migration and Refugees

Armed conflicts, political unrest, and warfare compel thousands of individuals to flee their hometowns and countries each year, driven by threats to their lives. According to the United Nations High Commissioner for Refugees (UNHCR) report at the end of 2022, there were 108.4 million forcibly displaced people, of which 35.3 million were refugees (UNHCR, 2022). The term 'refugee' is broadly defined as someone who harbors a "well-founded fear of

being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion" and is unable or unwilling to seek protection from their own country (UNHCR, 1951). While the term "refugee" is often used interchangeably with "asylum seeker," the latter refers to an individual who has left their country of origin and has applied for refugee status in another country, awaiting a decision on their application (Nicholl & Thompson, 2004). Refugees endure both indirect consequences, such as forced migration, bombings, and living in inhospitable conditions, and direct consequences, including injuries sustained during warfare, sexual violence, and capture.

Migration exerts profound and extensive impacts on individuals, communities, and cultures, both in the countries of departure and those of arrival. The migration process can be delineated into three distinct phases: pre-migration, migration, and post-migration. These phases often exhibit overlapping and blurred transitions. The pre-migration phase occurs when individuals or groups make the decision to migrate and prepare for their journey, which may involve accessing financial, legal, and political resources to facilitate the migration process. The migration phase involves the physical relocation to a new place, crossing boundaries to reach a place of safety. The post-migration phase, which may last a lifetime, holds the potential to affect not only the individual but also future generations (Berry, 1997). Before forced migration, refugees frequently undergo or witness physical, psychological, and sexual or gender-based violence (Giacco et al., 2018). During migration, they encounter uncertain and challenging journeys, often leaving behind family members and possessions. After resettlement, they may face post-migration challenges such as immigration detention and temporary protection, all while living under the constant threat of repatriation (Nickerson et al., 2011). Given the arduous process of migration, refugees comprise an exposed and vulnerable population often subjected to various levels of repeated and cumulative traumatic events during different phases of their journey.

1.1.4. Mental Health of Refugees

During the different phases of migration, individuals encounter numerous stressors, including unemployment, social status loss, loneliness, language barriers, and cultural differences. These stressors, combined with inadequate coping mechanisms, contribute to the physiological and psychological health issues experienced by refugees (Hyman, 2004; Johnson, 2005). Extensive research has demonstrated that refugees, due to their exposure to high levels of traumatic events and other stressors, are prone to psychological disorders. Studies reveal that refugees often experience exposure to eight or more traumatic events during conflicts (Roberts et al., 2009). Researchers have also explored the "dose-response" relationship between trauma exposure and psychological distress in refugees, finding a strong association between the complexity of experienced trauma and the severity of symptoms of PTSD, anxiety, and depression (Nickerson et al., 2015). The prevalence of mental health problems among refugees varies significantly across studies due to different measurement methodologies, the diversity of the surveyed population, and the cultural aspects of distress and mental health (Hollifield et al., 2002; Nosè et al., 2017). For example, a systematic review found a wide range of prevalence for depression (2.3% to 80%), PTSD (4.4% to 86%), and unspecified anxiety disorder (20.3% to 88%) among war-affected refugees from various ethnicities (Bogic et al., 2015). However, a consensus exists that mental health disorders are highly prevalent among refugees, with several studies establishing associations between mental health problems and psychopathology (e.g., Silove et al., 1997; Porter and Haslam, 2005). Longitudinal studies conducted with Bosnian and Kosovar refugees revealed that mental health disorders persist and may even increase over time after conflict. Three years after the conflict, Bosnian refugees continued to experience mental health disorders, while the prevalence of PTSD among Kosovar refugees was approximately 80% at the 18-month follow-up, compared to 37% at the baseline (Mollica et al., 2001; Roth et al., 2006).

Studies carried out in conflict-affected regions and resettlement countries consistently report varying but generally high rates of psychological disorders, such as PTSD, depression, and anxiety, among war-affected and displaced individuals (Acarturk et al., 2018; Fazel et al., 2005; Javanbakht et al., 2019; Tekeli-Yesil et al., 2018).

1.1.4.1. PTSD Diagnosis:

The American Psychological Association (APA, 2013) defines PTSD based on several criteria, including exposure to actual or threatened death, serious injury, or sexual violence; re-experiencing symptoms such as intrusive memories, nightmares, and flashbacks; avoidance of stimuli associated with the traumatic event; changes in mood and thoughts such as negative beliefs and detachment from others; and trauma-related arousal and reactivity. Notably, the Diagnostic and Statistical Manual of Mental Disorders (DSM)-V places PTSD in a separate chapter titled "Trauma and stress-related disorders," departing from its previous classification as an anxiety disorder in the DSM-IV. Furthermore, the DSM-V no longer includes the subjective response of fear, helplessness, or horror in its diagnostic criteria, as studies indicate that not all individuals with PTSD experience these specific fear reactions (Kinzie, 2015). In the 11th edition of the International Classification of Diseases (ICD-11) published by the World Health Organisation (WHO, 2022), the description of PTSD was refined, and a new category called "Complex PTSD" was introduced. According to the ICD-11, individuals must exhibit symptoms such as re-experiencing the trauma through intrusive memories, deliberate avoidance of traumatic reminders and memories, and the perception of current threats after exposure to an extremely threatening or horrific event. The understanding of PTSD has evolved over time. Although symptoms resembling PTSD have been recognised since ancient times, the modern understanding of the disorder emerged during the 19th and early 20th centuries. Initially, PTSD symptoms were attributed to brain damage, but it was later recognised that the primary causes were psychological. During

World War (WW)- I, symptoms were referred to as "shell shock" in soldiers, and during WW-II, the terms "war fatigue" or "war neurosis" were used to describe severe reactions experienced by both soldiers and civilians. The concept of traumatic stress gained further recognition during and after WW-II, leading to the development of diagnostic criteria, particularly for war-related trauma. In the DSM-I, symptoms were broadly categorised as "Gross Stress Reaction," and in the subsequent DSM-II, there was little improvement in the description of PTSD. It was not until the DSM-III in 1980 that the term "trauma" was used for the first time, and it was classified under anxiety disorders. The inclusion of secondary trauma as a criterion was introduced in DSM-IV, shifting the focus from large-scale public events to individual experiences (APA, 1952, 1968, 1980, 1987, 1994; Myers, 1940; Wilson, 1994; Jones, 2007).

PTSD has been extensively studied in various populations, including victims of sexual assault, physical assault or accidents, natural disasters, childhood sexual abuse, complex trauma, and in veterans. More recently, there has been a growing focus on post-conflict regions where refugees and asylum seekers experience high rates of PTSD (Kienzler, 2008). PTSD is the most common mental health problem observed among refugees who have lived through war-related experiences.

1.1.4.1.1. PTSD theories: PTSD has been examined from various theoretical perspectives, each providing unique insights into the condition. Despite their differences, these perspectives share a common understanding, recognising maladaptive processing of traumatic events as a fundamental feature of PTSD. While characterisations of the after-effects of traumatic events date back to the 3rd century, the official psychiatric diagnosis of PTSD was acknowledged by the APA in 1980 in the DSM-III (Birmes et al., 2003; Lasiuk & Hegadoren, 2006). One of the earliest theories of PTSD originated in nineteenth-century Britain, a period marked by the widespread use of railway travel due to the Industrial Revolution, leading to a

high incidence of railway crashes. Physician Dr Waller Lewis described a syndrome among traveling post-office workers who had experienced railway crashes, which he labeled "Railway Spine". This syndrome encompassed symptoms such as chronic pain, sleep disturbances, and nightmares about the crashes (Cohen & Quintner, 1996). While some physicians attributed the psychological complications of this syndrome to somatic causes, others believed its origins to be psychological (Lamprecht & Sack, 2002; van der Kolk et al., 1996b). Subsequently, this concept was renamed by Oppenheim as "traumatic neurosis," positioning the term between neurasthenia (fatigue after mental effort and bodily weakness) and hysteria (Holdorff, 2011), introducing the term "trauma" for the first time. However, clinical inquiries persisted over the subsequent decades, posing questions such as "Does the incident produce the disorder, or is the disorder a result of the person's innate weaknesses?" and "Is the illness primarily biological or psychological in nature?" These questions prompted a renewed focus on the study of "hysteria," particularly among women, towards the end of the nineteenth century (Lasiuk & Hegadoren, 2006). Many physicians during that era noted similar symptoms in cases of Railway Spine and Hysteria. While Hysteria was challenging to precisely define, it encompassed a wide range of mental and physical conditions, including paralysis, tremors, spasms, as well as various abnormalities of the respiratory, digestive, and circulatory systems, sometimes accompanied by mental symptoms (Marlowe, 2001).

The French neurologist Jean-Martin Charcot made significant contributions to the understanding of hysteria by meticulously observing and documenting its symptoms. He concluded that many somatic symptoms associated with hysteria had a psychogenic origin and could be induced through hypnosis. Concurrently, Sigmund Freud and his colleague Breuer in Vienna arrived at similar conclusions regarding hysteria, finding that these symptoms could be relieved when traumatic memories and their associated emotions were expressed in words, a process known as "catharsis," later renamed "psychoanalysis" by Freud

(Herman, 1997). In his book "The Aetiology of Hysteria" (1896), Freud attributed hysteria to one or more instances of premature sexual encounters during early childhood. However, this connection between psychological trauma and symptomology proved controversial, leading Freud to retract his hypothesis about hysteria due to societal and moral implications (Lasiuk & Hegadoren, 2006). Interest in the term "trauma" gradually waned until the outbreak of WW-I, when the conflict reignited awareness of trauma. Thousands of soldiers faced warfare at close quarters, many experiencing the imminent threat to their lives and witnessing the death or mutilation of their comrades. In response, they exhibited symptoms resembling hysteria, such as screaming, uncontrollable weeping, freezing, becoming mute and unresponsive, and experiencing memory loss and emotional numbness (Herman, 1997). This phenomenon was termed "shell shock" by the British military psychiatrist Charles Samuel Myers (1915). Concurrently, British physician W.H.R. Rivers, working at Craiglockhart War Hospital during WW-I with soldiers suffering from shell shock, emerged as a pioneering figure in the field of psychology. He employed an eclectic approach to psychotherapy, using talking therapy, hypnosis, and other innovative psychological techniques to treat these patients. Although Cognitive-Behavioural Therapy (CBT) was not fully developed at that time, his contributions in treating soldiers exhibiting symptoms akin to PTSD are highly respected and acknowledged in the history of psychology and trauma treatment. His collaborative approach strongly resonates with modern CBT practices today (Howorth, 1996). Following WW-I, the investigation into the concepts of hysteria, war neurosis, trauma, and their interrelationships receded from the forefront of medical and psychological inquiry until the devastating consequences of WW-II, which affected both soldiers and civilians. During this period, American psychiatrist Kardiner (1941), drawing inspiration from Freud's work, observed that soldiers were not only suffering from symptoms reminiscent of hysteria but were also experiencing amnesia. He introduced the term "war neurosis" to describe this

condition. Kardiner believed that these soldiers were attempting to preserve the integrity of their ego by simultaneously exhibiting amnesia and bodily arousal. The Vietnam War also played a pivotal role in prompting investigations into veterans grappling with the adverse psychological effects of combat. Consequently, the findings from these inquiries, along with Kardiner's theory, significantly contributed to the formal establishment of PTSD in the DSM-III, published in 1980. Concurrently, the field of psychological trauma was integrating new ideas from social and behavioural sciences, emphasising the interplay between environmental factors and individual dynamics (Lasiuk & Hegadon, 2006). In the 1960s, there was a notable increase in the development of behavioural theories related to trauma. The behavioural theory suggests that PTSD symptoms emerge as a result of Classical Conditioning (Resick & Schnicke, 1992). According to this perspective, cues associated with a traumatic event serve as Conditional Stimuli, while the negative experiences during the trauma act as Unconditional Stimuli. This conditioning leads to the elicitation of Conditional Response and Unconditional Response, such as fear, avoidance, and anxiety, triggered by the traumatic experience (Mowrer, 1947; 1960). For instance, if a person experiences intense fear during a traumatic event, such as hearing a sudden loud noise like an explosion, it is likely that they will experience fear again when exposed to similar noises in the future.

Behavioural theory has been enriched and supported by numerous studies, including the model of PTSD introduced by Ehler and Clark (2000). According to their model, PTSD develops only when individuals perceive the traumatic incident and/or its consequences as a serious threat. Once triggered, this perception of ongoing threat is accompanied by intrusions, emotional reactions, re-experiencing, arousal, and anxiety symptoms. These perceived threats also prompt various behavioural and cognitive reactions aimed at reducing the perceived danger and immediate distress. Paradoxically, these reactions may impede cognitive change and contribute to the persistence of the disorder. In the 1960s and 1970s, there was a

groundbreaking shift in psychiatric doctrine towards understanding the impact of environmental factors, interpersonal relationships, and cognitive processes on PTSD. For instance, Horowitz (1976) introduced the Information Processing Theory, which suggested that individuals with PTSD face difficulties in processing and integrating the specific details of a traumatic event. He proposed that information related to traumatic experiences often contradicts an individual's preexisting beliefs, resulting in distressing symptoms. In simpler terms, when a person encounters a new experience, it typically needs to align with their internal model based on previous information (Horowitz, 1982). However, when this alignment fails to occur, the disrupted and conflicting information contributes to the development of PTSD symptoms. This model encompasses several stages, including the encoding of sensory information, the consolidation of this information into memory, the retrieval of fragmented yet vivid traumatic memories, and the integration of these memories into existing cognitive structures.

Building upon the Information Processing Model, Brewin (2001) introduced the Dual Representation Theory, proposing the existence of two distinct forms of information processing in humans. The first is termed "Verbally Accessible Memory" (VAM), enabling individuals to consciously recall and articulate their personal life stories through autobiographical memory. The second is known as "Situationally Accessible Memory" (SAM), responsible for the unconscious storage of memories, bodily reactions, and sensations. In daily interactions, these two modes of processing collaborate to construct meaningful and comprehensive memories of life experiences. However, in the presence of traumatic stress, the balance between VAM and SAM is disrupted, with SAM assuming dominance. Consequently, individuals may struggle to recall autobiographical details of the traumatic event while retaining sensory cues associated with it. This fragmentation between the two memory modes poses challenges in integrating the trauma memory into pre-existing

memory schemas and reducing fear-associated trauma memories stored within the SAM structure. To address these challenges, this approach emphasises the importance of exposure and habituation in treatment interventions for PTSD symptoms (Brewin & Holmes, 2003).

In the Social-Cognitive Theory, Horowitz (1986) expanded his research beyond the psychodynamic and information-processing perspectives to underscore the limitations of existing cognitive structures in accommodating traumatic experiences, as outlined above. Similarly, Janoff-Bulman (1992) introduced the concept of "shattered assumptions" to better grasp the nature of trauma. She argued that individuals possess three fundamental cognitive schemas: (1) the belief that the world is meaningful and comprehensible, (2) the belief that the world is benevolent, and (3) the belief that the world is worthy and competent. When these fundamental assumptions are shattered by a traumatic event, individuals may experience symptoms of PTSD.

Reposing on Lang's Bio-Informational Emotional Imagery Theory (1977, 1979), Foa and Kozak (1986) introduced the Emotional Processing Theory (EPT). Consistent with Lang's Bio-Informational Theory of Emotional Imagery, the activation of an associative network of stored information occurs when individuals contemplate an emotionally charged stimulus, such as a spider. This parallels the activation of the same network during a real-life encounter with the stimulus, like stumbling upon a live spider. This network of information encompasses various aspects, such as perceptual aspects (details like the color, shape, size, and texture of the spider), semantic details (the meaning associated with the stimulus, such as it being an insect, associated danger, or the possibility of being bitten), somatovisceral responses (the physical and visceral reactions experienced when encountering the stimulus, like fear and an accelerated heart rate), preparatory motor responses (the body's readiness to respond, such as muscles tensing in preparation to flee from the spider). It's important to emphasise that this concept asserts that only mental imagery possesses the capacity to elicit

physiological and behavioural response systems (Lang, 1987; Wilker & Kolassa, 2013). EPT posits that exposure therapy has the potential to modify the connections between the fear stimulus and these cognitive networks. The “fear network,” originally proposed by Lang (1977), suggests that each new traumatic experience triggers the same memory structure, as traumatic experiences often share common elements such as life-threatening situations and heightened physiological arousal (Wilker & Kolassa, 2013). This model distinguishes between two types of memory: Declarative “Cold” memory, including information about long-term periods and general life events, and Non-Declarative “Hot” memory, which contains sensory, emotional, and physiological information specific to a particular experience (Foa & Kozak, 1986; Lang, 1979). According to the EPT, when a person undergoes a traumatic incident, sensory information related to the event cannot be effectively integrated into their existing memory networks. As a result, these sensory and emotional experiences remain vivid over time, contributing to the development of PTSD symptoms. In simpler terms, changes in memory structures are also responsible for emotional reactions. When faced with a traumatic experience, individuals may find it difficult to fully absorb and process these emotions. Foa and Kozak (1986) proposed that the fear network must be activated for the successful alteration of sensory information within the system. This necessitates repeated exposure to traumatic memories through techniques like imaginal exposure. Such methods aim to decrease avoidance of the traumatic experience and facilitate the integration of information that contradicts the fear response.

In the early 1990s, Stephen Porges introduced one of the groundbreaking biological models called the Polyvagal Theory, which is a significant framework for understanding how the Autonomic Nervous System (ANS) responds to stress and trauma, especially in the context of PTSD. According to the Polyvagal Theory, adaptive behavioural strategies have their neurophysiological foundations in the development of the mammalian ANS. Our ANS

evolved as mammals separated from reptiles, enabling us to automatically communicate with other mammals and activate various self-defense mechanisms when needed. The theory additionally asserts the argument that the physiological state limits the variety of behaviour and psychological experiences. It offers various insights into the plasticity of the physiological state. First, the idea underlines that different kinds of behaviour are reinforced through multiple physiological conditions. For instance, the mobilisation responses of fight or flight are facilitated by a physiological condition characterised by vagal withdrawal. On the other hand, spontaneous social engagement behaviours are supported by a physiological condition characterised by increased vagal influence on the heart (through myelinated vagal pathways originating in the nucleus ambiguus). The idea also emphasises how the striated muscles of the face and the smooth muscles of the internal organs (viscera) are controlled by the same brain pathways, forming an integrated social interaction system. Thirdly, the Polyvagal Theory suggests that neuroception can be used as a trigger or inhibitor of defense mechanisms (Porges, 2009). In simple terms, Porges's theory highlights how our physiological state—the process by which our body's systems are operating—is related to behavioural issues and psychological problems. Therefore, the Polyvagal Theory has provided a useful framework for comprehending the physiological reactions to trauma and stress. Apart from Porges's Polyvagal Theory, biological theories of PTSD have asserted different theoretical standpoints to understand trauma. Some biological theories suggest that the experience of a traumatic event can result changes in neurobiological functioning, leading to the development of traumatic stress. For example, Pitman and colleagues (2012) discovered that Vietnam combat veteran twins diagnosed with PTSD, as well as their non-combat-exposed twins, exhibited reduced hippocampal volumes in comparison to Vietnam combat veteran twins without PTSD and their unexposed twins. Furthermore, it is hypothesised that alterations in brain structures involved in memory consolidation can

contribute to symptoms such as intrusive thoughts, hyperarousal, and emotional numbing, which are commonly observed in PTSD.

In conclusion, the simple concept of "shell shock" has given way to sophisticated and multifaceted theories of PTSD that consider biological, psychological, social, and cognitive aspects. The diagnosis, treatment, and support offered to those with PTSD have improved with the help of with these progressions.

1.1.4.1.2. *Epidemiology of PTSD:* Although individuals encounter traumatic events at least once in their lives, research suggests that 80% to 90% of those exposed to stressors do not develop PTSD. Therefore, exposure to a traumatic event is necessary but not solely sufficient for the diagnosis of PTSD (Breslau, 2002; Ford et al., 2015; Kessler et al., 1995, 2005). Considering the stressful journey, resettlement, and adjustment process in host countries, perhaps the most significant disadvantage of being a refugee is the experience of multiple catastrophic and ruinous life events, which can lead to the development of PTSD. Thus, it is not surprising that refugees often suffer from PTSD, either during war or conflict or after resettlement. For instance, Fazel et al. (2005) found, in a systematic review of 7,000 refugees residing in Western countries, that they were ten times more likely to develop PTSD than people of the same age in those countries. According to studies, the prevalence of PTSD in refugees ranges from 4% (Steel et al., 2002) to 86% (Carlson & Rosser-Hogan, 1991).

1.1.4.1.3. *PTSD Risk and Protective Factors:* PTSD, like any other mental health problem, results from multiple causes rather than a single factor (Carlson et al., 2008). While certain stressors can significantly impact the manifestation of PTSD symptoms, specific factors play a protective role in the development of PTSD.

Risk Factors: Research indicates that pre-, peri-, and post-traumatic factors are strongly associated with PTSD (Shalev, 1996a). Pre-traumatic risk factors include variables that may influence vulnerability to developing PTSD. In a systematic review of 54 studies, DiGangi et

al. (2013) identified six categories of predictors of pre-trauma: cognitive abilities (e.g., self-appraisals, lower cognitive ability), coping and response styles (e.g., rumination, emotion-focused coping, avoidance), personality factors (e.g., hostility, neuroticism, low self-efficacy), psychopathology (prior psychiatric history), psychophysiological factors (e.g., startle reactivity), and social-ecological factors (family of origin, poverty, etc.). Additionally, lower education levels (Enlow et al., 2013), being female (Breslau, 2009), previous trauma, and repeated trauma history (Resick, 2014; Schaaf & McCanne, 1998) can trigger the experience of PTSD as pre-traumatic factors. Peri-traumatic risk factors generally occur during, immediately, or shortly after the traumatic event and can manifest as physiological activity (e.g., high blood pressure) or dissociation (Ford et al., 2015). The degree of exposure to traumatic events and the presence of negative emotions such as fear, shame, helplessness, and guilt have been found to be highly associated with peri-traumatic risk factors (Alvarez-Conrad et al., 2001; Herman, 1992). On the other hand, research has found that adverse social environments (e.g., lack of psychological and physical support to overcome stress), avoidance, and limited cognitive flexibility, which play a crucial role in reappraising the traumatic event, are the main post-trauma risk factors for developing PTSD (Ullman & Filipas, 2001; Wenzlaff & Wegner, 2000; Williams et al., 2010).

Protective Factors: Despite the presence of risk factors, some individuals may not develop PTSD or may only experience mild symptoms. This can be attributed to the presence of protective factors that lower the likelihood of experiencing PTSD symptoms. Research suggests that having good social support and self-efficacy are major protective factors against PTSD (Brewin et al., 2000; Waldrep & Benight, 2008; Vogt et al., 2007). Social support includes caring, loving, and listening assistance that helps individuals cope with a stressful event and is provided by friends, family, groups, or even strangers. Self-efficacy, on the other hand, refers to an individual's belief in their ability to achieve goals and overcome challenges

(Ford et al., 2015). Several studies have also shown that intelligence, reading ability, and education can act as protective factors for PTSD (Macklin et al., 1998; Schnurr et al., 2004; Storr et al., 2007). However, it is important to interpret these findings carefully, as PTSD can be experienced by individuals across all levels of intelligence, education, and reading ability, both in adults and children.

1.1.4.1.4. Cultural Context and PTSD: The most recent edition of the DSM (APA, 2013) highlights the crucial role of cultural context in clinical practice more than previous editions, emphasising the connection between social issues, cultural elements, and the diagnosis of psychological problems. Although responses to trauma can vary across cultures, the manifestation of pathological reactions to trauma often exhibits similar patterns. However, these responses are intricately shaped by cultural and ethnic differences. Various cultures have their own frameworks and help-seeking strategies for understanding and addressing psychological issues, including PTSD (Schauer et al., 2011; Summerfield, 1997). Despite extensive research on trauma reactions globally, psychological treatments and assessment tools have primarily been developed from a Western perspective. Consequently, issues have emerged in cross-cultural trauma research, stemming from differences in values, habits, and attitudes, where Western diagnostic criteria and treatment approaches might not be universally applicable (Regel & Joseph, 2017). As a result, researchers and clinicians have integrated the concept of "culturally sensitive" practices into their work to cater to the diverse needs of various groups (Schauer et al., 2011). This approach has yielded promising results in the treatment of PTSD, leading to the development of effective and culturally sensitive models, including Narrative Exposure Therapy (NET), Culturally Adapted CBT, Narrative Therapy, and Eye-Movement Desensitisation and Reprocessing (EMDR).

1.1.4.1.5. Comorbid Disorders of PTSD:

PTSD is a prevalent mental health disorder among refugees, and it often co-occurs with other psychological disorders. Comorbidity in this context refers to the simultaneous presence of one or more additional psychological disorders alongside PTSD. Compared to other mental health conditions, PTSD exhibits significantly higher rates of comorbidity. For instance, a study by Spikol et al. (2022) reported that 80% of individuals with PTSD also met the criteria for at least one other mental health condition. Commonly observed psychological problems in individuals with PTSD include depression, anxiety, stress, and sleep disorders (Forchuk et al., 2020; Mellman et al., 1995; Roszell et al., 1991; Sim, 2019). For example, a national survey involving 5,877 participants found that PTSD symptoms frequently coexisted with anxiety, depression, and substance abuse (Kessler et al., 1995). Brewin et al. (1996) highlighted that in many cases, the comorbidity of PTSD with other disorders is likely to contribute to emotional dysregulation. Emotional dysregulation can be influenced by an individual's disrupted self-schema, often shattered by adverse traumatic experiences (Hijazi, 2014). Moreover, a systematic study conducted by Bogic et al. (2015) revealed that 68.4% of refugees with PTSD also received a diagnosis of depression. Pukay-Martin et al. (2012) reported similar findings, indicating that 63% of veterans with PTSD reported coexisting symptoms of depression. Similarly, studies conducted in refugee populations have highlighted the co-occurrence of PTSD with other disorders, such as psychoses (Cantor-Graae & Selten, 2005), alcohol and substance abuse (Kessler et al., 1995), eating disorders (Bhugra, 2003), suicidal behaviours (Bhugra, 2004a), and somatoform disorders (van der Kolk et al., 1996a). Exploring potential comorbid disorders in individuals with PTSD is crucial for successful and effective treatment.

1.1.4.1.6. Psychological Interventions for PTSD:

For the treatment of individuals diagnosed with PTSD, various approaches have been introduced to provide comprehensive treatment and reduce the symptoms of PTSD, along

with its commonly overlapping comorbid disorders. In the following chapter, several treatment models will be introduced that are commonly used and recommended in trauma therapy.

Cognitive Behavioural Therapy: CBT is increasingly recognised as the treatment of choice for trauma survivors, supported by evidence-based research and its widespread popularity. Authoritative organisations, such as the National Institute for Health and Care Excellence (NICE, 2005) and the Institute of Medicine (2008), have recommended it as a first-line treatment for PTSD. CBT is considered a trauma-focused therapy technique suitable for individuals from diverse backgrounds who have experienced trauma. Its goal is to help individuals reframe their thoughts about the traumatic experience and assign it a new meaning. CBT employs a multifaceted approach that explores how thoughts, emotions, and attitudes interact, teaching individuals to confront and overcome the distress, fear, and avoidance associated with their trauma (Regel & Joseph, 2017). It is a problem-focused approach that incorporates various elements to address the challenges faced by trauma survivors. The key components of CBT include coping skills training, which focuses on developing effective strategies to address PTSD-related problems. CBT involves reconstructing distorted cognitions related to the trauma, and acceptance methods aim to help individuals accept trauma-related emotions and thoughts without trying to avoid them (Nixon, 2006). While anxiety management skills and cognitive restructuring are central to CBT, there are also related approaches and techniques that can be integrated into the treatment process. These may include stress inoculation training, Cognitive Processing Therapy (CPT), relaxation training, dialectical behaviour therapy, and acceptance and commitment therapy (Bradley et al., 2005; Foa et al., 2009).

Overall, CBT equips trauma survivors with practical skills to manage anxiety, challenge distorted thinking, and address the impact of trauma on their lives. Its effectiveness

and adaptability to diverse populations have made it a widely recommended and utilised treatment approach for PTSD.

Prolonged Exposure (PE): Prolonged Exposure (PE) Therapy has also gained recognition as a first-line treatment for PTSD. Studies have found it to be effective in reducing comorbid symptoms such as anger, guilt, and depression in trauma survivors (Kinzie, 2015). PE focuses on confronting triggers related to the traumatic event or distressing elements that have been avoided. Exposure is carried out through imagination, where individuals vividly relive their traumatic experiences in the present moment, providing detailed information about their emotions, thoughts, and physiological reactions. A hierarchy of imagination is constructed, starting from the least disturbing or stressful event. Gradual exposure to the traumatic experience allows individuals to work through each element in the hierarchy until habituation occurs. Habituation is marked by a decrease in physiological responses and a reduction in emotional arousal and PTSD symptoms. Another form of exposure used in PE therapy is real-life exposure, also known as in vivo exposure. This technique involves direct or indirect confrontation with events resembling the traumatic experience in real life. The goal is for discomfort to diminish over time, with the expectation that eventually, no discomfort will be experienced (Bradley et al., 2005; Foa & Kozak, 1986; Rothbaum et al., 1992).

Narrative Exposure Therapy: NET was developed by Schauer et al. (2005) specifically for treating mental health problems among refugees residing in post-conflict areas. It has been acknowledged as an effective and short-term therapy approach. The treatment involves emotional exposure to traumatic memories and the reorganisation of these memories into a coherent chronological narrative (Robjant & Fazel, 2010). NET combines elements from Testimony Therapy (TT) and PE. TT focuses on creating a comprehensive life span narrative from birth to the present, aiming to provide a sense of continuity and coherence to the individual's life (Mørkved et al., 2014). PE, on the other hand, facilitates safe confrontation with

avoided thoughts and memories related to the traumatic event (Foa et al., 2007). The core focus of NET is the habituation of intrusive symptoms during the reconstruction of autobiographical memories of traumatic experiences (Neuner et al., 2002). The therapy typically involves four key phases: diagnosis and psychoeducation, constructing a lifeline representing the individual's life story, narrating the lifeline by recounting the traumatic experiences, and finally, reviewing and signing the document that summarises the narrative (Schauer et al., 2011).

NET provides a structured framework for trauma survivors to process and integrate their traumatic experiences into a coherent narrative. Through engaging in the therapy process, individuals could confront and make sense of their past traumas, thereby reducing the distressing symptoms associated with PTSD.

EMDR: EMDR technique is another technique recommended by NICE guidelines for the treatment of PTSD (NICE, 2005). Its primary objective is to reduce avoidance of the traumatic event and facilitate the development of a coherent memory of the experience (Ehlers et al., 2010; Schnyder et al., 2015). During an EMDR session, the therapist guides the patient to focus on an image, memory, and bodily sensations associated with the traumatic event, which holds personal significance for the patient (Ford, 2018). Concurrently, the patient engages in a secondary task, such as tracking the therapist's finger, listening to a specific sound, tapping their own fingers, or employing the butterfly hug method. This process is designed to restructure the working memory (Shapiro, 1989; Shepherd et al., 2000), aiming to eliminate maladaptive and unhealthy behaviours linked to the traumatic event. EMDR's efficacy is attributed to the 'dual taxation' paradigm, where the individual recalls a stressful event while simultaneously performing one of the secondary tasks mentioned above. By engaging in these simultaneous activities, both tasks compete for limited working memory resources. As a result, the distressing memory becomes less emotionally charged and vivid. The dual taxation process maximises the working memory load, leading to successful treatment, memory reconsolidation, and less intense recall of the

distressing events in subsequent sessions (Cuperus et al., 2019; Gunter & Bodner, 2008; van den Hout & Engelhard, 2012; van Schie et al., 2015).

Multimodal Approaches: Multimodal approaches have emerged as effective strategies for addressing a wide range of issues faced by traumatised refugee populations, encompassing acculturation challenges, economic hardships, and physical health concerns, in addition to targeting psychological problems. The fundamental premise of multimodal approaches is rooted in the acknowledgment that refugees encounter diverse stressors and obstacles across the various phases of migration (Reid et al., 1990). While certain studies have provided evidence supporting the efficacy of multimodal approaches for refugees, other research, such as the study conducted by Nickerson et al. (2011), has indicated limited effectiveness in the treatment of PTSD and other associated mental disorders, particularly when compared to trauma-focused interventions.

1.2. Syrian Civil War

1.2.1. Background of Syrian Civil War

The Arab Spring, a series of uprisings that unfolded in the early 2010s, left a lasting imprint on several Arab countries. Its genesis can be traced back to a street vendor's self-immolation in Tunisia, an act of protest the deteriorating economic situation and the Tunisian government. In Syria, Bashar al-Assad ascended to the presidency in 2000, succeeding his father Hafez al-Assad. Like his predecessor, Bashar al-Assad maintained authoritarian rule and consolidated power within his family, aggravating the existing discontent among Syrians and exacerbating the country's economic challenges (Davis & Alchukr, 2014). Initially, the protests in Syria commenced as peaceful demonstrations advocating for democratic reforms, the rescinding of specific laws, and economic transformations in the early months of 2011. However, following the aggressive response of military forces to schoolchildren who expressed anti-government sentiments by inscribing graffiti on a wall, the protests rapidly escalated into widespread civil unrest by March 2011. The Syrian government labeled the

protestors as terrorists, resulting in a full-fledged armed conflict between the government and the opposition (Davis & Alchukr, 2014; Hove & Mutanda, 2015). This protracted conflict continues to produce far-reaching socio-economic and political ramifications both within Syria and globally.

1.2.2. Socio-Political Impact of the Syrian Civil War

The Syrian Civil War continues to have extensive and far-reaching socio-political consequences both within the country and globally. The conflict has led to the displacement of more than 5 million people internationally and nearly 7 million internally, causing numerous casualties and injuries (UNHCR, 2023a). With Syria emerging as the largest source of refugees worldwide, the majority of those displaced have sought shelter in neighbouring countries such as Turkiye, Lebanon, Jordan, Iraq, and Egypt (STATISTA, 2023; UNHCR, 2023b). Since 2015, Europe has also become a significant destination for Syrian refugees, giving rise to debates and crises surrounding their human rights protection in European nations. In 2016, the European Union (EU) brokered an agreement with Turkiye to manage the flow of Syrian refugees into Europe. This arrangement stipulated that migrants not eligible for asylum and crossing from Turkiye to Greece would be sent back to Turkiye after March 2016. Consequently, only a small portion of Syrians were deemed eligible for resettlement in Europe, leading to a buildup of refugees at Turkish borders. Desperate to enter the European zone, many resorted to perilous sea voyages, resulting in multiple fatalities in the Mediterranean Sea (Commission Européenne, 2016; UNHCR, 2017).

The successful resettlement of Syrian refugees in new countries has brought about multifaceted implications for host nations in terms of their social, economic, and political dynamics. Jordan, as one of the neighbouring countries, has encountered challenges in catering to the needs of Syrian refugees, particularly in areas such as education, healthcare, housing, and energy (Fakih & Ibrahim, 2016). Limited employment opportunities for

refugees in these host countries have led many to seek work in sectors like construction and agriculture, leading to tensions with local residents who perceive this as competition for jobs, particularly in middle-income nations (e.g., Achilli, 2015). In Europe, countries like Germany and Sweden have accommodated a significant number of Syrian refugees, facing hurdles related to family reunification, poverty, and unemployment, further compounded by the impact of the COVID-19 pandemic. Host nations grapple with the dual challenge of meeting the needs of Syrian refugees while sustaining their national welfare systems and addressing the concerns of their own citizens (Strømme, 2020). Given the widespread dispersal of Syrians seeking asylum in over 130 countries, the socio-political ramifications of the Syrian Civil War transcend borders, affecting host countries and their populations worldwide (UNHCR, 2011a).

1.2.3. Psychological Impact of the Syrian Civil War

The Syrian Civil War has left a profound mark on the psychological well-being of Syrians. The conflict has exposed individuals to a range of traumatic experiences, including loss, violence, the constant threat of death, insecurity, and displacement. As a result, there has been a significant prevalence of mental health disorders within the population, including conditions like PTSD, depression, anxiety, and substance abuse (Alpak et al., 2015; Jefe-Bahloul, 2014; Kirmayer et al., 2011). A recent study by Kakaje et al. (2021) revealed that around 60% of individuals living in Syria reported moderate to severe mental health issues. Displaced Syrian refugees, in particular, face an elevated risk of developing mental health problems. Post-migration factors such as an uncertain future, housing difficulties, food scarcity, psychological distress, social isolation, unemployment, cultural barriers, and challenges adapting to new societies have a more significant detrimental impact on mental health than pre-migration factors like prior traumatic experiences, preexisting psychiatric disorders, familial bereavement, and exposure to violence (Demirbas & Bekaroglu, 2013;

DiGangi et al., 2013; Ford et al., 2015; Teodorescu, 2012). These findings underscore the substantial psychological toll that the Syrian Civil War has exacted on Syrians, both those who remain in conflict-affected regions and those who have been displaced. Efforts aimed at addressing the mental health needs of Syrians should account for the intricate interplay of pre- and post-migration factors, offering comprehensive support to foster psychological well-being and resilience within this population.

1.2.4. Turkiye's Position in Syrian Civil War

The Republic of Turkiye is a signatory to the 1951 Refugee Convention and the 1967 Protocol, thereby adhering to the geographical limitations established by these agreements. The 1951 Convention recognises resettlement in a third country as the preferred solution for refugees displaced due to events occurring outside of Europe (UNHCR, 2011b).

Turkiye, owing to its political and geographical position, has borne a significant burden as one of the neighbouring countries impacted by the Syrian Civil War. Since October 2011, the nation has implemented an "open door and border" policy for displaced Syrians, offering them "temporary protection". This policy ensures that individuals of Syrian nationality seeking international protection will not be forcibly returned to Syria and will be safeguarded within the borders of Turkiye (UNHCR, 2011a). (Even though the term 'refugee' does not accurately characterise the Syrians living in Turkey, due to its common use in the literature, it will be preferred for this population through out this study). Estimates from 2015 suggested that Turkiye was hosting over a million Syrians in 22 camps spread across different regions of the country (UNHCR, 2015a). Although some Syrians officially enter Turkiye and receive a residence permit, others cross the borders unofficially and remain unrecorded by Turkish authorities, making it challenging to accurately estimate the total number of Syrians in the country. As of the end of 2022, the number of Syrians under temporary protection in Turkiye was estimated to exceed 3.5 million, making Turkiye the

host of the largest refugee population globally (UNHCR, 2021a). The substantial influx of refugees has posed a significant "refugee crisis" for Türkiye, prompting the government to take a more central role in managing aid and strategic goals for the successful resettlement of Syrians. Efforts have been directed toward ensuring education for Syrian children within the Turkish education system and establishing a labor policy for Syrian refugees to encourage workforce participation. The government has also aimed for greater international involvement in managing Syrian migration (Hoffman & Samuk, 2016). However, the overwhelming influx of refugees has led to social integration challenges for both the Syrian refugees and Turkish citizens, impacting various dimensions, including the economy, society, politics, and healthcare (Arenliu et al., 2020). The scale and complexity of the refugee crisis necessitate continuous efforts and adjustments from the Turkish government to effectively manage the situation and address the needs of both refugees and the host population.

1.3. Rationale of the Study

Cultural differences play a crucial role in shaping individuals' experiences of psychological challenges and their perceptions of what is considered normal or pathological. The cultural context profoundly influences how symptoms manifest, the duration and severity of psychological issues, and the overall nature of mental disorders. Therefore, considering cultural factors is essential when developing mental health interventions for diverse populations, especially those impacted by war, such as refugees. Several research studies, including those by Davidson et al. (2004), Kirmayer et al. (2015), and Rosenberg et al. (2007) have highlighted the significant influence of cultural elements on mental health. These studies consistently underscore the importance of culturally sensitive approaches to understand and address psychological issues. When providing mental health services to refugee populations, it is crucial to consider the cultural backgrounds, beliefs, values, and norms that individuals bring with them. Culturally sensitive interventions aim to bridge the

gap between Western-developed psychological treatments and the intricate cultural contexts of refugees. These interventions are meticulously tailored to incorporate cultural meanings, language nuances, religious beliefs, and existing social support systems. Such comprehensive approaches ensure that mental health care is not only effective but also appropriate and resonant with the cultural realities of those seeking help.

The Syrian refugee crisis has raised significant concerns about the mental well-being of displaced populations, especially in the context of Türkiye. As efforts continue to establish effective and inclusive mental health programs for refugee communities, the need for culturally sensitive interventions has become increasingly evident. The crisis has emphasised the importance of providing trauma-oriented interventions tailored to the unique needs of the displaced Syrian refugee population. However, there remains a noticeable research gap regarding the effectiveness of NET specifically within the Syrian refugee population in the Turkish context. Therefore, this study aims to investigate the feasibility and potential effectiveness of NET, an evidence-based trauma-focused therapy technique, among displaced Syrian refugees in Türkiye. The study's overarching goals encompass addressing the existing gap in the literature, exploring the effectiveness of a culturally sensitive mental health intervention in this particular context, assessing the adaptability of NET in light of specific cultural and contextual factors, acknowledging and meeting the unique mental health needs of displaced Syrian refugees, and contributing significantly to the development of an effective mental health program tailored to this population. In preparation for the intervention study, a preliminary research phase was conducted to anticipate and understand potential barriers, challenges, and contextual conditions that might hinder the effective delivery of NET and limit its positive impact within therapy sessions for the displaced Syrian population in Türkiye. This preliminary research involved collaborating with healthcare professionals actively involved in providing care to Syrian refugees. The primary aim was to gather

insights and perspectives from these experienced professionals, who have direct and frontline experience with the refugee population. The valuable findings obtained from this preliminary research phase significantly contributed to the development of a culturally sensitive and contextually appropriate NET intervention. Furthermore, it recognises the insufficiently established prevalence rates of mental health problems, including PTSD, depression, anxiety, and related disorders among externally displaced Syrian refugees. Several factors have contributed to this knowledge gap, such as the inherent diversity within the refugee population, cultural differences, and the limited research conducted within this specific context. Therefore, this study also seeks to address this research gap through a systematic review that systematically gathers and synthesises existing evidence on the prevalence rates of these mental health problems among the displaced Syrian refugee population. Moreover, the study seeks to investigate potential correlations between these mental health issues and various demographic characteristics within this population. This review served as a foundational step in understanding the existing landscape of mental health issues within this context. Subsequently, a focus group was convened to gain valuable insights into the practical feasibility of implementing NET as an intervention within the displaced Syrian population in Turkiye. Building upon the findings derived from both the systematic review and the insights gathered through the focus group discussions, the subsequent phase of the research involved the implementation of the NET intervention with Syrian participants. This phase aimed to assess the feasibility and potential effectiveness of NET in alleviating symptoms associated with PTSD, depression, anxiety, and stress within this specific population. The rationale of each study is discussed in detail under the relevant chapters.

In summary, this research adopts a multifaceted approach, combining a systematic review, focus group discussion, and intervention implementation, all with the overarching goal of addressing the mental health needs of displaced Syrian refugees in Turkiye. By

synthesising existing knowledge, understanding the contextual challenges, and evaluating the potential of a culturally sensitive intervention, this study aims to contribute to the enhancement of mental health services for this vulnerable population.

Chapter 2: A systematic review of prevalence and correlates of Post-Traumatic Stress Disorder, Depression and Anxiety in the displaced Syrian population*

(This chapter was submitted to Journal of Affective Disorders Report and published in 2022. See Appendix A for journal guidelines)

*Aysazci-Cakar, F., Schroder, T., & Hunt, N. (2022). A systematic review of prevalence and correlates of post-traumatic stress disorder, depression, and anxiety in displaced Syrian population. *Journal of Affective Disorders Reports*, 100397.

<https://doi.org/10.1016/j.jadr.2022.100397>.

2.1. Introduction

Since the beginning of the civil war in Syria in March 2011, the world has confronted one of the largest displaced migration waves in our era, with the dislocation of at least 5.6 million Syrians seeking safety in different countries (UNHCR, 2021b). Due to displacement inside the country, seeking shelter out of the conflict area, around 13.1 million people from Syria need humanitarian assistance (updated in August 2023 as 15 million- UNHCR, 2023c). In 2013, Syria became the main country of origin of asylum seekers in 44 industrialised countries in Europe, North America, and the Asia Pacific region (UNHCR, 2015b). Due to countries' policies toward refugees and closeness to the conflict area, Turkiye, Lebanon, Jordan, Iraq, and Egypt have become the leading neighbouring countries (UNHCR, 2021b) allowing access to this vulnerable population. Since the summer of 2015, Europe has been a new destination for Syrian citizens mainly crossing through Turkiye to enter Greece for possible onward travel. The 'Syrian crisis' has prompted greater attention from European

countries (Yazgan et al., 2015) in the face of an overwhelming and unstoppable influx of Syrians into Europe. Germany and Sweden have the highest Syrian displaced population in Europe (Bitoulas, 2015). Forced displacement has a detrimental impact on people's integrity of self, existence, health, and mental well-being (Boehnlein et al., 2016; Ozkaleli, 2018; Welsh & Brodsky, 2010). The migration period involves distinctive transitions. Before forced migration, refugees may have experienced or witnessed physical, psychological, and sexual- or gender-based violence (Giacco et al., 2018); during migration they may face uncertain and challenging journeys. After arriving in a safe country, they may face numerous challenges and post-migration stressors. They may experience uncertainty about their legal status and future, worry about people left behind, discrimination and adverse political climate, loneliness and boredom, prohibition to work, disruption of education for children, and problems with language and culture (Kirmayer et al., 2011; Miller & Rasmussen, 2010). Researchers have shown interest in the dose-response relationship between trauma exposure and psychological distress in refugees (Mollica et al., 1998a, 1998b; Steel et al., 2009). There is a strong relationship between the complexity of trauma and psychological disorder: the more types of traumas to which participants were exposed, the greater the PTSD, anxiety, and depression symptoms they exhibited (Nickerson et al., 2015). Associations with psychopathology occur not only with traumatic experiences before migration but also with living in the host country (e.g., Hunt & Gakenyi, 2005; Silove et al., 1997). PTSD, depression, and anxiety disorders are the most common psychological problems among displaced populations affected by war trauma and having adverse life experiences (Morina et al., 2018). In a systematic review of studies encompassing nearly 7000 refugees residing in Western countries, Fazel et al. (2005) found that they were ten times more likely to develop PTSD than corresponding age groups in those countries, with a prevalence range of 3–86% for PTSD and 3–80% for depression. Studies investigating the prevalence of psychological

problems vary in terms of diagnostic methods (clinical interview or self-reports) and instruments applied. Some assessment tools lack validity, having been originally developed for Western civilisation and not standardised for different ethnicities, and there are challenges with cross-cultural understanding and interpretation of assessments. Studies also vary in terms of the severity and number of traumatic events and the extent of exposure to violence reported, sociodemographic characteristics of samples, ongoing threats that refugees are facing, and other post-migration stressors (Steel et al., 2009; Naja et al., 2016; Bogic et al., 2015). In addition to the psychological impact of war and conflict on the displaced population, host countries may face hardship to meet even the basic needs of asylum seekers and their inhabitants may confront political and societal challenges (Yalim & Kim, 2018). Since the civil war in Syria started, neighbouring countries have struggled to manage the huge migration wave politically, societally, and economically, even though they receive aid from international organisations (e.g., UNHCR) and Western countries. For example, Lebanon has the estimated highest numbers of refugees per capita in the World with 1.5 million displaced Syrians in a total population of 6.8 million (UNHCR, 2021c), which makes it hard for the country to sustain and address the needs of both its own citizens and of Syrian refugees. Thus, the ‘Syrian crisis’ has evolved into a ‘Lebanese-Syrian crisis’, due to the shortage of resources caused by the widespread presence of Syrians (Hendaus et al., 2021). In a UNHCR Mental Health Report, El Chammay et al. (2013) reported that only 1% of Syrians in Lebanon had access to mental health services due to a lack of service delivery and economic problems. Studies over the past decade have documented the dramatic increase in psychological distress in the Syrian displaced population. More than half of the 22 million Syrian people are estimated to be in need of psychosocial support (Moghaddam et al., 2017) and the majority of Syrian refugees have experienced at least three traumatic events during or after their migration (Ibrahim & Hassan, 2017). However, given the vast influx of Syrian

refugees in resettlement countries, addressing their mental health difficulties is generally not a priority. Due to a lack of appropriate services for addressing this population's basic needs such as food, safety, and accommodation, there is little scope for mental health service delivery. Several studies have investigated the prevalence of mental health problems in the displaced Syrian population. A cross-sectional study conducted in Sweden reported a high prevalence of PTSD (29.9%), depression (40.2%), and anxiety (31.8%) among 1215 Syrian refugees having a residency permit (Tinghog et al., 2017). Acarturk et al. (2018) found a higher prevalence of PTSD (83.4%) and depression (37.4%) in 781 externally displaced Syrian citizens residing in a camp in Turkiye. Considering the dramatic numbers of displaced Syrians in need of psychological treatment, this population needs immediate psychological support around the world. It is crucial for their adjustment to new countries and sustained well-being to respond appropriately to their psychological problems. Refugees and asylum seekers may differ in manifesting their psychological problems in terms of their socio-economic and demographic characteristics, though findings are mixed. However, it was demonstrated that female refugees have worse mental health than male refugees (Schubert & Punamaki, 2011; Schweitzer et al., 2006). Some studies highlighted that marital status, socio-economic and resettlement status and length of stay, settlement type, traumatic life experiences, and educational level are also associated with worse mental health status (Bhugra, 2004b; Bhui et al., 2003; Burnett and Ndovi, 2018; Lindencrona et al., 2008; Sir & Ozkan, 1998). Even though findings showing the association between mental health problems and demographics of refugees vary, it is crucial to investigate the possible impact of these characteristics on refugees' well-being; enabling governments, policy-makers, and healthcare professionals to handle this population's mental health problems better and in time. Delayed access to mental health care after resettlement increases the risk of depression more than fourfold and PTSD more than threefold in traumatised refugees exposed to adverse life

experiences (Song et al., 2018). Improving and detecting mental health problems in the early stages of immigration might better facilitate the adjustment of refugees and might have a subsequent positive impact on their resettlement problems (Blight et al., 2006; Hollander, 2013). Considering the scarcity and inconsistency of studies indicating the prevalence of psychological problems and determining the correlations between demographic characteristics and mental health problems of this disadvantaged population; this systematic review aims to investigate the prevalence of PTSD, depression, and anxiety in the externally displaced Syrian population. Furthermore, it aims to investigate the correlations between these mental health problems and Syrian refugees' demographic characteristics: sex, marital status, educational level, economic status, traumatic events experienced, resettlement period, residing country, legal status, and settlement type. These variables are compared and analysed for demonstrating the possible outcomes/reasons for risk and protective factors for the displaced Syrian population's mental health status. To our knowledge, this systematic review is the first study investigating the prevalence and correlates of common psychological problems in the externally displaced Syrian population in both low-income and high-income countries.

2.2. Method

2.2.1. Search Strategy

EMBASE, MEDLINE, PsycInfo, CINAHL and Web of Science databases were searched with the keywords of 'Mental Health', 'Psychological Problems', 'Psychopathology', 'Prevalence' and 'Syrian' using truncations, combinations of Boolean operators (AND, OR, NOT), parenthesis (" "), and Medical Subject Headings (MeSH) between January and March 2021. The search strategy and key terms used in different databases are represented in Table 1. No language restriction was applied, the search was

limited to only peer-reviewed/scholarly articles and the time frame was between March 2011 (the beginning of the Syrian Civil War) and March 2021.

Table 1

Search strategy and key terms used in databases

	EMBASE	MEDLINE	PSYCINFO	CINAHL	Web of Science
Number					
1	“MENTAL”	Psychological*	“MENTAL HEALTH”	“Mental Health”	“Mental Health
2	“PSYCHOLOGIC**”	Mental Health/ or Mental* or Mental Disorders/	“PSYCHOLOGICAL PROBLEM**”	OR “Psychological Problem”	“Problem**” OR “Psychological Disorder**”
3	“PSYCHOPATHOLOG**”	Psychopatholog*	“PSYCHOLOGICAL DISORDER**”	OR “Psychological Disorder”	OR “Psychological Problem**”
4	“PREVALENCE**”	Prevalen*	“PSYCHOPATHOLOGY”	OR	OR
5	“SYRIAN**”	Syria*	“PREVALENCE”	OR “Psychopathology”	“Psychopatholog**” AND
6	1 OR 2 OR 3	1 OR 2 OR 3	“SYRIAN**”	OR	“Prevalence”
7	4 AND 6	4 AND 6	1 OR 2 OR 3 OR 4	“Mental Illness”	AND
8	5 AND 7	5 AND 7	5 AND 7	AND	“Syrian”
9	Limit 8 to “adult (18-65) and (65+ years)”	Limit 8 to “all adult”	6 AND 8	“Prevalence” AND “Syrian”	NOT “Adolescen**” NOT “Children” NOT “Systematic Review”

2.2.2. Selection and Screening Process

This review follows the guideline of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Moher et al., 2009). A flow diagram of the literature search based on the PRISMA is presented in Figure 1. The registration for the PROSPERO database was completed in March 2021. The review was accepted with the protocol number CRD42021241360. To frame and refine the review question, the PICO model (Eriksen & Frandsen, 2018) was utilised. PICO contains the components of (P)opulation (Adult Syrian

population), (I)ntervention/(I)nterest (prevalence of PTSD, Anxiety and Depression), (C)ontext/(C)omparison (displaced Syrian population due to Syrian civil war) and (O)utcomes (correlates between these mental health problems and Syrian people's demographics).

Primary inclusion and exclusion criteria for this review are represented in Table 2.

Table 2

Inclusion and Exclusion criteria of studies

	Inclusion Criteria	Exclusion Criteria	Rationale
Sample	-Externally displaced	-Internally Displaced Syrian	The aim of the study
Characteristics	Syrian population (residing out of Syria) -Syrians affected by the Syrian Civil war -Adult Syrians (18 and over) -No gender restriction	population - Mixed ethnicity (presence of other refugee populations with Syrians) -Specified population (e.g., only women or elderly people, children, only parents, married couples)	
Method	Quantitative Studies only utilising validated Diagnostic or Screening methods	Qualitative Studies, Randomised Controlled Studies, Systematic Literature Reviews, Case-studies	To investigate the prevalence/percentages of mental health problems
Study design	Only Cross-sectional studies and Cohort studies (only baseline measurements were considered)	Further studies of longitudinal research	To capture mental health problems and their percentage in a point of time, obtaining multiple variables at the time of the data snapshot
Outcomes	Percentages or cut-offs	Mean scores, poor statistical reporting	To obtain prevalence data

Types of diagnosis	PTSD, Depression, and Anxiety	The most common mental health disorders of refugees	
Publication date	March 2011 to March 2021	Beginning of the Syrian Civil War and the end of the literature search	
Publication Location	Online bibliographic databases (only peer-reviewed/scholarly journals)	Dissertations, Conference Proceedings, Gray Literature, Reports	To obtain reliable and trustworthy data

Figure 1 presents the inclusion and exclusion process of the screening studies. During the database searching, a total of 319 studies were screened. Additionally, 28 studies were detected with hand-searching of literature, saved alerts from the databases, and the help of the librarians of the University of Nottingham. After the title screening, 78 studies were removed from the list because of the duplications across databases. The abstract screening was carried out with 269 studies and 235 studies were excluded due to the aims of the studies which are out of the scope of this review. Full search screening was carried out with a Screening tool created by the first author for the detailed full-text retrieval. During the full-text screening, 4 additional studies were detected from the bibliographies of the studies screened. Each paper was read carefully to identify whether they meet inclusion criteria. 17 studies were excluded during this process and a total of 21 studies met the eligibility criteria.

2.2.3. Data extraction

A data extraction tool was developed to tabulate and analyse data across the included studies and to compare their different outcomes. It describes each study in detail such as the location of the study, demographics of the sample, and context and measurements used for data collection.

2.2.4. Quality appraisal

The Joanna Briggs Institute (JBI)'s Critical Appraisal tool for prevalence data was utilised for the assessment of risk of bias in the included studies (See Appendix B). This enabled a rigorous process for evaluating the quality of studies and investigating the possibility of bias in their design, measurement, classification, conduct, and analysis. After full-text searching, a total of 21 studies met full eligibility criteria. Quality appraisal was initially completed by the first author and then checked for reliability by the second and third author reviewing one half of studies each. Consequently, three studies were excluded from the final list due to insufficient sample size, inadequate detail about study participants, psychometric concerns toward the validity and reliability of the measurements, and difficulties in the measurement of PTSD. There were disagreements for only two studies, which were resolved by discussion. Consequently, one study was included, and the other study was excluded because of the sampling method and the aim of the study. The JBI Quality Appraisal scores for each study are outlined in Table 3.

Table 3

JBI's Quality Appraisal scores for included studies

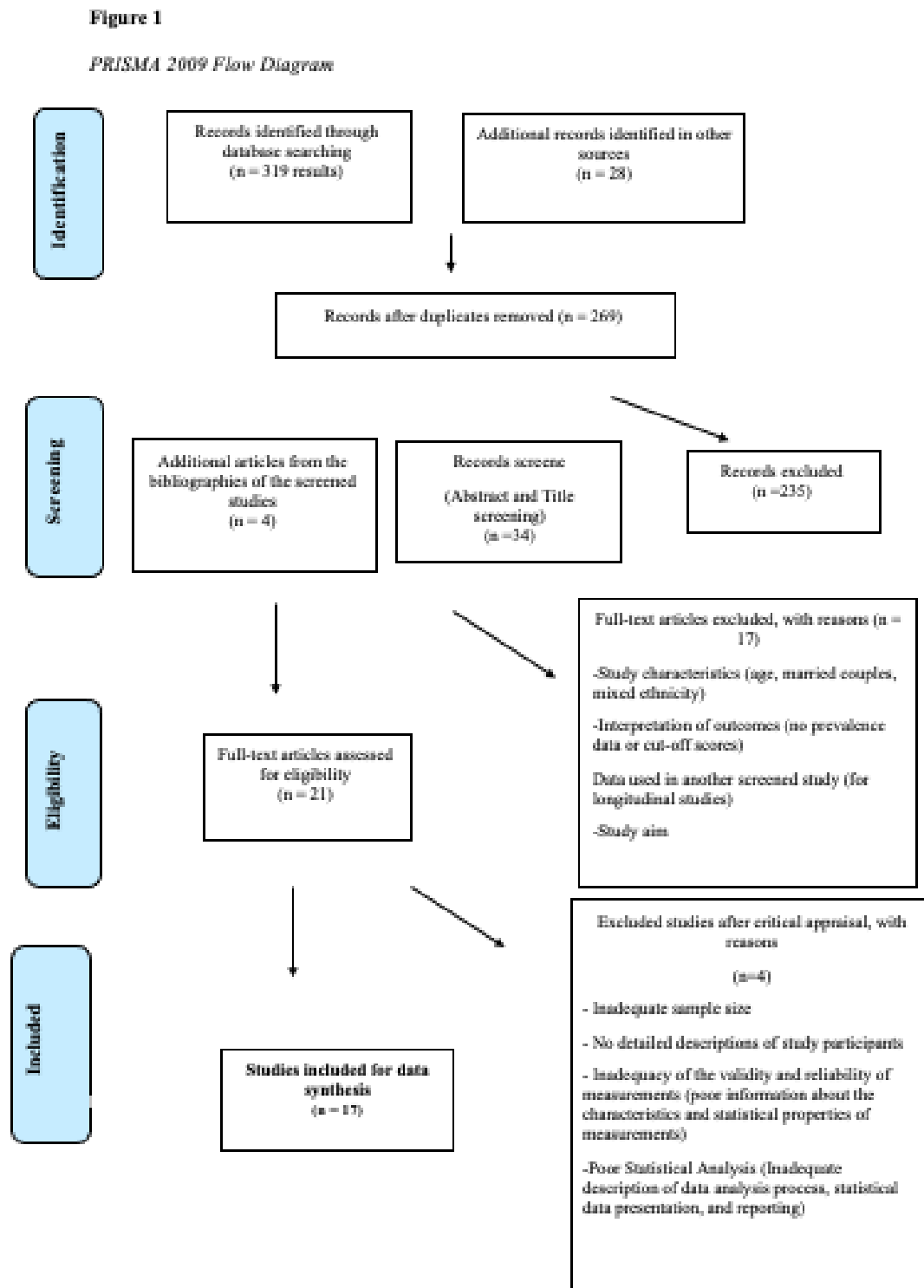
Included Studies	Alpak et al., 2015	Chuang et al., 2018a	Gammouh et al., 2015	Kazour et al., 2017	Najja et al., 2016	Tinghog et al., 2017	Jejee-Bahlout et al., 2014	Taha et al., 2016	Poole et al., 2018
Items of Quality Appraisal									
1. Was the sample frame appropriate to address the target population?	Y	Y	Y	Y	Y	Y	Y	Y	Y
2. Were study participants sampled in an appropriate way?	Y	Y	Y	Y	Y	Y	Y	Y	Y
3. Was the sample size adequate?	Y	Y	Y	Y	Y	Y	Y	Y	Y
4. Were the study subjects and the setting described in detail?	Y	Y	Y	Y	Y	Y	Y	N	Y
5. Was the data analysis conducted with sufficient coverage of the identified sample?	Y	Y	Y	Y	Y	Y	Y	Y	Y
6. Were valid methods used for the identification of the condition?	N self- report measure is not valid for this population	N self- report measure is not valid for this population	Y	Y	Y	Y	N self- report measure is not valid for this population	Y	Y
7. Was the condition measured in a standard, reliable way for all participants?	Y	Y	Y	Y	Y	Y	Y	Y	Y
8. Was there appropriate statistical analysis?	Y	Y	Y	Y	Y		Y	Y	Y
9. Was the response rate adequate, and if not, was the low response rate managed appropriately?	Y	Y	Y	Y	Y	N (Resp onse rate is 30%)	U	U	U

Included Studies	Tekeli-Yenil et al., 2018	Acarturk et al., 2018	Basbeli et al., 2019	Georgiadou et al., 2018	Acarturk et al., 2020	Sagahci et al., 2019	Juvanbaktir et al., 2019	Kaya et al., 2019
Items of Quality Appraisal								
1. Was the sample frame appropriate to address the target population?	Y	Y	Y	Y	Y	Y	Y	Y
2. Were study participants sampled in an appropriate way?	Y	Y	Y	Y	Y	Y	Y	Y
3. Was the sample size adequate?	Y	Y	N	Y	Y	Y	Y	Y
4. Were the study subjects and the setting described in detail?	N	N	Y	Y	Y	N	Y	Y
5. Was the data analysis conducted with sufficient coverage of the identified sample?	Y	Y	N	Y	Y	Y	Y	Y
6. Were valid methods used for the identification of the condition?	Y	Y	Y	Y	Y	Y	N self-report measures are not valid for this population	Y
7. Was the condition measured in a standard, reliable way for all participants?	Y	Y	Y	Y	Y	Y	Y	Y
8. Was there appropriate statistical analysis?	Y	Y	Y	Y	Y	Y	Y	Y
9. Was the response rate adequate, and if not, was the low response rate managed appropriately?	U	Y	U	N (Response rate is 38.6%)	Y	U	U	Y

Note. Y= Yes, N= No, U= Unclear

Figure 1

PRISMA 2009 Flow Diagram



2.2.5. Data synthesis

To answer the review questions, the prevalence and correlates of PTSD, depression, and anxiety and the demographics of the Syrian population (sex, marital status, education level, economic status, legal status, number of traumatic events experienced, resettlement period, and residing country) are analysed descriptively in an organised structure.

Quantitative outcomes are represented in Table 4, indicating that findings are not robust and differ in evaluating the demographics (for example, classification of employment status or education levels), and in applying a variety of measurement tools. For example, while some studies report the PTSD prevalence of female and male participants separately, others presented their outcomes together. As a result, the outcomes were synthesised and analysed descriptively according to each demographic.

2.3. Results

Seventeen studies met full eligibility criteria and were included in this review. Despite the systematic search of the literature having no language restriction, only studies in English remained on the final list. The demographics of the included studies are represented in Table 4. A total of 9061 Syrian participants were included in this review with 50.1% (4492) female and 49.9% (4474) male. The marital status, education level, economic status, traumatic events experienced, resettlement period and residing country, and legal status and settlement type are analysed descriptively in Tables 3 and 4. Because of missing cases, the numbers do not add up to the total population. The numbers are presented as they were reflected in the original articles. In general, the prevalence of PTSD, depression, and anxiety varies across studies. It is between 11.4% (Georgiadou et al., 2018) and 83.4% (Acarturk et al., 2018) for PTSD, 14.5% (Georgiadou et al., 2018) and 70.5% (Tekeli-Yesil et al., 2018) for depression, and 13.5% (Georgiadou et al., 2018) and 47.7% (Javanbakht et al., 2019) for anxiety. The confidence interval (95%) of PTSD prevalence of included studies is likely to fall between

23.26 and 42.63% with a mean of 32.95% (SE=4.48). The prevalence of depression is between 30.29 and 50.53%, with a mean of 40.41% (SE=4.47) and anxiety is between 17.66 and 48.93% with a mean of 33.3% (SE=5.62).

2.3.1. Sex and PTSD, Depression and Anxiety

Overall, 14 studies aimed to investigate the association between sex and symptoms of PTSD, depression, and anxiety in the externally displaced Syrian population. The relationship between mental health problems and sex varies across studies, but while most studies reported that being female is highly associated with experiencing PTSD, depression, and anxiety; 6 studies found no relationship between sex and these disorders. Nine studies ($N = 4974$) assessed the relationship between sex and PTSD. Among those, five studies reported that being female is significantly associated with developing PTSD. (Acarturk et al., 2018 [OR=4.1 (95% CI) (0.4–6.8), $p < .001$]; Kaya, 2019 [OR= 2.8 (95% CI) (1.75–4.47), $p < .001$]); (Sagaltici et al., 2019), (β ;.41, $p < .001$); Acarturk et al., 2020 [OR= 1.84 (95% CI) (1.33–2.54), $p < .001$]; Alpak et al., 2015 (46.2%, $p < .001$)). Three studies had found no significant relationship between sex and PTSD symptoms (Georgiadou et al., 2018; Kazour et al., 2017; Chung et al., 2018a). On the other hand, one study had reported higher PTSD symptoms among male participants, but no correlation was found (Basheti et al., 2019) between sex and PTSD symptoms. Nine studies ($N = 5661$) assessed the relationship between sex and depression. Five studies reported that being female is significantly associated with developing depression (Acarturk et al., 2018, [OR=5.1 (95% CI) (3.2–8.1, $p < .001$]); Poole et al., 2018, [OR=3.23 (95% CI) (1.21–8.62), $p = 0.019$]; A. Javanbakht et al., 2019 (58.8%, $p = .03$); Kaya et al., 2019, [OR= 2.7 (95% CI), (1.74–4.41), $p = .004$]); Acarturk et al., 2020, [OR=1.86 (95% CI) (1.44–2.42), $p < .001$]. Four studies found no relationship between sex and depression (Gammouh et al., 2015; Naja et al., 2016; Georgiadou et al., 2018; Tinghög et al., 2017). Three studies ($N = 3050$) assessed the relationship between sex and anxiety. Two

studies reported that being female is significantly associated with developing anxiety disorder (Javanbakht et al., 2019 (52.7%, $p=.01$); Acarturk et al., 2020, [OR=2.44 (95%CI) (1.87–3.19),

Table 4*Demographics of the included studies*

Article	Study design	Sample Size (N)	Gender N/(%)		TEE (Mean)	Marital Status M/S/O N/ (%)	Education Level N/ (%)				Economic Status N/ (%)		Employment Status N/ (%)	
			Women	Men			None	Low	Medium	High	Low	Enough	Yes	No
1	Alpak et al., 2015	352	173 (49.1)	179 (50.9)	3.71	M= 304 (86.4) S= 46 (13.1) O= 2 (0.5)	60 (17.0)	149 (42.3)	121 (34.4)	22 (6.3)			164 (46.4)	188 (53.4)
2	Chung et al., 2018a	564	183 (34%)	381 (66%)	8.36	M= 85 (51.0) S=72 (43.0) O=11 (6.0)				101 (60%)				

8	Taha et al., 2016	Cross-sectional	820	506 (61.7)	313 (38.2)	8.1	M= 743(91.6) S= 53 (6.6) O= 15 (1.8)	-	308 (51.0)	233 (38.6)	63 (10.5)	90 (11)	728 (89)
9	Poole et al., 2018	Cross-sectional	135	55 (40.7%)	80 (59.3%)		M= 99 (74.4) S= 34 (25.6%)	15 (11.4)	29 (22.0)	38 (28.8)	50 (37.9)		
10	Tekeli-Yesil et al., 2018*	Cross-sectional	285	141 (49.5)	144 (50.5)		M= 228 (81.2) S=41 (14.6) O= 12 (4.3)	16 (5.6)	115 (40.4)	123 (43.2)	31 (10.9)	103 (36%)	182 (64%)
11	Acarturk et al., 2018	Cross-sectional	781	444 (60.6)	289 (39.4)		M= 628 (86.4) S= 61 (8.4) O=38 (5.2)	96 (13.1)	642 (86.9)			266 (34%)	515 (66%)
12	Basheti et al., 2019	Cross-sectional	186	87 (46.8)	99 (53.20)		M=82 (44.0) S=82 (44.0)	20 (10.8)	32 (17.2)	38 (20.0)	96 (51.0)		

						O= 23 (12.0)							
13	Georgiadou et al., 2018	Cross-sectional	200	61 (30.5)	139 (69.5)	M= 119 (59.5) S= 74 (37.0) O= 7 (3.5)	-	-	-	-			
14	Acarturk et al., 2020	Cross-sectional	1678	866 (51.6)	812 (48.4)	M= 145 (84.9) S=131 (7.8) O= 118 (7.0)	137 (8.2)	765 (45.6)	650 (38.8)	116 (6.9)	731 (43.6)	942 (56.1)	
15	Sagaltici et al., 2019	Cross-sectional	342	179 (52.3)	163 (47.7)	M= 284 (83.0) S/O= 58 (17.0)	216 (63.2)		126 (36.8)				
16	Javanbakht et al., 2019	Cross-sectional	157	74 (47.1)	83 (52.9)	M=116 (74.4) S= 32 (20.5) O= 8 (5.1)	11 (7.1)	50 (32.5)	34 (46.6)	12 (7.8)			

17	Kaya et al., 2019	Cross-sectional	420	237 (56.4)	183 (43.6)	13.7	M= 356 (84.7)	375 (89.2)	45 (10.8)	255 (61.9)	165 (38.1)	118 (28.2)	302 (71.8)
							O=66 (15.3)						
	Total (N)		9,061	4,492	4,474		M=5,234 ^a		1,637 ^b	1,221 ^b	946 ^c	2,296 ^c	
	(%)			(50.1%)	(49.9%)		(75.8%)		(57.3)	(42.7%)	(29.2%)	(70.8%)	
							S/O=1665						
							(24.2%)						

Note. (Listed studies above are represented by the authors)

TEE=Traumatic Event Experienced, Marital Status (M= Married, S= Single, O= Others), non= 0 years, Low= 1-6 years, Med= 7-12 years, High= above 12 years.

*This study sampled Syrian population living in Nizip (Turkiye) and Jarabulus (Syria). However, only the demographics of Syrian Refugees residing in Turkiye were represented at the table.

a= According to outcomes of sixteen studies, b = According to outcomes of three studies, c = According to outcomes of seven studies

Note: Because of the missing cases in some studies, the numbers provided above did not add up to the total. The numbers are presented as they were reflected in the original articles.

Table 5*Outcomes of PTSD, depression, and anxiety prevalence and characteristics of studies*

#	Article	Country	Legal Status of Population**	Settlement Type	Duration of displacement (mean)	PTSD	Depression	Anxiety	Measurements*	
						(%)	(%)	(%)		
						95% CI	95% CI	95% CI		
1	Alpak G., et al., 2015	Turkiye	Refugee	Camp	6.52 m	33.5%				SLESQ
2	Chung et al., 2018a	Sweden	Refugee	Out of Camp	24.45 m	NA				GHQ, HTQ
3	Gammouh et al., 2015	Jordan	Refugee	Out of Camp	-		29.5%			BDI
4	Kazour et al., 2017	Lebanon	Refugee	Camp	10.02 m	27.2%				MINI
5	Naja et al., 2016	Lebanon	Refugee	Out of Camp	-		43.9%			MINI-Arabic
6	Tinghog et al., 2017	Sweden	Refugee ^a	Out of Camp	-	29.9%	40.2%	31.8%		HSCL, HTQ
7	Jefee-Bahlou et al., 2014	Turkiye	Refugee	Out of Camp	-	27.2-32.6%	36.9-43.3%	29.2-34.7%		HADStress
8	Taha et al., 2016	Iraqi Kurdistan	Refugee	Camp	-	41.8%				HTQ
9	Poole et al., 2018	Greece	Asylum Seeker	Camp	12.1 m	16.3%	44.0%			PHQ
						NA	37-50%			
10	Tekeli-Yesil et al., 2018	Turkiye	Refugees	Out of Camp	-	29.8%	70.5%	38.8%		MINI
11	Acarturk et al., 2018	Turkiye	Refugees	Camp	14.1 m	83.4%	37.4%			IES-R, BDI
						NA	NA	NA		

12	Basheti et al., 2019	Jordan	Refugees	Out of Camp	-	38.7%				HTQ
13	Georgiadou et al., 2018	Germany	Refugees ^a	Mixed	-	11.4%	14.5%	13.5%		ETI, PHQ, GAD-7
14	Acarturk et al., 2020	Turkiye	Refugees	Out of Camp	3.4 y	19.6%	36.1%	34.7%		HSCL-25, PCL-5
15	Sagaltici et al., 2019	Turkiye	Refugees	Camp	33.74 m	17.7-21.5	33.8-38.4	32.4-37.0		CAPS, SLESQ
16	Javanbakht et al., 2019	USA	Refugees	Out of Camp		31%				CAPS, SLESQ
17	Kaya et al., 2019	Turkiye	Refugees	Out of Camp	2.2 y	32.2%	40.3%	47.7%		PCL, HSCL-25
						NA	NA	NA		
						NA	NA	NA		
						36.5%	47.7%			HTQ, BDI
						NA	NA			

Note. a= having/guaranteed residency permit, m= month, y= year

NA= Not Applicable

(**BDI**= Beck Depression Inventory, **CAPS**= Clinical Administered PTSD Scale, **DSI**= Diagnostic Psychiatric Interview, **ETI**= Essen Trauma Inventory, **GAD**= Generalised Anxiety Scale, **GHQ**= General health Questionnaire, **HADStress**: A Somatic Symptom Screening for PTSD (headaches (H), appetite change (A), dizziness and faintness (D), and sleep problems (S)), **HSCL**= Hopkins Symptom Checklist, **HTQ**= Harvard Trauma Questionnaire, **IES-R**= Impact of Event Scale-Revised, **MINI**= Mini International Neuropsychiatric Interview, **PCL**= PTSD Checklist, **PHQ**= Patient Health Questionnaire, **SLESQ**= Stressful Life-events Screening Questionnaire)

*The measurements listed above are mainly self-administered but there are some exceptional measurements that are interviewer-administered.

**Legal Status of refugees have been reflected as they were addressed in the original article

$p < .001$], but one study (Tinghog et al., 2017) reported no relationship between sex and anxiety even though the female Syrian population showed higher anxiety symptoms.

2.3.2. Marital status and PTSD, Depression and Anxiety

Fifteen studies aimed to investigate the association between marital status and the prevalence of PTSD, depression, and anxiety in the externally displaced Syrian population yielding varying results. As detailed below, 19 results showed no relationship between marital status and PTSD, depression, and anxiety. Twelve studies ($N = 6632$) assessed the relationship between marital status and PTSD. Among those, one reported that being married (civil or religious marriage) and being single were protective factors for developing PTSD (Tekeli-Yesil et al., 2018; for civil marriage [OR= 0.30 (95% CI) (0.12- 0.74) $p < .01$], for only religious marriage [OR= 0.33 (95% CI) (0.11- 0.99), $p < .01$], for being single [OR= 0.18 (95% CI) (0.05- 0.61), $p < .01$]); this study suggests that being divorced or widowed might predict PTSD. Another study also reported being divorced or widowed as a risk factor for developing PTSD (Tinghog et al., 2017, [OR= 51.5% (95% CI) (37.9- 65.1%), $p < .01$]. The remaining 10 studies found no significant relationship between marital status and PTSD (Alpak et al., 2015; Kazour et al., 2017; Acarturk et al., 2018; Georgiadou et al., 2018; Basheti et al., 2019; Chung et al., 2018a; Kaya et al., 2019; Javanbakht et al., 2019; Sagaltici et al., 2019; Acarturk et al., 2020). Nine studies ($N = 5946$) assessed the relationship between marital status and depression; only three of these found a significant relationship. One study found that being married (civil or religious marriage) and being single were protective factors for developing depression (Tekeli-Yesil et al., 2018; for civil marriage [OR= 0.72 (95% CI) (0.31 - 1.64), $p < .01$], for only religious marriage [OR= 0.57 (95% CI) (0.21- 1.52), $p < .01$, for being single [OR= 0.61 (95% CI) (0.21- 1.79), $p < .01$], one study reported that being married was associated with reduced depression symptoms (Poole et al., 2018, [AOR= 0.23 (95% CI) (0.05- 0.95), $p = .042$]) and one study reported that divorced or widowed participants

were at high risk of developing depression (Tinghog et al., 2017, [OR= 56.5% (95% CI) (41.9- 69.5%), $p < .01$]. On the other hand, six studies found no significant relationship between marital status and depression (Gammouh et al., 2015; Naja et al., 2016; Acarturk et al., 2018; Georgiadou et al., 2018; Kaya et al., 2019; Javanbakht et al., 2019; Acarturk et al., 2020). Four studies ($N = 3250$) assessed the relationship between marital status and anxiety, but only one found a significant relationship, reporting that divorced or widowed participants were at high risk of developing anxiety (Tinghog et al., 2017, [OR= 51.8% (95% CI) (38.0- 66.1%), $p < .01$]. Three studies found no relationship between marital status and anxiety (Georgiadou et al., 2018; Javanbakht et al., 2019; Acarturk et al., 2020).

2.3.3. Educational level and PTSD, Depression and Anxiety

In total, fourteen studies aimed to investigate the relationship between educational level and PTSD, depression, and anxiety. None of them found a significant relationship between educational level and mental health problems. Eleven studies ($N = 6967$) assessed the relationship between PTSD and educational level. None found a significant relationship between these two variables (Alpak et al., 2015; Taha et al., 2016; Kazour et al., 2017; Tinghog et al., 2017; Acarturk et al., 2018; Chung et al., 2018a; Basheti et al., 2019; Kaya et al., 2019; Javanbakht et al., 2019; Sagaltici et al., 2019; Acarturk et al., 2020). Eight ($N = 5461$) studies assessed the relationship between depression and educational level, and none found a significant relationship between the two variables (Gammouh et al., 2015; Naja et al., 2016; Tinghog et al., 2017; Acarturk et al., 2018; Poole et al., 2018; Javanbakht et al., 2019; Kaya et al., 2019; Acarturk et al., 2020). Three studies ($N = 3050$) assessed the relationship between educational level and anxiety; none reported a significant relationship between these two variables (Tinghog et al., 2017; Javanbakht et al., 2019; Acarturk et al., 2020).

2.3.4. Economic Status and PTSD, Depression and Anxiety

In total, seven studies aimed to investigate the relationship between economic status and PTSD, depression, and anxiety. The variables related to economic status were addressed differently across studies as employment, occupation, and income status. In data analysis, these variables were gathered under the ‘economic status’ category. The relationship between the prevalence of mental health problems and economic status varies across included studies. However, as indicated below, the negative association between economic status and the prevalence of mental health disorders was also claimed. Five studies ($N = 3516$) examined the relationship between PTSD and economic status. Among those, three found a significant relationship between employment status and PTSD prevalence. Alpak et al. (2015) found that PTSD prevalence was higher among housewives (%51.8, $p < .001$), and Acarturk et al. (2018) reported higher PTSD scores among retired Syrians (Med=66, a score range from 0 to 88 for IES-R). Acarturk et al. (2020) also found that good income was associated with lower PTSD prevalence [OR= 0.19 (95% CI) (0.05- 0.64), $p < .01$], but nothing was reported for unemployed participants, and no other studies (Tekeli-Yesil et al., 2018 and Kaya et al., 2019) indicated a relationship between economic status and PTSD. Six studies ($N = 4239$) investigated the relationship between depression and economic status. Among those, four studies found a significant relationship between employment status and depression. Acarturk et al. (2018) reported that depression scores were higher among retired Syrians (Med=24, a score range from 0 to 63 for BDI-II). However, in this population, PTSD levels were higher than depression. Kaya et al. (2019) found that depression [OR= 1.62 (95% CI) (1.19–2.20), $p < .01$] was predicted by lower economic status among male [OR= 2.23 (95% CI) (1.36–3.64), $p < .01$] but not among women, but no significant relationship was found between PTSD and lower economic status in this study. Similarly, Gammouh et al. (2015) found that low income was associated with higher depression symptoms [OR= 0.70 (95% CI) (0.42–

1.15), $p=.03$] and Acarturk et al. (2020) reported that good income had predicted lower depression scores [OR= 0.16 (95% CI) (0.07- 0.38), $p< .001$]. On the other hand, two studies reported no significant relationship between economic status and depression (Naja et al., 2016 and Tekeli-Yesil et al., 2018). Only one study ($N = 1678$) investigated the relationship between economic status and anxiety (Acarturk et al., 2020). This study found that good income was associated with low anxiety symptoms [OR= 0.26 (95% CI) (0.12–0.59), $p<.01$].

2.3.5. Traumatic Events Experienced (TEE) and PTSD, Depression and Anxiety

Five studies investigated the relationship between Traumatic Events Experienced (TEE) and PTSD, depression, and anxiety. The mean numbers of traumatic events are between 3.71 and 13.7 across studies. The most common experienced traumatic events in this population ($N = 3371$) were, in order, “living in a war-affected area; the experience of the death of someone close; experiencing life-threatening accident; experiencing life-threatening accident of a someone close; experiencing someone close’s torture; experiencing the abduction or being taken hostage of someone close; experiencing torture; and experiencing someone else’s torture, beating or sexual abuse”. All studies investigating the relationship between TEE and mental health disorders reported that exposing a greater number of traumatic events is associated with higher PTSD, depression, and anxiety symptoms. For example, Kaya et al. (2019) found that exposing combat situation was the most common traumatic event for both female (88.6%) and male (89%) participants and the high numbers of TEE were predicted to PTSD [OR= 1.092 (95% CI) (1.045–1.140), $p< .001$] and depression [OR= 1.142 (95% CI) (1.090–1.196), $p< .001$]. Tinghog et al. (2017) reported similar results and found a significant relationship between the number of TEE and anxiety [OR= 0.044 (95% CI) (0.031- 0.056), $p<.05$], addition to PTSD [OR= 0.056 (95% CI) (0.044- 0.068), $p<.05$] and depression [OR= 0.045 (95% CI) (0.032- 0.058), $p<.05$]. In this study, 85% of the sample reported experiencing war at a close quarter. Additionally, the

relationship between increased PTSD symptoms and higher means of traumatic events was also reported in other studies (e.g., Alpak et al., 2015, ($p=.002$); Taha et al., 2016, ($p<.001$); Chung et al., 2018a, ($p<.001$)). Alpak et al. (2015) reported that 92% of participants reported having been in a region affected by war and the participants reported a mean of 3.71 (min-max:0–9) traumatic events with 33.5% of PTSD prevalence. Moreover, the higher numbers of traumatic events were reported in a study conducted in Turkiye by Kaya et al. (2019) with a mean of 13.7 (min-max: 2–32) associated with the 36.5% of PTSD and 47.7% of depression prevalence. This study also highlighted that male participants reported experiences of more traumatic events than females (14.9 vs 13.0; $p<.001$).

2.3.6. Resettlement period and country and PTSD, Depression and Anxiety

Eight articles discussed the resettlement period and its impact on mental health problems. The mean numbers of resettlement periods differ across studies from 6.52 months to 3.4 years. The studies included had reported no significant relationship between the resettlement period and the mental health disorders (Alpak et al., 2015; Kazour et al., 2017; Acarturk et al., 2018; Chung et al., 2018a; Kaya et al., 2019; Sagaltici et al., 2019; Acarturk et al., 2020). Only a study conducted in Greece by Poole et al. (2018) found that increased time in the asylum process as a predictor of depression symptoms. The studies included in this systematic review represent the Syrian displaced population from eight different countries: Turkiye, Sweden, Jordan, Lebanon, Iraqi Kurdistan, Greece, Germany, and the USA. Most of the included studies (7) were conducted in Turkiye (see Table 5). The highest prevalence of PTSD among the Syrian population was calculated in Turkiye with 83.4% (Acarturk et al., 2018) and the lowest prevalence was reported in Germany with 11.45% (Georgiadou et al., 2018). The highest depression prevalence was found in Turkiye with 70.5% (Tekeli-Yesil et al., 2018) and the lowest in Germany with 14.5% (Georgiadou et al.,

2018). Lastly, the highest prevalence of anxiety was reported in the US with 47.7% (Javanbakht et al., 2019) and the lowest in Germany with 13.5% (Georgiadou et al., 2018).

2.3.7. Legal status of the population and settlement type and PTSD, depression and anxiety

Almost all included studies referred to the Syrian displaced population as ‘refugees’, but most did not provide information whether this population had legal refugee documents or not. Only two studies clearly specified the refugee status as “having a guaranteed residency permit”, one of these was conducted in Germany by Georgiadou et al. (2018) reporting the lowest PTSD (11.4%), depression (14.5%) and anxiety (13.5%) levels of all reviewed studies. It also reported that shorter validity of residence permits was significantly associated with increased PTSD symptoms ($p=.04$). A study conducted by Tinghog et al. (2017), sampling the population of Syrian refugees with residency permits in Sweden, had not reported similar results. It showed no distinction in the prevalence of PTSD (29.9%), depression (40.2%), and anxiety (31.8%) when compared to other studies with Syrian refugees without legal status. Additionally, a study conducted by Poole et al. (2018) sampled asylum seekers in Greece and finding a very high depression prevalence (44.0%). The lack of a clear definition of legal refugee status and inconsistent results across studies make it difficult to draw conclusions. Regarding settlement type, six studies ($N = 2882$) investigated Syrian refugees living in camps, ten studies ($N = 5934$) sampled those living outside camps and one study ($N = 200$) was mixed (see Table 5). Only two studies investigated the relationship between settlement type and mental health problems: Basheti et al. (2019) and Georgiadou et al. (2018) examined the impact of settlement type on Syrian refugees’ mental health, but neither found a significant relationship.

2.4. Discussion

The purpose of this review was to gain a better understanding of the prevalence and correlates of PTSD, depression, and anxiety among the externally displaced Syrian population. The findings indicate that the prevalence of PTSD, depression, and anxiety is high and female displaced Syrians, especially those living in Turkiye, are at greater risk of experiencing these mental health problems; however, results regarding the relationship between sex and mental health are mixed. Generally, economic status was not found to be significantly related to mental health problems; however, higher-level depression was found to be strongly associated with a lower level of economic status. Marital status, education level, and resettlement period were not found to be significant predictors of PTSD, depression, and anxiety. The number of traumatic events was closely associated with higher symptom severity of PTSD, depression, and anxiety. The results of this review show that the prevalence of mental health problems among externally displaced Syrians to range from 23.26% to 42.63% (M=32.95%) for PTSD, 30.28% - 50.53% for depression (M=40.41%), and 17.67% - 48.93% (M=33.3%) for anxiety. Our findings build upon the work of Pecona et al. (2020), who investigated the prevalence of post-traumatic stress, depression, and anxiety in 8176 adult Syrian refugees through a systematic review. They found that the prevalence of PTSD ranged from 23.4% to 83.4% (M=43.0%), which has a larger range for PTSD compared to our study. Thus, the wider range could suggest that the mean is less precise. In contrast, our results, with a narrower range, could be interpreted with a more reliable estimate for PTSD scores. Furthermore, they reported depression rates ranging from 20% to 44.1%, with a mean value (M=40.9%) similar to our depression prevalence, and anxiety rates ranging from 19.30% to 31.8% (M=26.6%), providing further support for the generalizability of our findings regarding the high prevalence of these mental health problems in this population. These rates are significantly higher than in the general population. In the US National

Comorbidity Survey, the prevalence of PTSD was found between 6% and 9% in the adult population (age 18–59, Kessler et al., 2005) and a systematic review (Baxter et al., 2013) reported the global prevalence of anxiety as 7.3%. A national survey reported that the prevalence of depression as 7.1% among US adults (National Institute of Mental Health, 2017). The prevalence of depression and anxiety in this review is up to 7 times higher and PTSD is up to 8 times higher in the externally displaced Syrian population than in the general population. Our findings are consistent with the literature indicating that refugees have worse mental health than permanent residents or non-refugees (e.g., Kocijan-Hercigonja et al., 1998). Having lived through war-related life experiences and migration has put this population at a higher risk of experiencing mental health problems; however, we did not find data regarding the prevalence of psychological problems in the Syrian population before the war, preventing comparisons of psychological well-being before and after the war. This is due to the shortage in mental health research and care in Syria before the civil war. Only 70 psychiatrists in two psychiatric hospitals were serving a population of 22 million in Syria before the civil war (Cultural Orientation Research Center, 2014). Nonetheless, the prevalence of PTSD, depression, and anxiety disorders in the internally displaced Syrian population, and refugee populations in general, is similar to our findings (e.g., Al Ibraheem et al., 2017; Kakaje et al., 2021; Steel et al., 2009; Turner et al., 2003). Contrary to expectations, this review found a mixed relationship between gender and PTSD, depression, and anxiety. While some studies reported a significant relationship between being female and experiencing PTSD, depression, and anxiety, others found no such relationship in the displaced Syrian population. This is surprising because women in the general population are more likely to experience and report PTSD, depression (e.g., Hapke et al., 2006; & Nolen-Hoeksema et al., 2008; Piccinelli & Wilkinson, 2000) and anxiety (e.g., McLean et al., 2011), even though some types of psychological problems such as substance abuse and antisocial

behaviours are more common in the male population (World Health Organisation (WHO), 2002). It has also been reported that female refugees tend to experience more mental health problems than males (Aoun et al., 2018; Cantekin & Gencoz, 2017; WHO, 2004;). Even though the male participants report higher numbers of traumatic events, female participants experience higher symptoms of PTSD (Mollica et al., 1987; Potts, 1994). This might be because men have higher resistance to, and avoidance of, experiencing and verbalising mental health problems, due to a common belief that men should stand and fight to protect their family members from external threats (Jaji, 2009). Women may be concerned about continuing to take care of the family in post-conflict areas, increased workload because of losing a husband during the war, changes in parental roles after the migration, and be used to reporting and interpreting feelings and problems. Some of these stressors and responsibilities had not been associated with female Syrians before the war, and displacement might have put extra burdens on their post-migration challenges, leading them to suffer from more severe mental health problems. All studies reporting an association between being female and the risk of developing PTSD were conducted in Turkiye. This may be due to environmental circumstances such as gender-based violence, isolation, living in poor conditions, or forced marriages. Acarer (2015) reported that women residing in camps in Turkiye ages between 15 and 50 were sold on the ground of “temporary marriage” for up to 5000 Turkish Lira. Even though the Turkish government has been trying to control and prevent these arrangements, female Syrians may still be at a great risk that might have a detrimental impact on their mental health and well-being. The findings of this review also highlight a mixed result for marital status and experiencing PTSD, depression, and anxiety. The majority of findings indicated no significant relationship between marital status (single, married, widowed, or divorced), several studies reported that while being single and married are protective factors, being widowed or divorced are risk factors for developing these mental health problems in

the displaced Syrian population. These results are supported by the mixed outcomes of studies conducted in both the Syrian displaced population and other refugee populations (e.g., Al Ibraheem et al., 2017; Momartin et al., 2004). A cross-sectional study with Syrian refugees living in Lebanon reported that divorced participants showed the highest prevalence (80%) of PTSD symptoms (Aoun et al., 2018). In addition, another study concluded that being married is a protective factor against mental health problems (e.g., Poole et al., 2018). However, it could be argued that being married might also have a negative impact on mental health because of having to leave the partner behind, losing family connections during migration, witnessing a partner being kidnapped, and having no idea about their whereabouts. These kinds of situations might have extra concerns for married Syrians and may reduce the supportiveness of marital ties. Having family members to care for in a new country might put additional stress on married Syrians who try to survive in insecure and poor economic conditions. We found inconsistent results regarding the relationship between PTSD and economic status. However, these findings must be interpreted with caution because economic status was addressed differently in included studies. Several studies classified it as “employment status” and others as “occupation” and “income status”. However, the obvious finding to emerge from this review is that low economic status is strongly associated with higher PTSD, depression, and anxiety. Conversely, good income is associated with lower depression symptoms. Kaya et al. (2019) indicated that being male can be a risk factor for developing depression, especially for those with low economic status. These results can be in line with the role of Syrian men in the traditional patriarchal structure of Syrian society (Briskman & Latham, 2017; Connor et al., 2016). There is no doubt that because of resettling in a new country, experiencing economic distress because of leaving all possessions behind, and not knowing how to sustain their economic roles in a new community, Syrian men experience a salient reduction of the power of their economic role in their families where they

were previously responsible for breadwinning. The unemployment status of refugees had been extensively studied, and the findings indicate lower mental health outcomes for both genders who are unemployed refugees (Dalgard & Thapa, 2007; Segal et al., 2018; Simich et al., 2006). Despite inconsistent results found between economic status and the mental health problems in this review, lower economic status can be a risk factor for developing mental health problems. Interestingly, the results of the current review showed no relationship between length of the resettlement period and symptoms of PTSD, depression, and anxiety. This finding is contrary to previous studies, which have suggested the association between a longer resettlement period and higher levels of psychological problems among the refugee population. For instance, Bogic et al. (2015) found a higher prevalence of PTSD, depression, and other anxiety disorders was associated with a longer resettlement period. Laban et al. (2004) also found that a longer duration of asylum procedure was associated with higher psychiatric disorders. Our divergent result may be explained by the fact that the settlement period was less than 4 years across the included studies, limiting the results of our review.

Traumatic exposure is the main predictor of PTSD and comorbid psychological problems (Mollica et al., 1998a). The number of types of traumas, to which people were exposed, is positively associated with PTSD, anxiety, and depression symptoms (Borho et al., 2020; Hendaus et al., 2021; ; LeMaster et al., 2018; Nickerson et al., 2015). Consistent with the literature, our review strongly implies that the number of traumatic events experienced is associated with higher levels of PTSD, depression, and anxiety. The most common traumatic events experienced in our review were “living in an area affected by war/destruction of home” and “experiencing/witnessing the death of someone close”, presenting great risks of trauma in this population. The relationship between the legal status of the population (being a refugee or asylum seeker) and mental health problems could not be analysed, as nearly all included studies lacked detailed information about the status of the Syrian refugee

population. This demonstrates a problem with the quality of studies, which omit significant information from their methods and results. Only three studies provided this information; however, their findings demonstrated mixed results for different legal statuses. While one study found no distinctive relationship between either having a legal status or not and the symptoms of PTSD, depression, and anxiety in the Syrian population residing in Sweden (Tinghog et al., 2017), the other studies indicated a higher prevalence of depression in asylum seekers in Greece (Poole et al., 2018) and higher PTSD symptoms among Syrian population in Germany having shorter validity of residency permit (Georgiadou et al., 2018). These results may be explained by the presence of uncertainty about the future and fear of repatriation or immigration detention among this population. Importantly, we did not find a relationship between settlement type and mental health problems of Syrian Refugees; however, this finding cannot be extrapolated, because only two out of seventeen studies investigated this relationship. Generally, there are few studies investigating the relationship between settlement type and mental health problems and their results are inconsistent. For instance, contrary to our findings, a study conducted in two refugee camps in Chad reported the association between experiencing daily stressors and higher levels of depression among refugees, due to safety concerns and problems meeting basic needs, such as food, water, and medical care (Rasmussen & Annan, 2010). Lastly, another unanticipated finding was the higher levels of PTSD and depression among Syrian Refugees living in Turkiye. Possible explanations for this result might be the proximity to the conflict area, the temporary protection status of Syrian living in this country, and the huge influx of Syrians in Turkiye, which hosts the largest refugee population in the world (UNHCR, 2021c), with highly negative the quality and quantity of service provided for this population.

2.5. Limitations

This review aimed to find out the prevalence of PTSD, depression, and anxiety in externally displaced Syrian refugees and its demographic correlates. It has provided substantial data about the mental health problems of Syrian Refugees living outside of Syria. It has also highlighted methodological and theoretical problems associated with research in this area. To assess this, JBI's Quality Appraisal tool was employed to evaluate the quality of prevalence rates of the studies. As shown in Table 3, some studies lacked confidence intervals for the prevalence of PTSD, depression, and anxiety. This represents one of the limitations of the included studies since confidence intervals are crucial for understanding the range within which the true population parameter is likely to lie. Their inclusion in research findings is essential for robust and reliable data analysis and interpretation, as they also enable readers to make informed decisions, facilitate comparisons, enhance interpretation, promote transparency, and mitigate the overinterpretation of results. Furthermore, the quality check also revealed that 3 out of 17 studies lacked valid assessment tools for this population, which may raise concerns about the trustworthiness of the findings, especially given that Syrian refugees have culturally diverse backgrounds compared to the Western population. It was also found that nearly half of the studies' response rates during the participation process were unclear, which could potentially affect the representativeness and statistical power of the studies. Considering these problematic aspects of the studies, there is a distinct lack of consistency and poor choice of methods and reporting in the included studies.

During the process of screening and data analysis, several problems were identified. The most frequent of these were: (1) sampling methods (e.g. convenience or registry-based sampling, sample size, response rates), (2) the use of a variety of measurement tools (different diagnostic criteria and cut-off points), (3) assessment of tools (e.g., clinical interviews, lack of structure in interviews), (4) validity and reliability of the measurements

(not culturally standardised for Syrian population), (5) appropriateness of statistical analysis (e.g., using different software for data analysis, unexplained psychometric data), (6) contextual differences across studies (e.g., variety of traumatic events experienced, differences in living environment, settlement type, the undefined legal status of the population). Considering these shortcomings, a good number of the studies have substantial limitations and provide inconsistent results, especially in sampling, assessment, and identifying contextual and demographic differences. In line with these shortcomings and particular examples given above that we encountered during the data collection and analysis; the limitations of our review should be acknowledged.

Some studies only tabulated the demographic variables of participants and did not analyse the relationship between a specific demographic and mental health problems (e.g., educational level of the participants was tabulated only as numbers or percentages but was not analysed as a variable with mental health problems), making it difficult to obtain cumulative data. For this reason, most variables could not be analysed in terms of prevalence (which had been one of the aims of this review) but only analysed descriptively as correlates. Additionally, some variables across studies were categorised in different ways. Some classified employment status as being “retired” or “student” but others as “housewife” or “labourer” preventing the extraction and analysis of these data. Even though we had not applied any language and country (region) restrictions, the final list of eligible studies was all in English, but with participants from eight different countries. This might affect the generalisability of our results as some countries hosting a large number of Syrian displaced people, such as Egypt, Denmark, Sudan (STATISTA, 2022), Canada or Norway could not be included in this review, as there were no studies from these countries meeting our eligibility criteria. Another frequent obstacle to data analysis was the use of a variety of different measurements and characteristics such as self or clinician-administered, different cut-off

scores, or lack of cultural adaptation. For example, the mean numbers of TEE vary between 3.7 and 13.7. The most likely reason for this variability is the number of items included in TEE measurements. Even though higher mean numbers of TEE were reported in Kaya et al. (2019), the highest PTSD, depression, and anxiety were reported in other studies, potentially leading to inconsistent results in this review. Several studies included in this review investigated the impact of settlement type (in camp/out of camp) on mental health well-being. Future studies should consider the impact of this variable on the mental health of the Syrian displaced population regarding their living conditions and accessing or failing to access resources to meet fundamental needs. Uncertainty about the legal status of the Syrian population across studies in this review prevented an examination of the association between legal status and mental health well-being. Future studies should also be careful about identifying this population's legal status which might have a different and considerable impact on mental health well-being.

Currently, there is low-to-moderate intensity of research on the mental health problems of the displaced Syrian population; future studies must focus on this topic and establish additional potential factors for the mental health well-being of this specific group. As mentioned above, there is no research from some countries hosting a large number of Syrian populations. Future studies should also aim to address the mental health status of Syrians in residing in these countries. Considering the large number of Syrian refugees, host countries should pay attention to the high prevalence of PTSD, depression and anxiety in this population and establish early specific psychological interventions. This is very important in terms of the spectrum and continuum of affective disorders in this population. Recent studies have investigated patients fulfilling the diagnostic criteria for multiple psychological disorders who might be misdiagnosed because of overlapping symptoms of psychological disorders, which, rather than being categorised distinctly, have common biological

underpinnings which may form the continuum of affective disorders (Ng. et al., 2020). Considering the outcomes of this review, highlighting the higher level of PTSD, depression, and anxiety symptoms in the displaced Syrian population, these diagnoses might overlap and convert into other psychological problems in the future. For instance, Ng et al. (2020) reported the conversion of patients with psychotic characteristics with overlapping mood and psychotic symptoms into more distinct symptoms of schizophrenia or bipolar disorder over time. Thus, the findings of this study have important implications highlighting the early diagnosis and interventions of psychological disorders which would allow researchers, clinicians, policymakers, and health professionals to determine and monitor possible diagnoses of future psychological problems, support future well-being, and built up better social and individual adjustments to society for the Syrian displaced population. The results of this review have demonstrated that some demographic variables can be identified as risk factors for mental health problems. Awareness of these risk factors would prevent more serious mental health problems in the future. Successful schemes and policies must be set up especially for accelerating the acculturation process and avoiding post-migration risk factors such as providing employment opportunities, offering better accommodation facilities, granting legal status, and framing legal rights for this specific population.

2.6. Conclusion

This systematic review has identified that PTSD, depression, and anxiety in the Syrian displaced population are significantly higher than in the general population. The relationship between sex and economic status and mental health problems of the Syrian population are mixed across included studies, but it is evidenced that being a female is a predictor of experiencing PTSD, depression, and anxiety in this population. Particularly, female Syrians residing in Turkiye are at a greater risk of suffering from these mental health problems. Additionally, the association between lower economic status and higher depression levels

draws attention. The marital status, education level, and resettlement period were not significant predictors of PTSD, depression, and anxiety among this population. Providing a residency permit was not associated with improved well-being. On the other hand, consistent with the literature, the number of traumatic events experienced was also the predictor of mental health problems, but post-migration challenges also play a great role in it. Greater numbers of traumatic events were closely associated with the higher symptom severity of PTSD, depression, and anxiety. Lastly, among eight different countries, the highest PTSD and depression prevalence was found in Turkiye and the highest anxiety prevalence in the US. The lowest prevalence for these three mental health problems was reported in Germany. More population-based and statistically strong studies are needed to identify the mental health problems of this population and their risk factors to provide effective and convenient mental health interventions. There are significant methodological and theoretical problems in the articles reviewed. Future studies should improve their study designs and applications taking these shortcomings into consideration for demonstrating reliable outcomes.

Chapter 3: Practical Feasibility of Narrative Exposure Therapy in Syrian Refugee population residing in Turkiye: A Focus Group Study

(This chapter was submitted to and published in International Journal of Social Sciences in 2023. Therefore, there are repetitions across the thesis to inform the reader about the outline and rationale of the studies. See Appendix D for journal guideline).

*Aysazci-Cakar, F., Schroder, T., & Hunt, N. (2023). Practical feasibility of Narrative Exposure Therapy in Syrian Refugee population residing in Turkiye: A Focus Group Study. *International Journal of Social Sciences*, 7(32), 1-25.

<https://doi.org/10.52096/usbd.7.32.01>.

3.1. Introduction

Migration has many wide-ranging impacts on individuals, communities, and cultures, both in the countries where people have left and in the places where they have resettled as safe shelters. Prior to forced migration, refugees have often experienced or witnessed physical, psychological, and gender-based violence (Giacco et al., 2018). They face uncertain and challenging journeys and the compunction of leaving family members and all possessions behind; they experience post-migration difficulties such as immigration detention and temporary protection with the threat of repatriation (Nickerson et al., 2011). Given these difficulties, the refugee population lives through repeated and cumulative traumatic life experiences before, during, and after migration.

Since the civil war started in 2011, it has been reported that over 12 million people in Syria were displaced internally and externally to save their lives. At the end of 2022, UNHCR reported that at least 5.4 million Syrians had been externally displaced, with 3.6 million of them seeking safety in Turkiye (UNHCR, 2022; 2023a). Turkiye hosts the largest

number of refugees worldwide (UNHCR, 2023b). Since the beginning of the conflict in Syria, the Republic of Türkiye has considerably extended protection and assistance to Syrian refugees and declared temporary protection in October 2011 (Syria Needs Analysis Project, 2013). This protection law called the 'Temporary Protection Regulation,' was adopted in 2014 and considers Syrians in Türkiye not as 'refugees' but as 'guests' (UNHCR, 2018), providing them with temporary protection and assuming that they will return to Syria when the conflict ends. In the convention of a decade after the beginning of the civil war in Syria, the disturbance in the area remains a challenge and looks like it will continue to do so as the disturbance in the Middle is floating. Due to the unsteady and unforeseeable political atmosphere and the influx of Syrians in Türkiye, the law of temporary protection for this population creates challenges both for the Republic of Türkiye and the Syrian Refugees under the protection of this law.

Many Syrians living in Türkiye encounter multiple daily stressors such as high housing costs, low wages, exploitation in the labor market, discrimination, and uncertainty about their futures (Kaya & Kirac, 2016). Being exposed to war-related experiences and going through different phases of migration, refugees face various common psychological disorders. WHO (WHO, 2015) reported that approximately 600,000 refugees suffer from severe mental illness and require psychological treatment, with another 4 million potentially experiencing such disorders. It is well-known that exposure to high levels of traumatic events and other stressful experiences leads many refugees to suffer from psychological disorders. A study conducted in Lebanon by Kazour et al. (2017) reported a lifetime prevalence of Post-Traumatic Stress Disorder (PTSD) in Syrian refugees at 35.4%. Additionally, PTSD in this population is often comorbid with other psychological disorders. A cross-sectional study carried out in Türkiye by Fuhr et al. (2019) found that the prevalence of PTSD was 19.6%, with comorbid symptoms of anxiety and depression observed as 36.1% and 34.7% in the

Syrian population, respectively. While the investigation of the mental health problems of refugees is relatively recent, there is a moderate amount of research in the literature aiming to address the mental health issues of this population and offer effective interventions. Over the past few decades, prominent treatment methods have been developed and widely used for the mental health problems of this group. For example in the UK, Trauma-Focused Cognitive Behavioural Therapy (TFCBT) and EMDR have been proven as the most effective interventions, with recommendations of NICE for the treatment of PTSD (NICE, 2005). These therapy techniques have been examined in numerous studies and have shown high success rates in reducing PTSD symptoms (e.g., Giannopoulou et al., 2006; Sandström et al., 2008). Schauer et al. (2005) have also developed an effective and short-term therapy technique called NET for addressing potential mental health problems of refugees living in post-conflict areas. The effectiveness of NET has been demonstrated through randomised controlled studies involving different ethnicities (e.g., Neuner et al., 2004 & Neuner et al., 2008). NET is known as a 'culturally universal' approach as it is based on a narrative that is 'an integrative part of every culture' (Schauer et al., 2005, 2011). The treatment involves emotional exposure to traumatic memories and the reorganisation of these memories into a coherent chronological narrative (Robjant & Fazel, 2010). NET incorporates components of TT and PE. It aims to construct a lifeline from birth to the present and focuses on a lifespan narrative (Mørkved et al., 2014). It offers a safe confrontation with thoughts and memories that have been avoided by the person since the traumatic event occurred (Foa et al., 2007). The second focus of NET is the habituation to intrusive symptoms during the reconstruction of autobiographical memories of traumatic experiences (Neuner et al., 2002). It is conceived that trauma survivors avoid thinking about any details of the traumatic event represented in the fear network, and those who suffer from PTSD experience difficulties with autobiographical context. That is why they become unable to adjust the details about the

event (e.g., time and place) and they cannot construct a chronological life story (Schauer et al., 2011). Thus, NET emphasises the associated imbalance of “hot” and “cold” memories in PTSD and how a fear network is activated in the brain. NET has been developed for people who are more likely to have complex trauma and, because of that, as the fear structures of survivors are likely to overlap, patients are not only asked for their “worst experiences” but are encouraged to narrate all stressful and positive life events in chronological order from birth to the present day.

Considering the vast influx of Syrian refugees in resettlement countries, addressing mental health difficulties is generally not a priority for this population. Moreover, taking into account the barriers to accessing mental health interventions, such as language difficulties, cultural differences, economic concerns, and unfamiliarity with the host country's healthcare system, there is no doubt that refugees are in an emergency situation that requires immediate psychological support. To illustrate, Tinghog et al. (2017) found that 85% of Syrian refugees resettling in Sweden reported experiencing war at close quarters, and 79% reported being exposed to other life-threatening experiences, which may lead to emerging psychological problems in this population. This suggests a dose-response relationship that claims a linear connection between trauma exposure and psychological distress (Mollica et al., 1998a, 1998b). Recent studies (e.g. Akthar et al., 2020; de Graff et al., 2023; Feen-Calligan et al., 2020;) have attempted to focus on effective psychological interventions for both the general population and the Syrian refugee population in conflict areas and receiving countries. Besides living through long-term adverse and uncontrollable life experiences, it is also noteworthy that the social, political and economic conditions of the hosting country are closely bound up with the mental health well-being of refugees. Turkiye has also developed many health action plans for this population. However, budget limitations have hindered the integration of mental health into primary and community care, resulting in unmet mental

health care needs and a treatment gap for Syrian refugees residing in Türkiye. A few studies have attempted to look into the efficacy of particular psychological interventions in this population, including Program Management Plus (PM+), Group Program Management Plus (gPM+), a self-help psychological program created by WHO (Acarturk et al., 2022; Akhtar et al., 2020; Uygun et al., 2020;), EMDR (Acarturk et al., 2015, 2016; Yurtsever et al., 2018), a brief group behavioural intervention (Bryant et al., 2022) and culturally adapted CBT (Eskici et al., 2023). Apart from these interventions and psychological guidance and counseling provided by local mental health services, there are currently few structured and commonly adopted psychological interventions for Syrian refugees living in Türkiye. Therefore, there is a clear need to offer and implement an evidence-based, structured, and practical psychological intervention to offer and implement to address the mental health problems of this population in Türkiye. Although NET has been shown to be effective in refugee populations, , to date NET has not been practiced and investigated in Türkiye or with Syrian refugees. These gaps in the literature have motivated us to address these deficiencies and investigate the feasibility and effectiveness of NET within the Turkish context and among war-affected Syrian populations. In our subsequent study, we aimed to examine the feasibility and effectiveness of NET for the treatment of mental health problems of Syrian refugees in Türkiye. To ensure the contextual and practical feasibility of NET, a preliminary focus group (FG) was conducted involving local workers who have professional experience with Syrians in Türkiye. The primary purpose of this FG was to carry out an in-depth exploration of a topic about which little is known and to encourage participants to engage in collective sense-making processes (Nel et al., 2015; Stewart et al., 2007). By employing this technique, we aim to gather knowledge about potential obstacles, challenges, and circumstances that could hinder the delivery of NET in this context. This knowledge may help us to adapt the practical procedures of NET for effective implementation of it in the subsequent study.

3.2. Materials and Methods

3.2.1. Participants

This study was approved by the Ethics Committee of the Division of Psychiatry and Applied Psychology at the University of Nottingham (Approval no. DPAP-2022-28, see Appendix C). Six participants were recruited, but one of them withdrew from the study at the last minute. Thus the FG was carried out with 5 participants from different professionals (social worker, sociologist, psychologist, doctor, and nurse). The year of professional experience of participants with Syrians living in Türkiye was between 3 and 8 years. The age range was between 28 and 35. Participants were recruited from three different regions of Türkiye (Izmir, Mardin, and Batman) using convenience sampling, based on accessibility and availability of the participants. Informed consent and demographic data were obtained from each participant.

3.2.2. The Role of the Moderators

The FG was moderated by two facilitators, one of whom was an independent researcher, and the other was the main researcher (FAC) of this study. The main researcher was responsible for introducing the aims and methods of this study, as well as explaining the nature of the NET technique to participants. The independent researcher was responsible for posing the semi-structured questions (see Appendix E) to the group and facilitating the discussion. The main researcher was present throughout the group to address any research-related questions and to observe the group dynamics.

3.2.3. Data Collection

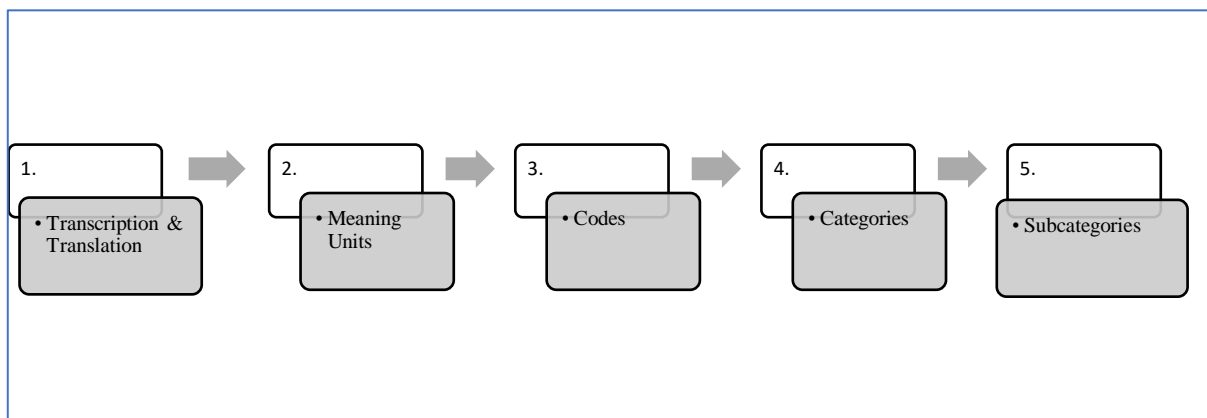
Due to the Covid-19 pandemic and travel restrictions, the research was conducted online via Microsoft Teams. The FG took place on August 10, 2021, at 19:00 (GMT+3). At the beginning participants were provided with a 20-minute PowerPoint presentation by the main researcher, which included information about the general aim and method of NET

intervention study, the theoretical background, and the nature of NET. Following the presentation, the independent researcher initiated the semi-structured group interview by addressing the pre-defined questions. The interview lasted 63 minutes and was video-recorded using the recording function of Microsoft Teams. The Turkish language was used during the FG and the group discussion was later transcribed and translated from Turkish to English by the main researcher (FAC) for data analysis.

3.2.4. Data Analysis Method

3.2.4.1. Rational For Qualitative Content Analysis:

This study aims to explore the knowledge around a topic that is little known. As mentioned by Green and Thorogood (2004) Content Analysis might be suitable for the simplest reporting of data that needs to be explored. Krippendorff (2004) defines it as a research technique that allows for replicable and valid inferences from texts or other meaningful materials to their contexts of use. In this study, an inductive qualitative Content Analysis approach was used to analyse and interpret participants' perspectives. Inductive Content Analysis involves the researcher answering the research question by formulating concepts, categories, and themes, and repeatedly referring to the original text sources to ensure a strong connection between the data obtained and the results (Elo & Kyngäs, 2009). To conduct the analysis, the discussion was transcribed and translated as a starting point. Erlingsson and Brysiewicz's (2017) Content Analysis guide was utilised and following the guideline, the text was divided into smaller parts called Meaning Units (MUs). Codes were then formulated and grouped into categories based on their similarities and differences. To achieve a deeper level of analysis, subcategories were created from the formulated categories. Figure 2 illustrates the phases of Content Analysis.

Figure 2*Phases of Content Analysis*

In the literature, there is considerable overlap between Content Analysis and Thematic Analysis in terms of cutting a text into parts, philosophical background, description and interpretation of data and searching/creating themes. As one of the descriptive approaches in qualitative studies, Content Analysis and Thematic Analysis are suitable for research where a low level of interpretation is required, compared to grounded theory and hermeneutic phenomenology where a higher level of interpretation is needed (Vaismoradi et al., 2013). However, there are distinct features between Content Analysis and Thematic Analysis. In Thematic Analysis, the searcher aims to reach latent meanings of content. These latent meanings having more implicit and abstract level represents themes which require deeper interpretation than Content Analysis (Sandelowski & Barosso, 2003). On the other hand, in Content Analysis, the researcher chooses to go through the material (text) simply and aims to formulate an easy-achieved classification with both qualifying and quantifying the data (Vaismoradi et al., 2016). Hence, the variation between Thematic Analysis and Content Analysis mainly roots in theme development where intensity level of abstraction levels distinct each other for these two methods. Parallel to the aim of this FG research, the Content Analysis method was chosen as a step-by-step model for systematically analysing the codes

and categories obtained from the discourses of the FG participants rather than investigating the hidden meanings under these categories and themes.

3.2.4.2. Theoretical/Philosophical Underpinnings:

This research aims to discover knowledge around the practical feasibility of NET in Syrian Refugees living in Turkiye. Therefore, we were already aware that there is little known about this topic and it requires some exploratory research. This study was designed as qualitative research for gathering subjective and detailed descriptions around the research question with Focus Group. A Focus Group is described as a research technique that collects data through group interaction on a topic determined by the researcher (Morgan, 1996). Thus, in this research, participants were gathered around, and data was obtained from the group discussion. Data was analysed systematically with Content Analysis. This process was primarily shaped by the nature of knowledge known (Epistemology) and the concept of reality (Ontology). The methodology created a bridge between these philosophical perspectives and the method (Content Analysis) of this study. Content Analysis is a systematic approach that allows the researcher to explore a large amount of textual data with coding and categorising it, determines their frequency and relationships, reflects the framework and discourses of conversation (Gbrich, 2007; Mayring, 2000; Pope et al., 2006). In the quantitative and qualitative research literature, there is some conflict about placing the Content Analysis method as it has some similarities with discourse analysis and thematic analysis such as being descriptive and doing textual analysis. However, it is well-accepted that while these two approaches are placed under the Interpretivist approach, Content analysis posits under the Positivist approach. Interpretivist/constructivist approaches acknowledge the probabilistic nature of knowledge and reality, accepting the understanding that there is no single objective reality. On the other hand, Positivism emphasises the replication of the natural sciences through controlling the natural world with universal laws that could be

further examined through particular scientific rules of method (Barbour, 2014). Typically, the Content Analysis method follows the Positivist approach with a fundamental notion that meaning can be counted and coded systematically. It uses a codebook with an a priori coding scheme that allows a researcher to map the meanings of particular content from which conclusions can be drawn (Lowe, 2004). Content Analysis method relies on systematic, objective description and, quantification and replicability of data obtained.

3.2.4.3. Quality Check:

Each MU, code, category, and subcategory were evaluated independently by the authors of this research. At least an 80% interrater agreement was set for the quality check. The first (FAC) and third authors (NH) examined each MU and reached 65% agreement for the MUs between 1-50. After discussion and review, the authors had 92% agreement. Then the first (FAC) and second authors (TS) investigated the MUs between 51-104 and reached 80% agreement. Following this, after discussing the non-overlapping categories and subcategories, 96.3% agreement was reached between the first and second authors.

3.3. Results

Four codes, twelve categories and twenty-one subcategories were created under one-hundred and four meaning units. The numbers of the codes, categories and subcategories are represented in Table 6.

Table 6

Distribution of codes, categories and subcategories

Code (Numbers)	Category (Numbers)	Subcategory (Numbers)
Research (N=9)	Delivery of NET (N=9)	Suitability (N=1) Challenges (N=2) Length of Sessions (N=3)

		NET Beneficial (N=3)
Recruitment (N=51)	Language (N=5)	-
	Challenges (N=11)	Language (N=1)
		Address Changes (N=3)
		Needs (N=7)
	Solution (N=1)	-
	Criteria (N=13)	-
	Demographics* (N=12)	Location (N=2)
		Age (N=6)
		Employment* (N=3)
		Education* (N=1)
	Traumatic Event (N=9)	Challenge (N=1)
		Suitability (N=1)
		Classification of events (N=7)
Therapy (N=35)	Language (N=26)	Translator (N=18)
		Turkish (N=1)
		Mother-tongue (N=3)
		Productiveness (N=3)
	Online Delivery (N=2)	-
	Challenges (N=1)	-
	Cultural Differences (N=6)	-
Remarks (N=10)	Cultural Differences (N=10)	Awareness (N=3)
		Trust Issue (N=4)
		Perceptions toward Mental Health (N=3)

* *Note* * One meaning unit is coded within both the employment and education subcategories

3.3.1. Code “Research”

The only category formulated under the code of "Research" is the "Delivery of NET" category. Participants provided their insights and perspectives on how NET could be delivered effectively in this context.

3.3.1.1. Delivery of NET:

This category is divided into four subcategories in terms of similarities and differences among the meaning units. The participants developed their arguments around these subcategories: Suitability, Challenges, Length of sessions, and NET beneficial.

Suitability: The participants thought that if NET can be delivered robustly, this technique seems very suitable and promising for Syrian refugees living in Turkiye.

Challenges: The participants highlighted that the successful delivery of NET might pose challenges for the researcher due to the specific characteristics of the Syrian population in Turkiye. They emphasised that the participants should fully understand the purpose of the research and their responsibilities during the therapy session.

Length of Sessions: The participants expressed concerns that delivering NET for 8-12 weekly sessions, each lasting 60-90 minutes, might not be suitable for the Syrian population, as they tend to live day by day. For instance, one participant indicated that:

“P5: (MU18)...the length of the sessions in this study might be a bit long for these people. Because they take each day as it comes. I think it would be hard to expect these people to sit in a room in front of a screen for 60 to 90 minutes...”

NET Beneficial: The participants highlighted that NET appears to be a promising, beneficial, and productive therapy technique for the population of Syrians living in Turkiye. They acknowledged that this aspect makes the study distinguished and adds value to the research literature.

3.3.2. Code “Recruitment”

Participants discussed the recruitment process of the study. Four categories are formulated under the code of “Recruitment”. Some categories are divided into subcategories in terms of similarities and differences among the meaning units.

3.3.2.1. Language:

During the discussions, the FG participants expressed their viewpoints regarding the recruitment of Syrians who are fluent in Turkish for the research. They suggested that conducting research with Syrians who speak Turkish would be more suitable for the nature of the study. The participants believed that Syrians who are fluent in Turkish would adjust to the therapy process more easily and would not face difficulties in accessing equipment or the internet for the online delivery of NET. They also noted that these individuals would be more open to new experiences. The majority of the participants agreed on finding Syrians speaking Turkish is within possibility. P4 expressed her opinion as:

“(MU29).....Syrians who can speak Turkish have improved themselves very well, adjusted the society properly and are open to new things.....So, I would say that these people won't have difficulty either accessing the internet or having at least one device for online meetings.”

3.3.2.2. Challenges:

The FG participants engaged in a discussion about the challenges that the researcher might encounter regarding recruitment and reaching out to potential participants. The

"Challenges" category was divided into three subcategories: Language, Address Changes, Needs.

Challenges in Language: Participants discussed the language barrier as a challenge in recruiting and communicating with potential participants. They highlighted the importance of finding Syrians who are fluent in Turkish or have a good understanding of the language to facilitate effective communication during the study. Even though the participants indicated that Syrians able to speak Turkish would be more suitable for this research, reaching out these population could still pose a challenge.

Challenges in address changes: Based on their professional experiences, the FG participants highlighted that this population makes frequent address changes (mostly relocation to another city) and this is the main challenge in reaching out them once again for a fieldwork or medical examination. The participants identified the issue of address changes as a potential challenge in reaching out to participants. They mentioned that Syrians living in Turkiye may frequently change their addresses due to reasons, such as seeking better living conditions or job opportunities. This could pose difficulties in maintaining contact and ensuring their participation in the study.

Needs: The participants discussed the diverse needs of the Syrian population as another challenge. They mentioned that individuals may have different priorities and urgent needs, such as accessing basic necessities, healthcare, or employment. These needs could potentially impact their willingness or availability to participate in the study. P4 expressed her opinion as:

“(MU13).....I have recognised that their priority is meeting their basic needs such as accommodation, food or earning money somehow. That’s why when it comes to

psychological problems, I don't think that they have enough awareness toward their mental well-being or psychological conditions. ...”

3.3.2.3. Solution:

Since the FG participants were given a brief presentation about the intervention study, they were already informed about the design of this study which was designed as an online therapy session. The participants agreed that online delivery of NET would mitigate the negative impact of address changes of participants and help to maintain the continuity of the therapy sessions.

3.3.2.4. Criteria:

The participants mainly focused on the eligibility criteria for Syrian participants in this study. They emphasised that while the Syrian population in Turkiye may face challenging living conditions, it is important to note that not every Syrian living in Turkiye is subject to living in poor conditions. The participants expressed that it is feasible to find six participants who speak Turkish and meet the eligibility criteria for the study. Furthermore, the participants highlighted the significance of the recruitment process and the importance of establishing clear eligibility criteria in advance. P1 indicates that:

“(MU30) I think... the most important thing here is that... who is going to be these 6 participants...and... deciding their eligibility criteria. These all must be considered in advance. They must have internet access in a long run...and also...they must be the ones who can adjust your research process. I think, first and foremost, it is really important to think carefully about whom to participate in this research.

3.3.2.5. Demographics:

Location: The participants raised the issue of different language usage in different regions of Turkiye. For example, in the southeast of Turkiye, local people speak Arabic or Kurdish in

their daily lives. As a result, Syrians resettled in these regions may have learned these languages better than Turkish. The participants concluded that the location of the participants should also be taken into consideration as well. P1 stated that:

“.....(MU44) However, Syrians, especially those living in the southeast of Turkiye, have learnt to speak Kurdish as this is the local language here (Batman province).....(MU45) On the other hand, Syrians living in the west of Turkiye or some places in the southeast of Turkiye can speak Turkish.”

Age: Participants indicated that young adult Syrians would be more suitable for this study, as they are relatively more active in daily life and more fluent in the Turkish language. That's why the participants agreed that an age range must be established before recruiting the participants. As expressed by P1:

“(MU48)...Only older Syrians couldn't learn the Turkish language. They still don't know Turkish...Plus, the Syrians....who are between 20-45 ages can speak Turkish better than the older ones. From this point of view, age range can be set for this study...”

Employment: The FG participants highlighted that Syrians who have a job and economic relief would be more suitable for this study. It was mentioned that this population is also more fluent in the Turkish language, open to new experiences, and have adjusted to social life in Turkiye better. As stated by P5:

“(MU40)...(Syrians who) are relatively in the business life, somehow...err.. They have to be a part of it. They have to work to earn money. If they have to work, they have to learn the language.”

Education: The participants indicated that Syrians having educational backgrounds would be more suitable for this study. The meaning units mentioning the educational background of participants has layered meanings and goes under the “employment” subcategory as well. To

illustrate, P3 stated his opinion as following which goes under both employment and education subcategories:

“(MU33)... The participants indicated that Syrians literate (in latin alphabet) would be more suitable for this study. The meaning units mentioning the educational background of participants have layered meanings and fall under both the "employment" and "education" subcategories.”

3.3.2.6. Traumatic Events:

The participants developed their arguments around the notion that traumatic events experienced by Syrians might have an impact on the recruitment process. This category is divided into three subcategories. These subcategories are Suitability, Challenges, and Classification of experienced traumatic events.

Challenges: One participant highlighted a potential difficulty for the researcher in recruiting Syrians who have had traumatic life experiences, as the ongoing impact of these experiences might still be affecting them.

Suitability: It is stressed that the mere existence of traumatic experiences would pose a challenge for the researcher, but it would also provide an opportunity for the participants who are seeking psychological help..

Classification: In this subcategory, the participants engaged in a profound argument regarding the differentiation of negative life experiences of this population from their war-related traumatic life experiences. Specifically, the negative life events experienced by this population before and after migration were extensively discussed in terms of their direct and indirect connection to the Syrian civil war. The participants subsequently reached a consensus that a comprehensive understanding of the characteristics of these negative life

events is crucial in order to classify them as war-related traumatic experiences. As expressed by P5:

P5: “(MU102):... I think that’s why it is really necessary to understand the content and the details of the events.”

3.3.3. Code “Therapy”

The participants engaged in a discussion regarding the design and structure of the intervention study of NET. They formulated categories related to language, online delivery, challenges, and cultural differences under the overarching code of "Therapy".

3.3.3.1. Language:

This category is further divided into four subcategories, which capture the similarities and differences among the meaning units. The participants developed their arguments around the following subcategories: Translator, Turkish Language, Mother Tongue, and Productiveness.

Translator in therapy: The participants engaged in an extensive argument regarding the benefits and disadvantages of using a translator during the intervention study. However, various disagreements emerged, and a common view on the use of a translator during the delivery of NET could not be reached. The disagreements were expressed in the group discussion as following:

P3: “(MU54) The bond between a patient and therapist gets weaker gradually. Additionally, if the translator does not know anything about the therapy process... this is the worst. Sometimes, later on, the patient and translator become having their own conversations and I feel (as a psychologist) left out and lose control.”

P5: “(MU68) If I speak for my profession (social worker) when visiting Syrians at their homes, we are always escorted by a translator... The conversations taking place there (home visits for fieldwork) and therapeutic dialogues are different. Because in

fieldwork, a translator and the Syrian households can speak among themselves...However, I don't think that these kinds of things could emerge in a therapy session."

P5: "(MU61)... I guess we cannot say anything like not having a translator in a therapy session is better than having one...Or vice versa."

Therapy language as Turkish: The participants reached a conclusion that if Turkish were to be set as the therapy language, Syrian participants in NET sessions must have a good command of the language to express themselves explicitly. P5 expressed that:

"P5: (MU61)... If we expect these people to express themselves freely and interpret their sincere inner feelings to the outer world, they must speak Turkish very well...."

Using Mother-tongue in therapy: The participants engaged in an extensive discussion regarding the use of the mother tongue during therapy sessions for Syrian participants. They did not express any concerns about using a translator in therapy during this discussion. Consequently, using a translator and using the mother tongue were formed as two separate subcategories. The participants concluded that it is always better and easier to have a therapy session in a mother tongue to convey feelings and thoughts easily as stated above:

"P5: (MU58)...It is always easy to express yourself and your feelings. It is far more comfortable. You can convey your feelings to the other person easily."

Productiveness: The participants discussed whether the preferred language would affect the productivity of therapy sessions, considering the use of the mother tongue in the presence of a translator or a second language such as Turkish for Syrian participants. They concluded that instead of solely focusing on the preferred language, it is essential to consider the participants' ability to benefit from the therapy as P2 indicates:

P2: (MU50) When a Turkish person goes under therapy, we don't expect 100% productiveness from a therapy... So, we should completely focus on what these people can gain most from the therapy.... (MU52).

3.3.3.2. Online Delivery:

In this category, there are no subcategories as the participants unanimously agreed on the convenience of online delivery for NET participants. Despite the acknowledgment of online delivery as a convenient technique by the participants, challenges for Syrian participants, such as equipment supply for remote delivery of NET, were later raised and discussed in detail. One participant expressed her opinion around the convenience of online gatherings from her own experience in this FG research as following statement:

P1: "(MU26) Speaking for myself, I am attending this group discussion via the internet and computer. So, it provides great convenience... (MU27) I think we all agree on this topic. Is there anyone who disagrees?"

P1 did not get any objection, but even though online delivery was acknowledged as a convenience technique by the participants, in later discussion, challenges for Syrian participants, for example in equipment supply for remote delivery of NET, were raised again and discussed in detail.

3.3.3.3. Challenges:

The participants recognise that while online delivery of NET would be a great convenience for the participants, accessing online therapy equipments (computer, phone, headphone, internet etc.) may be difficult. They acknowledge that this population generally lives in poor conditions in Turkiye, making it challenging to provide them with the necessary equipment.

3.3.3.4. Cultural Differences:

The participants focused their arguments on the cultural differences that the therapist may encounter, specifically regarding sex differences, while conducting the sessions. Male participants of the FG shared examples from their professional experiences, highlighting how sex differences can create barriers when working with this population. They mentioned that female Syrians often do not want to speak or have interviews with male workers. When they asked about whether this problem would cause a barrier for this research as the researcher is a female, they agreed that sex difference would not cause a challenge for this research. As mentioned by P5:

“(MU72) They (female Syrians) don’t want to talk with men workers (in fieldwork)... (MU75) However, I haven’t seen any male Syrians refusing to speak with women professionals, though. (MU76) I don’t think this would be a problem for Miss A... (for the researcher).”

3.3.4. Code “Remarks”

In the last section of the FG discussion, the participants were asked to provide any advice or attention for the research team to consider that had not been discussed.

3.3.4.1. Cultural differences:

The participants shared their opinions and perspectives on the Cultural Differences category, discussing potential challenges that may arise when working or studying with Syrians.

Awareness: The participants emphasised the importance of being aware of cultural differences when working with this vulnerable population.

Trust Issue: The participants highlighted the trust issues they have encountered when working with the Syrian population. Drawing from their own professional experiences, they emphasised the sensitivity and importance of establishing a trustworthy relationship with this vulnerable group. P3 expressed her opinion as:

“(MU81)...They fled from a country having a political disturbance and they were not safe, there. Trust is a very delicate and important issue for them. (MU82) We are doing interviews with these people but we are, almost all of us here, employed under a governmental institution. They may have some concerns about the information they have shared or going to share with us. Like, Where will this information go? ...Who will receive this information?... (MU83) We must be sure that we have clarified everything about the situation and process for these people. If we could accomplish it, we could minimise any possible problems.”

Perception toward Mental Health: The participants highlighted that mental health problems are not always recognised as health issues or are generally viewed as a punishment from Allah or a source of shame within the community. The participants provided advice to the research team regarding this misperception and its impact on working with the population, emphasising the need for sensitivity, cultural understanding, and education about mental health within the community.

3.4. Discussion

This exploratory study has identified several challenges and obstacles that need to be addressed before conducting an intervention study. The insights and potential solutions provided by the discussion are valuable in helping the research team overcome these challenges. The FG discussion emphasised that the successful delivery of NET in this context is seen as a promising technique. However, the recruitment process is crucial, particularly in terms of the participants' ability to speak Turkish. It was acknowledged that many Syrians in Turkiye face communication problems as Arabic is not commonly used in the country (Bicer, 2017). It was concluded that even though the number of Syrians fluent in Turkish is narrow, there are Syrians living in Turkiye who are fluent in Turkish. Therefore, it is highlighted that the research team can implement strategies to identify and recruit Syrians who have a good

command of the Turkish language. It is concluded by ensuring that participants have a sufficient level of Turkish proficiency, the therapy sessions can be conducted effectively, allowing for better engagement, and understanding of the intervention. It was raised that frequent address changes among the Syrian population can pose a significant barrier for researchers or professionals trying to maintain therapy sessions. However, the current study's design as remote sessions provide a potential solution to mitigate this challenge, particularly considering the impact of Covid-19 pandemic during the time of this research. By utilising remote therapy sessions, the research team can overcome the obstacle of address changes, allowing for flexibility in conducting sessions, as participants can join from their current location without the need for physical proximity.

The scale and complexity of the 'Syrian crisis' have made it challenging to provide adequate assistance and support to all those in need. Unfortunately, the COVID-19 pandemic also posed a challenge to carrying out these endeavours (UNICEF, 2020). The FG participants, who have considerable professional experience with Syrians in Turkiye, have also expressed concerns about Syrians' unmet basic needs, which could act as a barrier to reaching to this population for the intervention study. The FG participants discussed that Syrians may not be willing to participate in this study, as their priority is to meet their basic needs such as accommodation, food, and money. It was also concluded among the participants that it is possible to find six Syrians who speak Turkish fluently and have some economic relief, as not all Syrians in Turkiye are living in difficult conditions. Therefore, they agreed that eligibility criteria should be established for potential participants and the researcher should implement this during the recruitment process. The eligibility criteria were set for the age range are 20-45, as these Syrians living in Turkiye tend to be more active in daily and business life, which could facilitate their fluency in Turkish and adaptation to the research process. Another eligibility criterion discussed was relative economic relief. It was

mentioned that this would help address concerns related to vital and economic needs that could potentially have a negative impact on the recruitment and therapy process. Falconnier (2009) has also highlighted the relationship between access to mental health services and seeking help among low-income individuals, emphasising that they are less likely to access such services and show fewer improvements compared to middle-income individuals. The FG participants also emphasised that literate Syrians in Turkish would be more suitable for the main study, as they have adapted to the Turkish community more easily. The location of potential participants must be taken into consideration, as in some regions of Turkiye, local people speak different languages such as Kurdish and Arabic. Thus, Syrians living in these regions may use these languages as well. The nature of experienced traumatic events was also extensively discussed focusing on their classification. However, this discussion veered away from the aim of the FG research, prompting the main researcher to intervene. The researcher summarised the discussion and the group concluded that detailed knowledge of the characteristics and content of the life experiences is necessary for proper classification. Regarding the therapy language, the participants did not reach a consensus on whether using a translator or conducting the session in Turkish, or in their mother tongue would be more productive for the intervention study. The main concern raised during this discussion revolved around the challenge of conveying feelings to a therapist through a translator and the difficulty of expressing oneself in a second language. While the effectiveness of NET with the use of a translator has been demonstrated in various refugee populations worldwide (e.g., Neuner et al., 2004; Stenmark et al., 2013), it was predicted that using a translator could pose a challenge for the intervention study. Because use of a translator during sessions, considering the diverse range of Syrian Arabic dialects, may make it difficult to pair Syrian participants with suitable translators. This could potentially create another complication for the research process.

Even though online delivery of NET was acknowledged as convenient for the participants, obtaining technological equipment was considered as a challenge. The FG participants advised that potential participants should be informed in advance about their access to the required equipment and the internet. Additionally, the participants further emphasised the importance of being aware of cultural differences when engaging with this population, as any overlooked situation may be sensitive in the Syrian culture. It was also highlighted the significance of building trustworthy relationships, as individuals who have fled conflict areas to foreign countries often possess an insecure worldview due to the dangerous and uncertain environments they have experienced. The discussion also focused on the distorted perception of mental health and treatment among Syrians, which could pose challenges for the intervention study in various aspects, ranging from the recruitment process to treatment. This aligns with existing literature that extensively demonstrates the Syrian population's distorted perception of mental health. The participants expressed concerns about how Syrian people's perception of mental health problems might create challenges for the recruitment of the intervention study. Overall, the participants provided valuable insights and advice that had not been previously addressed in the discussion. Their professional experiences highlighted the importance of cultural awareness, building trust, and addressing the Syrian population's perception of mental health to overcome challenges and conduct a successful intervention study. Along the lines of mental health stigma in Arabic culture, a study conducted by Llosa et al. (2014) with refugees in camps in Lebanon reported a significant treatment gap. Despite the availability of free and well-promoted health services, the study found that the mental health treatment gap in the camp was as high as 96%. The findings of the study emphasise the need to address mental health stigma and its impact on help-seeking behaviours in Arabic culture. Similarly, studies have shown that Syrians residing in Turkiye have reported a high prevalence of mental health problems (e.g., Kaya et

al., 2019). This population also exhibits limited knowledge and awareness of psychological problems and their treatments, coupled with a high stigma towards mental health problems (Hassan et al., 2016).

This study has identified and shed light on the potential obstacles that may arise during the implementation of NET in this context. However, it is important to acknowledge the limitations of this study. The data was analysed using the CA method, wherein the researcher employed analytical constructs to derive answers to the research question (White & Marsh, 2006). As the researcher read through the document, she divided the text into MUs and then formed codes, categories and subcategories regarding similarities and differences. In this process, when she was constructing these layers, she might miss out on other perspectives and different meanings of the text. Therefore, the researcher's own interpretations and biases may have influenced the analysis and findings. To address this potential risk, the main researcher collaborated with an independent researcher who also took a role as a moderator in the FG. They specifically reviewed certain meaning units that could fall under multiple categories or subcategories by watching the video recording of the FG research. This collaborative approach aimed to ensure a robust classification of the MUs under relevant and appropriate categories. Another limitation is that the findings are based on the perspectives and experiences of the FG participants, and thus may not capture the full range of challenges and perspectives within the Syrian population in Turkiye. The sample size of the FG was also limited, which may impact the generalisability of the findings. The reliance on self-report data from the FG participants introduces potential biases, such as social desirability bias or individual interpretations of the questions. It is important to consider these limitations when interpreting the results of this study and to conduct further research using diverse methodologies to gain a more comprehensive understanding of the challenges and potential solutions for implementing NET with Syrians in Turkiye. Rather

than conducting face-to-face individual interviews, a group interview was preferred for this study to capture the dynamics of group interaction among professionals with different experiences. From this perspective, the group discussion was centred around the experiences of the recruited professionals. However, it is important to acknowledge that other professionals working with Syrians may have distinct experiences. While this raises questions about the external validity of the generated data, the researcher made efforts to recruit participants from diverse backgrounds to enhance the representativeness of the group. Nevertheless, the social nature of FG research inherently possesses this unique strength, as the dynamics of FGs are never the same. It is also important to consider that participants in this focus group study may have possessed disagreement on some topics discussed. Due to the group dynamic where participants are strangers to each other, some individuals may choose to withhold their opinions or not fully disclose their true thoughts, which could limit the collection of diverse data. Also, the moderators of FG might affect the group dynamic and the given answers. One of the moderators posed the questions in the line with the semi-structured interview questions. After some questions, the group remained silent for a long time. In these circumstances, the moderator gave examples or put general comments on the question to clarify it. These attempts might change or reroute the participants' statements.

This exploratory study has shed light on the potential obstacles and challenges involved in implementing a specific therapy technique that has not been previously applied to the Syrian war-affected population in the Turkish context. The findings of this study also provide insights into the challenges that future studies may encounter when conducting research with Syrians. This preliminary research serves as an instructive study for planning other psychological interventions aimed at investigating mental health interventions in this context.

3.5. Conclusion

In this FG study, it has been concluded that NET may be a promising technique for reducing mental health problems of Syrians. The significance of the recruitment process for potential participants was emphasised and eligibility criteria were set. These criteria include being between the ages of 20-45, fluent in Turkish, being literate, having economic relief, having access to equipment such as computer, phone and the Internet, and residing in the western region of the country. Despite the diverse nature of the Syrian population in Turkiye, this FG study serves as a roadmap for addressing potential obstacles and ensuring a smoother research process and reliable results. The recruitment process for the subsequent study will be carefully considered taking into account the findings of this research.

Chapter 4: Feasibility and effectiveness of Narrative Exposure Therapy in the Syrian refugee population and the potential role of it in Self-Concept Clarity

4.1. Introduction

4.1.1. Background of Syrian Civil War, Numbers, and Emergency

The ‘Arab Spring’ movement initially emerged as a series of small-scale anti-government protests. However, it swiftly spread across the Arab world, reshaping the political landscape of North Africa and the Middle East and impacting the lives of millions not only in the region but also worldwide. Originating as a call for democracy, freedom, and human rights in Tunisia, the movement subsequently extended to other nations such as Libya, Yemen, and Syria (Campante & Chor, 2012), triggering a cascading effect throughout the region. Commencing as uprisings against the Assad government due to political, economic, and social unrest within the nation, the Syrian Civil War erupted in March 2011, catalysing a devastating conflict that forcibly displaced millions of Syrians to neighbouring countries (Naja et al., 2016). As outlined in Section (1.2.), by the end of 2021, the Syrian Civil War had resulted in the internal displacement of 6.9 million Syrians, with an additional 5.7 million Syrians seeking refuge in neighbouring countries. Reports indicated that over 15.3 million Syrians impacted by the war would require some form of humanitarian assistance (UNHCR, 2023c).

Owing to the escalating conflict in the region, it was reported that over 3,000 Syrians fled to neighbouring countries daily throughout 2014 (Zetter & Ruadel, 2014). The substantial influx of Syrians created an overwhelming challenge in meeting the basic needs of both the newly arrived Syrians and the citizens of the host countries. This situation led to a significant strain on the host countries' resources, causing considerable difficulties and

insufficient capacity to manage the substantial social and economic burden. Despite the economic aid provided by the US government, Canada, and European countries to the host nations, these efforts have proven inadequate in addressing the refugees' fundamental, mental, and psychosocial requirements, rather than being regarded as successful initiatives (Yalim & Kim, 2018). For instance, a 2022 study, titled the "Return Intention Survey," revealed that 90% of Syrians were unable to fulfill their basic needs in the resettlement countries.

The mental well-being of refugees poses a significant challenge for both mental health professionals and policymakers in host countries. Research has consistently demonstrated that resettled refugee populations exhibit significantly higher levels of mental health disorders, including PTSD, depression, and other comorbid conditions, compared to the non-war-affected population of the resettled country. A noteworthy meta-analysis conducted by Steel et al. (2009) revealed a PTSD prevalence of 30.6% among refugees from 40 countries, significantly surpassing the 3-5.5% prevalence rate among the non-war-affected adult population. Refugees, who have already endured the weight of war and its psychologically devastating aftermath, encounter additional physical, economic, psychological, and social challenges upon resettlement, making adaptation to the new country's system, culture, and lifestyle particularly difficult. Consequently, this situation presents added difficulties for both refugees and the residents of host countries. A study by Akcapar and Simsek (2018) in Turkiye highlighted the adaptation issues faced by Syrian refugees, as well as the social struggles experienced by Turkish citizens in accepting these refugees, leading to disharmony and disruption within the society. Undoubtedly, such disharmony adversely affects the mental well-being, safety, and prospects for the future of the refugee population, hindering their successful integration into the new country. It is widely acknowledged that in addition to formulating effective policies and programs to meet the basic needs of this specific

population, addressing their mental health requirements is vital for facilitating their adjustment to the new country. This approach would promote their self-sufficiency in daily functioning within a shorter timeframe, subsequently alleviating the long-term burden on the host countries in facilitating the vulnerable population's integration into society.

4.1.2. Syrian Refugees in Turkiye

Following the outbreak of the Syrian Civil War, Turkiye implemented an "open door" policy, offering "temporary protection" rather than official "refugee" status to Syrians affected by the conflict due to its approximately 900-kilometer border with Syria. Since 2011, Turkiye has experienced a significant influx of Syrians fleeing the conflict. Additionally, in 2016, to manage the large influx of Syrians seeking entry into the EU, Turkiye and the EU reached an agreement stipulating that Syrians not eligible for asylum attempting to cross from Turkiye to Greece after March 2016 would be returned to Turkiye (European Commission, 2016). Consequently, with this policy in place and the agreement with the EU, Turkiye currently hosts the world's largest refugee population, with 3.6 million Syrians (UNHCR, 2021a).

While a small portion of Syrians are housed in seven refugee camps located in five different cities, primarily near the Syrian-Turkish border, reports indicate that over 3.5 million of them have dispersed across 81 provinces of Turkiye as of 2020 (Department General of Migration Management, 2022). Numerous studies conducted in various Turkish cities have investigated the resettlement and adaptation process of this population. The findings have underscored the significant challenges faced by Syrians in acclimating to Turkish society and lifestyle, encompassing social, economic, educational, cultural, and psychological aspects. These challenges have stemmed from societal discrimination, unemployment, language barriers, and the traumatic life experiences associated with the Syrian civil war, as well as the pre- and post-migration processes (Apak, 2014; Cakir, 2017;

Erdogan, 2018; Yildirimalp, 2017). Given the considerable number of Syrians affected by the war that Turkiye is hosting, comprehensive investigations into the needs and challenges of this population are imperative to facilitate the establishment and enhancement of policies aimed at promoting their integration into Turkish society.

4.1.2.1. Post Migration Stressors of Displaced Syrians in Turkiye:

It is widely recognised that refugees forced to flee their home countries undergo various traumatic experiences, not only due to the ravages of war but also as a result of re-traumatisation stemming from substandard living conditions in the countries they seek refuge in (Brune et al., 2002). In other words, apart from the direct impact of war, refugees grapple with post-migration stressors including challenges related to accommodation, acculturation, language barriers, cultural loss, unemployment, financial strain, exorbitant housing costs, meager wages, marginalisation, lack of social support, uncertainty about their future, and the fear of repatriation (Bogic et al., 2015; Eisenbruch, 1991; Kaya & Kirac, 2016). Moreover, it has been emphasised that various contextual factors, encompassing social, economic, and political dimensions in the resettlement countries, significantly influence these post-migration stressors for refugees (Zetter & Ruaudel, 2014).

Taking a closer look, as previously mentioned, the significant influx of Syrians into Turkiye has presented challenges for both the Turkish government, attempting to manage the rapid societal transformation and demands, and for the Syrians themselves, who have fled conflict-ridden areas in search of a secure environment to rebuild their lives and heal from the traumatic aftermath of war. A growing body of research has documented that Syrians resettled in Turkiye contend with an array of post-migration stressors that impact their daily functioning and integration into the community. For instance, a study by Esin et al. (2014) conducted among 248 Syrians residing in Istanbul revealed that low income, inadequate living conditions, limited access to clean water and sanitation facilities, heating issues, and

overcrowded living environment were some of the prevalent post-migration stressors experienced by this population. Furthermore, concerns about family members back home, separation from or loss of loved ones, challenges accessing healthcare and employment, loss of cultural identity and social support, as well as prejudices held by Turkish citizens blaming Syrians for straining the government's resources and disrupting societal security, were reported among the other stressors faced by Syrians in Turkiye (Cantekin and Gencoz, 2017; Human Rights Watch, 2016; Tastan et al., 2017). Research indicates that post-migration challenges are closely associated with a dose-response relationship, suggesting that a greater incidence of PTSD, depression, and anxiety is linked to cumulative exposure to trauma, including post-migration living difficulties in resettled refugees (Beiser & Hou, 2001; Porter & Haslam, 2005; Silove et al., 1997). Despite Turkiye 's efforts to manage these post-migration difficulties and its formulated policies aimed at addressing the needs of Syrians, there remain significant gaps in adequately assisting their resettlement and integration process. Considering all these factors, it is inevitable that this population continues to grapple with mental health issues due to the cumulative post-migration challenges they encounter in Turkiye.

4.1.2.2. Mental Wellbeing of Displaced Syrians in Turkiye:

The impact of war, combined with pre-migration and post-migration stressors, often subjects Syrians affected by conflict to a spectrum of physical, emotional, cognitive, and behavioural challenges (De Jong et al., 2003; Hassan et al., 2016; Mollica et al., 2004). As outlined in Chapter 2, our Systematic Review has revealed that numerous studies have focused on investigating prevalent mental health issues among Syrian refugees in host countries across various regions of the world. According to our findings, the prevalence of PTSD is up to eight times higher, with rates of depression and anxiety up to seven times higher among externally displaced Syrians than in the general population. Notably, Syrians

residing in Turkiye face an elevated risk of developing PTSD and depression. Corresponding with the study conducted by Karaman and Ricard (2016), Syrians resettled in Turkiye exhibited a higher prevalence of mental health issues compared to other refugees in Western nations. The reasons behind the heightened susceptibility of Syrians in Turkiye to mental health problems have been previously discussed in section 2.4. Hence, the findings of these studies underscore the significance of closely examining the mental health challenges encountered by conflict-affected Syrians. They emphasise the necessity of evaluating the existing psychological intervention programs aimed at promoting their mental well-being. These findings stress the urgency for implementing appropriate and effective mental health interventions to address the pressing mental health needs of the Syrian population affected by conflict, particularly in Turkiye.

4.1.2.3. Post-Traumatic Stress Disorder among displaced Syrian Refugees in Turkiye:

Refugees undergoing various phases of migration are prone to encountering traumatic events and cumulative stressors, thereby increasing the risk of developing PTSD (Fazel et al., 2005). Given the intricate link between traumatic stressors and PTSD, Syrians who have resettled in Turkiye face an escalated risk of developing PTSD due to the multifaceted traumatic experiences they encountered during the pre-migration, migration, and post-migration phases. For instance, a study conducted by Ozen and Cerit (2018) among Syrian refugees employed in Turkish Non-Governmental Organisations (NGOs) highlighted that the most prevalent pre-migration traumatic events included being forcibly displaced from Syria, exposure to bombings and gunfire, witnessing the destruction of homes, being confined indoors due to street chaos, and witnessing the death of a friend. These traumatic life events were found to be strongly correlated with the development of PTSD. Moreover, research has revealed that the prevalence of PTSD among 781 Syrians residing in a camp in Turkiye was 83.4%

(Acarturk et al., 2018), whereas it was 41.8% among 354 Syrians living in the city of Kilis, Turkiye (Jefee-Bahlou et al., 2014). These statistics, in conjunction with the findings from our systematic review, further reinforce the understanding that Syrians living in Turkiye are more susceptible to experiencing heightened levels of PTSD. The potential rationales underlying these outcomes have already been extensively discussed in detail in section 2.4.

4.1.2.4. Other Mental Health Problems among displaced Syrian Refugees:

Research has emphasised the heightened prevalence of comorbidities between PTSD and other mental health disorders among displaced Syrians affected by war (e.g., Chung et al., 2018b; Chung, 2021). Studies have illustrated that Syrian refugees forced to flee their homeland grapple with a broad spectrum of emotional disturbances, including feelings of sadness, anger, fear, hopelessness, emotional suppression, and disinterest, as well as psychological issues such as depression and anxiety. These have been identified as the most prevalent mental health challenges faced by Syrian refugees (Ben Farhat et al., 2018; Gross & John, 2003; Hijazi & Weissbecker, 2015; Tinghog et al., 2017; UNHCR, 2014). Alongside the mental health concerns and their intersection with PTSD, literature also highlights that this population contends with various other health issues, including chronic pain, headaches, sleep disorders, and alterations in self-perception and self-efficacy (Chung et al., 2021; Ghumman et al., 2021; Strømme et al., 2020).

4.1.2.5. Barriers to Reaching Mental Health Services for Syrian Refugees:

When working with culturally diverse populations, it is crucial to carefully consider the significance of social and cultural components in understanding the experience, expression, diagnosis, evaluation, and treatment of mental health issues. Within Syrian culture, it is common to manifest psychological distress as somatic symptoms, often leading to indirect expressions of mental health concerns (Hassan et al., 2015). Consequently, many individuals may remain unaware of the availability of psychological services in their host country,

hindering their ability to seek help. For instance, a study conducted in Germany revealed that Syrian refugees resettled in the country exhibited more reluctance towards seeking psychological assistance, despite reporting greater daily dysfunction compared to German citizens (Schlechter et al., 2021). Consequently, individuals are inclined to associate their psychological issues with physical ailments and might perceive sharing personal experiences and feelings as unrelated to their psychological well-being. Moreover, societal labeling of psychological disorders as "mad" or "crazy" can result in shame and stigmatisation, creating additional barriers to openly discussing psychological distress (Hassan et al., 2016).

Consequently, these negative attitudes and stigmatisation toward mental health problems are likely to impede this population's access to mental health services. Furthermore, the language of the host country serves as an important cultural context that significantly influences access to mental health services, particularly for recently resettled individuals. For instance, a study conducted in Turkiye determined that language barriers posed the most significant challenge for Syrians residing in camps when seeking help for their psychological issues (Sahloul et al., 2012). Conversely, in Jordan, where Arabic is the predominant language, Syrians reported minimal cultural differences following resettlement and accessed more accessible mental health services (Basheti et al., 2015). Thus, the language barrier could significantly impede access to mental health services. Moreover, the inadequacy of mental health programs and resources provided by host countries poses an additional challenge. While counseling and psychological support services are broadly available in Turkey, specific mental health services for this population remain limited due to the priority placed on meeting their basic physical needs (e.g., Karaman & Ricard, 2016). This prioritisation is comprehensible, considering Maslow's hierarchy of needs theory. According to Maslow, the fulfillment of physiological needs must precede the pursuit of other levels of needs, including security, social, self-esteem, and self-actualisation. Consequently, as host countries prioritise meeting the basic life needs of Syrian

refugees, dedicated psychological and counseling programs and services may be insufficient in providing specialised treatment for trauma and stress resulting from war. This situation creates an additional obstacle for individuals in need of accessing psychological support.

4.1.3. *Psychological Interventions for displaced Syrian Refugees*

The profound impact of war and migration on the mental health of Syrian war victims who have immigrated to other countries remains challenging to fully comprehend.

Nevertheless, it is imperative to identify their mental health needs and provide culturally and socially appropriate treatment methods for these individuals (Yalim & Kim, 2018).

Numerous intervention programs have been developed and implemented to address mental health issues among war-affected displaced communities worldwide, as detailed in section 3.1. However, the effectiveness of psychological treatments specifically tailored to the culturally diverse and non-Western Syrian refugee population remains a subject that has not been extensively explored.

4.1.4. *Western Healthcare in Non-Western Population:*

The deficiency of culturally sensitive psychological support tailored to non-Western individuals underscores a pressing concern. Considering the heightened likelihood that immigrants may be exposed to more traumatic events and susceptible to experiencing an array of psychological challenges, the effectiveness of Western-centered psychological treatment methods provided to these individuals is brought into question. While studies have demonstrated the effectiveness of Western-based psychological talking therapies, their applicability within non-Western cultures remains uncertain, as these specific cultures may not fully accept or comprehend these therapeutic approaches (Bhugra et al., 2014).

Culture significantly influences the conceptualisation, interpretation, and expression of symptoms and coping mechanisms related to psychological issues (Helman, 2007). For instance, among African communities, there is a belief that disturbing their deceased

ancestors could manifest as symptoms such as headaches or insomnia, seen as a source of wisdom and guidance (Bemak & Chung, 2015). Consequently, cultural beliefs and customs can influence how trauma and mental health problems are conceptualised and expressed. In the treatment of PTSD, the application of Western techniques to non-Western populations has faced criticism (Kazlauskas, 2017; Slobodin & de Jong, 2015), as these techniques have not demonstrated cultural sensitivity in addressing the mental health problems of refugees. Considering these criticisms, the adaptation or utilisation of culturally sensitive therapy techniques holds crucial significance in providing effective treatments for this population (Benish et al., 2011). As is the case with other refugee populations, Syrian refugees, coming from an Eastern culture with its unique structure, are no exception. Therefore, the provision of culturally sensitive and effective treatments is of paramount importance for this traumatised population. In addition to culturally adapted and effective Western therapies, NET has gained recognition as a promising psychological technique in the treatment of PTSD and its comorbid disorders, particularly for conflict-affected refugee populations originating from diverse contextual backgrounds. Since NET is based on the oral tradition and historical storytelling, which holds universal value across cultures (Robjant & Fazel, 2010), it has been found to be highly applicable across various cultural contexts (e.g., Bichescu et al., 2007; Hensel-Dittman et al., 2011; Neuner, 2004).

4.1.5. Narrative Exposure Therapy

The effectiveness of various therapies, EMDR, CBT, and TFEBT has been extensively examined, demonstrating significant success in reducing PTSD symptoms and other comorbid disorders in refugees (Giannopoulou et al., 2006; Sandström et al., 2008). However, these interventions are often perceived as costly, time-consuming, and not readily accessible in post-conflict areas, particularly where urgent mental health interventions are required within a limited timeframe. Consequently, NET, developed by Schauer et al. (2005),

has emerged as an effective and time-efficient therapy for addressing the potential mental health issues of refugees residing in post-conflict regions. NET is regarded as a "culturally universal" approach, as it is based on a narrative that is deemed to be an integral part of every culture (Schauer et al., 2005). The therapy entails emotional exposure to traumatic memories and the reorganisation of these memories into a coherent chronological narrative (Robjant & Fazel, 2010). NET has also been adapted into various versions to cater to different groups. The children's version of NET, known as KIDNET, has been designed for children aged eight years and older who are either experiencing PTSD or are at a high risk of developing it. Furthermore, an extension of NET, known as FORNET, has been developed to aid perpetrators in regaining control over their behaviours (e.g., Crombach & Elbert, 2015).

4.1.5.1. Theoretical Background of NET:

NET incorporates elements of TT and TF-CBT. In the course of NET treatment, the recovery of trauma victims is pursued through two primary approaches: first, by achieving exposure and habituation, as targeted in TF-CBT, CBT for PTSD, and second, by restructuring a cohesive narrative through TT (Schauer et al., 2005). TT aims to construct a comprehensive life story from birth to the present and concentrates on a lifespan narrative (Mørkved et al., 2014), while PE aims to facilitate safe confrontation with thoughts and memories that have been avoided by the individual since the traumatic event occurred (Foa et al., 2007). While NET primarily focuses on the habituation of intrusive symptoms during the reconstruction of autobiographical memories of traumatic experiences, TT does not prioritise habituation. In contrast, PE and TFCBT have been extensively studied and are acknowledged as gold standards by the Institute of Medicine (2008) for the treatment of PTSD. The crucial theoretical distinction between NET and PE lies in NET's emphasis on developing a coherent narrative for trauma survivors and integrating fragmented traumatic memories into this cohesive account.

NET is founded on a theoretical understanding of autobiographical memory (Conway, 2001b), intrusive symptoms (Brewin et al., 2010), and fear networks (Foa & Kozak, 1986). It is hypothesised that trauma survivors avoid contemplating any details of the traumatic event represented in the fear network, and those suffering from PTSD encounter difficulties with the autobiographical context. This imbalance between 'hot' and 'cold' memory impedes the cohesive reconstruction of the details of the event, as the fear network remains highly activated (for further elaboration on fear network, see section 1.1.4.1.1), making it challenging for individuals to construct a chronological life story (Schauer et al., 2011).

In summary, NET theoretically strives to integrate the fragmented details of traumatic events into a coherent narrative with a chronological order by associating physiological, sensory, cognitive, and emotional responses with the event's contextual details (time, context, space). This process involves a full activation of the fear network through vivid imagination and detailed narration of the event, leading to the reconstruction of autobiographical memory and the reinterpretation of the trauma as a past event, reassuring the individual of their current safety (Bichescu et al., 2007; Schauer et al., 2011).

4.1.5.2. Therapeutic Process of NET:

NET is structured around four key phases, as identified by Schauer et al. (2011): diagnosis and psychoeducation, construction of a lifeline, narration of the lifeline, and rereading and signing of the document. The initial phase involves diagnosing trauma spectrum disorders through a clinical interview, followed by a session dedicated to "psychoeducation." During this phase, the patient is introduced to the theoretical understanding of PTSD, its symptoms, the concept of trauma memory, the rationale and procedure of NET, and an outline of the treatment plan. Subsequently, the construction of a lifeline, represented by a rope on a flat surface, takes place in the second session. Here, the patient is encouraged to identify significant life events from birth to the present, symbolising

positive events with flowers, negative events with stones, and instances of aggression or violence with sticks, while candles represent the loss of loved ones. The third phase entails narrating the lifeline, involving the patient recounting their life story from birth to the occurrence of the first traumatic event. Throughout this process, the therapist assists the patient in reconstructing fragmented traumatic memories and integrating them into a coherent life narrative. The therapist guides the patient between the present and the past, encouraging the expression of feelings, sensory information, and somatic responses to promote habituation. Detailed notes are taken during the session, capturing the entire narration. Each subsequent session begins with the review of the previous session's narration. If necessary, the patient and therapist collaboratively amend or supplement the narration, subsequently continuing with the following phase. The final session involves revisiting the complete narrative from the initial to the last session, culminating in the signing of the documented narrative by both the therapist and the patient. This document can also serve as a record for human rights purposes.

Various studies have examined the length of NET sessions to demonstrate its effectiveness in terms of session numbers. While the severity and complexity of trauma significantly influence the duration of the sessions, as outlined in the NET manual, the number of sessions typically ranges from five to ten, each lasting between 90 to 120 minutes (Schauer et al., 2011). Additionally, it has been suggested that the minimum number of sessions for refugees should be at least four, and for survivors of torture, the recommended number of sessions should be between eight and twelve (Schauer et al., 2005).

4.1.5.3. Evidence-based effectiveness of NET:

The effectiveness of NET has been well-documented, supported by substantial evidence demonstrating a significant reduction in PTSD symptoms. Neuner et al. (2004) conducted the first study comparing the efficacy of NET with other interventions among 43

conflict-affected Sudanese refugees resettled in northern Uganda. The participants were divided into three groups: one group received a single session of psychoeducation, the second group received psychoeducation and three sessions of supportive counseling, and the third group received psychoeducation and three sessions of NET. Data were collected at multiple intervals, including pre-test, post-test, 4-month, and 1-year follow-ups. The analysis indicated a notable difference between the groups, with the group receiving NET displaying reduced avoidance symptoms and improved daily functioning at the one-year follow-up. Another Randomised Controlled Trial (RCT) was conducted by Bichescu et al. (2007) with Romanian political detainees, comparing the effectiveness of NET with only psychoeducation. The results demonstrated a significant improvement in PTSD symptoms among participants who underwent NET. Several additional studies have been carried out to compare NET with other techniques, such as Stress Inoculation Training, Group Interpersonal Therapies, and meditation relaxation, to ascertain its effectiveness in various contexts, including among earthquake survivors and firefighters (Alghamdi et al., 2015; Hensel-Ditmann et al., 2011; Schaal et al., 2009; Zang et al., 2013). Findings from these studies consistently indicate that NET yields significantly better outcomes in reducing PTSD symptoms compared to alternative interventions.

NET has demonstrated its efficacy not only in the treatment of PTSD but also in various other psychological disorders, including borderline personality disorder, depression, anxiety, dissociation, sleep disorders, and suicidal thoughts (Halvorsen et al., 2014; Orang et al., 2018; Pabst et al., 2014; Stenmark et al., 2013; ; Steuwe et al., 2016; Weinhold et al., 2017). Furthermore, the effectiveness of NET has been bolstered by neurophysiological research, which has revealed its impact on brain structure reorganisation and modification, leading to reduced PTSD scores. Schauer et al. (2006, 2007) found that NET had a lasting effect on the reorganisation of brain structure, as evidenced by oscillatory brain activity six months after the

therapy in patients receiving NET. Moreover, Adenauer et al. (2011) reported that NET was associated with increased top-down regulation in the brain, resulting in enhanced parietal and occipital activity in response to aversive pictures post-therapy, which indicated a reduction in fear-response and symptoms of PTSD and depression.

4.1.5.4. Therapeutical Aims of NET:

NET was initially developed to alleviate symptoms of PTSD, particularly those resulting from armed conflicts, torture, and various forms of organised violence, affecting individuals from low- and middle-income countries. As its application expanded within therapeutic settings, it was observed to have a positive therapeutic impact on a diverse range of ongoing trauma experiences, such as sexual violence, domestic violence, emotional neglect, and others, in various settings, including high-income countries (Robjant & Fazel, 2010; Neuner et al., 2010). With the provision of empathy, active listening, unconditional positive regard, and sincerity of the therapist, patients are encouraged to recount the details of the traumatic event, including physical, emotional, contextual, and sensory components, with the goal of integrating these fragmented elements into a cohesive narrative tied to the present moment (Schauer et al., 2011). The therapeutic objectives of NET include the active chronological reorganisation of autobiographical memory, the use of imaginal exposure to activate fear memory, the association of physiological, cognitive, emotional, and sensory reactions with the time, space, and context of the event, the cognitive reassessment of behaviours and responses, the reinterpretation of the traumatic event, and the revisiting of positive life experiences to adjust fundamental assumptions. Finally, NET aims to facilitate the restoration of dignity for survivors through the process of testimony.

4.1.5.5. Political-Human Right Aims of NET:

According to UNHCR (2023a), more than 108 million individuals have been displaced as a result of human rights abuses and violations. Considering this substantial

number of victims, this displaced population requires interventions aimed at safeguarding and upholding their human rights and helping them regain the dignity that was shattered by their traumatic experiences. One of the elements of NET involves the creation of a written document detailing an individual's entire life, which is then revisited during the final session. This process serves to achieve these broader objectives. It allows survivors to testify about their traumatic life experiences, which may have been difficult to express due to feelings of shame, guilt, or emotional distress. With the guidance and support of the therapist, survivors are encouraged to give voice to their experiences, constructing a comprehensive narrative that encompasses their life history (Schauer et al., 2011). This written and signed document, representing a coherent testimony of the survivor's life experiences, can be used for social and political documentation of human rights violations (Bichescu et al., 2007). It can serve as a valid form of evidence that survivors can utilise for legal purposes or advocacy efforts to assert their rights.

4.1.6. Memory

Memory is defined as a dynamic mechanism that is adaptable, permeable, malleable, continuous, and constructive over time (Hunt, 2010; van der Kolk, 1998). Tulving (1993) classified five different types of memory systems, including episodic, semantic, procedural, perceptual representation, and short-term memory. According to Tulving, episodic memory records personal experiences that an individual is consciously aware of, while the semantic system stores knowledge about the world and retrieves it as needed. Procedural memory represents motor skills and falls under the category of declarative memory, while perceptual representation memory stores non-verbal and unconscious knowledge linked to the senses. This is classified as implicit memory. Lastly, Tulving described short-term memory as having limited capacity to store and recall information. These memory systems are viewed as hierarchically relational and depend on each other for the storage and retrieval of knowledge

(Tulving, 1993; Tulving & Schacter, 1990). However, due to the intricate nature of memory and extensive research in the field over the years, various definitions have emerged. Although some of these terminologies may overlap in meaning, they are represented by different terms (for instance, the term "declarative" memory is also referred to as "explicit" memory). In a broader context, Tulving (1972) described explicit memory as long-term memory, which he divided into two types: episodic and semantic memory. To detail it more, episodic memories allow individuals to store and retrieve autobiographical knowledge related to "the content, place, and time of the event," coding perceptions, physical sensations, cognitions, and emotions during the event. Research has indicated that individuals with PTSD often experience impairment in episodic memory function, leading to difficulties in recalling events or experiencing flashbacks (McNally, 1997; Zlomuzica et al., 2018). This understanding of episodic memory has led to the development of psychological interventions for PTSD, particularly focusing on "autobiographical memory," which is interrelated with both episodic and semantic memory systems, encompassing overarching life periods, general events, and event-specific knowledge (Conway & Pleydell-Pearce, 2000; Levine et al., 2002; Tulving, 2002).

4.1.6.1. Autobiographical Memory:

The type of memory that individuals have about their own personal past is referred to as "autobiographical memory" (AM). At the top of its hierarchical structure lies the "memory of lifetime periods," encompassing the major themes that an individual has experienced throughout their life (Schauer et al., 2011). AM is a long-term and declarative memory that represents a complex mental depiction of the self (Conway, 2001a; Conway & Pleydell-Pearce, 2000). While AM is closely associated with Tulving's concept of "episodic memory," the distinction between them lies in their functions, durations, and activations in the brain.

Episodic memory contains knowledge about the sensory-perceptual details of recent experiences, lasting for short periods of time (minutes or hours) unless they are linked to more durable and enduring autobiographical knowledge. On the other hand, AM is relatively long-lasting and encompasses knowledge about specific personal events (episodic memory) as well as general knowledge about the self (semantic memory), aiming to maintain and pursue realistic self-goals. Impairment in autobiographical memory, whether neurologically or psychologically, can lead to distortions in the stability and continuity of the self, as one of the functions of AM is to anchor the self in remembered and actual experiences of memories. Neuroanatomically, episodic memory is more closely associated with the posterior region of the brain, especially the occipital and posterior parietal lobes, as well as certain parts of the temporal lobes where sensory-perceptual networks are situated (Conway, 2001b). In contrast, AM is represented by different regions of the brain, including networks in midbrain structures such as the hippocampus and amygdala, as well as the temporal, occipital, and frontal lobes (Conway & Fthenaki, 2000).

4.1.6.2. Memory Reconsolidation and NET:

According to the Emotional Processing Theory (see section 1.1.4.1.1.), traumatic events that elicit high emotional arousal hinder the integration of contextual information and details into the memory system (Brewin et al., 2010). Consequently, memories of the traumatic experience are often recalled in fragmented form, lacking a coherent whole. This fragmentation of traumatic events can lead to disconnected details, unfinished expressions, and repetitions of words. Individuals suffering from PTSD may experience symptoms such as avoiding cues or reminders of the event, intrusive thoughts, and a sense of loss in their life narrative (Park et al., 2020; Schauer et al., 2005; 2011).

Drawing on the theoretical foundation of NET, which aims to integrate contextual information of a traumatic event into the memory system, the technique focuses on the PTSD

theories of Emotional Processing Theory, Dual Representation Theory, and the concept of Fear Network (Kangaslampi et al., 2015). The developers of NET propose linking implicit (sensory-bodily-emotional) memory, which is disconnected from contextual information, to explicit (episodic) memory to reconstruct autobiographical memory and reduce the symptoms of PTSD (Schauer et al., 2015). To achieve this integration, the NET therapist encourages the individual to discuss the traumatic event, engaging with the narrative on physiological, emotional, cognitive, and meaning-making levels. The therapist poses questions or provides feedback to activate sensory and perceptual information of the event (hot memory), guiding the individual to transition between the past and the present to promote the integration of hot and cold memory through exposure and habituation. By addressing all levels of the fear structure (for example of questions to target elements of fear/trauma structure, see Appendix F), the individual can reduce physical and affective reactions to the traumatic event and derive meaning from the experience by revisiting fragmented memories within their appropriate context and creating a coherent narrative of the event (Bichescu et al., 2007; Mørkved et al., 2014; Robjant & Fazel, 2010). Examples of such guiding questions may include asking about sensory elements and cognitive aspects related to the event both in the past and the present, facilitating a comprehensive exploration and integration of the traumatic memory.

4.1.7. Self

The concept of the "self" is a central and complex topic in psychological literature, encompassing multidimensional aspects such as personality, self-evaluation, culture, and developmental processes. Although the idea of the "self" is multifaceted, it has been employed to denote various interconnected terminologies in the literature, including self-esteem, self-efficacy, self-complexity, self-awareness, self-confidence, and self-concept

clarity. In the context of this study, the focus will be on exploring the concept of self-concept in subsequent chapters.

4.1.7.1. Self-Concept Clarity:

Rosenberg (1979) defined 'Self-Concept' (SC) as the complete set of an individual's thoughts and emotions regarding themselves as an entity. In contrast, Zimbardo (1988) suggested that the SC is a dynamic cognitive construct that represents and interprets various intrapersonal and interpersonal processes. Conversely, "Self-Concept Clarity" (SCC) is characterised as "the degree to which an individual's SC is clearly and confidently defined, internally coherent, and stable over time" (Campbell et al., 1996, p. 141). Although SC and SCC might appear to be related terms, their components and functions set them apart. While SC is seen as an adaptation to different social roles and the corresponding behavioural expectations from an individual (Goffman, 1959; Snyder, 1974), SCC is more closely associated with maintaining the consistency of the SC even under stressful circumstances (Linville, 1985; 1987).

Despite the relatively limited research attention on SCC, scholars have concentrated heavily on its practical usefulness, particularly after the 1980s, and a significant portion of research has focused on developing measures to assess this concept. Seminal studies by Campbell et al. (1990; 1991) played a critical role in conceptualising and operationalising the SCC construct, emphasising the confidence and temporal stability of self-descriptions. Subsequently, a considerable body of research has explored various aspects of SCC. Research findings have revealed a correlation between low SCC and poor psychological adjustment, including negative mood, personality traits, low self-awareness, anger, violence, and anxiety, as well as psychological issues such as high levels of anxiety, psychosis, and trauma-related disorders. Moreover, high SCC has been linked to positive psychological functioning, such as well-being, positive mood, extraversion, and self-esteem (Campbell et al., 1990; 1996; 2003;

Cicero et al., 2013; 2017; De Cremer & Sedikides, 2005; Diehl et al., 2001; Diehl & Hay, 2007; 2011; Hanley & Garland, 2017; Nezlek & Plesko, 2001; Ritchie et al., 2011; von Collani & Werner, 2005).

4.1.7.2. Trauma Memory and Self:

Numerous theories have underscored the role of AM in the continuity of self, supported by empirical evidence suggesting that AM and self are interconnected functions with a dynamic and reciprocal relationship (Bluck, 2003; Bluck & Levine, 1998). Individuals' perceptions, goals, and beliefs regarding themselves are shaped by their recollections of the past, and, in turn, their perceptions of their present selves are influenced by the content of their recollections and how they remember them (Wilson & Ross, 2003).

In the context of PTSD, intrusive images and flashbacks represent the most vivid manifestations of the disorder, and it has been reported that dissociation and memory fragmentation are central symptoms of this condition. Foa et al. (1993) highlighted post-trauma symptoms as impediments to the successful processing of trauma-related information, leading to disorganised memory representations, incoherent narratives of traumatic events, and disruptions in self-consistency and continuity. For instance, Lifton (1967) observed that survivors of the Hiroshima bombing experienced a loss of self-continuity in their daily existence and cultural context due to this catastrophic event. According to Singer et al. (2013), the connection between memory and narrative is crucial for healthy psychological and daily functioning in the long term. However, traumatic life experiences disrupt the continuity of daily life and fracture the ongoing narrative of the self, which serves to link an individual's past, present, and future (Brison, 1999). Therefore, the posttraumatic self can be comprehensively explored by examining how its inner continuity is shattered by the traumatic event and how it is subsequently narrated. Memory reconsolidation plays a critical role in the organisation of self. Thus, it is believed that memories that are processed and narrated during

therapeutic interventions ultimately lead to a transformation of the self, facilitating a successful integration and transformation between memory, self, and narrative (Lane & Garfield, 2005; Whelton, 2015).

4.1.7.3. NET and Self:

Cognitive theories of trauma suggest that our fundamental beliefs about ourselves and the world are stored and organised within cognitive structures known as "schemata" (Epstein, 1991). Following the experience of a traumatic event, individuals' capacity to integrate traumatic information into their existing schema often results in the generalisation of knowledge from the traumatic experience into new maladaptive beliefs. For example, individuals may start perceiving the world as an unsafe place and themselves as vulnerable and helpless beings (Shalev et al., 1996b). Consequently, individuals who have undergone trauma frequently feel like outsiders, sensing a difference from others, and experiencing confusion about the meaning of life (Courtois & Ford, 2009), as trauma disrupts the continuity of their life story and autobiographical memory. Therefore, individuals with fragmented life stories would benefit from a narrative approach that encompasses not only the traumatic events but also their entire life story, including significant positive and negative life events, to integrate these fragmented memories.

With its foundational principles of testimony and habituation, NET provides a transformative and therapeutic approach to linking the past and present, allowing for the reconstruction of the disconnected and unsettled sense of self caused by the disruptive impact of a traumatic event, which is unfamiliar to existing schemata during the narrative process (Neuner & Schauer, 2020; Weine et al., 1998). Despite the theoretical emphasis on the role of NET in the readjustment of the sense of self, no study has yet attempted to investigate the impact of NET on the self, even though this role of NET has been emphasised theoretically in numerous research and reports..

4.1.7.4. Scoping Review of Self related research in NET:

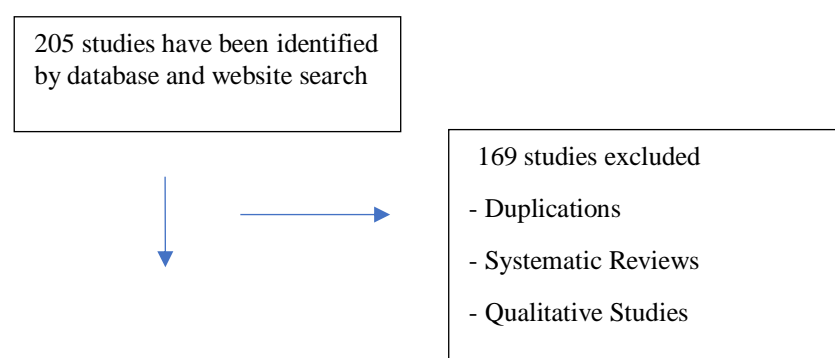
This scoping review aimed to highlight the existing gap in the literature regarding the investigation of self-related scales used in RCTs of NET. The review process commenced in June 2020, utilising databases such as Web of Science, Scopus, PubMed, and various other relevant websites. The search strategy involved the use of Medical Subject Headings (MeSHs) with the key terms "Narrative Exposure Therapy" and "Randomised Controlled Trials." The inclusion criteria specified studies published in English between the years 2005 and 2020.

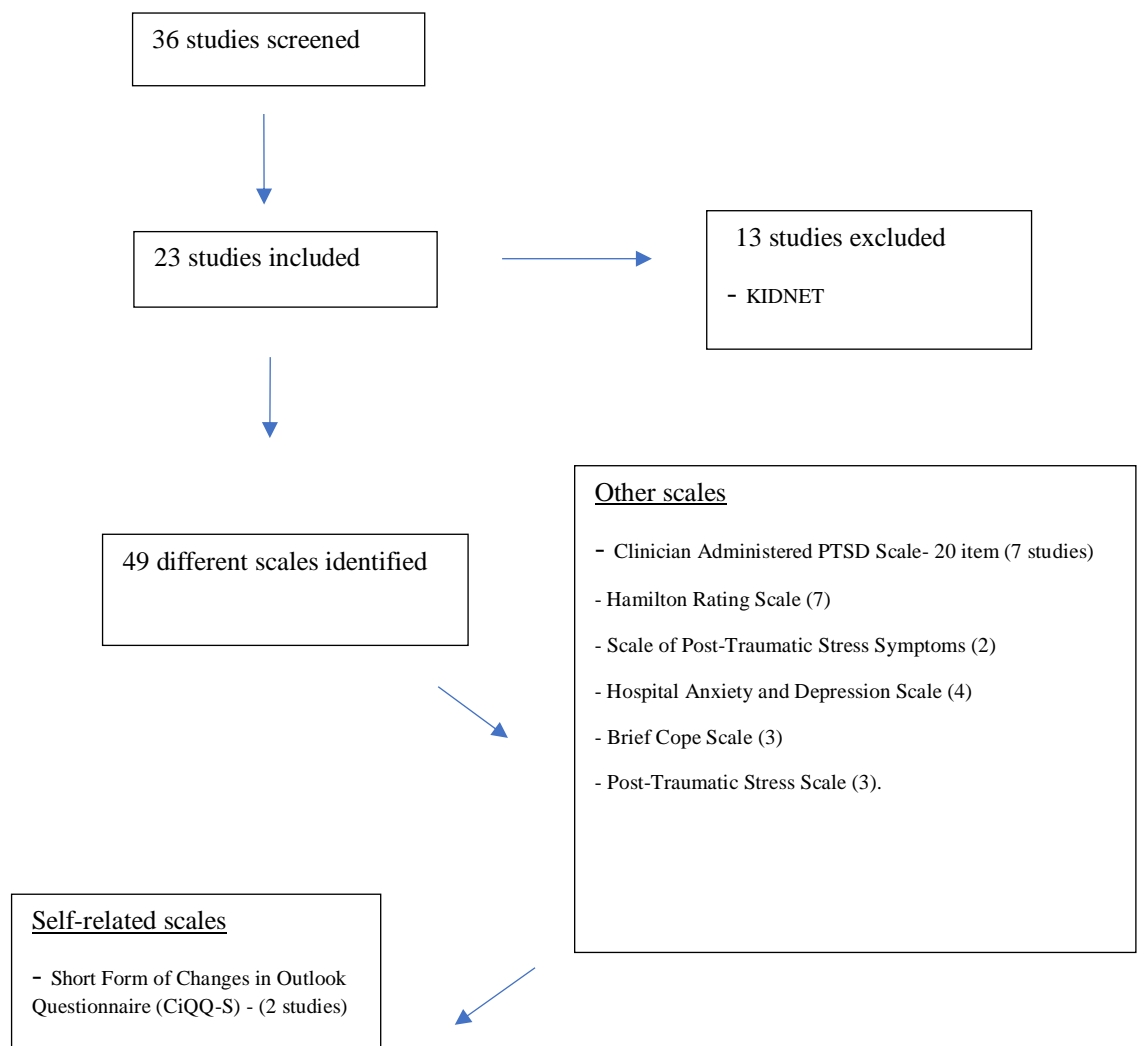
Following the initial search, a total of 205 studies were identified. Subsequently, the exclusion criteria were applied, eliminating duplications, qualitative studies, systematic reviews, and research that did not encompass both key terms. Studies focusing on NET interventions for children (KIDNET) were also excluded from the list during the screening process. Consequently, 23 research papers that incorporated NET as an intervention tool met the predefined inclusion criteria.

In a comprehensive analysis of the selected studies, the scales utilised in the pre- and post-tests were thoroughly examined to determine whether any of them investigated self-related concepts in conjunction with the implementation of NET. A meticulous review of the scales was conducted, resulting in the identification of a total of 49 different scales, as detailed in Figure 3.

Figure 3

Steps of scoping review to identify eligible studies having self-related scales in NET research





In the course of the scoping review, it was revealed that none of the listed studies specifically employed a self-related scale to investigate alterations in SC before and after the administration of NET treatment. However, the "Short Form of Changes in Outlook Questionnaire" (CiQQ-S) was identified as the only scale that contained items seemingly designed to assess changes in SC. Interestingly, this scale was utilised in only two of the studies included in the review. Specifically, the studies conducted by Zang et al. (2013) and Zang et al. (2014) focused on evaluating the efficacy of NET treatment in Chinese earthquake survivors. The CiQQ-S was employed in these studies to assess both positive and negative posttraumatic changes in self. Although no difference was found between the control and

NET groups' CiQQ-S scores in Zang et al.'s (2013) work, the results of Zang et al.'s (2014) study indicated a significant increase in CiQQ-S-Positive scores in the NET group compared to the control group. Although the scoping review did not identify any NET studies specifically designed to elucidate changes in SC post-treatment, the findings of Zang et al. (2014) suggest that, in addition to its efficacy in addressing PTSD symptoms, NET may also contribute to positive changes in SC. However, these conclusions should be carefully interpreted, considering the limitations of both studies. Neither study assessed the 'group x time interactions,' and both had small sample sizes, which are prone to type 2 errors. Consequently, given the lack of data in the literature and the potential limitations of the existing studies, this scoping review successfully draws attention to the existing gap in the literature, underscoring the absence of direct investigations into the impact of NET on SC.

4.1.8. Rationale of the intervention study

The ongoing conflicts in the region have resulted in the displacement of millions of Syrians, with a substantial portion seeking refuge in Turkiye, making it the largest host of refugees globally (UNHCR, 2021a). In light of this, it is imperative to address the pressing psychological needs of this population in addition to providing humanitarian aid. Our comprehensive literature review highlighted the heightened risk of psychological distress among Syrian refugees in Turkiye, emphasising the critical need for tailored mental health interventions. Despite the Turkish Government's efforts to develop health action plans, various obstacles have hindered the effective integration of mental health services into primary and community care, leading to unmet mental health needs among Syrian refugees in Turkiye. Moreover, Turkiye itself has been subject to a series of traumatic events, both natural and man-made, underscoring the importance of evidence-based and structured trauma-focused mental health policies for trauma survivors. Given its development for trauma-affected populations, NET is considered a practical and effective intervention that

could address the scarcity of mental health services and the high demand for support in the short term. To address this gap, this study aims to assess the effectiveness of NET in reducing PTSD, depression, anxiety, and general stress among displaced Syrian populations.

Additionally, the study seeks to investigate the feasibility of implementing NET within the Turkish context, considering the lack of prior research on this topic. Furthermore, recognising the role of NET in the reconsolidation of AM and its potential impact on SCC, our study aims to explore the relationship between NET and SCC. By addressing these critical research questions, it was aimed to contribute to a deeper understanding of the potential benefits of NET and its implications for the psychological well-being of displaced Syrian populations.

This study sought to answer the questions below:

1. Is NET feasible in the Turkish context?
2. Can NET be effective in the displaced Syrian population as it has been in other refugee populations in reducing traumatic stress?
3. Can NET be effective in reducing depression, anxiety, and general stress in the displaced Syrian population?
4. Does NET have a potential role in the regulation of SCC?

4.2. Method

The primary focus of this study is to explore the feasibility and effectiveness of NET within the displaced Syrian refugee population currently residing in Turkiye. Given its nature as a feasibility study, the aim is to assess the suitability of implementing the NET intervention within the Turkish context. Additionally, as an effectiveness study, it seeks to determine the extent of change and improvement in the designated variables, specifically in the reduction of PTSD, depression, anxiety, and stress, as well as the enhancement of SCC within this particular population. To examine these objectives, a Single Case AB design was employed to continuously monitor, measure, and track clinical changes over time. The goal

was to ascertain whether significant changes in symptoms occurred in response to the intervention, both subjectively and objectively.

4.2.1. Research Philosophy

This study is structured as a mixed method research and naturalistic Single Case Design (SCD). Mixed method research integrates elements of qualitative and quantitative research approaches to achieve comprehensive understanding and validation (Johnson et al., 2007, p:123). This approach adheres to distinct ontological and epistemological stances in contrast to purely qualitative or quantitative methods. The ontological standpoint strives to comprehend "the nature of reality" (Creswell, 2003), characterised by two contrasting views: objectivism and subjectivism. Objectivists consider reality as independent of social actors (Bryman & Bell, 2011), positioning the researcher as an external entity detached from the study. In contrast, subjectivists perceive reality through the participants' perspectives (Ansari et al., 2016), emphasising the role of human involvement, including the researcher(s), in the exploration of reality. Despite these divergent positions, in mixed methods research, a researcher can assume an ontological stance that lies between these two extremes (Ansari et al., 2016). Regarding epistemology, it addresses the question of "what is the relationship between knowledge and the researcher?" (Creswell, 2003). If the researcher maintains a detached stance while pursuing knowledge, this reflects a "positivist" approach that regards knowledge as a singular objective reality. On the other hand, when the researcher becomes involved in the process of acquiring knowledge, this corresponds to a "phenomenological" path (Ansari et al., 2016), which suggests that knowledge can only be explored through the lens of personal experience. Similarly to the ontological position, it is possible for a researcher to position themselves between these two epistemological paradigms. At this juncture, critical realism recognises that the most effective approach to acquiring knowledge involves the use of both qualitative and quantitative methodologies (Pratschke, 2003). This

epistemological approach was introduced by Roy Bhaskar in the early 1970s during the widespread criticism of the dominance of the positivist paradigm (Bukowska, 2021). Critical realism positions itself as an alternative to positivism, which focuses on regularities and law-like forms, as well as interpretivism, which centers on hermeneutics. Critical realism advocates for the utilisation of mixed methods, emphasising the existence of an external reality in both the natural and social sciences (Gorski, 2013). Accordingly, critical realism employs qualitative methods to provide an in-depth explanation of the phenomenon of interest (Bhaskar, 1998), and it also employs quantitative methods to test theories regarding the occurrence of causality under specific conditions (Mingers, 2004).

This study has adopted critical realism as an epistemological position, recognising that case studies can investigate complex phenomena and concepts, necessitating the utilisation of multiple research methodologies to address various research questions (Easton, 2010)

4.2.2. Rationale for Single Case Design

Single case studies have played a groundbreaking role in the history of psychology. Early pioneers in the field of psychology, such as Ebbinghaus (1913), Pavlov (1927), Skinner (1938), and Watson (1925), emphasised the pivotal importance of time series designs involving single subjects or organisms. However, during the course of history, RCTs have been esteemed as dominant and recommended research designs, considered the gold standard for evaluating the effectiveness of interventions. RCTs involve randomly assigning participants to different clinical trials (Akobeng, 2005; Lobo et al., 2017). The advantages and significance of RCTs are evident as they aim to control various potential biases, measure the effect size and confounding factors, ensure strong internal validity through randomisation, and are recognised as rigorous tools for establishing a cause-effect relationship between an intervention and its outcome (Booth & Tannock, 2014; Hariton and Locascio, 2018). Despite their considerable importance, it is essential to acknowledge the limitations of RCTs. For

instance, the selection of participants may exclude a significant number of potential candidates or be too selective based on the study's clinical sample (Schulz et al., 2010). Moreover, ethical concerns arise, particularly in the context of double-blinding control, where neither the research nor the control group participants are informed about the treatment being administered. Additionally, RCTs may not always be feasible in everyday practice, demanding substantial financial resources, time, and personnel (Morley, 2018). It is also worth noting that the results of RCTs are typically reported as group means and standard deviations, which might not adequately reflect the unique experiences of individual participants within the group. This can pose challenges for clinicians who seek to apply these group outcomes at the individual level (Morley, 2018).

As an alternative to RCTs, SCDs can offer an experimental approach that yields rigorous outcomes in assessing the effectiveness of an intervention, serving as a suitable bridge between laboratory research and practical applications (Borckardt et al., 2008; Kratochwill et al., 2010; Kratoch & Levin, 2014) Unlike RCTs, SCDs focus on evaluating each participant individually, although they often involve multiple subjects to replicate outcomes (Morgan & Morgan, 2009). SCDs also provide an opportunity to explore outcomes comprehensively through the integration of qualitative and quantitative methods (Gaya & Smith, 2016).

SCD involves the systematic collection of the criterion variable over time, gathering data under various conditions, and aiming to establish whether the introduction of an intervention is directly responsible for the changes observed in the target variables (Morley, 2018). Different stages within SCDs are referred to as "phases," denoted by capital letters, with A representing the baseline (no intervention) phase and B/C/D... representing different intervention phases. Various types of SCDs are employed to assess the effectiveness of an intervention, depending on the research question. These include Interrupted Time Series (AB)

Design, Reversal (ABA) Design, Multiple Baseline Design, Changing Criterion Design, and Alternating Treatment Design.

The ABA design is recognised as a robust experimental design since it manipulates the intervention by withdrawing and reintroducing the treatment (Morley, 2018).

Experimental control is more effective in ABA designs compared to AB designs, as it demonstrates the experimental effect in the transition from A to B and again from B to A.

However, the ABA design has faced criticism due to its design that concludes with a baseline phase (Kazdin, 2011), leading to ethical concerns regarding the well-being of the subjects. In practical terms, if the intervention has positively impacted the participant's behaviour, withdrawing the intervention and returning to the baseline condition could potentially worsen the participant's condition (Tate & Perdices, 2019).

AB designs involve two phases: Phase A and Phase B. In Phase A, no intervention or manipulation is administered, and the target behaviour is continually and frequently assessed to predict its future patterns in the absence of intervention. Following systematic evaluation of the target behaviour, the intervention is introduced in Phase B, where the behaviour is also continuously assessed under controlled conditions. By comparing the data from both phases, it can be determined whether the intervention has produced any change in the target behaviour as predicted (Tate & Perdices, 2019). Although AB designs do not establish a cause-effect relationship, they demonstrate a correlation between dependent and independent variables (Barlow et al., 2009). AB designs are particularly suitable in clinical settings where treatment reversal is unlikely. However, they have faced criticism for their limited replicability, making it challenging to firmly establish the reliability of the change in the target variable, especially considering the potential influence of external factors on the independent variable (Byiers et al., 2012). Nevertheless, AB designs can yield reliable data

on the effectiveness of an intervention, particularly when time and resources are limited (Kazdin, 2011).

Given these considerations, SCD was chosen as the methodology for this study, aiming to investigate the effectiveness and feasibility of a specific clinical intervention that cannot be reversed. The AB design was utilised in this study to address ethical concerns, manage time and resources efficiently, and appropriately address the research questions. To mitigate the aforementioned limitations, the intervention was replicated across at least three subjects (cases), with each case having at least three baseline measurements to establish stability before introducing the intervention. This approach aimed to improve replicability and control for potential external factors that could affect changes in the target behaviour.

4.2.3. Participants

4.2.3.1. Convenience Sampling Strategy and Rationale for Sample Size:

Determining the number of participants in SCD is crucial yet challenging as it directly impacts the ability to establish replicability and, consequently, the external validity of the study. Morgan and Morgan (2009) have recommended a minimum of three replications of treatment effects across individual cases for single-case designs (SCDs). Hence, it is suggested that a sample size of 3 would suffice to address the research questions. However, to account for potential dropouts or withdrawals from the research, 6 cases (with two representations for each case as a standard) would be more suitable to ensure the continuity and stability of the research. After establishing the sample size, an FG was conducted to identify and address any potential obstacles that might affect the implementation of the NET in the specific target population. These potential obstacles encompassed cultural differences, language barriers, economic concerns, and technical requirements. Consequently, the inclusion criteria for participants in this study were established based on the insights gleaned from the FG discussion (see Chapter 3). Subsequently, potential participants were selected for

inclusion using a convenience sampling strategy, taking into account their availability, accessibility, and decision to participate (Stratton, 2021).

4.2.3.2. Inclusion Criteria:

The FG study did not only emphasise the pivotal role of the recruitment process in identifying appropriate NET participants but also enlightened the researcher about potential obstacles and challenges, offering viable solutions based on the professional experiences shared by the FG participants. The inclusion criteria for NET participants were meticulously designed in accordance with the insights derived from the this discussion. Nevertheless, several fundamental inclusion criteria were predetermined for the purpose of this study. Given the objective of investigating the profound impact of the Syrian Civil war on participants' mental health and, consequently, the efficacy of NET, it was specified that Syrian refugees must have experienced at least one war-related adverse life event, should not be currently taking any psychotropic medication, and should not be undergoing any other form of psychotherapy simultaneously. The latter two criteria were deemed essential to ensure the internal validity of the study by mitigating any external factors that might influence the effectiveness of NET. Additionally, the age criterion was established as 18 or above, considering that this study aims to deliver NET to adult participants. The choice of language for this study was predetermined to be Turkish, primarily to investigate the effectiveness and feasibility of NET within the Turkish context and, secondarily, because Turkish is the native language of the researcher. Accordingly, the outcomes of the FG also supported the delivery of NET in Turkish. Based on these criteria and the findings from the FG, participants were selected if they met the specified inclusion criteria:

- 1- Being a Syrian refugee resettling in Turkiye
- 2- Have been affected by at least one war-related adverse life experience

- 3- Being 18 years old or above
- 4- Being literate and fluent in Turkish
- 5- Being able to give informed consent
- 6- Not being on psychotropic medication
- 7- Not receiving any other psychotherapy during the study
- 8- Being able to attend online NET sessions
- 9- Having technical equipment (computer, internet, headphone, etc.) for online sessions and being able to use them
- 10- Having economic relief
- 11- Being located in the west of Turkiye, (or located in other regions of Turkiye but being able to speak Turkish fluently)

4.2.3.3. Demographics of the participants:

In this study, four female and two male participants were recruited, with an age range of 19 to 33 and a mean age of 24. However, one male participant withdrew from the study before providing consent, and two female participants dropped out during the NET sessions. Consequently, the study continued with one male and two female participants, each of whom had experienced a varying number of war-related traumatic life events. The demographics of the participants are shown in Table 7.

Table 7*NET participants' demographics*

Participants (Pseudonym)	Demographics					Types of Traumatic Experiences
	Age (years)	Gender	Marital Status	Education	Year of settlement in Turkiye	
Participant 1 Banu	23	Female	Divorce d	Secondary school	2016	Natural disasters, fire or explosion, traffic accident, exposure to a poisonous substance, physical assault, sexual assault, being in the war zone and staying under heavy gunfire
Participant 2 Sibel	26	Female	Married	University	2011	Natural disasters, fire or explosion, being in the war zone and staying under heavy gunfire
Participant 3 Hamza	33	Male	Married	University	2013	Natural disasters, Serious accident at work, home, or during recreational activity, fire or explosion, being in the war zone and staying under heavy gunfire
Participant 4 Nurcan	19	Female	Single	University Student	2013	Natural disasters, fire or explosion, being in the war zone and staying under heavy gunfire

(withdrawn)

Participant 5	22	Female	Single	University Student	2013	Natural disasters, fire or explosion, being in the war zone and staying under heavy gunfire
---------------	----	--------	--------	--------------------	------	---

Mila

(withdrawn)

Participant 6	23	Male	Single	High School	-	-
---------------	----	------	--------	-------------	---	---

Muhammed

(withdrawn)

	SCCS	✓	✓	✓	✓				✓		✓	✓
Nurcan	IES-R	✓	✓	✓	✓	✓	✓	✓				
	DASS-21	✓	✓	✓	✓	✓	✓	✓				
	SCCS	✓	✓	✓	✓							
Mila	IES-R	✓	✓	✓	✓							
	DASS-21	✓	✓	✓	✓							
	SCCS	✓	✓	✓	✓							

Note. IES-R- Impact of Event Scale-Revised; DASS-21-Depression, Stress, and Anxiety Scale; SCCS-Self Concept Clarity Scale; B- Baseline;

S- Session; FU- Follow-up

Table 9*Characteristics and Psychometric properties of measurements*

Measure	Aim	No. of items	Scoring	Scale Direction	Item (Example)	Range	Clinical Cut-off	Subscales	Reliability (Internal Consistency)- Original measure	Reliability (Internal Consistency)- Turkish version
LEC-5	Evaluates the existence of potentially traumatic life events that have been experienced during a lifetime	17	6-point nominal	-	“Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)”	-	-	-	-	-
IES-R	Assesses subjective distress caused by traumatic events	22	5-point likert	Higher scores indicate higher levels of post-traumatic stress	“I found myself acting or feeling like back at that time”	0-88	33 (Weiss, 2004)	Intrusion, Avoidance, And Hyperarousal	$\alpha=0.96$ (Total scale) $\alpha=0.94$ (intrusion) $\alpha=0.87$ (avoidance) $\alpha=0.91$ (hyperarousal) (Creamer et al., 2003)	$\alpha=0.94$ (Total scale) (Corapcioglu et al., 2006)
DASS-21	Measures depression, anxiety, and stress	21	4-point Likert	Higher scores indicate higher levels of depression,	“I could not seem to experience any positive feeling at all” (depression) “I felt scared without any good reason” (anxiety)	0-42 (Doubled when scoring)	9 (depression) 7 (anxiety) 14 (stress) (Lovibond & Lovibond, 1995)	Depression Anxiety Stress	$\alpha=0.91$ (depression) $\alpha=0.84$ (anxiety) $\alpha=0.90$ (stress) (Lovibond & Lovibond, 1995)	$\alpha=0.87$ (depression) $\alpha=0.85$ (anxiety) $\alpha=0.81$ (stress) (Saricam, 2018)

SCCS	Evaluates to what extent a people's beliefs, attitudes and values toward themselves are clearly and confidently defined, stable and consistent	12	5-point Likert	anxiety, and stress	"I found it difficult to relax" (stress)					$\alpha=0.86$ (Campbell et al., 1996)	$\alpha=0.89$ (Sumer & Gungor, 1999)
			4-point Likert in the Turkish version	Higher scores indicate higher clarity, confidence, and stability in self-concept	"Sometimes I feel that I am not really the person I appear to be"*	12-60	-	-			
					"In general, I have a clear sense of who I am and what I am"						

Note. *Reversed scoring

4.2.3.4. Rationale, Validity, and Reliability of Measurements

Life Events Checklist (LEC-5): LEC-5 was developed as a self-report questionnaire to assess the presence of potentially traumatic life events experienced throughout one's lifetime. Comprising 17 items, the questionnaire adopts a 6-point nominal style response, allowing respondents to indicate multiple responses simultaneously (Weathers et al., 2013). Initially designed to be used alongside the Clinician-Administered PTSD Scale for DSM-IV to aid in the diagnosis of PTSD, it has been found to be suitable for use with various other measures (Gray et al., 2004). While the original LEC demonstrated favorable psychometric properties, no specific data on the psychometric properties of LEC-5 are currently available.

The key distinction between LEC and LEC-5 lies in the modification of one item ("Sudden, unexpected death of some close to you" was revised to "sudden accidental death") and the addition of a response ("part of my job") within the response category (Weathers et al., 2013).

During the recruitment phase of this study, the LEC-5 questionnaire was administered to potential participants to assess their eligibility, considering the study's focus on exploring the efficacy of NET in a population of Syrian refugees affected by war-related life experiences. The selection of this scale was based on its comprehensive examination of war-related traumatic life experiences, including items such as "combat or exposure to a war-zone (in the military or as a civilian)", "assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)", and "captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)" in addition to other adverse life events. Moreover, the availability of the Turkish version of the LEC-5 in existing literature facilitated its application within the target population, making it the most suitable choice among various other scales.

Impact of Event Scale-Revised (IES-R): The IES-R (Horowitz et al., 1979) emerged in the literature just prior to the release of the DSM-III. Initially conceived as a self-measurement tool for trauma assessment, it comprised two subscales: intrusive thoughts and avoidance, founded upon Horowitz's Emotional Processing Model (Horowitz, 1976). Subsequently, the release of DSM-III introduced a model of PTSD categorised into three symptom clusters, necessitating the incorporation of an additional new subscale, namely physiological hyperarousal (Beck et al., 2008). Criticisms directed at the scale, citing its failure to fully capture PTSD as defined in the DSM-III and its lack of assessment of hyperarousal, rendered the revision of the scale imperative (Larsson, 2000). In response to these critiques and for a more effective and precise assessment of PTSD, the IES-R was refined (Weiss & Marmar, 1997).

Widely used across various literature and translated into numerous languages from its original English version, the IES-R has been validated as a gold standard tool for measuring PTSD (Christianson & Marren, 2012). While not intended for diagnostic purposes, it has demonstrated the ability to distinguish individuals with and without PTSD, supported by evidence of its validity (Beck et al., 2008), as well as exhibiting high reliability with a Cronbach's alpha (α) of 0.96 for the total scale (Creamer et al., 2003). Comprising a 5-point Likert scale with 22 items, the IES-R evaluates three constructs of PTSD (intrusion, avoidance, and hyperarousal) over the past seven days. The psychometric properties of the Turkish version of IES-R were investigated by Corapcioglu et al. (2006), demonstrating robust validity and high internal consistency ($\alpha = 0.94$). Owing to its sensitivity to change (Creamer et al., 2003), which facilitates accurate and repeated measurements from individuals, its concise number of items that minimises the risk of familiarity and fatigue during repeated testing, and its widespread use in assessing PTSD symptoms, coupled with its demonstration of good validity and reliability in both the original and Turkish languages,

the IES-R was considered a suitable instrument for evaluating weekly PTSD scores for each participant in this study.

Depression, Anxiety, and Stress Scale-21 (DASS-21): Despite the conceptual and symptomatic distinctions traditionally drawn between anxiety and depression, extensive overlaps have been observed between the two, particularly during the assessment of these concepts using measurements (Clark & Watson, 1991a). These overlaps have prompted researchers to critically examine and develop clinically validated and reliable assessments for both depression and anxiety. Clark and Watson (1991b) proposed that the two constructs can be differentiated from each other based on unique features such as the absence of positive mood (specific to depression) and physiological hyperarousal (specific to anxiety). Concurrently, Lovibond and Lovibond (1995) conducted a series of studies focusing on the psychometric evaluation of a questionnaire designed to assess the core symptoms of depression and anxiety. Recognising the need for an additional construct (stress) to enhance the discernibility between the two, they developed a 42-item self-report Depression, Anxiety, and Stress Scale (DASS-42) (Lovibond & Lovibond, 1995). DASS-21 represents a shortened version of DASS-42. Both DASS-42 and DASS-21 have been widely employed in various settings to assess depression, stress, and anxiety, demonstrating high validity and internal consistency (Brown et al., 1997; Henry & Crawford, 2005).

Comprising 7 items for each subscale, DASS-21 evaluates depression, anxiety, and stress, with scores ranging from 0 to 42 for each construct. The scores of DASS-21 are doubled to obtain DASS-42 scores, with higher scores indicating greater distress across the three symptom clusters. The psychometric properties of the Turkish version of DASS-21 were examined by Saricam (2018), revealing robust validity and high internal consistency ($\alpha = 0.87$ for depression, $\alpha = 0.85$ for anxiety, and $\alpha = 0.81$ for stress). Consequently, DASS-21 was selected for this study as a suitable instrument to evaluate each participant's depression,

anxiety, and stress scores for the following reasons: it enables discrimination between subscales, provides a practical and convenient application with its consolidated format assessing depression, anxiety, and stress in one measure, has a limited number of items that reduces the risk of respondent familiarity and fatigue during repeated testing, and exhibits strong validity and reliability in both the original and Turkish languages.

Self-Concept Clarity Scale (SCCS): Building on previous research, Campbell et al. (1993) asserted that SCC should be distinctly defined and constructed independent of self-esteem, emphasising its significant role in the definition and perception of the self. This construct is instrumental in subdividing knowledge concepts, including beliefs about one's specific roles, values, and personal goals, as well as their organisation (Campbell et al., 1996). To differentiate the concept of SCC from self-esteem, identity, and other related terms, and to evaluate the extent to which individuals' beliefs about themselves are founded on a clear and definite representation, the SCCS was developed, demonstrating robust validity and high internal consistency ($\alpha = 0.86$) (Campbell et al., 1996).

Comprising 12 self-report items, the SCCS utilises a 5-point likert scale, producing scores ranging from 12 to 60. Notably, the questionnaire incorporates reverse scoring for certain items, implying that the numerical scoring operates in the opposite direction. The psychometric properties of the Turkish version of SCCS were examined by Sumer and Gungor (1999), revealing its validity and high internal consistency ($\alpha = 0.89$).

In this study, SCC was assessed at specific time points, aiming to observe anticipated changes over time rather than on a weekly basis. Scores were obtained during each baseline phase, at the first, middle, and final sessions, as well as during the follow-up phase. The decision to employ SCCS was grounded in several factors: its unique capacity to differentiate from other self-related terms, aligning with the objectives of the study, its robust validity and reliability demonstrated across various settings in existing literature (e.g., DeMarree &

Bobrowski, 2017; Matto & Realo, 2001), and the availability of a Turkish version of SCCS with reliable psychometric properties for application.

Change Interviews (CIs): CIs were employed to evaluate each participant's perception of the NET sessions over the course of the study. CIs facilitated the exploration of participants' perspectives on the changes observed, as well as the factors that either facilitated or hindered the process of change (Elliot et al., 2001). As such, CIs were conducted one month after the completion of the NET sessions, aiming to gain insights into the participants' experiences with the NET technique and to assess its feasibility and effectiveness within this specific context.

The interviews were conducted by an independent researcher to ensure the participants could freely and candidly express their thoughts, without the influence of the therapist. Employing a semi-structured format, the interviews addressed specific questions outlined in the Change Interview Questionnaire provided in Appendix G. This approach was adopted to facilitate an environment conducive to honest reflection and comprehensive feedback from the participants. Considering these factors, this qualitative method was instrumental in capturing nuanced changes that might have been overlooked by the quantitative measures. This approach reflects the mixed-method approach embraced in this study, thereby enhancing the comprehensiveness of the research findings.

4.2.4. Procedure

4.2.4.1. Ethical Approval: In all research involving the collection of data from human subjects, it is imperative to uphold fundamental ethical principles that recognise and respect the essential humanity of the individuals involved (Oliver, 2010). As such, ethical approval was obtained for the recruitment of human participants in this study. The Research Ethics Committee within the Division of Psychiatry and Applied Psychology (now Division of Mental Health and Clinical Neurosciences), Faculty of Medicine and Health Sciences, at

the University of Nottingham granted approval for this study on 20th July 2021 (Ethics Reference No.: 2022-2816-1, See Appendix C). During the course of the study, modifications were made, necessitating the submission of an additional amendment to the initial ethics application. These alterations encompassed adjustments in the number of baseline measurements, the inclusion of follow-up measurements, and the extension of session durations (reviewed to be between 60-120 minutes). The revised ethics application was thoroughly reviewed and subsequently approved on 18th January 2022 by the same committee. (see Appendix H).

In accordance with the ethical guidelines outlined by the British Psychological Society Code of Human Research Ethics (The British Society, 2018), Informed Consent (IC) was obtained from each participant before the commencement of the study (refer to Appendix I). Prior to their involvement, participants were provided with comprehensive information regarding the research procedures through the Participant Information Sheet (PIS) (see Appendix J). The research team diligently adhered to the regulations stipulated in the University of Nottingham General Data Protection Regulation (GDPR) of 2018, which aims to ensure the enhanced protection of personal data used and stored in research. Furthermore, the Study Outline (Appendix K) and Data Management Plan (Appendix L) have been meticulously delineated.

Ethical implications associated with the online delivery of NET (e-NET) were extensively discussed by Kaltenbach et al. (2020), prompting the authors to introduce a practical guideline for e-NET, which was duly considered during the design of this study. Nonetheless, several ethical concerns required careful deliberation and the establishment of a comprehensive plan prior to the study's commencement. One of the primary ethical concerns centered around the online delivery of NET was the potential risk of participants experiencing dissociation and intense stress without the physical presence of a therapist. To

mitigate this, participants were asked to provide the contact information of someone close to them, who would be physically present in the same location during the sessions, facilitating immediate assistance in collaboration with the therapist. Additionally, participants were advised to have mint gum and a bottle of water on hand during sessions to alleviate sensations of dissociation or dizziness. Another critical concern pertained to the participants' well-being between the weekly sessions, considering the possibility of psychological trauma symptoms emerging following the narration of distressing life experiences during sessions. While the study aimed to address these issues during sessions, the potential for unexpected psychological distress after sessions was acknowledged. Participants were briefed on the likelihood of such occurrences and instructed to promptly contact the researcher via email if they experienced any concerning symptoms. Furthermore, participants were provided with a contact information of an independent researcher, ensuring immediate support if the primary researcher was unavailable.

Signposting of participants' wellbeing was another ethical priority. Participants were contacted by the researcher at 3 and 6-month intervals following the completion of the NET sessions, facilitating a check-in to assess their coping mechanisms and overall well-being in the aftermath of the sessions. This proactive measure aimed to ensure that participants were adequately supported after the intervention.

4.2.4.2. Informed Consent:

Each participant received a comprehensive PIS via email, providing them with detailed and relevant information about the research, including the contact details of the research team. Following this, any inquiries or concerns were addressed promptly by the research team via phone or email, ensuring a clear understanding of the process and nature of the intervention study. Subsequently, participants were sent the IC electronically.

Participants were given a week to review the IC and were requested to sign and return it within two weeks. They were informed that failure to return the IC within the stipulated timeframe would be interpreted as their decision not to volunteer and thus, would result in their withdrawal from the study. While five out of six participants returned the signed CI as required, one participant did not respond and subsequently lost contact with the researcher. Consequently, it was acknowledged that the participant had chosen to withdraw from the study.

4.2.4.3. Recruitment Process: The recruitment process of the study is outlined below:

- To reach potentially eligible participants, research advertisement leaflets were distributed between August and December 2020. The leaflets, written in Turkish (see Appendix M), invited volunteers to contact the researcher using the provided contact details if they were interested in participating in the study.



- The participants who contacted the researcher were assessed for their eligibility, as outlined in the inclusion criteria (see section 4.2.3.2.). Upon confirming that they met the demographic requirements, they were requested to complete the LEC-5. Prior to providing it, participants were informed that it would be used to determine their eligibility for the study and that their participation would be contingent upon meeting the specified criteria. This assessment process was concluded in November 2021.



- All participants were found to meet the eligibility criteria, and they were initially provided with the PIS. Research-related inquiries, including communication preferences, online session arrangements, video recording procedures, and anonymity protocols, were discussed

with the participants via email, text, or phone calls. Subsequently, the IC was shared with the participants to outline their rights and responsibilities within the study, emphasising their autonomy to withdraw from the study at any point and their voluntary participation acknowledgment.



- Five participants returned their signed ICs, confirming their voluntary participation in the study. Subsequently, the NET sessions were initiated and conducted on a weekly basis for each participant.

4.2.4.4. Withdrawal:

PIS explicitly stated that participants had the right to withdraw from the study at any time and that their data would be deleted if they chose to withdraw and did not wish for their data to be used. Participants were also informed that if their data had already been used for analysis, it would not be feasible to retract their data from the study, and their data might be utilised for the study's dissemination. These circumstances were made clear to participants before they provided their consent.

While initially planning the SCD, it was acknowledged that recruiting three participants would be sufficient to address the research questions related to the intervention of the NET study. However, considering the potential challenges in recruiting eligible participants, especially Syrian refugees committing to weekly sessions, it was anticipated that participant withdrawal was a possibility. Consequently, the decision was made to recruit six participants, with the inclusion of two representatives for each case, to ensure the continuity and successful execution of the research. As predicted, three participants withdrew from the study at different stages. One participant withdrew before the commencement of the NET sessions by failing to confirm their participation and return the consent form. Despite attempts by the

researcher to establish contact, the participant did not respond, leading to the assumption that they had chosen to abandon the study, in accordance with the terms outlined in the PIS. Two other participants withdrew from the study during the delivery of the NET. One participant withdrew after completing Session 2, giving a reason of her busy exam period at her university. The other participant withdrew before Session 6 due to health issues (tested positive for Covid-19 twice) that hindered their ability to continue the sessions. Both withdrawals were acknowledged, and the participants were offered the opportunity to share their reasons for withdrawal and any additional support needed. Consequently, the NET sessions were successfully completed with the remaining three participants.

4.2.4.5. Confidentiality and Anonymity:

This study is conducted in strict adherence to the ethical guidelines outlined by the DPAP, University of Nottingham. These guidelines emphasise crucial ethical considerations in research, particularly the assurance of complete participant anonymity, the safeguarding of personal identifiers in demographic data, the secure handling of data collection and analysis, and the protection of confidentiality during the dissemination of results. Given the study's focus on collecting personal data, particularly concerning participants' traumatic and stressful life experiences, the research team takes full responsibility for maintaining their confidentiality throughout all stages of the research.

To uphold confidentiality, participants were given the option to choose pseudonyms of their preference, which were subsequently utilised throughout the study, including in forms, online questionnaires, video recordings, transcripts, translations, and all other research-related documents. Any identifiable details were meticulously removed and anonymised by the researcher. Furthermore, participants were instructed to ensure they were in a private and confidential space during the online sessions. It was explicitly communicated that these sessions could be shared and discussed with supervisors only, when necessary, with the

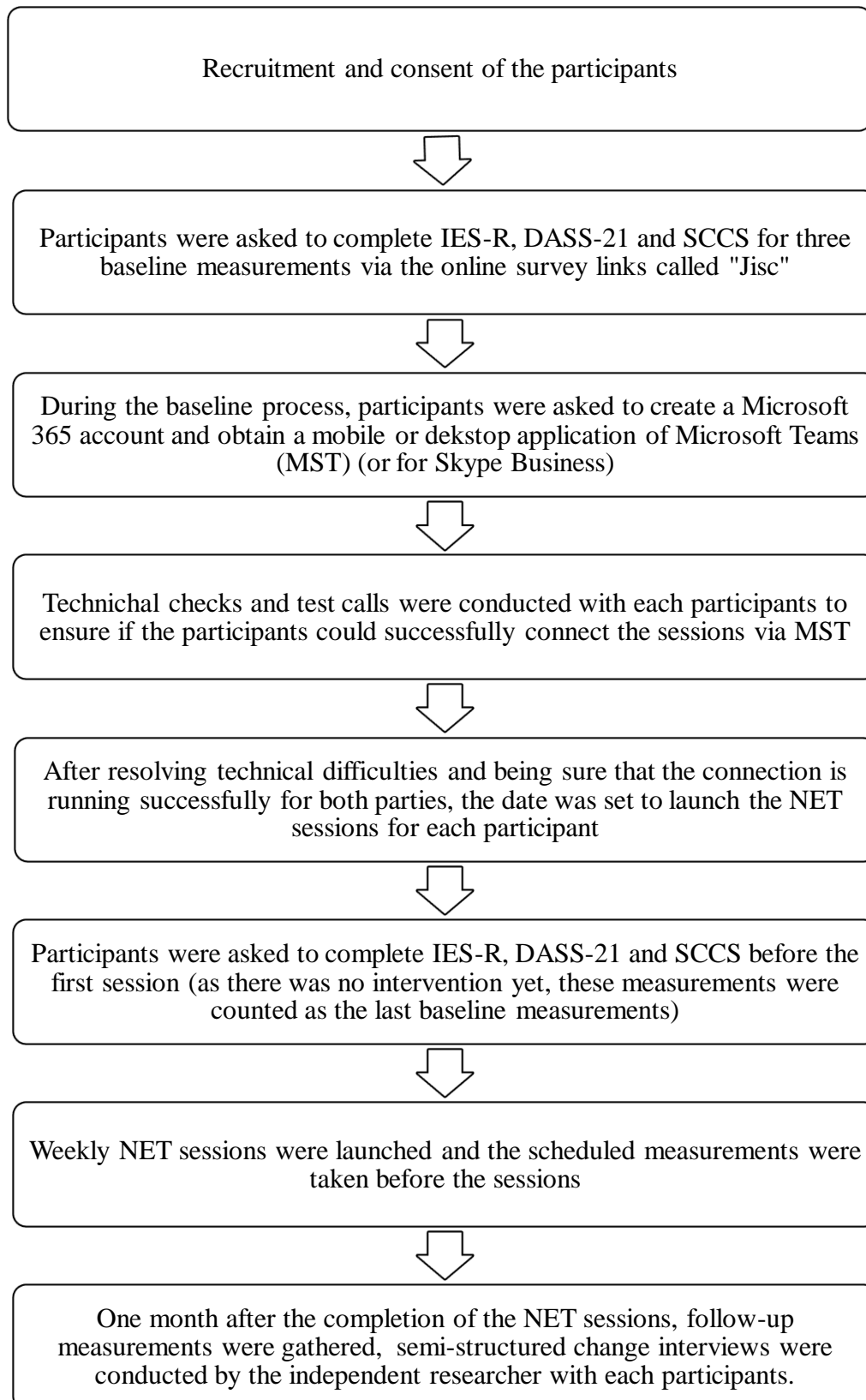
utmost consideration for protecting the participants' confidentiality. Participants were fully informed that their anonymity would be safeguarded at every stage of the study and throughout the dissemination of the research findings.

4.2.4.6. Data Collection Process:

In response to the limitations imposed by the COVID-19 pandemic, the intervention study was restructured to facilitate the online delivery of the NET sessions. To ensure the effective delivery of the sessions and to acquire a professional qualification, I underwent a 16-hour training program provided by the Eremo Institute in January 2021. This training, conducted by the developers of NET, was supplemented by additional supervision sessions in March and April 2021.

To adhere to the study protocol and guarantee the effective and robust delivery of NET, the researcher meticulously followed the NET manual developed by Schauer et al. (2011) and implemented the e-NET guidelines introduced by Kaltenbach et al. (2020). These established protocols and guidelines were instrumental in guiding the online delivery of the intervention, allowing for the smooth implementation of the study protocol, and ensuring the standardisation and quality of the NET sessions. The Data Collection process is outlined in Figure 4.

Figure 4

Data collection process of NET study**4.2.4.7. Data Storage and Security:**

Data for the NET intervention study was collected through weekly online surveys conducted via the "Jisc online surveys" platform. The University of Nottingham IT Team granted the researcher access to this platform, allowing the creation of an account specifically for the study. Once participants completed the questionnaires, the data on the Jisc platform was promptly downloaded and securely stored in password-protected files within the researcher's UoN OneDrive. Subsequently, the data was deleted from the Jisc platform to ensure data security and privacy.

The storage and processing of video recordings, session narrations, transcripts in both Turkish and English, therapist's observational notes, subjective notes, data analysis, and other research-related documents were also securely managed using the same cloud storage system, with each file being filed under the respective participant pseudonyms. This meticulous process was undertaken to safeguard the participants' identities comprehensively. Additionally, fidelity checks of the sessions were conducted by the principal supervisor, ensuring adherence to the fidelity checklist. Password-protected files were exclusively accessible to the researcher and were partially shared with supervisors solely for fidelity checks.

The research team assumes full responsibility for protecting the participants' rights, privacy, and research data throughout and after the study. In compliance with the University of Nottingham GDPR 2018, all data generated from this study is set to be securely disposed one year following the completion of the research, in accordance with the established data retention policy.

4.2.4.8. Protection of Research Participants:

As highlighted by Kaltenbach et al. (2020), the risk of dissociation during e-NET is minimal, but participants might inadvertently harm themselves due to a loss of control over their bodies. Additionally, the process of memory reconsolidation during therapy might lead

participants to recall traumatic events more vividly, potentially triggering flashbacks, heightened arousal, irritability, nightmares, and distress. To prepare participants for these possible reactions, they were strongly encouraged to promptly communicate with the researcher if they experienced any such responses. Throughout the sessions, the therapist or researcher diligently monitored any signs of excessive physiological and emotional distress that were observable through the online platform. Participants were frequently asked about their bodily sensations and emotional states to identify and address any emerging concerns. In cases where participants exhibited bodily reactions, the researcher employed specific techniques recommended by Kaltenbach et al. (2020), which focused on sensory engagement to prevent dissociative responses. These techniques guided participants to focus on movements, sounds, sights, and tastes, helping them remain grounded during the sessions and prevent any distressing reactions.

Prior to the study, participants were informed of the potential risks and reassured that they would be provided with guidance and support during and after the sessions. Ensuring the participants' well-being remained a top priority throughout the research process, with follow-up contact conducted via phone at three and six months after the intervention to monitor their coping mechanisms and provide additional assistance, particularly concerning their psychological well-being.

4.2.4.9. Debriefing of Participants:

Participants received comprehensive debriefing about the research, including the contact details of the research team and avenues for voicing any concerns or queries encountered during the study. This information was reiterated to participants upon completion of the sessions to ensure their continued awareness of the available support. In addition to research-specific guidance, participants were equipped with the contact information of relevant non-governmental organisations in Türkiye, which could offer

additional assistance in terms of socioeconomic and psychological support. This provision aimed to further facilitate access to comprehensive resources beyond the scope of the study, emphasising the importance of holistic well-being for the participants.

4.2.4.10. Compensation:

Participants were not provided with compensation for travel expenses as the NET sessions were conducted remotely, and they were not reimbursed for their time dedicated to the study. The matter of participant compensation was carefully deliberated with the supervisors, considering the ethical implications of the study's clinical nature, which aimed to closely resemble real-world therapeutic practice. Consequently, it was determined that no form of compensation would be offered, emphasising the voluntary nature of participants' involvement without any external inducements.

4.2.4.11. Risk/Role to Researcher:

Given the nature of the NET sessions involving the recounting of distressing life experiences, there was a possibility of emotional strain on the researcher. With the sessions scheduled concurrently and on a weekly basis for each participant, the cumulative exposure to the participants' unique and traumatic war-related narratives could potentially be overwhelming. To effectively manage these challenges, the researcher maintained regular communication with the supervisors and scheduled monthly, or more frequent, if necessary, supervisory meetings. These meetings served as a platform to discuss any emotional impact or risk factors associated with the prolonged exposure to distressing content during the NET sessions. Such proactive measures aimed to safeguard the well-being of the researcher and ensure a supportive research environment.

4.2.4.12. Dual Role of Researcher:

The acknowledgment of the dual role of the researcher in the study is essential, particularly concerning the integrity of the NET delivery, clinical outcomes, and the subsequent interpretation of the results. The influence of therapist "therapeutic allegiances" on study outcomes has been a topic of extensive debate in the literature, with some meta-analyses indicating a link (e.g., Robinson et al., 1990) and others not finding such a relationship (e.g., Gaffan et al., 1995).

The concept of "Allegiance Bias" in psychotherapy underscores the potential contamination of intervention outcomes due to the researcher's theoretical and treatment preferences (Luborsky et al., 1975), emphasising the risk of inadvertently influencing research findings. Leykin and DeRubeis (2009) have further underscored several factors that could exacerbate this risk in psychological therapies, including inadequately trained researchers, insufficient adherence to ethical practice, mishandling of missing data, and excessive enthusiasm for particular study outcomes, particularly in the context of randomised controlled trials. These considerations emphasise the critical importance of maintaining a rigorous and unbiased approach throughout the research process.

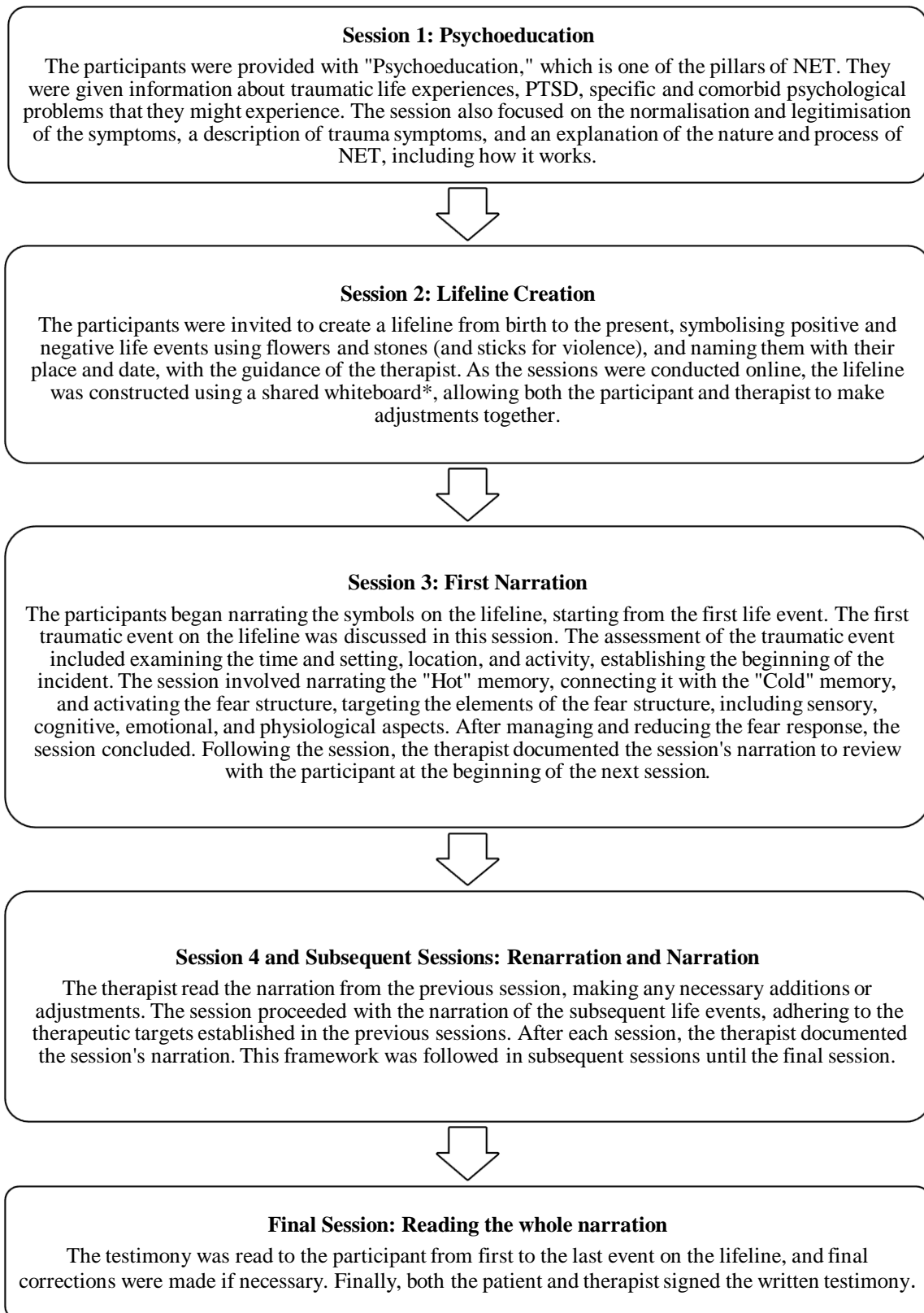
As a researcher with a dual role and a keen awareness of the risk of allegiance bias, this study was designed to mitigate that potential influence. To address this, the researcher engaged in NET supervision meetings with supervisors whenever issues arose. Additionally, the researcher participated in various online NET supervision meetings facilitated by the developers of NET, which included open clinical consultation sessions and email exchanges to discuss any potential biases or dilemmas that emerged during the NET sessions. Leykin and DeRubeis (2009) suggested that Allegiance Bias could be alleviated by employing multiple clinicians to deliver a specific therapy technique. Unfortunately, this option was not feasible for this research due to the language requirement (Turkish) and the researcher's unique ability to conduct the sessions within this particular context. Furthermore, considering

the absence of prior studies on NET in Turkiye or with Syrian refugees, using a translator for therapy sessions in Arabic was briefly considered. However, this approach introduced other ethical and methodological complexities. Additionally, the researcher diligently maintained observational notes, documenting both objective and subjective experiences during the delivery of NET and the subsequent data analysis process. These notes served as a point of reference to effectively manage any potential Allegiance Bias in the event of missing data. Moreover, to facilitate a more comprehensive evaluation and analysis of outcomes, change interviews were conducted by an independent researcher to capture the participants' perspectives on the changes resulting from the NET sessions. Additionally, treatment fidelity checks were conducted by the principal supervisor to ensure that NET was consistently delivered with all its essential components. In conclusion, despite the researcher's dual role as both a therapist and a researcher, the aforementioned measures were implemented to minimise the risk of allegiance bias in this study.

4.2.4.13. Delivery of NET sessions:

The NET intervention was administered following the standardised short-term NET manual developed by Schauer et al. (2011). This manual aimed to facilitate the integration of complete autobiographical memory by establishing connections between the hot and cold aspects of each memory, ultimately inhibiting the fear response through exposure to traumatic memories. Moreover, the remote NET sessions were conducted in accordance with the e-NET guidelines highlighted and recommended by Kaltenbach et al. (2020). As a result, the NET manual and the e-NET guidelines were amalgamated for the purposes of this research.

The NET sessions were structured to be delivered over 8-12 sessions, each lasting between 60 to 120 minutes for every participant. A visual representation of the steps involved in the NET intervention is outlined in Figure 5.

Figure 5*Steps of NET intervention*

Note. Scheduled measurements were taken before the sessions via Jisc Online survey links.

* Participants' lifelines created on a whiteboard can be found in Appendix N.

4.2.4.14. Treatment Fidelity of NET:

Fidelity checks in this study were conducted by the researcher's principal supervisor. These checks aimed to evaluate the extent to which essential intervention components were delivered comprehensively and consistently by an interventionist trained to administer the intervention (Sanetti & Kratochwill, 2009). The purpose of the fidelity checks was to bolster confidence in methodological strategies, such as reliability, replicability, and the consistent delivery of the intervention, and to assess the changes in the target behaviour resulting from the intervention. Additionally, they were used to determine whether the intervention was delivered as intended. The fidelity checks for each participant were conducted after the completion of the NET sessions. As the NET sessions were conducted online, video recordings of the designated sessions, along with English translations, were shared with the supervisor. The Fidelity Check Lists for the Psychoeducation, Lifeline, Narration, and Final sessions can be found in Appendix O-S.

4.3. Analysis

For the systematic evaluation of trends, levels, and stability of the measurements, Visual Analysis (VA) was employed for each participant, both within and across the baseline and intervention phases. VA has historically emphasised the clinical significance of graphed data over statistical significance (Kazdin, 2011; Tate & Perdices, 2019) and is considered the gold standard for SCDs (Kratochwill et al., 2010; Smith, 2012). However, Parsonson and Baer (2015) have criticised VA for its subjectivity, highlighting the need for appropriate statistical tests that involve judgments about complex theoretical assumptions. Thus, Simulation Modelling Analysis (SMA) was also used in this study for statistically evaluating

the significance between autocorrelated streams and detecting any actual changes (Type-I and Type-II Errors).

SMA is a form of bootstrapping methodology aimed at illustrating whether statistically significant differences exist between various types of data sets (Borckardt et al., 2008). It provides acceptable control of the Type-I and Type-II error rates with short streams of autocorrelated data (Borckardt & Nash, 2014). In this study, SMA was applied to analyse the temporal relationships between IES-R, DASS-21, and SCCS outcomes. Additionally, Jacobson and Truax's (1991) Reliable Change Index (RCI) and Clinically Significant Change (CSC) were also applied to assess whether the changes were reliable and clinically meaningful between the pre-, post-, and follow-up phases of the intervention.

Finally, the CI conducted with each participant were analysed using the qualitative method of Content Analysis to examine the participants' experiences during the NET sessions and to investigate the treatment changes in conjunction with the quantitative data. This mixed-method approach facilitated data triangulation, enhancing the validity of the findings, and providing a deeper understanding of the results.

4.3.1. Visual Analysis

Effective visual displays are crucial for SCDs as they serve as the primary source for analysing and interpreting the study. Unlike the summaries of statistics typically reported in group-based research, visual displays showcase the entire data set over time in an x-y plot format, enabling examination and judgments about the impact of the independent variable on the dependent variable (Morley, 2018). Unlike group-based research, VA is concerned with identifying any changes in trends and variability within the data set, particularly the characteristics of changes upon the introduction of the intervention (Chiang et al., 2015; Morley, 2018).

A “trend” signifies a systematic change in the central value (mean/median) of the data, while “variability” pertains to the standard deviation or range within the dataset. Interpreting variability in the data plot involves considering various factors, including the duration of phases and the scale of patterns observed between phases (Morley, 2018). VA has faced criticism for its perceived lack of formal rules and decision-making criteria, rendering it highly subjective and prone to error, particularly when the impact of an intervention is not immediately evident (DeProspero & Cohen, 1979; Harbst et al., 1991; Lenz, 2013; Wolery & Harris, 1982). To address these concerns, Furlong and Wampold (1981) introduced a four-step system for conducting VAs, aiming to overcome these challenges. These steps consist of: (1) examining the data for stability, trend, and level within and across phases; (2) determining whether there is an intervention impact by inspecting different phases; (3) evaluating the significance of clinical change by examining the intervention effect, whether it is temporary, permanent, or delayed; and (4) assessing the replicability of the results. On the other hand, VA has also faced criticism for its lack of statistical inferences, which require normality of distribution and independence of observations (Barlow et al., 2009). Considering the high presence of autocorrelation in time-series data, the application of statistical analysis is deemed inappropriate as it violates the assumption that error terms in subsequent terms are independent (Morley, 2018). In recent times, several researchers have explored alternative methods to address this critique and mitigate the issue of error terms. Some non-parametric tests for statistical analysis have been introduced for SCDs with small data sets to examine differences between phases and compute statistics summarising non-overlapping data points in the phases (Morley, 2018). The Percentage of Nonoverlapping Data (PND) (Scruggs & Mastropieri, 2001) represents the percentage of data points in the intervention phase that overlap with any of the values in the baseline phase. In other words, the number of treatment phase data points surpassing the lowest data of the baseline is calculated, and the overall

percentage denotes the PND value. PND is a straightforward statistic to calculate, but it has faced criticism for its potential to result in a Type II error (Lenz, 2013), particularly when there is a highly abnormal data point in the baseline phase, which can lead to a low PND (Morley, 2018). To address these limitations, an alternative method, the Percentage of Data Points Exceeding the Median (PEM) (Ma, 2006) was introduced. PEM uses the median value of baseline data as a reference point and computes the percentage of data points in the intervention phase that surpass the median value. PEM is less likely to cause a Type II Error (Lenz et al., 2012) but has been found to be more prone to making a Type I error, implying the presence of an intervention effect when none exists (Wolery et al., 2010). To address these challenges, Fisher et al. (2003) proposed the Conservative Dual Criterion (CDC) method, which demonstrates effective strategies for detecting the intervention effect, as well as Type I and Type II errors. This method has been found to be highly valuable even when dealing with highly autocorrelated single-case data (Morgan & Morgan, 2009). The CDC method adjusts the baseline phase by computing the Standard Deviation (SD). The adjusted baseline mean is then modified by adding or subtracting one SD from the baseline mean. Subsequently, the adjusted baseline trend is plotted in the treatment phase, enabling the researcher to determine how many points meet the dual criteria (beyond or above the limits of the two lines representing the adjusted baseline mean and trend). This process allows for a conclusion to be drawn regarding the presence or absence of a treatment effect. The direction of the adjustment plays a crucial role in this process. For example, if the intervention is anticipated to reduce the response or frequency in the target behaviour, the baseline trend is adjusted downwards (baseline mean minus SD). Conversely, if the intervention is expected to increase the response or frequency in the target behaviour, the baseline trend is adjusted upwards (baseline mean plus SD).

Parker and his colleagues (2011) developed a test called Tau-U to control data with a trend in the baseline. This test combines two non-parametric tests: Kendall's rank correlation test (Tau) and the Mann–Whitney U statistic, which is used to analyse the non-overlap of all pairs statistic. In essence, this test integrates nonoverlap between phases with intervention phase trends and can adjust any trends observed in the baseline. Even though Tau-U is a robust test and easy to compute with several software programs, it primarily focuses on the association between variables. Since this research involves an intervention and aims to assess its effectiveness and focus on behaviour change, the Percentage of PND is chosen to address these inquiries. On the other hand, as Tau-U presumes a consistent directional increase or decrease in the relationship (monotonic) between two variables, the PND method is considered the most suitable approach for this study, assuming that any alterations in behaviour can be attributed entirely to the intervention (Morley, 2018). Thus, this study applied Furlong and Wampold's (1981) Four-step VA model to investigate trends and variability in the data sets for SCDs, Fisher et al.'s (2003) CDC model to estimate the change between phases, and Ma's (2006) PEM model to investigate the treatment effect. However, even though each model was employed to detect the treatment effect in this study, PEM was chosen as the primary outcome for VA. There are a couple of reasons behind this choice. Firstly, PEM utilises the median of the baseline phase as a clear reference point for comparison. Consequently, it relies less on subjective or arbitrary criteria to determine what constitutes a change. It is a straightforward method to calculate and understand as it can simply demonstrate the percentage of data points exceeding the median. PEM also demonstrates sensitivity to alterations in the data distribution. For example, when there is an evident and significant change in data values in the treatment phase, PEM is likely to identify these changes, making it a suitable method for detecting significant treatment effects. Above all, it provides more robust data when working with small sample sizes, such as small-n

research designs and SCD as employed in this research. Unlike some other statistical tests, PEM does not rely on the assumption of a normal distribution, which can be problematic when data is scarce. Considering all these reasons, PEM is considered the primary method of analysis to investigate the treatment effect.

4.3.2. *Simulation Modelling Analysis*

Conventional parametric and nonparametric statistics assume that observations are independent. However, this assumption is not valid for observations in single-case time series designs as the observations are largely serially dependent. This serial dependence is called "Autocorrelation". Autocorrelation refers to the idea that the value of one observation is interrelated with one or more of the subsequent observations. Thus, later observations can be influenced by earlier ones (Borckardt et al., 2008).

Under many circumstances, autocorrelation poses a significant risk of producing a Type I error. SMA for time series designs is a statistical bootstrapping approach that considers autocorrelation in a data set. In other words, SMA aims to detect the correlation between two variables and reduce the likelihood of making a Type I error. With short data streams (between 5 and 15 data points per phase), SMA provides more power than conventional statistics (Borckardt et al., 2008), and it has a user-friendly software program available for free for both Windows and Macintosh users (can be found at <http://clinicalresearcher.org/software.htm>). The most frequently employed method in SMA is the calculation of lag-1 autocorrelation, which estimates the Product-Moment Correlation coefficient between a series in each phase (S1, S2, S3....Sn) and a series of the same points starting from the subsequent point (S2, S3, S4....Sn) (Tate & Perdices, 2019).

Given this knowledge, in this intervention study, SMA was employed to investigate the temporal relationship between variables to explore if a change occurring in one variable leads to a change in another. A lag represents an observation taken at a one-time point and in

this study, a “lag” refers to a measurement taken in a particular week. If the significant Pearson-r value ($p > .05$, $-1 < r < +1$) is greater than zero ($r > 0$), this indicates that changes in Variable1 precede changes in Variable2. If the significant r values are below zero ($r < 0$), this indicates that Variable1 and Variable2 change in opposite directions (Borckardt, 2006).

The following pairs of scales and subscales were analysed to see if there is any cross-correlation (temporal relationship) between them:

- IES-R and DASS-Depression
- IES-R and DASS- Anxiety
- IES-R and DASS-Stress
- Depression and Anxiety
- Depression and Stress
- Anxiety and Stress
- SCCS and IES-R
- SCCS and DASS- Depression
- SCCS and DASS- Anxiety
- SCCS and DASS- Stress

4.3.3. Reliable Change Index and Clinically Significant Change

Jacobson and Truax (1991) highlighted a method to investigate two important questions in SCDs, especially those commonly asked in clinical treatments, regarding pre-treatment and post-treatment scores of an individual on a standard measure. These questions revolve around: (1) whether the change in an individual’s pre-treatment and post-treatment standard measure scores is reliable; and (2) whether this change is clinically significant. In other words, is this change distinguishable for the clinical population?

This two-step method aims to assess the reliability and significance of the change occurring at the individual level. The first question investigates the statistical reliability of the change (not attributed to measurement error), called RCI, and is based on the confidence intervals around the pre-treatment score (± 1.96 , 95% confidence interval). Jacobson offered a relatively straightforward calculation for computing the values of RCI, as demonstrated in Figure 6.

Figure 6

Calculation of RCI

$$RCI = \frac{(\text{pre-treatment score} - \text{post-treatment score})}{SE_{\text{diff}}}$$

$$SE_{\text{diff}} = \sqrt{2 \times SEM^2}$$

$$SEM = \text{standard error of measurement} = SD \times \sqrt{(1 - r)}$$

Note. SE_{diff} = Standard Error of the difference, SEM = Standard Error of Measurement

As shown in Figure 6, the standard error of measurement (SEM) directly affects the reliability of the tests, meaning that the larger the SEM, the lower the reliability of the tests. Accordingly, if the RCI value exceeds $+1.96$, we can be confident that the change is reliable (at 95% confidence) and not attributable to measurement error.

In their second question, Jacobson and Truax (1991) investigated "to what extent the change is clinically meaningful?" and they used the term "Clinically Significant Change" to address this question. They proposed three statistical criteria for assessing the significance of the clinical change. Each criterion is based on a cut-off score on the measurement and defines

the effectiveness of the treatment as "dysfunctional/clinical" and "functional/non-clinical". In Criterion A, the score of post-treatment should fall outside more than 2 SDs from the mean of the non-clinical group, in the direction of the non-clinical population. In Criterion B, the post-treatment score should fall within 2 SDs of the mean of the non-clinical population, and in Criterion C, the post-treatment score should fall closer to the mean of the non-clinical population. Jacobson and Truax (1991) suggested that the selection of the criterion depends on the distribution of the data and the degree of overlap. As the means of the clinical and normative (non-clinical) populations' IES-R, DASS-depression, DASS-anxiety, DASS-stress, and SCCS scores overlap within the 2 SDs, Criterion C was utilised in this study to analyse CSC. Therefore, in this study, RCI and CSC methods were applied to investigate the reliability of the changes in PTSD, depression, anxiety, stress, and SCC between pre-treatment, post-treatment, and follow-up phases and to understand the clinical meaningfulness of these changes if any were available. RCI and CSC values were calculated by employing a simple Excel application called the "Leeds Reliable Change Indicator" developed by Morley & Dowzer (2014).

4.4. Results

The results are detailed in different sections under this title. The first section indicates the means and standard deviations of the questionnaires utilised to observe changes in variables across different phases of the NET study intervention. The second section outlines the VA outcomes, the subsequent section presents the results for SMA for each pair of questionnaires (or subscales) (e.g., IES-R & Depression, SCCS & Anxiety). The following section demonstrates the results for RCI and CSC for post-treatment and follow-up outcomes for each measurement taken individually. The CI section provides information on the participants' subjective experiences with NET, outlined in a table. Lastly, within and across case perspectives sections demonstrate the changes and findings of the intervention.

4.4.1. Means, Medians, and Standard Deviations of Questionnaires

Table 10 demonstrates the mean and median values of each measurement for each participant for the baseline and intervention phases.

Mean and SD values of Nurcan's IES-R and DASS subscales for the intervention phase could only be calculated for 4 sessions (S2, S3, S4, and S5) as the participant dropped out of the study in Session 6. Nurcan's SCCS for the intervention phase represents her score in S2 (as SCCS was given to the participants at the beginning, middle, and end of the intervention phase, this is the only score taken from her). Therefore, there are no SD and mean values for her SCCS scores for the intervention phase. Additionally, Mila's IES-R, DASS subscales, and SCCS scores were demonstrated only for Session 2 as the participant dropped out of the study in Session 3. Therefore, no means and SDs were reported for the measurements in her intervention phase.

4.4.2. Visual Analysis of Outcomes

Data collected repeatedly throughout the study were graphed and visually analysed individually to inspect the changes in level, trend, and variability for each measurement across phases and time points. To enhance the VA, Fisher et al.'s (2003) CDC was utilised, and Ma's (2006) PEM models were applied to investigate the effect size (ES). Fisher et al. (2003) generated empirical rules for determining how many points should meet the CDC to conclude the intervention change, as demonstrated in Table 11. Scruggs and Mastropieri (1998) suggested ranges of ES for interpreting the intervention effect. According to that range, ES scores of "0.90 or above" indicate "high effectiveness," scores "between 0.70 and 0.89" indicate "moderate effectiveness," scores "between 0.50 and 0.69" indicate "questionable effectiveness," and scores "less than 0.50" are considered "not effective".

Table 10*Mean and SD of measurements*

Phases	Participants	IES-R	DASS-Depression*	DASS-Anxiety*	DASS-Stress*	SCCS
		Mean-Med (SD)	Mean-Med (SD)	Mean-Med (SD)	Mean-Med (SD)	Mean-Med (SD)
Baseline	Banu	45- 44 (2.6)	16.7- 16 (1.2)	15.3- 16 (1.2)	13.3- 14 (3.1)	22.3- 24 (3.8)
Intervention		41.33- 42 (6.9)	11.6- 11 (2.8)	5.8-7 (4.1)	6.4- 4 (3.8)	34.2-32 (5.2)
Baseline	Sibel	32- 34 (4.36)	22-26 (6.9)	25.3- 26 (3.1)	14.7-14 (1.2)	27.7- 28 (0.6)
Intervention		25.4- 23 (8.7)	12.2-10 (4.1)	15.4-15 (2.1)	9- 8 (3.9)	32.2- 32 (0.5)
Baseline	Hamza	81.7- 82 (3.5)	32.7- 36 (7.6)	38.7- 40 (2.3)	40.7- 42 (2.3)	28.7- 29 (1.5)
Intervention		72.4- 81 (17.7)	31.2- 38 (10.9)	32.7- 38 (10.3)	35.8- 42 (11.5)	31- 29.5 (3.4)
Baseline	Nurcan	22- 24 (7.2)	14.7- 14 (2.3)	20- 16 (10.6)	24- 26 (5.3)	33- 32 (2.6)
Intervention**		13.5-14 (6.8)	12- 11 (3.6)	12-12 (3.6)	15- 15 (5.8)	32(-)
Baseline	Mila	22.3-20 (8.7)	12- 12 (8.7)	14- 8 (3.5)	9.3-16 (3.1)	35.6 - 36 (2.1)
Intervention***		10(-)	10(-)	12(-)	4 (-)	42 (-)

Min- Max	0-88	0-42	0-42	0-42	-
-----------------	------	------	------	------	---

Note. (*) Doubled when scoring. (**) according to four treatment sessions, (***) according to one treatment session, M: Mean, Med: Median,

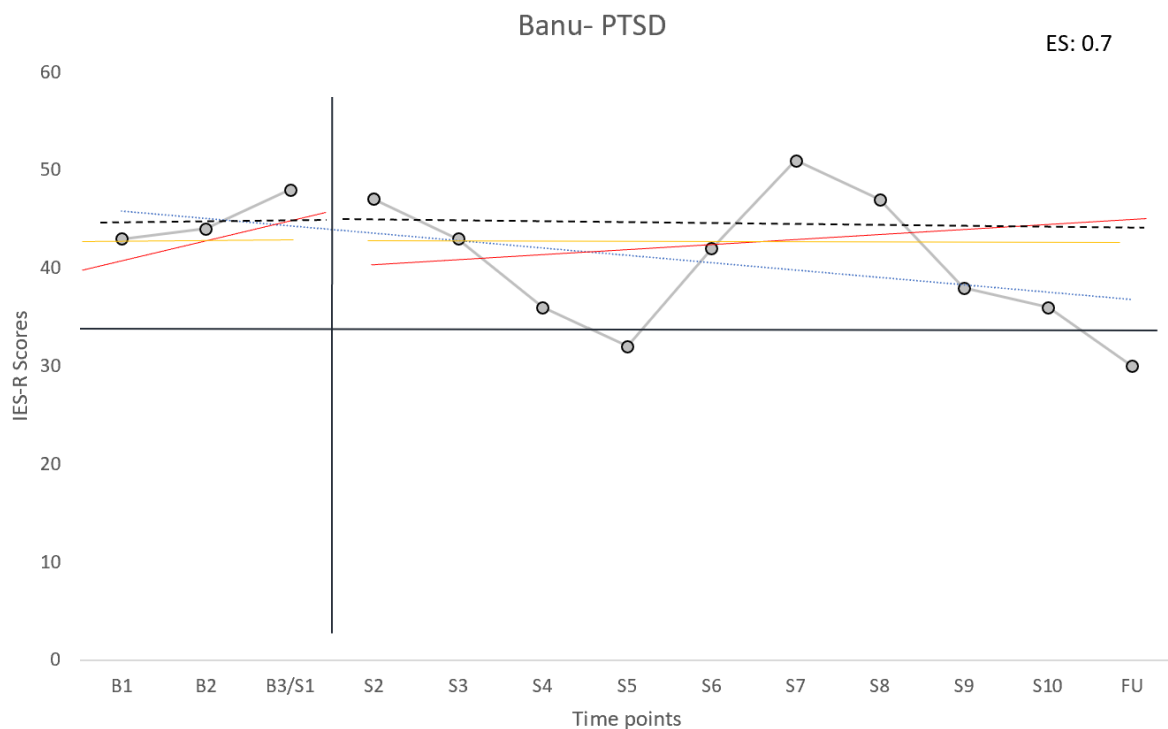
SD: Standard deviation.

IES-R and DASS-Subscales- higher scores indicate higher levels of PTSD, depression, anxiety, and stress symptoms. SCCS- higher scores indicate higher levels of SCC

Table 11*Summary of criteria for change between phases*

Number of points in the treatment phase	Number of points in the predicted direction to conclude that there is a change
5	5
6,7	6
8	7
9,10	8
11,12	9
13	10
14	11
15,17	12

Figures 7A, 7B, and 7C represent changes in level, trend, and validity values of CDC and PEM for Banu's IES-R, DASS-Subscales, and SCCS.

Figure 7A*Visual Analysis of Banu's IES-R*

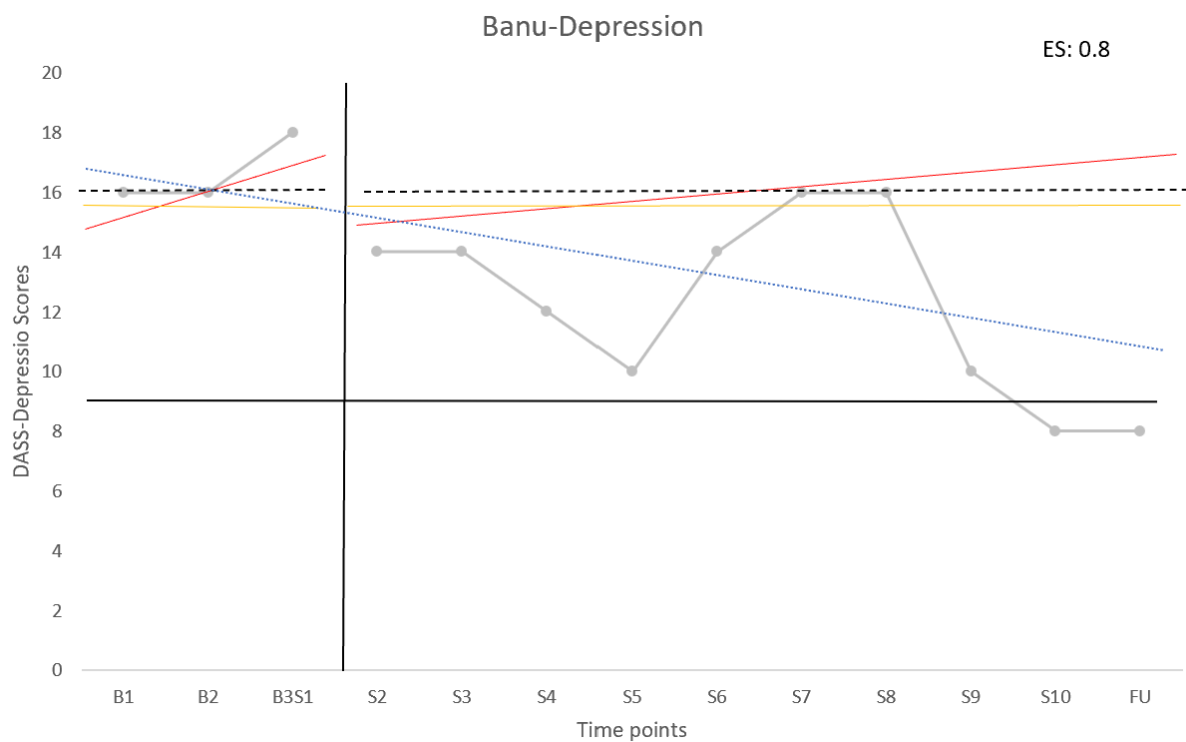
Note. Horizontal black line represents clinical cut-off for IES-R, dotted blue line represents general trendline, red line represents the adjusted trendline (0.25 SD) of the baseline for CDC, orange line represents the adjusted mean of the baseline for CDC, and dashed black line represents the median of the baseline for PEM.

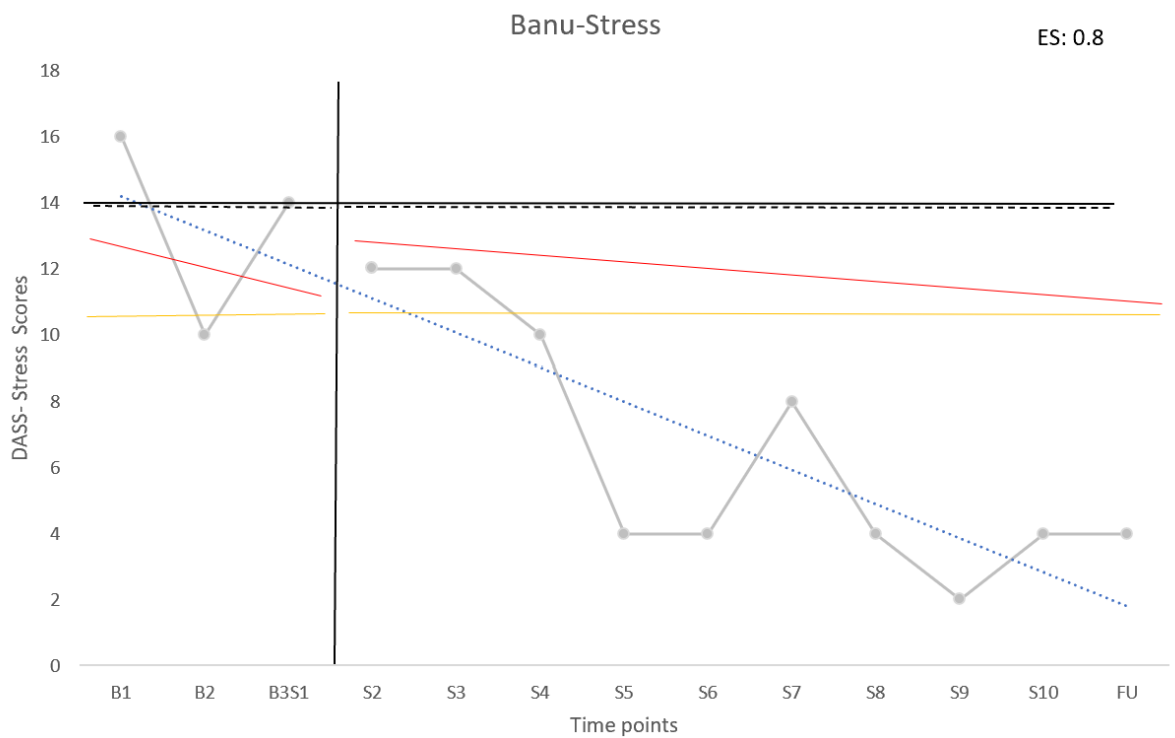
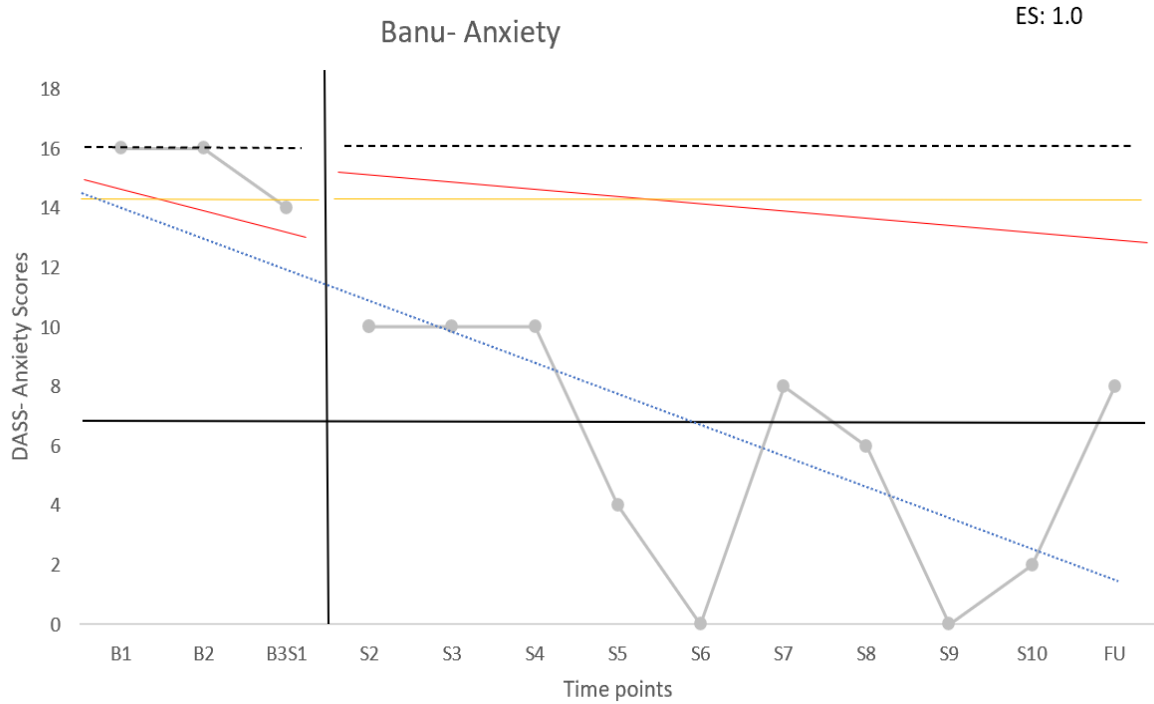
Interpretation of Banu's IES-R trend, variability, CDC, and PEM: There is a slight upward trend in the baseline phase, but a non-linear trend in the treatment phase. PTSD scores of Banu incline to decline as the overall trendline represents. It can be seen in Figure 7A that there is variability in the treatment points, with spikes in Session 5 and Session 7.

The treatment phase (including FU) has 10 data points. Fisher et al. (2003) suggested that there must be at least 8 points in the predicted direction (below both lines of adjusted mean and trendline of the baseline) to conclude that there is a change. In Figure 7A, there are 6 data points below the two lines (adjusted mean and trendline), which indicates no change in the treatment phase. PEM analysis was run to investigate the treatment effectiveness, and it was found to be 0.70 (the number of points below the median of the baseline), which represents "moderate effectiveness."

Figure 7B

Visual Analysis of Banu's DASS- Subscales





Note. Horizontal black line represents clinical cut-off, dotted blue line represents general trendline, red line represents the adjusted trendline (0.25 SD) of the baseline for CDC, orange

line represents the adjusted mean of the baseline for CDC, and dashed black line represents the median of the baseline for PEM.

Interpretation of Banu's DASS-Depression trend, variability, CDC, and PEM:

There is an upward trend in the baseline phase, but a non-linear trend in the treatment phase. Depression scores of Banu show a notable decline, as the overall trendline demonstrates. It can be seen in Figure 7B-Depression that there is moderate variability, as there are no significant spikes in the treatment phase. In Figure 7B-Depression, there are 8 data points below the two lines (adjusted mean and trendline), which indicates a change in the treatment phase. PEM analysis was run to investigate the treatment effectiveness, and it was found to be 0.80 (the number of points below the median of the baseline), which represents "moderate effectiveness."

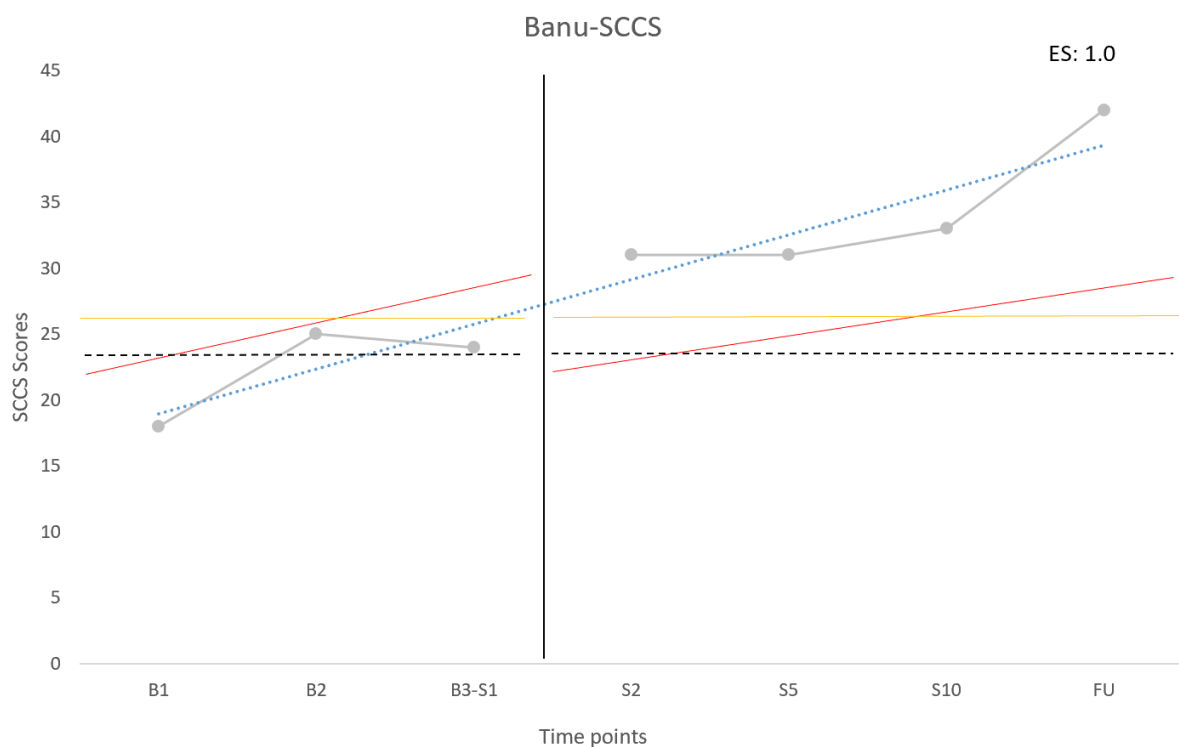
Interpretation of Banu's DASS-Anxiety trend, variability, CDC, and PEM: There is a downward trend in the baseline phase, but a non-linear trend in the treatment phase. Anxiety scores of Banu show a significant decline, as the overall trendline demonstrates. It can be seen in Figure 7B-Anxiety that there is considerable variability, with significant spikes at S6, S7, and S9 in the treatment phase. In Figure 7B-Anxiety, there are 10 data points below the two lines (adjusted mean and trendline), indicating a change in the treatment phase. PEM analysis was conducted to investigate the treatment effectiveness, and it was found to be 1.0 (the number of points below the median of the baseline), which represents "high effectiveness".

Interpretation of Banu's DASS- Stress trend, variability, CDC, and PEM: There is a downward trend in the baseline phase, but a non-linear trend in the treatment phase. Stress scores of Banu show a significant decline, as the overall trendline demonstrates. It can be seen in Figure 7B-Stress that there is moderate variability, with no significant spikes in the treatment phase. In Figure 7B-Stress, there are 8 data points below the two lines (adjusted

mean and trendline), indicating a change in the treatment phase. PEM analysis was conducted to investigate the treatment effectiveness, and it was found to be .80 (the number of points below the median of the baseline), which represents "moderate effectiveness."

Figure 7C

Visual Analysis of Banu's SCCS



Note. Dotted blue line represents general trendline, red line represents the adjusted trendline (0.25 SD) of the baseline for CDC, orange line represents the adjusted mean of the baseline for CDC, and dashed black line represents the median of the baseline for PEM.

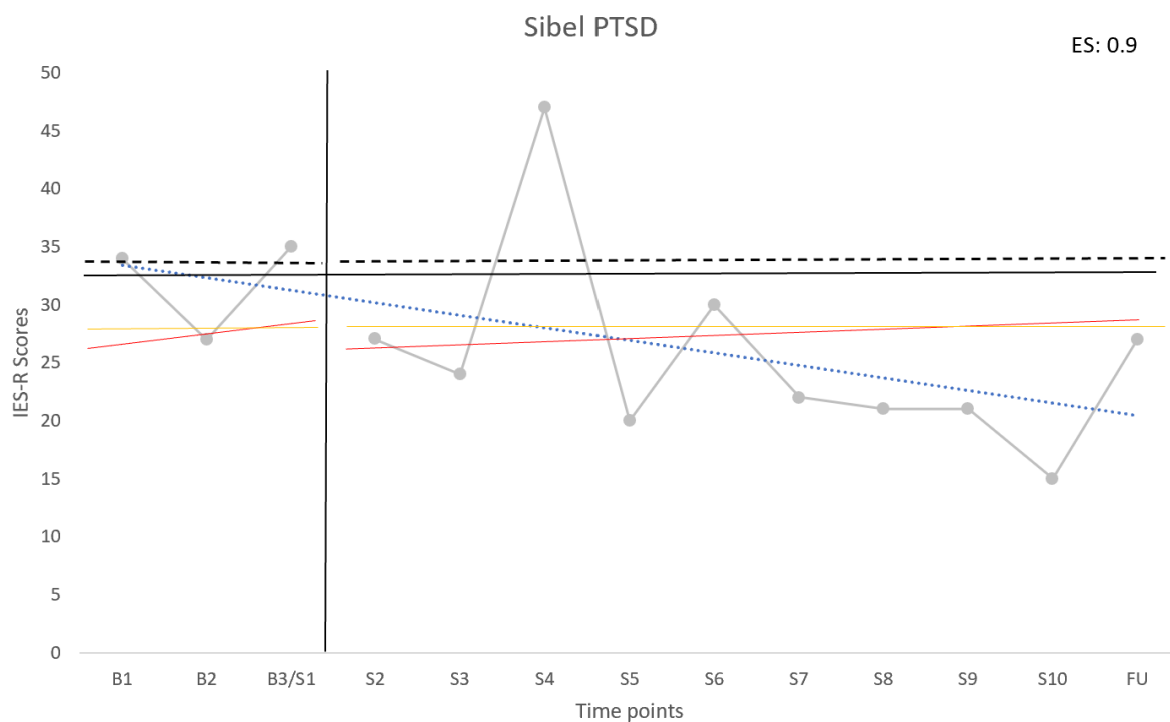
Interpretation of Banu's SCCS trend, variability, CDC, and PEM: There are upward trends in both the baseline and treatment phases. SCCS scores of Banu show a significant increase, as the overall trendline demonstrates. It can be seen in Figure 7C that there is moderate variability, with no significant spikes in the treatment phase. In Figure 7C, the treatment phase has 4 data points for SCCS. However, Fisher et al. (2003) suggest that

there must be at least 5 data points in the predicted direction (above the adjusted trendline and mean for SCCS, as higher points indicate high SCC) to inspect the changes between phases. Thus, it becomes difficult to investigate the change in the treatment phase for Banu's SCCS. PEM analysis was conducted to investigate the treatment effectiveness, and it was found to be 1.0 (the number of points above the median of the baseline), which represents "high effectiveness".

Figures 8A, 8B, and 8C represent changes in level, trend, and validity, and values of CDC and PEM for Sibel's IES-R, DASS-Subscales, and SCCS.

Figure 8A

Visual Analysis of Sibel's IES-R

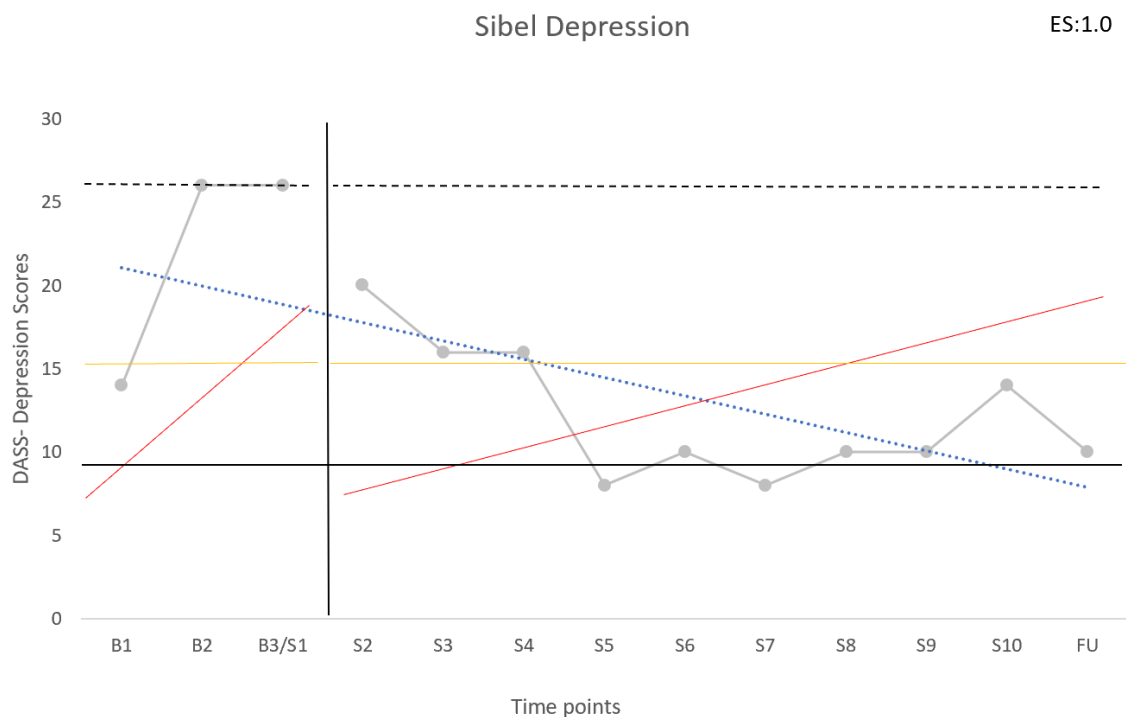


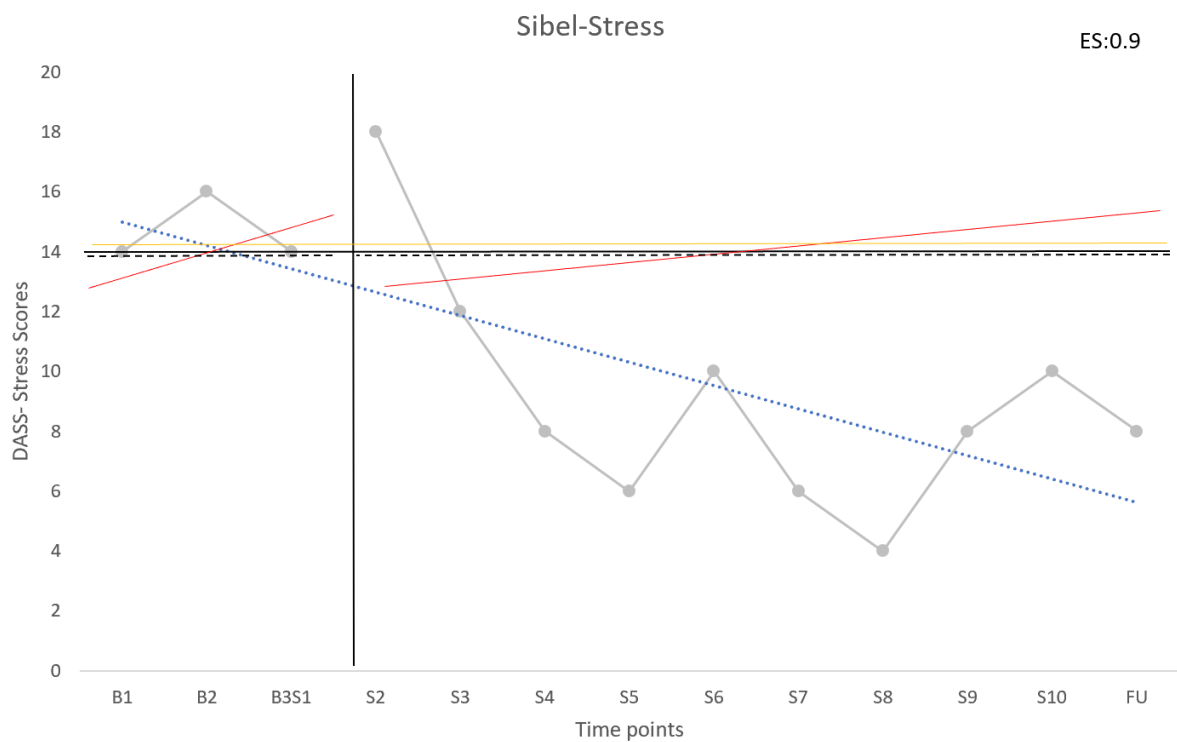
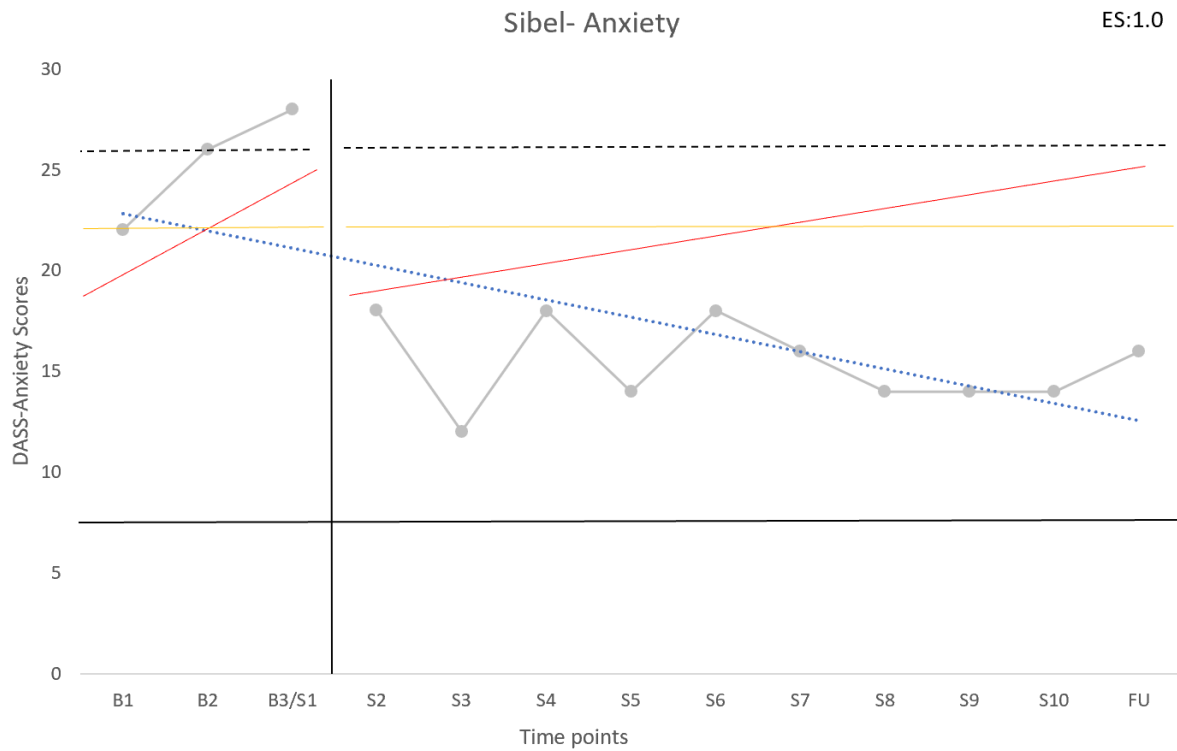
Note. Horizontal black line represents clinical cut-off, dotted blue line represents general trendline, red line represents the adjusted trendline (0.25 SD) of the baseline for CDC, orange line represents the adjusted mean of the baseline for CDC, and dashed black line represents the median of the baseline for PEM.

Interpretation of Sibel's IES-R trend, variability, CDC, and PEM: There is a non-linear trend in the baseline phase, but a slight downward trend in the treatment phase. PTSD scores of Sibel demonstrate a decline, as the overall trendline represents. It can be seen in Figure 8A that there is moderate variability in the treatment points, with a spike in Session 4. The treatment phase (including follow-up) has 10 data points, and there are 7 data points below the two lines (adjusted mean and trendline), which indicate no change in the treatment phase for PTSD. PEM analysis was conducted to investigate the treatment effectiveness, and it was found to be 0.9 (the number of points below the median of the baseline), which represents "high effectiveness".

Figure 8B

Visual Analysis of Sibel's DASS- Subscales





Note. Horizontal black line represents clinical cut-off, dotted blue line represents general trendline, red line represents the adjusted trendline (0.25 SD) of the baseline for CDC, orange

line represents the adjusted mean of the baseline for CDC, and dashed black line represents the median of the baseline for PEM.

Interpretation of Sibel's DASS-Depression trend, variability, CDC, and PEM:

There is a non-linear trend in the baseline phase, but a slight downward trend in the treatment phase. Depression scores of Sibel represent a remarkable decline, as the overall trendline demonstrates. It can be seen in Figure 8B-Depression that there is moderate variability in the treatment points, with no significant spikes. The treatment phase (including follow-up) has 10 data points, and there are 7 data points below the two lines (adjusted mean and trendline), which indicates no change for depression in the treatment phase. PEM analysis was conducted to investigate the treatment effectiveness, and it was found to be 1.0 (the number of points below the median of the baseline), which represents "high effectiveness."

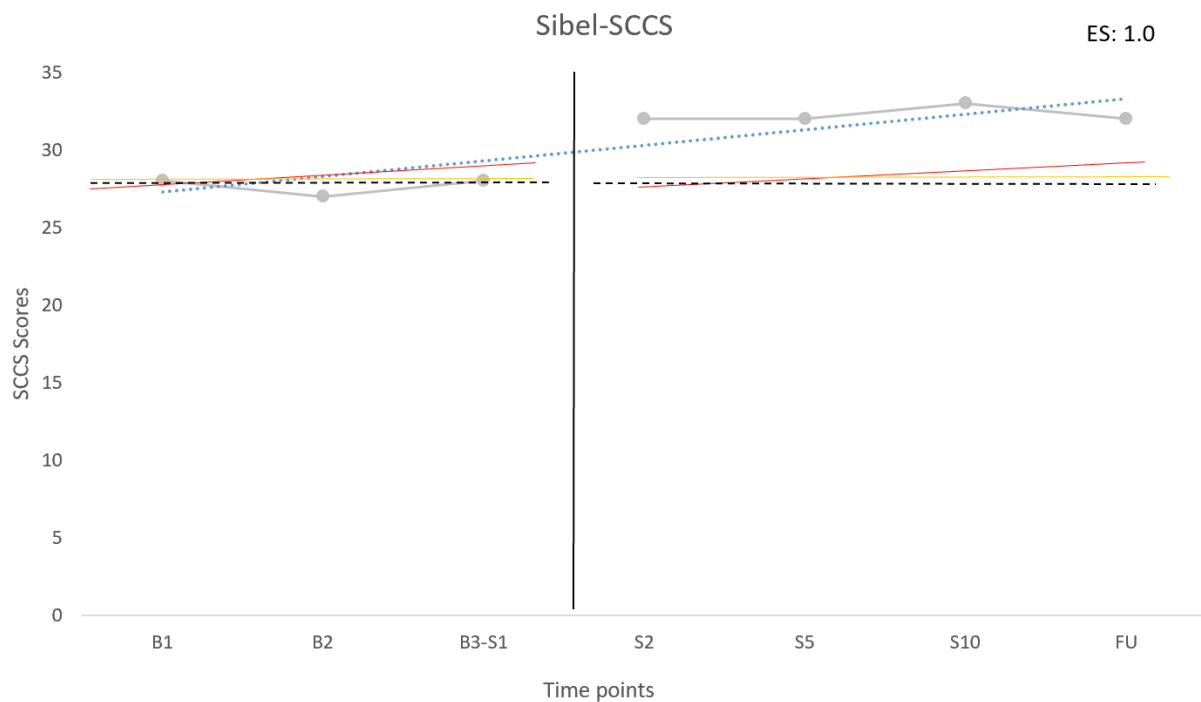
Interpretation of Sibel's DASS-Anxiety trend, variability, CDC, and PEM: There is an upward trend in the baseline phase, but a slight downward trend in the treatment phase. Anxiety scores of Sibel represent a remarkable decline, as the overall trendline demonstrates. It can be seen in Figure 8B-Anxiety that there is moderate variability, with no significant spikes in the treatment phase. In Figure 8B-Anxiety, there are 10 data points below the two lines (adjusted mean and trendline), indicating a change for anxiety in the treatment phase. PEM analysis was conducted to investigate the treatment effectiveness, and it was found to be 1.0 (the number of points below the median of the baseline), which represents "high effectiveness".

Interpretation of Sibel's DASS-Stress trend, variability, CDC, and PEM: There is a non-linear trend in the baseline phase, but a remarkable downward trend in the treatment phase. Stress scores of Sibel represent a remarkable decline, as the overall trendline demonstrates. It can be seen in Figure 8B-Stress that there is moderate variability, with no significant spikes in the treatment phase. In Figure 8B-Stress, there are 9 data points below

the two lines (adjusted mean and trendline), indicating a change for stress in the treatment phase. PEM analysis was conducted to investigate the treatment effectiveness, and it was found to be 0.9 (the number of points below the median of the baseline), which represents "high effectiveness."

Figure 8C

Visual Analysis of Sibel's SCCS



Note. Dotted blue line represents general trendline, red line represents the adjusted trendline (0.25 SD) of the baseline for CDC, orange line represents the adjusted mean of the baseline for CDC, and dashed black line represents the median of the baseline for PEM.

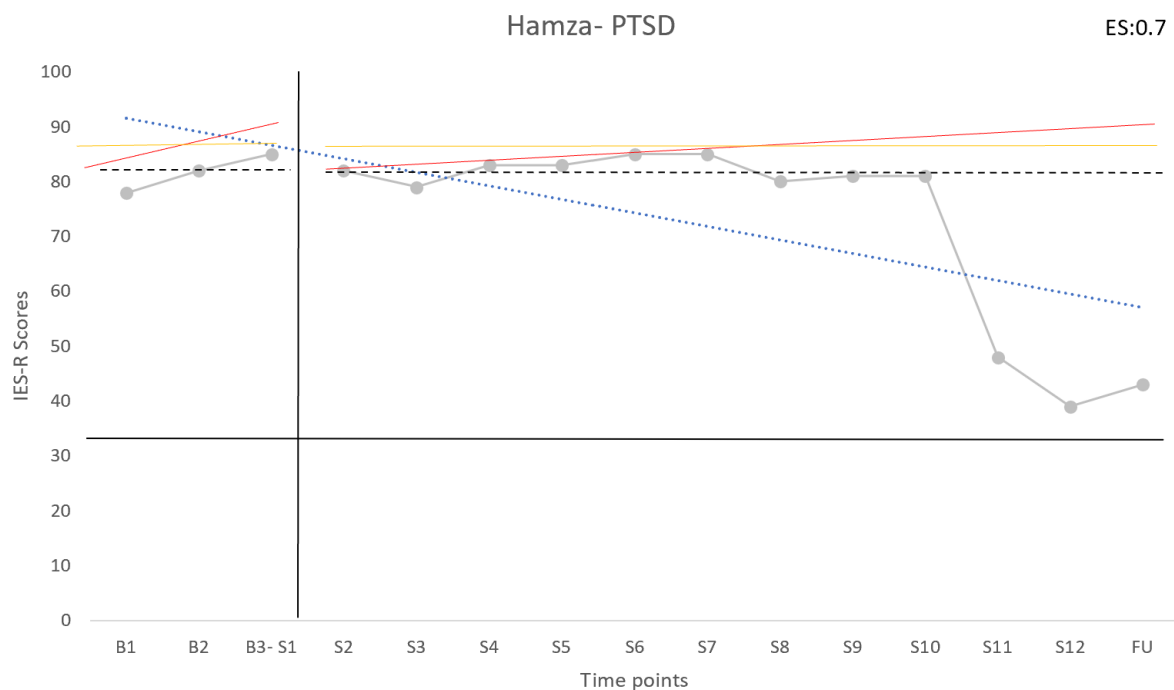
Interpretation of Sibel's SCCS trend, variability, CDC, and PEM: There are slight upward trends in both the baseline and treatment phases. SCCS scores of Sibel show an increase, as the overall trendline demonstrates. In Figure 8C, there is moderate variability, with no significant spikes in the treatment phase. Although the treatment phase has 4 data points for SCCS, Fisher et al. (2003) suggest that there must be at least 5 data points in the

predicted direction (above the adjusted trendline and mean for SCCS, as higher points indicate high SCC) to inspect the changes between phases. As a result, it is challenging to thoroughly assess the change in the treatment phase for Sibel's SCCS. PEM analysis was conducted to investigate the treatment effectiveness, and it was found to be 1.0 (the number of points above the median of the baseline), indicating "high effectiveness."

Figures 9A, 9B, and 9C represent changes in level, trend, and validity, values of CDC and PEM for Hamza's IES-R, DASS-Subscales, and SCCS.

Figure 9A

Visual Analysis of Hamza's IES-R

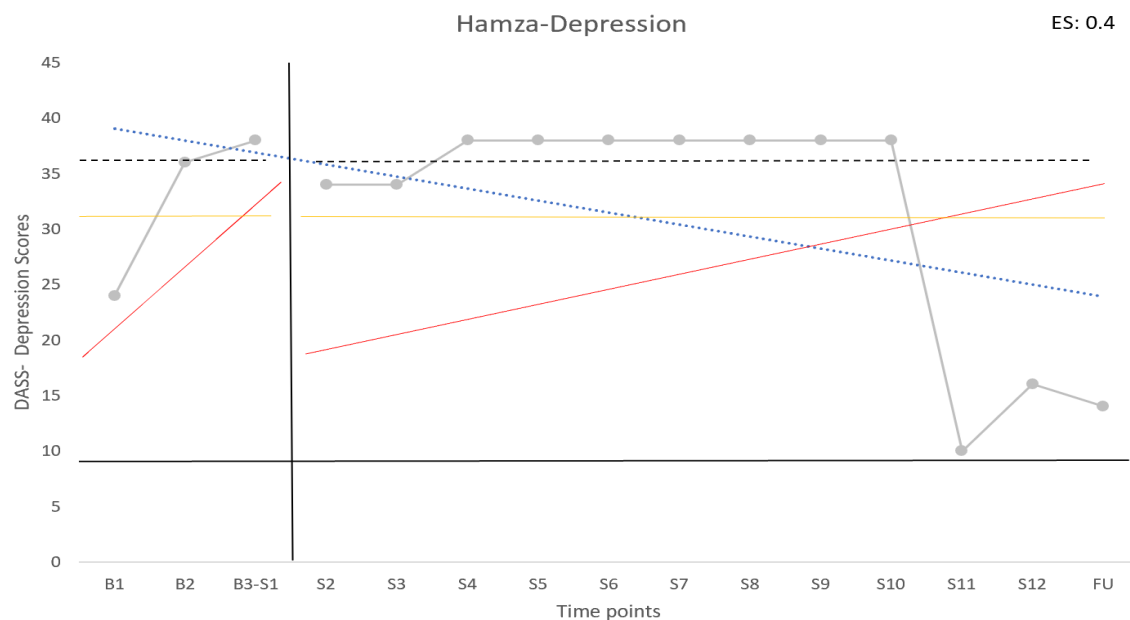


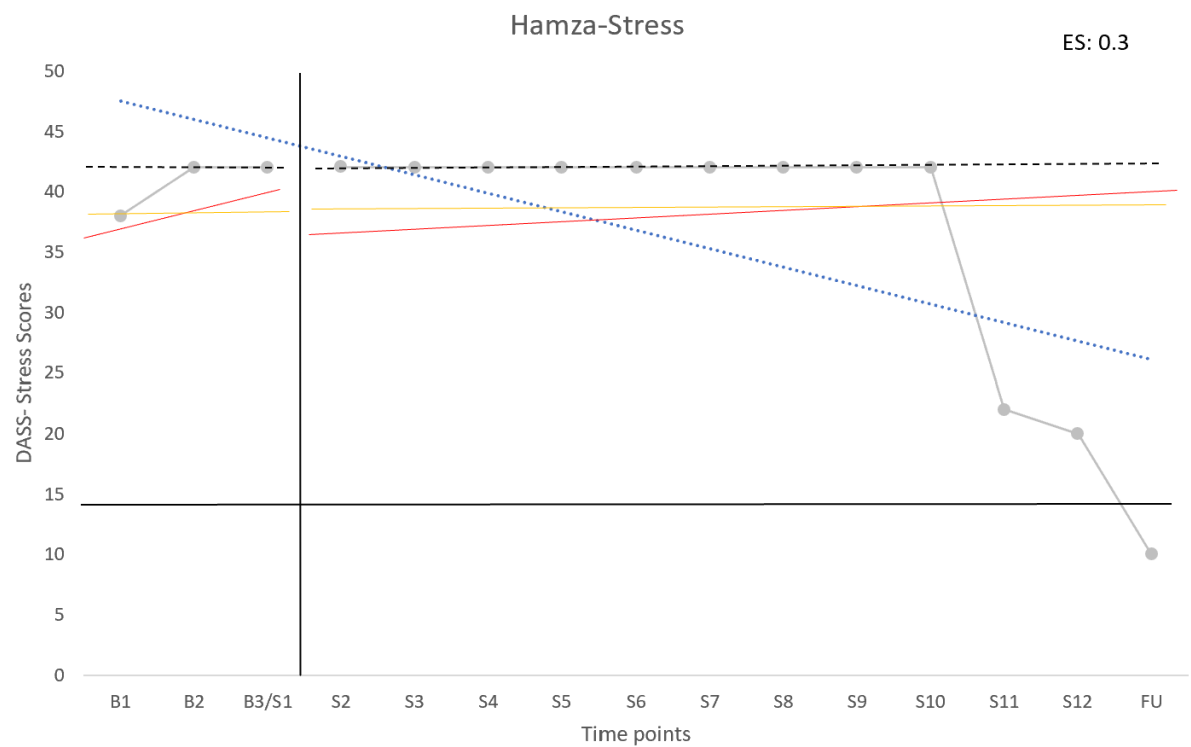
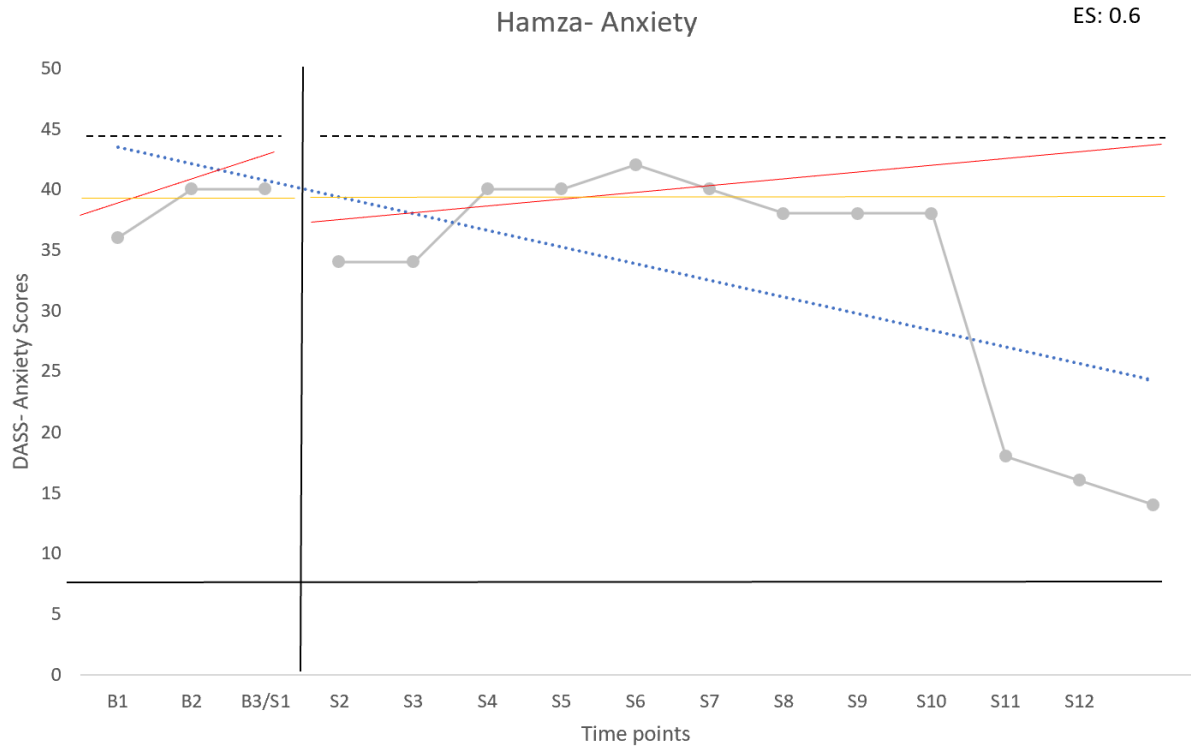
Note. Horizontal black line represents clinical cut-off, dotted blue line represents general trendline, red line represents the adjusted trendline (0.25 SD) of the baseline for CDC, orange line represents the adjusted mean of the baseline for CDC, and dashed black line represents the median of the baseline for PEM.

Interpretation of Hamza's IES-R trend, variability, CDC, and PEM: There is an upward trend in the baseline phase, but a downward trend in the treatment phase. PTSD scores of Hamza demonstrate a decline, as the overall trendline represents. It can be seen in Figure 9A that there is moderate variability in the treatment points, with a notable decline in Session S11. The treatment phase (including the follow-up) has 12 data points; however, Fisher et al. (2003) suggest that there must be at least 9 points in the predicted direction (below both lines) to conclude that there is a change. In Figure 9A, there are 7 data points below the two lines (adjusted mean and trendline), indicating no change in the treatment phase for PTSD. PEM analysis was conducted to investigate the treatment effectiveness, and it was found to be 0.7 (the number of points below the median of the baseline), representing "moderate effectiveness".

Figure 9B

Visual Analysis of Hamza's DASS- Subscales





Note. Horizontal black line represents clinical cut-off, dotted blue line represents general trendline, red line represents the adjusted trendline (0.25 SD) of the baseline for CDC, orange

line represents the adjusted mean of the baseline for CDC, and dashed black line represents the median of the baseline for PEM.

Interpretation of Hamza’s DASS-Depression trend, variability, CDC, and PEM:

There is an upward trend in the baseline phase, but a downward trend in the treatment phase. Depression scores of Hamza represent a decline, as the overall trendline demonstrates. It can be seen in Figure 9B-Depression that there is moderate variability in the treatment points, with a notable decline in Session S11. The treatment phase (including the follow-up) has 12 data points, and there are 3 data points below the two lines (adjusted mean and trendline), indicating no change for depression in the treatment phase. PEM analysis was conducted to investigate the treatment effectiveness, and it was found to be 0.4 (the number of points below the median of the baseline), which represents "no effectiveness".

Interpretation of Hamza’s DASS-Anxiety trend, variability, CDC, and PEM:

There is an upward trend in the baseline phase, but a downward trend in the treatment phase. Anxiety scores of Hamza represent a remarkable decline as the overall trendline demonstrates. It can be seen in Figure 9B-Anxiety that there is moderate variability as there as there is a remarkable decline in Session S11. In Figure 9B-Anxiety, the treatment phase (including FU) has 12 data points, and there are 8 data points below the two lines (adjusted mean and trendline), which indicates there is no change for anxiety in the treatment phase. PEM analysis was run to investigate the treatment effectiveness and it was found 0.6 (number of points below the median of the baseline) which represents “questionable effectiveness”.

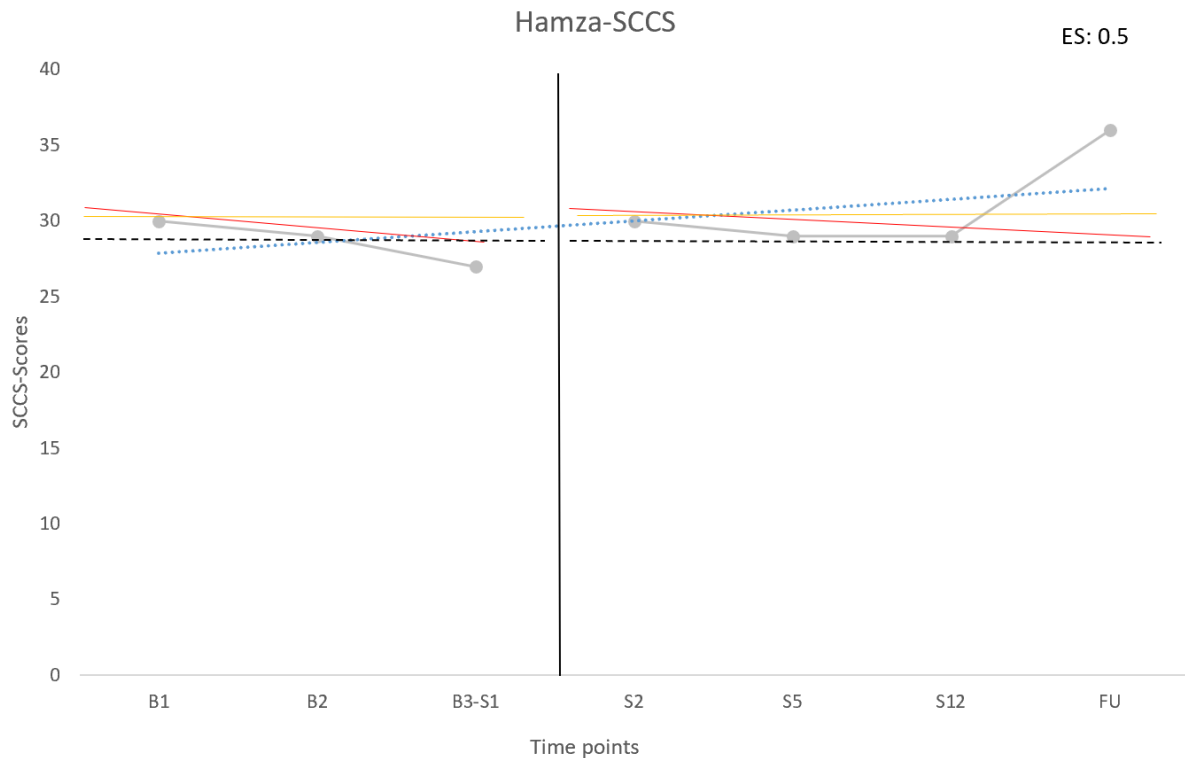
Interpretation of Hamza’s DASS- Stress trend, variability, CDC, and PEM:

There is an upward trend in the baseline phase, but a downward trend in the treatment phase. Stress scores of Hamza represent a remarkable decline as the overall trendline demonstrates. It can be seen in Figure 9B-Stress that there is moderate variability as there is a remarkable decline in Session S11. In Figure 9B-Stress, there are 3 data points below the two lines

(adjusted mean and trendline), which indicate there is no change for stress in the treatment phase. PEM analysis was run to investigate the treatment effectiveness and it was found 0.3 (number of points below the median of the baseline) which represents “no effectiveness”.

Figure 9C

Visual Analysis of Hamza's SCCS



Note. Dotted blue line represents general trendline, red line represents the adjusted trendline (0.25 SD) of the baseline for CDC, orange line represents the adjusted mean of the baseline for CDC, and dashed black line represents the median of the baseline for PEM.

Interpretation of Hamza's SCCS trend, variability, CDC, and PEM: There is a slight downward trend in the baseline, but an upward trend in the treatment phases. SCCS scores of Hamza represent a slight increase, as the overall trendline demonstrates. It can be seen in Figure 9C that there is moderate variability, with no significant spikes in the treatment phase. In Figure 9C, the treatment phase has 4 data points for SCCS. However, Fisher et al. (2003) suggest that there must be at least 5 data points in the predicted direction (above the

adjusted trendline and mean for SCCS, as higher points indicate high SCC) to inspect the changes between phases. Thus, it is challenging to investigate the change in the treatment phase for Hamza's SCCS. PEM analysis was conducted to investigate the treatment effectiveness, and it was found to be 0.5 (the number of points above the median of the baseline), which represents "questionable effectiveness".

4.4.3. *Simulation Modelling Analysis Outcomes*

SMA was used to investigate the cross-correlational relationship between the variables, aiming to explore whether a change in one variable leads to a change in another. Tables 11, 12, and 13 outline both significant and non-significant relationships between pairs of questionnaires in detail.

- **SMA for IES-R and DASS-Depression**

SMA was utilized to explore the cross-correlational relationship between the IES-R and the DASS-Depression subscale. As shown in Table 12, the IES-R and DASS-Depression scores exhibited a strong correlation for Banu in lag-1 ($r=+0.67$, $p<0.05$) and lag 0 ($r=+0.88$, $p<0.01$), and for Hamza in lag 0 ($r=+0.79$, $p<0.01$). However, no relationship was observed at any lag for Sibel's IES-R and DASS-Depression ($p>0.05$).

- **SMA for IES-R and DASS- Anxiety**

SMA was used to examine the cross-correlational relationship between the IES-R and the DASS-Anxiety subscale. As depicted in Table 12, the IES-R and DASS-Anxiety scores exhibited a strong correlation for Sibel in lag-2 ($r=+0.55$, $p<0.01$) and lag 0 ($r=+0.79$, $p<0.01$), and for Hamza in lag-1 ($r=+0.70$, $p<0.05$) and lag 0 ($r=+0.91$, $p<0.01$). However, no relationship was observed at any lag for Banu's IES-R and DASS-Anxiety ($p>0.05$).

- **IES-R and DASS-Stress**

SMA was employed to investigate the cross-correlational relationship between the IES-R and the DASS-Stress subscale. As represented in Table 12, the IES-R and DASS-

Stress scores were found to be highly correlated for Sibel in lag-2 ($r=+0.62$, $p<0.01$), lag-1 ($r=+0.49$, $p<0.05$), lag 0 ($r=+0.47$, $p<0.05$), and lag+2 ($r=+0.41$, $p<0.05$) and for Hamza in lag-2 ($r=+0.47$, $p<0.05$), lag-1 ($r=+0.59$, $p<0.05$) and lag 0 $r=+0.78$, $p<0.01$). However, no relationship was found in any lag for Banu's IES-R and DASS- Stress ($p>0.05$).

Table 12

SMA Lag correlations between IES-R and DASS-Subscales

Participant	Lag	IES-R and DASS- Depression	Lag	IES-R and DASS-Anxiety	Lag	IES-R and DASS-Stress
Banu	-2	$r= +0.16$	-2	$r= + 0.26$	-2	$r= +0.19$
	-1	$r= +0.67^*$	-1	$r= +0.27$	-1	$r= +0.25$
	0	$r= +0.88^{**}$	0	$r= +0.41$	0	$r= +0.50$
	+1	$r= +0.42$	+1	$r= +0.34$	+1	$r= +0.35$
	+2	$r= -0.35$	+2	$r= +0.06$	+2	$r= +0.04$
Sibel	-2	$r= +0.35$	-2	$r= +0.55^{**}$	-2	$r= +0.62^{**}$
	-1	$r= +0.35$	-1	$r= +0.04$	-1	$r= +0.49^*$
	0	$r= +0.39$	0	$r= +0.79^{**}$	0	$r= +0.47^*$
	+1	$r= +0.18$	+1	$r= +0.15$	+1	$r= +0.20$
	+2	$r= -0.17$	+2	$r= -0.19$	+2	$r= -0.41^*$
Hamza	-2	$r= -0.19$	-2	$r= +0.08$	-2	$r= +0.47^*$
	-1	$r= +0.39$	-1	$r= +0.70^*$	-1	$r= +0.59^*$
	0	$r= +0.79^{**}$	0	$r= +0.91^{**}$	0	$r= +0.78^{**}$
	+1	$r= +0.43$	+1	$r= +0.37$	+1	$r= +0.51$
	+2	$r= -0.25$	+2	$r= -0.17$	+2	$r= -0.04$

Note. $^* = p<0.05$, $^{**} = P<0.01$, +/- indicates the direction of the relationship

- **Depression and Anxiety**

SMA was employed to investigate the cross-correlational relationship between the DASS-Depression and DASS-Anxiety subscales. As represented in Table 13, the DASS-Depression and DASS-Anxiety scores were found to be highly correlated for Banu in lag 0 ($r=+0.59$, $p<0.05$), for Sibel in lag-2 ($r=+0.78$, $p<0.01$) and for Hamza in lag-1 ($r=+0.58$, $p<0.05$), lag 0 ($r=+0.89$, $p<0.01$).

- **Depression and Stress**

SMA was employed to investigate the cross-correlational relationship between the DASS-Depression and DASS-Stress subscales. As represented in Table 13, the DASS-Depression and DASS-Stress scores were found to be highly correlated for Banu in lag 0 ($r=+0.39$, $p<0.05$), for Sibel in lag-2 ($r=+0.60$, $p<0.05$), lag-1 ($r=+0.71$, $p<0.05$), lag 0 ($r=+0.83$, $p<0.01$), and lag+2 ($r=-0.56$, $p<0.05$), and for Hamza in lag 0 ($r=+0.59$, $p<0.05$) and in lag+1 ($r=+0.75$, $p<0.01$).

- **Anxiety and Stress**

SMA was employed to investigate the cross-correlational relationship between the DASS-Anxiety and DASS-Stress subscales, and the results were presented in Table 13. As represented, the DASS-Anxiety and DASS-Stress scores were found to be highly correlated for Banu in lag-2 ($r=+0.48$, $p<0.05$), lag-1 ($r=+0.78$, $p<0.05$), lag 0 ($r=+0.89$, $p<0.05$), lag+1 ($r=0.67$, $p<0.05$) and in lag+2 ($r=0.69$, $p<0.01$). In other words, the temporal relationship between Banu's DASS-Anxiety and DASS-Stress scores were highly correlated in all lags. On the other hand, this relationship for Sibel was found to be significant only for lag+2 ($r=-0.66$, $p<0.05$). Additionally, SMA analysis found correlations between Hamza's DASS-Anxiety and Stress in lag-2 ($r=+0.44$, $p<0.05$), lag-1 ($r=+0.59$, $p<0.05$), and lag 0 ($r=+0.74$, $p<0.05$).

Table 13*SMA Lag Correlations between DASS subscales (Depression, Anxiety, and Stress)*

Participant	Lag	Depression and Anxiety	Lag	Depression and Stress	Lag	Anxiety and Stress
Banu	-2	r= +0.31	-2	r= + 0.36	-2	r= +0.48*
	-1	r= +0.48	-1	r= +0.43	-1	r= +0.78*
	0	r= +0.59*	0	r= +0.39*	0	r= +0.89*
	+1	r= +0.45	+1	r= +0.43	+1	r= +0.67*
	+2	r= +0.24	+2	r= +0.33	+2	r= +0.69**
Sibel	-2	r= +0.78**	-2	r= +0.60*	-2	r= +0.39
	-1	r= +0.39	-1	r= +0.71*	-1	r= +0.36
	0	r= +0.54	0	r= +0.83**	0	r= +0.58
	+1	r= +0.27	+1	r= +0.55	+1	r= +0.49
	+2	r= -0.18	+2	r= -0.56*	+2	r= -0.66*
Hamza	-2	r= +0.20	-2	r= -0.36	-2	r= +0.44*
	-1	r= +0.58*	-1	r= +0.14	-1	r= +0.59*
	0	r= +0.89**	0	r= +0.59*	0	r= +0.74*
	+1	r= +0.31	+1	r= +0.75**	+1	r= +0.44
	+2	r= -0.04	+2	r= +0.25	+2	r= -0.19

Note: *= p<0.05, **=P<0.01, +/-= indicates the direction of the relationship

- **SCCS and IES-R**

SMA was employed to investigate the cross-correlational relationship between SCCS and IES-R. As represented in Table 14, the SCCS and IES-R scores were not correlated for Banu and Sibel ($p>0.05$). However, it was found to be highly correlated for Hamza in lag-1 ($r=-0.43$, $p<0.01$) and lag 0 ($r=-0.33$, $p<0.01$).

- **SCCS and DASS- Depression**

SMA was employed to investigate the cross-correlational relationship between the IES-R and the DASS-Depression subscale. As represented in Table 14, the SCCS and DASS-Depression scores were found to be highly correlated for Banu in lag 0 ($r=-0.94$, $p<0.01$) and for Hamza in lag+2 ($r=+0.76$, $p<0.05$), but it was not found significant for Sibel ($p>0.05$).

- **SCCS and DASS- Anxiety**

SMA was employed to investigate the cross-correlational relationship between the SCCS and DASS-Anxiety subscale. As represented in Table 14, the SCCS and DASS-Anxiety scores were found to be highly correlated for Banu in lag 0 ($r=-0.91$, $p<0.01$) and for Hamza in lag+2 ($r=0.76$, $p<0.05$), but no significant correlation was found for Sibel ($p>0.05$).

- **SCCS and DASS- Stress**

SMA was employed to investigate the cross-correlational relationship between the IES-R and DASS- Stress subscale. As represented in Table 14, the SCCS and DASS-Stress scores were found to be highly correlated for Banu in lag 0 ($r=-0.84$, $p<0.05$), for Sibel in lag-2 ($r=+0.57$, $p<0.05$) and for Hamza in lag 0 ($r=-0.32$, $p<0.01$).

Table 14

SMA Lag Correlations between SCCS and IES-R, and DASS-subcales

Participant	Lag	SCCS and IES-R	Lag	SCCS and Depression	Lag	SCCS and Anxiety	Lag	SCCS and Stress
Banu	-2	$r= 0.00$	-2	$r= -0.73$	-2	$r= -0.89$	-2	$r= -0.53$

	-1	r= -0.44	-1	r= -0.70	-1	r= -0.88	-1	r= -0.22
	0	r= -0.65	0	r= -0.94**	0	r= -	0	r= -0.84*
						0.91**		
	+1	r= -0.75	+1	r= -0.75	+1	r= -0.83	+1	r= -0.39
	+2	r= -0.80	+2	r= -0.95	+2	r= -0.80	+2	r= -0.95
Sibel	-2	r= -0.34	-2	r= +0.46	-2	r= -0.22	-2	r= +0.57*
	-1	r= -0.28	-1	r= +0.22	-1	r= -0.59	-1	r= -0.37
	0	r= -0.02	0	r= -0.47	0	r= -0.72	0	r= -0.55
	+1	r= -0.54	+1	r= -0.95	+1	r= -0.84	+1	r= -0.79
	+2	r= -0.00	+2	r= -0.70	+2	r= -0.19	+2	r= -0.95
Hamza	-2	r= +0.87	-2	r= +0.34	-2	r= -0.16	-2	r= +0.73
	-1	r= -0.43**	-1	r= +0.56	-1	r= +0.30	-1	r= +0.14
	0	r= -0.33**	0	r= -0.28	0	r= -0.24	0	r= -0.32**
	+1	r= +0.59	+1	r= -0.15	+1	r= +0.11	+1	r= +0.14
	+2	r= +0.13	+2	r= +0.76*	+2	r= +0.76*	+2	r= +0.73

Note: *= p<0.05, **=P<0.01, +/-= indicates the direction of the relationship

Note: Significant Negative r values show the reverse correlation between variables. However, in this table, significant negative correlations indicate that the results are in the predicted direction while SCCS scores increase and the symptoms of PTSD, Depression, Anxiety, and Stress decrease.

4.4.4. *Reliable Change Index and Clinically Significant Change Outcomes*

The RCI and CSC scores were evaluated to investigate if the changes between pre-treatment, post-treatment, and follow-up measures are reliable and clinically significant. The RCI and CSC values are outlined in Table 15. Table 16 demonstrates the normative and clinical group data used when calculating the RCI values. As the questionnaires were given to

the participants in the Turkish format, The Turkish normative and clinical group data were referenced and used while calculating the RCI values, except for the SCCS questionnaire as there is no study exists investigating the Turkish clinical and normative group data for it. Thus, Kusec et al. (2016)'s data were used instead to evaluate the RCI values for SCCS in this study.

Table 15

RCI and CSC values (calculated with normative and clinical data present in literature for each questionnaire).

Participant	Time	IES-R	DASS (depression)	DASS (anxiety)	DASS (stress)	SCCS
Banu	Posttreatment (S10)	0.80	2.96	1.89**	1.003	-7.3**
	FU	1.60	2.96	1.08	1.003	-14.5**
Sibel	Posttreatment (S10)	2.17**	4.44*	1.62	0.40	-4.03**
	FU	0.80	5.92*	1.35	0.60	-3.2**
Hamza	Posttreatment (S12)	4.9*	6.7*	3.23*	2.21*	0
	FU	4.45*	7.41*	3.50*	3.21*	-5.6**

Note. *Reliable Change, ** Reliable and Significant Change, FU: Follow-up

Note. Pre-treatment values entered in the excel application represent the median value of the baseline for each participant. Post-treatment refers to the final NET session and Follow-up refers to the measurements taken a month after completing the NET sessions.

The RCI was calculated by using the formula indicated in Figure 6 and the excel application mentioned in section 4.3.3 to investigate if the RCI value is greater than 1.96. The RCI value greater than that (equates to the 95% confidence interval) reflects that the change is reliable.

- **Reliable and Clinically Significant Change in PTSD**

As demonstrated in Table 15 the changes in IES-R scores for post-treatment and follow-up were not found to be reliable and clinically significant for Banu. However, the change between Sibel's pre-treatment and post-treatment IES-R scores represents a reliable and clinically significant change (RCI=2.17). On the other hand, the change between Hamza's pre-treatment and post-treatment IES-R scores shows only a reliable change (RCI=4.9), without reaching clinical significance. Similarly, his pre-treatment and follow-up scores for the IES-R represent a reliable change (RCI=4.45) but not a clinically significant one for PTSD scores.

- **Reliable and Clinically Significant Change in Depression**

As indicated in Table 15, the changes in DASS-Depression scores for post-treatment and follow-up were not deemed reliable and clinically significant for Banu. However, the change between Sibel's pre-treatment and post-treatment for DASS-Depression demonstrates a reliable change (RCI=4.44), and the change between her pre-treatment and follow-up also exhibits a reliable change (R=-5.92). Similarly, for Hamza, the change between his pre-treatment and post-treatment for DASS-Depression shows only a reliable change (RCI=6.7) without reaching clinical significance. Likewise, his pre-treatment and follow-up scores indicate (RCI=7.41) only a reliable change for depression scores.

- **Reliable and Clinically Significant Change for Anxiety**

As demonstrated in Table 15, the change in Banu's DASS-Anxiety between pre-treatment and post-treatment was found to be reliable and clinically significant (RCI=1.89). However, the change between her pre-treatment and follow-up scores do not demonstrate reliability or clinical significance. The changes in DASS-Anxiety scores for post-treatment and follow-up were not found to be reliable and clinically significant for Sibel. For Hamza, the change between his pre-treatment and post-treatment for DASS-Anxiety shows only a

reliable change (RCI=3.23) but lacks clinical significance. Similarly, his pre-treatment and follow-up scores indicate (RCI=3.50) only a reliable change for DASS-Anxiety.

- **Reliable and Clinically Significant Change for Stress**

As demonstrated in Table 15, the changes in DASS-Stress scores for post-treatment and follow-up were not found to be reliable and clinically significant for Banu and Sibel. However, the change between Hamza's pre-treatment and post-treatment for DASS-Stress shows only a reliable change (RCI=2.21), but it was not clinically significant. Similarly, his pre-treatment and follow-up scores represent (RCI=3.21) only a reliable change for DASS-Stress.

- **Reliable and Clinically Significant Change for Self-Concept Clarity**

As demonstrated in Table 15, the change in Banu's SCCS between pre-treatment and post-treatment was found to be reliable and clinically significant (RCI=-7.3), and the change between her pre-treatment and follow-up scores was also found to be reliable and clinically significant (RCI= -14.5) for SCCS. The changes in SCCS scores for pre-treatment and post-treatment (RCI= -4.03) and pre-treatment and follow-up (RCI= -3.2) were found to be reliable and clinically significant for Sibel. However, the change between Hamza's pre-treatment and post-treatment for SCCS shows no significant change. However, his pre-treatment and follow-up scores represent (RCI=-5.6) reliable and significant change for SCCS.

Table 16

Normative and Clinical Data referenced when calculating the RCI and CSC values

Measure	Subscale	Study	Population	N	Score Range (Lowest- Highest)	Cronbach α	Mean and SD
Impact of Event Scale- Revised (IES-R)	Total	Corapcioglu et al. (2006)	Clinical Group (Participants applied to a mental and neurological disorders hospital in Istanbul, diagnosed with PTSD)	104	0-88	0.94	$\bar{x} = 43.04 (\pm 16.83)$
			Normative Group (Participants applied to a mental and neurological disorders hospital in Istanbul, not diagnosed with PTSD)	65			$\bar{x} = 16.65 (\pm 15.91)$
Depression, Anxiety, and Stress Scale (DASS-21)	Depression	Saricam (2018)	Clinical Group (Patients who went for treatment to a psychiatry clinic due to psychological and psychiatric problems in Turkiye)	101	0-42	0.87	$\bar{x} = 10.83 (\pm 5.55)$
			Normative Group (Formation education certificate program students from different faculties in Turkiye)	220			$\bar{x} = 5.88 (\pm 4.33)$
	Anxiety	Saricam (2018)	Clinical Group (Patients who went for treatment to a psychiatry clinic due to psychological and psychiatric problems in Turkiye)	101	0-42	0.85	$\bar{x} = 10.39 (\pm 5.18)$

			Normative Group (Formation education certificate program students from different faculties in Turkiye)	220			$\bar{x} = 5.37 (\pm 3.88)$
Stress	Saricam (2018)		Clinical Group (Patients who went for treatment to a psychiatry clinic due to psychological and psychiatric problems in Turkiye)	101	0-42	0.81	$\bar{x} = 7.90 (\pm 3.93)$
			Normative Group (Formation education certificate program students from different faculties in Turkiye)	220			$\bar{x} = 11.85 (\pm 4.59)$
Self-Concept Clarity Scale (SCCS)	Total	Kusec, Tallon, & Koerner (2016)	Clinical Group (Participants with high Generalised Anxiety Disorder were recruited via flyers and online advertisements)	54		0.89 (for Turkish SCCS, Sumer & Gungor, 1999)	$\bar{x} = 31.13 (\pm 9.87)$
			Normative Group (Participants with low Generalised Anxiety Disorder were recruited via flyers and online advertisements)	69			$\bar{x} = 43.91 (\pm 9.14)$

-

4.4.5. Change Interviews

CI's were conducted with each participant to inquire about their experiences with NET sessions by an independent researcher. An independent researcher was preferred to minimise the risk of influence of the main researcher on participants' responses regarding their NET experiences. The independent researcher, a Turkish social worker familiar with the interview process, posed semi-structured interview questions to each participant via an online MST meeting. The semi-structured change interviews lasted between 32 and 61 minutes.

The change interviews aimed to further interpret how change occurred in the NET intervention for each participant. The Qualitative Content Analysis method was used to analyse the interviews and gain a deeper understanding of the participants' subjective experiences related to the NET sessions (detailed information on Content Analysis was given in the section 3.2.4.1.). The data collected from the CI's enabled us to conduct mixed-method research for this study, aimed at supporting or challenging the results of the quantitative SCD. As a result, a deductive approach was employed for the Content Analysis of the CI's. Broadly, deductive Content Analysis is utilised as the analysis is conducted based on prior knowledge, and the study's objective is theory testing (Kyngas & Vanhanen, 1999). Since the CI's sought to reassess and investigate the changes identified in SCD (prior knowledge), deductive Qualitative Content Analysis was considered the most suitable approach for analysing the change interviews.

The Content Analysis of the CI's was conducted using Erlingsson and Brysiewicz's (2017) method in this study. Each change interview was transcribed and translated into English, with the text then segmented into MUs. These MUs were identified based on their primary meanings and grouped under "codes" according to their similarities and differences. Subsequently, the codes were further organised into categories based on their underlying meanings. No subcategories were established in this study. Table 17 presents the number of

MUs, codes, and categories formed for each interview question (subject), consisting of 159 MUs, 37 codes, and 6 categories across the CIs of the three participants. Additionally, Table 18 illustrates examples of each participant's responses to the interview questions. To ensure a reliable interrater agreement, the primary and independent researchers examined the MUs, codes, and categories, seeking similarities and differences in their findings. The interrater agreement was established at a minimum of 80% similarities between researchers before the analysis commenced. Ultimately, the primary and independent researchers reached a notable 94.6% agreement. Disagreements primarily pertained to the allocation of certain MUs to categories and the labeling of categories representing specific MUs. These discrepancies were resolved through collective discussions among the researchers, leading to the final version of the Content Analysis.

Table 17

Content Analysis of Change Interviews: Number of Meaning Units, Codes, and Categories

Categories	Codes (number of MUs)	Categories	Codes (number of MUs)
Therapeutic	Facing Fears (2)	Emotional	Joy (4)
Experience	Hope (2)	Experience	Surprised (6)
	Courage (3)		Determination (1)
	Trustbuilding (3)		Desperation (6)
	Sense-making (8)		Overwhelmed (2)
	Informative Psychoeducation (6)		Optimism (3)
	Valuable Lifeline (4)		Hesitation (2)

	Tough Life Journey (2)		
	Truthfulness (3)		
Feasibility	Helpful (7)	Effectiveness of	Feeling strong (5)
	Practical (4)	NET	Feeling better (7)
	Suitable Time Structure (3)		Changed worldview
	Unsuitable Time Structure (3)		(5)
	Gradual Change (6)		Increased awareness
			(5)
			Increased functioning
			(8)
Symptoms	Multifaced feelings (2)	Self-Concept	Self-Growth (8)
Experienced	Burden of Trauma (2)		Self-Acceptance (3)
	Symptoms Severity (6)		Feeling Accomplished
	Isolation (3)		(4)
	Recalling Past (7)		Self-Evaluation (6)
	Deploration (2)		Self-Expression (6)

Note: MU=Meaning Unit, the numbers bricked after codes represent the quantity of MUs going under a particular codes

Table 18

Content of Change Interviews

Interview Question	Banu	Sibel	Hamza
How are you feeling generally?	...I am much better than before. I mean, I used to never talk about my past in any way. I couldn't talk. I was afraid, but contrary to my fears, it felt good to tell what I experienced.	The therapy sessions started well and ended well. As the sessions progressed, I started to feel better and now I feel better than before...	I was always avoiding facing my fears. I could not share it with anyone. Because no one would listen, no one would care. I've always been stuck with what I've been through, but a lot of things have changed over time....
Looking back now, what was therapy like for you?	The therapy process taught me that I also have good memories. Before, I thought I did not have any good memories, but therapy reminded me that I have good memories too...	It has brought to light many things that were covered up and not talked about for many years. I did not know anything about the therapy process. I had a different perception, this has changed. Some pieces also fell into place. I learned a lot of things that I did not know about trauma, now I am explaining what I went through with more logical reasons....	It taught me not to give up and to be strong. I used to be angry and hateful every day, but now I approach things more rationally and try to understand the causes of the problems and find solutions.
How did you get on with having therapy via a video link?	It was nice but I would prefer it to be face-to-face. Because I normally spend a lot of time on	We did not have any connection problems, so it went well. It was easy for me to attend the sessions	I'm already accustomed to online meetings because of my job. Therefore, it was not a problem

the phone, I wouldn't want to use the phone as a therapy tool. Physical intimacy with the therapist would be better.

from home in the evenings. It did fit well with my schedule...

for me to carry out the therapies like that. It even made things easier. During the sessions, I was at home in the evening and the home environment felt more comfortable...talking behind the screen felt more comfortable.

NET has a psychoeducation component. This is where the therapist talked to you about what happens in our minds when we experience traumatic stress and how the therapy is meant to help with that- did it make sense to you?

Yes. It's been useful. It was educational and helped me to answer the questions in my mind about the therapy process.

It was very meaningful and useful. Some things started to grab my attention more. I didn't know the underlying causes of what I was experiencing before, but now I can see them clearly.

In fact, at first, I was confused about how the therapies would progress, but then everything became clear with the information given. It has also given me awareness about the situation I am in.

Can you recall any of it/what was the most important thing you remember/anything else?

I would not directly describe any event I had been through. This was always difficult for me. But the therapist accompanied me step by step on this path and I was able to explain my experiences in detail. This is an experience I will never forget.

There is a moment in my past that affects me a lot. When we worked on this again in therapy, it brought awareness to some things. When I relived that moment, I realised how ridiculous it was.

The physical reactions I experienced in my body while describing the events... I felt like I was reliving the moment of the event. This was so weird. This applies to both positive and negative events.

Looking back now, what did you make of the lifeline?

The stones were more than flowers. But even if they were negative events, they became very meaningful for me to have them in my lifeline.

We had a long lifeline and I saw how many events I had buried in the past for a long time, that I did not realise. I was surprised to see that I had gone through so much at the age

I realised how strong a person I am. Because there were very sad events on this line and not everyone can easily handle what I went through... My life was always in pieces. But in this line,

		of 26. It was just like a movie strip.	it all came together chronologically, and my life story was complete... This line made me feel like: "I am not an ordinary person.
You were asked to fill in two questionnaires during each session, what did you make of them?	I was trying to focus on the last seven days, but it was a bit difficult for me to fill out the questionnaires as they reminded me of past events.	I evaluated the emotions and feelings that I had experienced in a week.	In the beginning, the polls were boring and tiring. But then my prejudices were crushed. Even if questions lead me to think about myself.
You were also asked to fill in a questionnaire at different times after the therapy sessions regarding your perception towards yourself, what did you make of it?	I don't remember those questions. This happens to me often because I am so forgetful.	I was able to express myself while answering those questions. These questions allowed me to evaluate myself.	I tried to be faithful to my thoughts about myself. Actually, I was surprised too, I thought that there would be no change in my perspective on myself, but it has completely changed.
The therapy was structured/time limited – how was that for you?	It was better for me that the therapy sessions were time-limited, because I often have trouble concentrating.	I wish I had more time. I would like to talk about some things in more detail.	The time limit was convenient for me. It was enough for me to talk comfortably. That's how I planned what I was going to say.
What was it like having someone reread your narrative back to you each session?	It's interesting, but it sounds good to listen to what I've been through.	I was really surprised at those moments. I always questioned myself "Did I really tell all of this?" Because I am normally very forgetful.	I was hearing what I went through from someone else not from Hamza's head. In fact, this was both enjoyable and painful.
What was it like talking about the context (i.e., specific details of each event such as what did rooms	There were times when I really struggled. Because it was difficult	I experienced bodily reactions during the sessions that were like what I experienced during the	I always felt like I had a chest keeping locked my bad memories.

look like etc) of each trauma event?	for me to go into details, I had been avoiding...	event. It was as if I was living that moment again in my body.	I felt like it was time to open this chest.
If you have noticed a change, how important is this to you?	I no longer blame myself for what I've been through. Now, I understand that what I went through was not my fault, but the result of some things I had to live with.	I feel eased like a bird.	Now I look at the world from a different perspective. I realised that I started to approach things more logically.
Were you surprised by the change(s)?	I never thought that I would experience such a change. I was hopeless, I thought there would be no change.	Yes, definitely! Some changes took me by surprise.	It was quite surprising. I used to be so pessimistic that I had no hope for anything. But now I do.
How would you describe your "self" before and after NET sessions? Is there any change(s)?	It's completely different. Previously, there was a person who was constantly upset about her life. But now I am not.	I think there is, but people around me should notice it, not me.	I was like a grumpy old person. But now I'm not like that, I take care of my health and I take advantage of opportunities.
Do you think is there anything that has helped you to understand your "self" better during NET sessions?	Yes, the therapist's supportiveness. The feeling that I was not alone...That helped me understand myself better.	The Lifeline... It helped me understand myself and what I've been through more clearly.	Especially the lifeline and re-readings gave me the opportunity to make a deep analysis of my life and myself.
Do you think change is due to the therapy, or other things (i.e., things that happened outside therapy room that might have influenced the outcome)	There was no other significant event in my life apart from the therapy sessions. So, I definitely think therapy is responsible for the change in me.	This is a difficult but good question. I cannot give a clear answer. But I think the impact of therapy is more.	I think both. it is reciprocal but the main trigger for the changes is therapy. For example, I moved out during therapy, changed my job, and changed my lifestyle. All of these, I think, is because NET offered me a different perspective.

Was any aspect of therapy particularly helpful?	I think the therapy was very useful with all its components.	Psychoeducation has been especially helpful in making sense of my experiences. Lifeline brought awareness to my experiences... the therapist's summary of what I said allowed me to witness what I had experienced from someone else's mouth.	Sometimes we allocated 10 minutes to an event, sometimes 1 hour for another. That flexibility was nice. It was also helpful to have my experiences read to me before each session.
Was any aspect of therapy unhelpful?	No, it wasn't. But due to the nature of therapy, some bodily reactions I had when I talked about the past made me feel uncomfortable, but this is a positive thing according to what I learned from the therapist.	There was nothing unhelpful, but the therapy went in a different direction than I expected. I thought the therapist was going to give me some advice for my life problems...but apart from that, it was a good journey for me.	No, there was nothing unhelpful.
Anything unexpected or took you by surprise?	No, nothing.	I did not think therapy would be that good. We had sessions for more than 3 months, but it feels like time just flew.	No.
Was there any point where you thought you could not carry on? If so, what helped you to complete therapy?	No, there was not. I was always determined to go all the way through.	No. I said to myself that I would go all the way, and so did I.	Before starting the sessions, I thought a lot about whether I could spare time for that. I considered withdrawing before starting, but then a force pushed me, and I decided to continue.

4.4.6. *Results from Within-Case Perspective*

Banu

The stability of variations around Banu's IES-R baseline mean suggested predictability for the improvements observed during the treatment phase. Figure 7A depicted an initial upward trend in her PTSD scores during the baseline, indicating a progression in her PTSD symptoms. However, the overall trendline demonstrated a decline in PTSD symptoms, with notable spikes during sessions 5 and 7. In session 5, despite narrating her most challenging negative life events on the lifeline and appearing reticent, emotionally distant, and notably stressed, in this session she had nearly the lowest PTSD score during the treatment. Subsequently, in session 6, following a demanding week ruminating on these negative events, her PTSD score exhibited an increasing trend, likely influenced by the previous session. Session 7 recorded her highest PTSD score, possibly exacerbated by her hospitalisation due to severe migraine attacks, which led to a three-week break between sessions 6 and 7. Her medication managed the attacks, but she still required emergency services for unbearable pain. Given this health context, her increased PTSD score in session 7 could be attributed to her compromised health. Post-treatment and follow-up phases did not reveal reliable and clinically significant changes in her IES-R scores when compared to the pre-treatment phase. CDC analysis corroborated the absence of change in PTSD scores, and the PEM analysis suggested a moderate treatment effect.

Regarding Banu's DASS-21 subscales, acceptable variations around the baseline mean were observed for depression and stress, but not for anxiety. These findings posed a challenge in interpreting the improvements in anxiety scores during the treatment phase. The baseline trendlines for each subscale demonstrated an upward trend for depression and downward trends for anxiety and stress (Figure 7B). However, spikes in anxiety scores during sessions 6, 7, and 9 were observed, with session 7 exhibiting a rise similar to the PTSD scores,

possibly related to her migraine attacks. Notably, in session 9, Banu's reduced anxiety and stress scores corresponded with her successful application to the Turkish Red Crescent, triggering an elevated positive mood. CDC analysis indicated a change in the treatment phase for depression, anxiety, and stress, with the treatment effect classified as high for anxiety but moderate for depression and stress. Although post-treatment and follow-up phases showed no reliable and clinically significant changes for her depression and stress scores, her anxiety score exhibited reliable and clinically significant change during the post-treatment phase.

The SCCS outcomes for Banu displayed an upward trend in both the baseline and treatment phases, indicating an enhancement in her SCC. Her baseline phase exhibited reasonable variations around the baseline mean, ensuring stability for comparison with the intervention phase. The number of SCCS points in the treatment phase fell below the suggested count by Fisher et al. (2003), making it challenging to interpret changes during this phase. Nevertheless, Banu's SCCS scores demonstrated a high treatment effect, signifying reliable and clinically significant changes during the post-treatment and follow-up phases.

SMA analysis indicated a significant temporal relationship between Banu's PTSD and depression scores for lag-1 and Lag0, depression and anxiety for lag0, depression and stress for lag0, and anxiety and stress for all lags. Additionally, a negative relationship was found between Banu's SCCS and depression, anxiety, and stress scores at lag0, signifying outcomes in the expected direction. This implied that increased SCC scores were associated with decreased stress scores. In summary, Banu's PTSD demonstrated no change during the treatment, with no significant change observed in the treatment phase. Notably, improvements were observed in Banu's depression, stress, and anxiety, indicating a high treatment effect for anxiety and stress. However, no reliable and clinically significant change was evident in Banu's depression and anxiety between the baseline and post-treatment as well as the baseline and follow-up phases. Her external life events, such as chronic migraine

attacks, nightmares, job loss, and family problems, appeared to have impact on her well-being, likely triggering symptoms of PTSD, depression, anxiety, and stress during the intervention and follow-up phases. Furthermore, Banu's SCCS scores highlighted a high treatment effect, indicating improved SCC through the NET intervention. Qualitative data further revealed that she felt a notable improvement in her symptoms of PTSD, depression, anxiety, and stress. Her statements, such as "I no longer blame myself for what I have been through," and "I never thought that I would experience such a change," provided explicit evidence of the subjective reduction in her symptoms during the treatment.

Sibel

Variations around the mean value of Sibel's PTSD scores during the baseline period were within a reasonable range, allowing for the prediction of changes during the treatment phase. Figure 8A illustrates a slight upward trend in the baseline, indicating an increase in PTSD symptoms. However, the overall trendline for PTSD showed a decrease during the treatment phase. Notably, there was a spike in Sibel's session 4, representing the highest IES-R score among all the sessions, including the baseline phase. During this session, she narrated her struggle with discrimination at her workplace due to her identity and outlook (wearing hijab). She described feeling undermined and overlooked by her boss, leading to heightened stress, sleep problems, low mood, and anger. This stressful life event likely triggered her PTSD symptoms, counteracting the potential improvement seen during the treatment. Notably, no break was given between the sessions, and the NET sessions continued a weekly basis. While the CDC analysis suggested no change in Sibel's treatment for PTSD, the PEM analysis indicated a high treatment effect for NET on her PTSD symptoms. Moreover, her PTSD scores in the post-treatment phase were found to be reliable and clinically significant compared to the pre-treatment phase. However, no reliable and clinically significant change was observed during the follow-up session. The increased IES-R scores during the follow-up

phase could be attributed to her mourning period following the recent loss of her grandfather. Sibel's scores exhibited questionable and reasonable variations for depression, making it challenging to establish a stable baseline for interpreting improvements during the treatment phase. Conversely, the variations observed in her anxiety and stress scores were reasonable and acceptable, allowing for a stable baseline to interpret changes during the treatment phase for these variables. Illustrated in Figure 8B, Sibel's depression, anxiety, and stress scores displayed notable upward trends during the baseline phases but indicated downward trends in the overall trendline, signifying improvements in these measures. Correspondingly, when the CDC analysis was conducted for the DASS-subscales, changes were observed in the treatment phase for anxiety and stress, but no significant change was found for depression. However, the PEM analysis suggested that the NET intervention was highly effective in treating depression, anxiety, and stress. Furthermore, while a remarkable change was noted for Sibel's depression scores during the post-treatment and follow-up sessions, no significant and clinically relevant change was detected for either anxiety or stress scores during these periods. As previously discussed, the absence of notable changes during the follow-up session might be attributed to the recent loss of her beloved grandfather, with whom she shared a close relationship.

Sibel's SCCS scores exhibited acceptable variations around the baseline mean, ensuring the stability required for predicting changes during the treatment phase. While a slight upward trend was evident during the baseline, the overall trendline indicated an upward trajectory, signifying improvements in Sibel's SCC. However, since the number of SCCS points in the treatment phase fell below the recommended threshold by Fisher et al. (2003), interpreting the changes during this phase was challenging. Nonetheless, the PEM analysis underscored a strong treatment effect of NET on enhancing SCC. Additionally, reliable and

clinically significant changes were observed for Sibel's SCCS in both the post-treatment and follow-up phases.

The SMA analysis revealed significant temporal relationships between Sibel's PTSD and anxiety scores for lag-2 and lag 0. Furthermore, correlations were observed between her PTSD and stress scores for lag-2, lag-1, lag 0, and lag+2, between depression and anxiety for lag-2, between depression and stress for lag-2, lag-1, lag 0, and lag 2, and between anxiety and stress for lag+2. Notably, a negative relationship was identified solely between Sibel's SCCS and stress scores in lag-2, confirming an anticipated correlation where increased SCC scores corresponded to decreased stress scores.

In summary, the findings suggest that while Sibel's PTSD symptoms remained unchanged throughout the treatment phase despite the apparent effectiveness of NET, there was a reliable change in her PTSD scores in the post-treatment phase, although it did not reach clinical significance. Notably, improvements were observed in Sibel's depression, stress, and anxiety, demonstrating a high treatment effect for each. However, changes were only observed for anxiety and stress during the treatment phase. Although her depression symptoms exhibited a reliable change in both post-treatment and follow-up sessions, the changes were not clinically significant. It is hypothesised that her work-related challenges and the loss of her grandfather significantly impacted her PTSD, depression, anxiety, and stress, particularly during the intervention and follow-up phases. Moreover, Sibel's SCCS scores indicated a high treatment effect, signifying an improved SCC, which was also found to be reliable and clinically significant during the NET. Qualitative data revealed that Sibel experienced a sense of improvement as the therapy progressed. However, she highlighted that the therapy unfolded differently from her expectations. While she anticipated receiving advice from the therapist regarding her life problems, the therapy took a different trajectory than she had expected. Despite this, she found the therapy beneficial in gaining a better

understanding of herself, as evident from her statement, "...but the therapy went in a different direction than I expected. I thought the therapist was going to give me some advice for my life problems...but apart from that, it was a good journey for me." Although Sibel did not explicitly discuss the severity of her symptoms during the sessions, her comments implied that she had gained a clearer understanding of herself and her experiences. While she remained uncertain about the precise impact of NET on her well-being, she acknowledged that the therapy had a meaningful effect on her.

Hamza

It was observed that the variations around Hamza's baseline mean value were acceptable, ensuring stability for investigating changes in the treatment phase for PTSD scores. As illustrated in Figure 9A, a noticeable upward trend in the baseline was followed by a downward trend in the overall trendline for PTSD scores, suggesting a potential improvement in his symptoms. While the CDC analysis did not demonstrate any change in the treatment phase for PTSD, moderate effectiveness was found for the NET intervention. However, the RCI and CSC analyses indicated a reliable change in Hamza's PTSD scores in both the post-treatment and follow-up phases.

Hamza's treatment phase exhibited moderate variability over the initial ten sessions, followed by a significant decline in his PTSD scores after Session 10. This period coincided with a series of significant changes in his life, including relocating to a new neighbourhood where he and his family felt more secure, exploring new job opportunities, and pursuing his Turkish citizenship application, which had previously been hindered by his sense of hopelessness. These positive developments, infused with hope for a better future, likely influenced his outlook and contributed to the alleviation of his pessimistic thoughts and feelings of despair. In his CI, Hamza attributed a great deal of his progress to the NET sessions, indicating that the changes were influenced by both the therapy and external events.

He noted, "I think both. It is reciprocal but the main trigger for the changes is the therapy. For example, I moved out during therapy, changed my job, and changed my lifestyle. All of these, I think, is because NET offered me a different perspective." The rapid decline in his PTSD symptoms following Session 10 could be attributed to a delayed response to therapy, which is commonly observed in patients with PTSD (Foa et al., 1999; Foa et al., 2005; Onyut et al., 2005).

Hamza's DASS-21 subscales displayed acceptable variations around the mean value, ensuring the stability of anxiety and stress scores for investigating improvements during the treatment phase. However, the variations in depression scores were moderate, making it challenging to establish a stable baseline for comparison. Notably, the overall trendline for all subscales depicted a significant and consistent downward trajectory, indicating improvements in all symptoms. Correspondingly, a rapid decline in all subscale scores was observed after session 10, again, possibly reflecting changes in Hamza's perception of the world and lifestyle, as expressed by himself. Despite no change being identified in the intervention phase for depression, anxiety, and stress symptoms, the PEM analysis suggested questionable effectiveness for anxiety, while indicating ineffectiveness for depression and stress. Intriguingly, a reliable but not clinically significant change was found for depression, anxiety, and stress scores in both the post-treatment and follow-up phases.

The variations around Hamza's SCCS were deemed acceptable for stability during the baseline phase, facilitating the interpretation of changes in the intervention phase. An initial slight downward trend in the baseline was followed by a slight upward trend in the overall trendline, suggesting a change in the expected direction, indicating an improvement in SCC. However, interpreting changes in the treatment phase for SCC was challenging due to the insufficient number of points, falling below the recommended number suggested by Fisher et al. (2003). Additionally, NET demonstrated questionable effectiveness in improving SCC.

Nevertheless, reliable and clinically significant change was observed during the follow-up phase.

SMA results demonstrated a significant temporal relationship between Hamza's IES-R and depression for lag 0; IES-R and Anxiety for lag-1 and lag 0; IES-R and stress for lag-2, lag-1, and lag 0; depression and anxiety for lag-1 and lag 0; depression and stress for lag 0 and lag+1; anxiety and stress for lag-2, lag-1, and lag 0; SCCS and IES-R for lag-1 and lag 0; SCCS and depression for lag+2; SCCS and anxiety for lag+2; SCCS and stress for lag 0. These relationships highlighted the complex interplay among the various psychological measures, suggesting the interconnected nature of Hamza's experiences and symptomatology.

Consequently, the NET intervention did not lead to a discernible change in Hamza's PTSD, depression, stress, and anxiety, despite the notable declines in trends during the treatment phase. The findings suggested that NET seemed ineffective for addressing Hamza's PTSD, depression, and stress, and its efficacy was questionable for anxiety and SCC. Surprisingly, reliable changes were reported for PTSD, depression, anxiety, and stress in both the post-treatment and follow-up phases, with a reliable and clinically significant change noted for SCC during the follow-up phase.

In light of these results, the significant improvements in Hamza's symptoms toward the end of the therapy were attributed to the late decline in his scores, which reflected positive changes. In his CI, Hamza emphasised how the NET sessions were instrumental in alleviating his PTSD symptoms, stating, "I was always avoiding facing my fears. I could not share it with anyone... but a lot of things have changed over time." He also expressed subjective improvements in his depression symptoms, remarking, "I was like an old grumpy person. But now I'm not like that, I take care of my health and I take advantage of opportunities...". The delayed improvement in symptoms may be associated with his initially high scores in PTSD, depression, anxiety, and stress. For instance, as illustrated in Figure 9A, Hamza's PTSD

scores fell within the severe range for IES-R (above 44), surpassing the cut-off point of 26 (Sterling, 2008). Similar observations were noted for his DASS scores, where he exhibited extreme severity for depression, anxiety, and stress (above 28, 20, and 34, respectively) (Lovibond & Lovibond, 1995).

4.4.7. Results from Across-Case Perspective

The overall interpretation of the within-case results suggests that the implementation of NET for PTSD yielded some degree of change among the participants. The outcomes indicated a range of results, with high to moderate treatment effects observed for PTSD symptoms. While the reliable and clinically significant changes varied across the cases, a reliable change in PTSD symptoms was generally reported.

Regarding depression scores, the findings presented mixed results for the changes observed during the treatment phases and the effectiveness of NET. However, the results for anxiety and stress scores appeared promising in terms of change and the efficacy of NET across all cases. Notably, no clinically significant changes were reported for stress among any of the participants. Conversely, the intervention of NET on SCC demonstrated a strong potential for high effectiveness, with reliable and clinically significant changes observed among all participants. These results suggest that NET may have a significant impact on enhancing participants' SCC, potentially contributing to positive changes in their overall well-being.

4.5. Discussion

4.5.1. Summary and Discussion

This study had several key objectives: (1) to assess the effectiveness of NET in reducing PTSD symptoms among the displaced Syrian population, (2) to evaluate the feasibility of implementing NET in the Turkish context, (3) to examine the impact of NET on reducing depression, anxiety, and general stress among the displaced Syrian population, and

(4) to investigate the potential role of NET in enhancing SCC. It is worth noting that this study represents the first attempt to explore the feasibility and effectiveness of NET in addressing the mental health challenges faced by war-affected Syrians residing in Türkiye, while also examining the potential relationship between NET and the enhancement of SCC.

4.5.1.1. Feasibility and Effectiveness of NET in PTSD:

The results anticipated that the implementation of NET would lead to a reduction in PTSD symptoms. Although not all participants exhibited consistent downward trends or reliable and clinically significant changes in their post-treatment phases, the results demonstrated varying degrees of improvement across different parameters. Notably, the ESs of NET in mitigating PTSD symptoms were indicative of moderate to high treatment effects. Furthermore, reliable and clinically significant changes were observed in the post-treatment and follow-up phases for two participants. The CIs also revealed symptom improvements among participants, expressed through feelings of strength and well-being, positive shifts in worldview, heightened awareness, and improved functioning. These promising findings align with previous research highlighting the positive impact of NET on reducing PTSD symptoms in patients (e.g., Neuner et al., 2004; 2008). Despite the slight change observed in the PTSD scores of one participant, the qualitative data revealed that all participants reported significant enhancements in their daily functioning, work-related activities, and social interactions. The disparities between the quantitative measurements and the qualitative change interviews could potentially be attributed to the delayed effects of NET. In other words, although the participants continued to experience some PTSD symptoms, the process of reconstructing fragmented memories through NET and establishing coherent narratives may have positively influenced their self-perception and functionality in their daily lives. This raises the question of how NET can enhance participants' functioning even when symptoms persist. One plausible explanation for this observation is rooted in one of the central theoretical

frameworks of NET, known as the "fear network" (Lang, 1979; Foa et al., 1989) (for further details, see section 1.1.4.1.1.). The activation of the fear network during NET sessions, aimed at integrating sensory perceptual elements of traumatic events into contextual knowledge, may potentially lead to an exacerbation of PTSD symptoms. This phenomenon can be attributed to the low threshold of activation of the fear network, which has a powerful nature and interconnected neural elements, enabling the activation of various sensory perceptual information linked to the traumatic event (Schauer et al., 2011). Additionally, the concept of "delayed response" in NET, stemming from its exposure-based nature, suggests that improvements in symptoms may continue to manifest even after a significant period, with some studies demonstrating sustained improvements up to 9-12 months (Foa et al., 1999; Foa et al., 2005; Onyut et al., 2005). Consequently, the engagement with the fear network and the retelling of the ongoing life narrative might have triggered an intensification of PTSD symptoms, potentially more severe than before due to the process of habituation and reliving.

The observed results may also be influenced by external factors and confounding variables inherent in the therapeutic process of NET. Adverse external events experienced by participants during the intervention were noted to correspond with upward spikes in PTSD scores, suggesting an exacerbation of symptoms. Furthermore, therapeutic outcomes in PTSD scores could be influenced by variables such as the therapist's experience, therapeutic alliance, modality and delivery of therapy, participant motivation, and severity of symptoms (Bachelor et al., 2007; Hersoug et al., 2001; Lantz, 2004; Moore, 2006). The online delivery of NET may have hindered the establishment of an authentic and empathetic therapeutic relationship, which could influence the successful habituation to traumatic experiences and the activation of the fear network, thereby impacting therapeutic outcomes for PTSD scores.

Moreover, the severity of PTSD symptoms at the baseline phase can contribute to a delayed and reduced response to treatment, as evidenced by the case of Hamza, who reported

extreme levels of PTSD symptoms initially, with a gradual decrease observed near the end of the NET sessions. Previous research by Barawi et al. (2020) has indicated that higher baseline PTSD symptoms are associated with a slower recovery, further emphasising the influence of initial symptom severity on treatment response.

In summary, the findings suggest that NET has demonstrated a notable impact on reducing PTSD symptoms among the war-affected Syrian population in Turkiye. Despite the factors influencing the outcomes of the study, these promising results indicate the feasibility of implementing NET in the Turkish context.

4.5.1.2. Feasibility and Effectiveness of NET in Depression, Stress, and

Anxiety:

The study's secondary aim was to examine the effectiveness and feasibility of NET in addressing symptoms of depression, anxiety, and stress, given their high comorbidity with PTSD. The analysis of weekly measurements, pre-, post-, and follow-up data, alongside qualitative data from CIs, indicated a mixed impact of NET on depression, but a potential effectiveness in reducing symptoms of anxiety and stress, particularly in the post-treatment and follow-up phases. While the quantitative data demonstrated mixed results for depression but promising results for anxiety and stress, CIs revealed that increased courage especially when facing with traumatic experinces, hope, changed positive worldview, feeling accomplished and optimistic view toward the world after NET which are closely linked with the redunction in these mental health problems. However, participants also reported feelings of desperation, being overwhelmed, and experiencing isolation during the sessions. Taking into account these statements and the mixed improvement observed in depression, it's possible that ongoing symptoms of PTSD may have contributed to sustained depressive symptoms. This relationship could be attributed to the commonalities between PTSD and depression, with various studies suggesting that PTSD is typically more severe and may lead

to the development of secondary depression in trauma survivors (Bleich et al., 1997; Davidson et al., 1989). These findings appear to contrast with earlier research suggesting the role of NET in reducing depression severity (e.g., Alghamdi et al., 2015; Bichescu et al., 2007; Stenmark et al., 2013). On the other hand, the observed effectiveness of NET in addressing anxiety and stress symptoms among the majority of participants aligns with the core principles of exposure and habituation in CBT, which has been recommended as a primary treatment for anxiety by authoritative bodies such as the Clinical Division of the APA (Chambless & Hollon, 1998). Consequently, the positive outcomes in anxiety and stress reduction support the existing body of research on the effectiveness of NET in these domains (e.g., Brady et al., 2021; Zang et al., 2013).

It is crucial to acknowledge that external factors and common elements, such as life events, the therapeutic process, and the influence of the therapist, may have contributed to the results observed for depression, similar to the findings on the moderate effectiveness of PTSD treatment in the study population.

In summary, the study indicates promising effectiveness of NET in addressing depression, anxiety and stress symptoms among war-affected Syrians in Turkiye. These results suggest the feasibility of implementing NET in the Turkish context.

4.5.1.3. The role of NET in Self-Concept Clarity:

The third aim of the study was to investigate the potential influence of NET on SCC. Through repeated measurements during the pre-, mid-, post-treatment, and follow-up phases, alongside qualitative data from CIs, the study demonstrated that NET had a substantial and positive impact on SCC. The quantitative results indicated high effectiveness, reporting reliable and clinically significant changes for participants in the post-treatment and follow-up phases. The CIs also evidenced the improvements in self-growth, self-acceptance, feeling accomplished, positive self-evaluation and self-expression which indicate the potential

impact of NET on SCC. Therefore, altogether these outcomes strongly support NET have a beneficial effect on SCC, aligning with the therapy's objective of creating a cohesive life narrative and facilitating the construction of meaning from fragmented memories, a crucial aspect of the self (Mørkved et al., 2014; Schauer et al., 2011; Bichescu et al., 2007).

Although previous studies have not directly examined the impact of NET on SCC, as it was documented with the scoping review conducted under this study (see section 4.1.7.4.), this relationship has been acknowledged taking into account the theoretical anchor of NET. The finding of it is in line with the work of Stenmark et al. (2013), which indicated an indirect positive change in self-perception and self-regulation attributable to improvements in physical health, psychological symptoms, daily functioning, and overall quality of life in patients undergoing NET.

In summary, the study provides compelling evidence that NET can have a positive and constructive influence on SCC. These results contribute valuable insights to the research field of NET, offering unexpected but meaningful knowledge on the therapy's broader impacts beyond the targeted symptoms.

4.5.2. Implications and Research Strengths

Experiencing and expressing traumatic stress, along with its psychological symptoms, can be significantly influenced by various factors, such as environmental risks, ethnoracial backgrounds, and contextual differences, including challenges related to accessing mental health care and cultural attitudes toward mental health problems (Ford et al., 2015; Norris et al., 2002; Regel & Joseph, 2017; Kirmayer et al., 2011). Despite the evidence supporting the effectiveness of NET in various refugee and war-affected populations, this study is the first to examine its effectiveness in the Syrian refugee population. Additionally, it is the first to investigate the feasibility of implementing NET in the Turkish context, where it has not been utilised before. The combination of the study's findings provides support for the potential

effectiveness and feasibility of NET in reducing the symptoms of PTSD, anxiety, and stress in the displaced Syrian refugee population living in Türkiye. The results suggest that NET can serve as a valuable therapeutic technique for addressing PTSD in Türkiye and that it can be readily integrated into clinical practice, offering promising treatment outcomes within this specific context. It is crucial for Turkish policymakers to take proactive steps in developing structured mental health care programs that can effectively introduce this short-term and cost-effective, yet clinically impactful, technique to this particular population and context.

Moreover, the successful intervention and delivery of NET by locally trained lay counselors have been demonstrated in various contexts, as supported by existing research in the literature (e.g., Neuner et al., 2008; Jacob et al., 2014; Schauer & Schauer et al., 2010). Considering this facilitating aspect of NET, it can be administered by lay counselors to a greater extent within this population and context, particularly where the need is urgent, but resources may be limited. Therefore, the user-friendly nature of NET provides practicality and effectiveness that can be readily applied within this context in a timely manner.

This research has underscored a significant finding related to the positive impact of NET on SCC, which had not been previously explored. Therefore, this study provides a novel perspective on the influence of NET on SCC, adding to the growing body of evidence on this topic. A key strength and rationale of this study were its use of SCD, which allowed for in-depth observation and analysis of each participant. This approach was instrumental in examining how the participants' symptoms of PTSD, depression, anxiety, and stress evolved during the NET sessions, as well as their perception of various components of the NET technique, such as creating a lifeline, habituation, narration, and the review of their life story. Consequently, this study has shed light on various significant points concerning the participants' subjective experiences. For instance, it became evident that while habituation and reliving traumatic events were among the most challenging aspects of the sessions, the

creation of a lifeline and viewing it from a Gestalt perspective, which involved perceiving it as a whole, and the process of rereading the entire life story emerged as the most rewarding and enjoyable elements of the therapeutic process, as expressed by the participants in the interviews. By employing a naturalistic design, which served as an alternative to group designs, the data could be interpreted and analysed at an individual level. Furthermore, certain adaptations were made during the therapeutic process in response to the participants' needs. For instance, one participant expressed a desire to discuss a recent loss, and 10 minutes were allocated to this discussion, enabling a more holistic understanding of how this event affected the participant's well-being and symptoms before moving on to the subsequent life event within the lifeline. This flexibility in the therapeutic process can be attributed to the inherent characteristics of NET and the application of SCD, underscoring the importance of tailoring therapy to individual needs. Such adjustments would not have been possible within the constraints of a rigidly structured therapy technique or group analysis, highlighting the value of personalised and nuanced approaches in therapeutic interventions.

The qualitative data collected in this study has provided valuable insights into how NET has contributed to the enhancement of daily functioning, work-related capabilities, and social bonds among the participants. This positive impact can be attributed to several factors, such as the transformative nature of the therapy, which involves the construction of coherent life narratives, the integration of fragmented memories, and the empathic listening provided during the sessions. Furthermore, the alleviation of self-blame and the facilitation of emotional expression have likely played a crucial role in the observed improvements in the participants' well-being and functionality, alongside the reduction of PTSD symptoms. Even though some participants continued to experience residual PTSD symptoms during and towards the end of the intervention, the utilisation of a mixed research design has emerged as one of the most significant strengths of this study. This combined approach has facilitated a

comprehensive understanding of the subjective experiences and perspectives of the participants, shedding light on the nuances and complexities of their therapeutic journey. By integrating qualitative and quantitative data, the study findings have been reinforced, enhancing the overall validity and reliability of the study's outcomes. This approach has enabled a more comprehensive evaluation of the therapeutic process, allowing for a deeper exploration of the participants' responses to the NET intervention and the ways in which it has influenced their daily lives and psychological well-being. As a result, the study has provided a more holistic understanding of the impact of NET, highlighting its multifaceted effects on the participants' functioning and quality of life.

The adaptation of the study to the remote delivery of NET in response to the challenges posed by the Covid-19 pandemic has not only allowed for the continuity of the research but has also revealed the potential of online therapy in reaching displaced populations effectively (Kaltenbach et al., 2021; Olthuis et al., 2023). Initially perceived as a potential obstacle, the utilisation of e-NET has emerged as a key strength of the study, particularly in the context of providing mental health support to disadvantaged and displaced individuals. With only a limited number of studies focusing on the efficacy of one-on-one video sessions for e-NET, the current research has significantly contributed to the growing body of evidence supporting the effectiveness of online therapeutic interventions, particularly in the context of trauma survivors and refugee populations. In light of the findings from this study, which demonstrate the successful delivery of e-NET to participants living in resource-limited environments, the implications extend beyond the specific context of Syrian refugees in Turkiye. The study's outcomes serve as an important initiative, highlighting the potential applicability of e-NET delivery to other trauma survivors, especially those who may face barriers to accessing traditional in-person therapy (Kaltenbach et al., 2021; Olthuis et al., 2023). By showcasing the feasibility and potential effectiveness of e-NET in improving

mental health outcomes, this research contributes to the ongoing discourse on the integration of digital platforms in mental health interventions, particularly in challenging and resource-limited settings. As a result, the study does not only add to the limited literature on e-NET but also underscores the potential for the widespread adoption of remote therapy as a viable and valuable option for trauma survivors and individuals facing similar challenges worldwide (Kaltenbach et al., 2021; Olthuis et al., 2023). Furthermore, another strength of this study is the fidelity checks that were conducted by the principal supervisor after. These checks were outlined as a matrix covering each participant and core sessions of NET (psychoeducation, lifeline, narration and renarration) to increase the reliability, replicability, the consistent delivery of NET. In other words, the sessions were monitored to see if the intervention was delivered abide by the NET manual (for further information see section 4.2.5.14).

4.5.3. *Limitations*

Even though the current study has yielded promising results, it is not without its limitations. Firstly, the use of the SCD method in this study may have presented certain challenges in achieving stability in the baseline for accurately rating performance and comparing changes during the treatment phase (Lobo et al., 2017). While efforts were made to attain baseline stability for measurements taken from each participant, occasional difficulties arose, as evidenced in specific instances (refer to Figure 7B-Stress, Figure 8A, Figure 8B-Stress), hindering a more confident determination of the treatment effect for some participants. This challenge has also made it difficult to discern whether the change observed during the treatment phase was primarily due to the effectiveness of the intervention or external factors. Additionally, the relatively short length of the baseline, consisting of only three measurements taken from each participant over approximately two weeks, may not fully reflect their true performance. A more extended baseline period with a greater number of data points might have provided a more precise reflection of participant performance. Despite providing clear and unambiguous evidence

for specific cases, the primary limitation of SCD is its potential limitation in generalising findings due to its reliance on small sample sizes (Kratochwill et al., 2013). Although efforts were made to mitigate this limitation by initially recruiting at least six participants, the withdrawal of three participants during the study ultimately resulted in a smaller sample size than anticipated. Undoubtedly, this has impacted the interpretation and generalisability of the study's outcomes.

To complement the results of the SCD, a mixed-method approach was employed, integrating qualitative content analysis to capture participants' subjective perspectives on the changes they perceived following NET. While this approach was adopted to foster more robust outcomes, it is important to acknowledge that content analysis has inherent limitations, such as potential biases during the coding and interpretation of data. These factors should be carefully considered when interpreting the qualitative findings alongside the quantitative results. The number and duration of the sessions could be another factor potentially influencing the results. Since this study was structured as a time-limited project, the number of sessions was confined to between 8 and 12 weekly sessions. However, this restricted timeframe may have limited the extent of participants' share and details of their narratives. For instance, one participant had more than 40 symbols, primarily stones, in his lifeline, with sessions scheduled for 12 weeks, each lasting up to 2 hours. Consequently, only three-four symbols were addressed and worked on during each session. However, when the subsequent events involved negative life experiences, the allowed time for a session limited the thorough exploration of events, including the process of reliving, habituation, and narration. Moreover, as noted earlier, the treatment effect of the NET technique may manifest even six months after therapy (Jongedijk, 2014). Therefore, a more extended number of sessions may better reflect behavioural changes. A specific example of this limitation in our study is apparent in the case of one participant, Hamza. As demonstrated in Figures 9A and 9B, whose treatment effect appeared to show up around Session 10. Given that

the behavioural change occurred toward the end of the therapy, it has limited the ability to ascertain the future trajectory of his progress. Another limitation relates to the relatively brief follow-up period, where measurements were taken only a month later. In interpreting the outcomes of symptom improvements, it is crucial to consider the theoretical underpinnings of NET and the broader literature on trauma, which shed light on the concept of ‘delayed response’ in trauma treatment. For instance, Bremner et al. (1993) highlighted the delayed onset of PTSD symptoms in Vietnam veterans, suggesting that traumatic experiences may lead to delayed responses to trauma treatment. Given NET's focus on addressing trauma-related symptoms stemming from fragmented memories, van der Kolk et al. (1995) also discussed how fragmented memories and dissociation could contribute to delayed recall and processing of traumatic experiences.

In assessing the efficacy of NET, it is essential to acknowledge the constraints imposed by the observation period of our analysis, which spanned 10-12 weeks of treatment with a one-month follow-up in this study. This limited timeframe presents challenges in fully capturing the complexities of NET's therapeutic process and the gradual unfolding of its effects over time, especially considering that the weekly measurements may not adequately reflect progress, particularly in NET where improvements in PTSD may manifest after a significant period of time (Shauer et al. 2011). Therefore, the short duration may not allow for a comprehensive understanding of how clients' trauma histories respond to NET, particularly considering the longitudinal and delayed nature of trauma recovery. Additionally, the one-month follow-up period may not provide sufficient insight into the durability of treatment outcomes or the long-term maintenance of therapeutic gains. Moreover, our utilization of SCD techniques within this timeframe adds another layer of limitation. While SCDs offer valuable insights into individual treatment trajectories, they inherently focus on a small number of cases, potentially limiting the generalizability of findings. In the context of NET, where each client's trauma narrative and

response to therapy is unique, extrapolating broader conclusions from individual cases may pose challenges. Despite these limitations, we endeavoured to maximize the depth of our analysis within the confines of the observation period and the single case design methodology. By meticulously documenting each client's progress and experiences throughout treatment, we aimed to elucidate the immediate and short-term impacts of NET on trauma symptoms and psychosocial functioning. Additionally, it's important to acknowledge another source of weakness in this study, which could have affected the effectiveness of NET and the generalizability of the outcomes: the participants' conditions in meeting the PTSD diagnosis. While NET has primarily been evaluated for patients meeting the criteria for PTSD (Shauer et al., 2011), not all participants in our study exceeded the cut-off score of the IES-R measurement for the diagnosis of PTSD. Therefore, it is unfortunate that the study did not exclusively include patients all meeting the PTSD criteria as indicated. While this study did not fully meet the inclusion criteria for NET, it also explored the promising improvements of NET even within patients with low levels of symptoms. However, the current study being based on a small sample of participants with low thresholds of PTSD symptoms, as seen in the cases of participants who withdrew during the initial phases of NET, could have led to the high rate of dropouts (half of the participants) in this research, as subjects with symptom severity under the clinical threshold and dropping out from treatment are closely related (Swift & Greenberg, 2012).

The original plan was to conduct the NET sessions on a weekly basis, which was mostly achieved. However, due to various unforeseen circumstances such as hospitalisation, relocation, or bereavement of the participants, there were occasional breaks of up to 3 weeks between sessions. While these life events are an inherent part of reality, it is recommended to give break no more than a fortnight between consecutive NET sessions (Robjant & Fazel, 2010) to facilitate the successful reconstruction of memories, event reorganisation, and the continuity of the narrative. Having a break of more than 2 weeks may have potentially

impacted the participants' progress by disrupting the potential gradual reduction in symptoms. As previously mentioned, the number of measurements for SCCS was insufficient and did not meet the recommended threshold of 5 points for the treatment phase outlined by Fisher et al. (2003) for interpreting changes between phases. While three data points for SCCS in the treatment phase were considered sufficient to observe changes and prevent the "maturation effect," the fact that it fell below the recommended threshold is undoubtedly one of the most significant limitations of this study. Despite the practicality of conducting e-NET, it is essential to address the limitations it posed in our study. During video calls, the lifeline of each participant was created on a whiteboard, with the therapist placing and replacing symbols based on the participant's instructions since they joined the sessions primarily via their phones. This inability to physically interact with the symbols may have resulted in reduced engagement and interaction during the sessions, potentially affecting the participant's connection to the symbols and lifeline. Additionally, zooming in on the symbols of events during the sessions might have restricted the holistic view of the lifeline, further diminishing engagement. The dual role of the researcher as both therapist and investigator in the NET sessions may have also introduced certain limitations. This arrangement could have influenced the outcomes of the study due to the researcher's heightened commitment to the research, data collection objectives, and her relationship with the participants, possibly affecting their perception of the researcher's authority. Ethical dilemmas arising from the potential conflict between these roles were carefully managed by maintaining objectivity and transparency remained a priority throughout the research process.

4.5.4. Future Directions

This study placed significant emphasis on examining the feasibility and potential effectiveness of NET in reducing PTSD symptoms and its comorbid disorders in Syrian refugees residing in Turkiye. While the results have provided promising insights, it is

imperative to note that further research is required to establish the replicability and generalisability of the findings. Future studies could consider employing similar research designs, such as SCD, or utilise controlled trials to offer more comprehensive outcomes. Additionally, comparative studies between NET and other trauma-focused therapy techniques in this context and population would enhance the understanding of the efficacy of NET in comparison to existing interventions.

Long-term investigations focusing on the extended follow-up periods could provide insights into the delayed effects of NET in reducing PTSD symptoms, an aspect that this study was unable to explore due to the limited duration of the follow-up phase. The participants were included among those who have rather economical relief following purposive sampling, due to inclusion criteria set in the preliminary FG research. Future research endeavors should aim to include a more diverse representation of the Syrian refugee population by conducting studies within larger community settings and utilising random sampling techniques.

While this study suggests the feasibility of implementing NET in the Turkish context for the treatment of PTSD and related psychological issues, the cultural disparities between Syrian and Turkish populations necessitate further investigation. Contextual differences between the two cultures may influence the generalisability of the findings from the war-affected Syrian refugee population to the broader Turkish community. Thus, future research should focus on examining the effectiveness of NET in the Turkish population, particularly considering the varying trauma types and cultural nuances between the two populations.

Furthermore, the study has shed light on the significant relationship between SCC and NET, offering new insights into the NET research domain. Consequently, future research should delve deeper into the interplay between SC and the NET technique. By exploring this relationship more comprehensively, researchers can gain a more distinguished understanding

of the role of NET in promoting positive self-regulation and overall psychological well-being.

4.6. Conclusion

The current study has demonstrated the promising potential of the NET technique in reducing symptoms of PTSD, depression, anxiety, and stress within the war-affected Syrian population in Turkiye. Notably, this research represents the first of its kind to investigate the impact of NET on displaced Syrian refugees and its feasibility within the Turkish context. Furthermore, this study has contributed to the existing body of knowledge by shedding light on the relationship between NET and SCC, revealing a gradual improvement in SCC during the NET intervention. This unique exploration of the connection between NET and SCC represents an unprecedented contribution to the field, offering valuable insights that serve as a crucial starting point for future research endeavors and clinical applications. By elucidating the potential benefits and limitations of NET in the context of displaced populations, this study lays the groundwork for further investigations aimed at enhancing our understanding of trauma-focused therapeutic interventions and their implications for psychological well-being in similar populations.

Chapter 5: General Discussion and Conclusion

While the discussion, future direction, and limitation sections have already been thoroughly addressed in their relative chapters, further significant implications of this research will be expounded upon in the subsequent chapters.

5.1. Implications of Mental Health Research in Syrian Refugees

The enduring Syrian refugee crisis has spurred extensive research into the mental health of the displaced Syrian population. Scholars have earnestly sought to grasp the prevalence of mental health issues within this community, along with the impediments that the Syrian refugees face in accessing mental health services. Additionally, intervention studies have been conducted to propose effective treatment models for this vulnerable group. Notably, the contributions of Acarturk et al. (2018), Yurtsever et al. (2018), and Silove et al. (2017) have been pivotal in investigating various dimensions of the mental well-being of Syrian refugees. These studies have brought to light the high incidence of mental health problems among this demographic, underscoring obstacles such as language barriers, cultural disparities, and a dearth of mental health professionals and resources, all of which hinder their access to necessary services. Building upon the existing literature, the systematic review conducted in this thesis aims to provide a comprehensive synopsis of current research, pinpoint research gaps, and establish a foundation for further inquiry. The findings of this review are extensive, encompassing clinical, policy, resource allocation, and research considerations in the mental health for Syrian refugees. By outlining evidence on the prevalence and determinants of mental health issues, the findings offer crucial insights for policymakers to prioritise and formulate mental health strategies, allocate resources, and facilitate the implementation of evidence-based interventions for this community. Allocating resources towards community-based projects, training mental health professionals, and providing accessible and culturally sensitive mental health therapies would undoubtedly help

identify and tackle the mental health challenges faced by this population, ultimately enhancing their overall well-being. Furthermore, authorities and policymakers can leverage these research findings to promote mental health services in collaboration with humanitarian and refugee organisations. This study emphasises the significance of integrating mental health services into local and international humanitarian efforts. Humanitarian agencies working with the Syrian refugee population can use these findings to develop programs, train their staff, and integrate mental health and psychosocial support within their services. Given Turkiye's significant role in hosting the largest refugee population globally, such collaboration may facilitate the implementation of effective and sustainable mental health initiatives for this community. Moreover, the findings of this research can contribute to reducing the stigma associated with seeking and receiving mental health assistance among Syrian refugees, while also raising awareness about the mental health challenges faced by this vulnerable group. By disseminating the results and fostering a greater understanding of their mental health needs, it is possible to foster empathy, support, and social inclusion for this marginalised population.

In conclusion, stakeholders, including clinicians, policymakers, researchers, and humanitarian organisations, can collaboratively utilise these implications to improve mental health outcomes and promote the well-being of displaced Syrians.

5.2. Implications of NET in Syrian Refugees

The findings of this research highlight that NET holds promise as an effective therapeutic approach for the war-affected displaced Syrian population. Since the narrative component of NET is based on TT offering a lifeline creation to represent experienced traumatic and other significant events (Schauer et al., 2011), this approach has the potential to empower this population, who experienced a loss of power and control due to the impacts of war, to become the narrators of their stories in many aspects. For instance, controlling and

owning their lives and sharing their stories with others may help gain power in relationships and foster societal repair (Bichescu, 2007; Schauer et al., 2011). In addition to that, beyond its therapeutic aims, the testimonial aspect of NET also serves for documenting human rights violations and protecting the dignity of individuals by an autobiographical report obtained at the end of the therapy (Schauer et al., 2011; Neuner et al., 2002). Therefore, Syrian refugees who have endured detrimental and traumatic events may utilise these documents for legal purposes, such as filing accounts of human rights violations or seeking asylum. They can obtain these testimonials through NET sessions, which create a therapeutic, confidential, and supportive environment, safeguarding their dignity and human rights while aiding in the development of a more coherent and less fragmented sense of self and memory.

The study findings also underscore the need for mental health professionals and humanitarian organisations to recognise the practicality and potential effectiveness of NET in this context. It emphasises the importance of designing and implementing therapeutic interventions and employing NET as a tool to meet the mental health needs of this population. Especially in conflict areas, NET offers a valuable opportunity for practical dissemination through locally trained professionals, ensuring successful and effective delivery. Considering the evidence on the practicality and effectiveness of NET delivered by trained lay counselors/professionals in various research (e.g., Jacob, 2014; Neuner et al., 2004), clinicians and mental health providers in Turkiye or any other country working with this population may consider delivering NET with lay counselors to successfully address the mental health needs of this population, especially when resources are limited. Therefore, policy and program development agencies should consider including NET techniques in their action plans and programs when designing psychological support for this population and the training of the professionals working with Syrian Refugees.

NET involves the integration of traumatic memories into a coherent narrative. Engaging in this systematic process during NET sessions may equip Syrian refugees with enhanced resilience and coping mechanisms to deal with their past traumas and current challenges. Consequently, this may help them actively and functionally engage with society, as the debilitating impact of trauma-related symptoms may have significantly reduced their social integration. NET can also help strengthen and enhance the social support networks of this population by facilitating the sharing of their narratives with a therapist, as it encourages participants to express their unspoken memories and repressed but unrestful feelings. Additionally, since NET focuses on the regulation of secondary emotions, such as feelings of shame, social pain, and guilt, ultimately regulating these emotions fosters connections within society, evokes empathy, and increases understanding among individuals who share similar experiences (Jordan, 2000; Schauer et al., 2011). Accordingly, again, through the process of engaging in the narration of their life experiences, individuals may regain a sense of empowerment and control over their own lives and a strong connection with society, which might have been lost due to trauma-related experiences (Resick & Schnicke, 1992; Wilson, 2006). Since it is supported by active and empathic listening of the therapist, NET allows for restructuring, correcting, and healing of social relationships (Elbert et al., 2015; Schauer et al., 2011).

This study also has the potential to address the long-term impacts of trauma in this population. NET, as a therapeutic tool, may offer a valuable intervention to target long-term impacts of trauma, such as isolation, comorbid psychological disorders, substance abuse, and self-harm. By addressing these long-term consequences, NET has the potential to contribute to the healing and recovery of Syrian refugees in the long run. Therefore, one of the most significant implications of this study could be the mediating role of NET in contributing to the overall well-being, sense of self, and successful integration of Syrian refugees into society

with its facilitative role in communication and emotional regulation, and enhanced coping strategies helping and extending the repair of collective social structures of trauma and shattered perception toward the social world where the survivors of trauma withdraw from meaningful social relationships (Katsounari, 2015; Mollica et al., 2004; Robjant & Fazel, 2010; Schauer et al., 2011).

In conclusion, the implications drawn from this research underscore the potential benefits of NET as a therapeutic approach for the war-affected displaced Syrian population. By recognising its testimonial and human rights aspects, its potential to address the long-term impacts of trauma, contribution to the sense of self, overall well-being, and successful integration into society, offering hope for healing and recovery in the face of significant challenges, NET can notably meet the mental health needs of Syrian Refugees.

5.3. Implications for Self-Concept Clarity

The study's significant findings, highlighting the notable effectiveness of NET on SCC, contribute valuable insights to the existing literature, addressing a previously unexplored gap, as evidenced in the comprehensive scoping review conducted in this research. The implications of these results are extensive and hold the potential to significantly influence the application of NET in practice and guide future research in this invaluable therapeutic approach. Foremost, in light of the positive impact of NET on SCC, mental health practitioners should acknowledge NET as a valuable therapeutic tool when working with individuals with SC issues. Because the findings increase the credibility of NET as an effective intervention not only for trauma-related psychological concerns but also for issues pertaining to the self. Consequently, an increased adoption of NET in both practice and research is highly anticipated. Additionally, this study sheds light on the strong correlation between the self and narration, supporting and enriching existing psychological theories such as Narrative Identity Theory (McAdams, 1985) and Narrative Therapy (White & Epston,

1990). This association underscores that narratives serve not only as a means of communicating experiences but also as fundamental elements in shaping and comprehending the self. From this perspective, it can be posited that NET may also impact Posttraumatic Growth (PTG), involving the discovery of meaning and the experience of positive transformation following highly challenging life circumstances. PTG refers to the positive psychological changes that transpire after enduring profound life challenges (Tedeschi & Calhoun, 1995; 2004). The principles of PTG align with the core tenets of NET, as discussed below, and the study's findings suggest that NET may contribute to the process of posttraumatic self-continuity and personal growth. This notion is further supported by Zang et al. (2014)'s study indicating the potential positive influence of NET on PTG among survivors of the Sichuan earthquake and by Hijazi (2014) in a preliminary RCT conducted with Iraqi refugees. Despite NET not originally being intended to target PTG, the findings of this study further support and affirm its potential to foster PTG following devastating life experiences.

The phenomenon of how traumatic experiences shape self-formation and self-development is complex. Previous research on PTSD and theoretical models of traumatic stress syndromes has revealed that individuals respond to trauma in diverse ways (Bonnano, 2004; Wilson & Drozdek, 2004; Wilson et al., 2001). While up to 90% of the population experiences at least one traumatic event during their lifetime, not all individuals develop PTSD. Survivors' reactions to trauma are multifaceted and influenced by various variables such as environmental support, coping skills, and the type of trauma experienced (Center for Substance Abuse Treatment, 2014; Kinzie, 2015). Establishing and reinforcing relationships that sustain a sense of posttraumatic self-continuity are crucial components of the transformative process of finding meaning after trauma (Wilson, 2006). Furthermore, it is asserted that the continuous feeling of self is based on two simultaneous points: the

perception of continuity and sameness of oneself in time and space, and the perception of continuity and sameness of how others recognise the self (Erikson, 1950). Considering the principles of NET, such as its time and space-specific lifetime creation, which help individuals to develop a coherent and organised narrative of their life story and comprehend their life as a whole with both positive and negative experiences (Schauer et al., 2011), and the therapeutic relationship between the therapist and survivor characterised by reciprocity, trustworthiness, and consistency, it is conceivable that NET may have both a direct and indirect influence on PTG. This study presents an opportunity for researchers to further investigate the role of NET in facilitating PTG, building upon the precedent results.

In conclusion, the findings of this study showcasing the effectiveness of NET on SCC are groundbreaking and hold implications for both practice of NET and future research. Mental health professionals should consider utilising NET for individuals with SCC issues, and researchers can explore the broader impact of NET on different aspects of self. Additionally, the study's insights into the link between the self and narration can inspire investigations into the role of NET in promoting PTG.

Overall, this research has the potential to make a valuable contribution to the expanding body of literature on trauma-focused interventions and their applicability in diverse populations. The multifaceted approach of this study, which includes data gathered from the systematic review, focus group, and intervention study, has generated valuable insights and added to the existing literature. It also paves the way for the development of future mental health implications for this vulnerable population. Importantly, the promising results of this study should encourage Turkish authorities and mental health services to develop appropriate policies and programs that incorporate the delivery of NET as an evidence-based intervention to address the mental health needs of Syrian refugees within the Turkish context. Furthermore, this research serves as an important call for researchers and

practitioners to deepen their understanding of the mental health challenges faced by Syrian refugees and provide support for their well-being.

5.4. Implications of NET in the context of Turkiye

The observation that many psychological interventions may not be universally applicable, as they were primarily developed for Western, Educated, Industrialised, Rich, and Democratic (WEIRD) societies, emphasises the critical importance of considering cultural context when implementing such interventions (Henrich et al., 2010; Kleinman & Benson, 2006; Li et al., 2023). This study significantly presents compelling insights and promising results regarding the effectiveness of NET in mitigating mental health population within two distinct cultural contexts. One of the primary objectives of this study was to introduce the NET approach to the Turkish context, where NET has not been previously practiced or researched. Consequently, the significant and promising results of this study carry profound and far-reaching implications across various domains. Considering the compelling challenges faced by Syrian refugees in Turkiye, encompassing traumatic experiences, loss, displacement, and acculturation stress (Alpak et al., 2015; Jefee-Bahloul, 2014; Kirmayer et al., 2011), the integration of NET into existing mental health programs in Turkiye could offer an evidence-based therapeutic approach that effectively targets trauma and facilitates healing and recovery within this vulnerable population. This is especially critical, as unaddressed mental health issues could exert additional pressure on host countries, leading to heightened reliance on their social welfare systems and potentially engendering long-term challenges for both refugees and host nations (UNHCR, 2013). Given Turkiye's pivotal role in hosting the largest refugee population globally, addressing the mental health needs of refugees within the country assumes paramount significance at the national level. This necessitates the training of mental health professionals and the allocation of resources to ensure proficient and culturally appropriate delivery of NET.

Although originally developed to help individuals who have experienced traumatic events in post-conflict areas (Schauer et al., 2011), the efficacy of NET has also been demonstrated in individuals affected by other trauma-related life events, including interpersonal violence and natural disasters (e.g., Bichescu et al., 2007; Ertl et al., 2011; Zang et al., 2013). This presents a valuable opportunity for Turkish mental health professionals to investigate this technique with individuals struggling with the psychological aftermath of various trauma-related life experiences, extending its potential benefits beyond the refugee population to the general population. Future studies are warranted to examine the effectiveness of NET in diverse trauma-related life experiences, as contextual factors may influence outcomes. However, considering the evidence in the literature, NET demonstrates promise as an effective tool for addressing a range of trauma-related and other mental health issues, as discussed in section 4.1.5.3. Moreover, the Contextual Model, proposed by Wampold (2001) and further developed by Wampold and Imel (2015), underscores three key factors that shed light on the adaptive value of trauma-focused interventions in various contexts: the genuine relationship between therapist and client, the cultivation of expectations, and the implementation of treatment strategies. These fundamental elements of trauma-focused interventions are also deemed vital to a variety of psychological interventions aimed at ameliorating impaired functioning in individuals. Considering NET as an evidence-based trauma-focused intervention that encompasses these three core elements, including the empathic bond between therapist and patient and the aspiration to construct new meanings for the future, NET holds promise for application beyond trauma-related conditions. The contextual approach further emphasises the significance of culturally tailored evidence-based treatments, as they tend to be more advantageous for individuals within the target cultural group (Wampold, 2015). Thus, the implementation of NET in the Turkish context, with both

refugee and non-refugee populations, holds potential for positive and substantial effects in the treatment of trauma-related and other psychological issues.

In conclusion, by demonstrating the feasibility and potential effectiveness of NET in the Turkish context, the findings of this research pave the way for the investigation of this technique in addressing mental health challenges within diverse populations in Türkiye. Encouragement for future research is extended to explore its effectiveness in individuals with varying trauma-related life experiences and psychological problems. This research offers valuable insights into the use of NET and its implications for mental health interventions, ultimately contributing to improved mental health outcomes for different populations in Türkiye.

Reflexivity

Throughout this study qualitative and quantitative methods were employed. The intervention study of NET utilised a mixed-method approach for data collection and analysis of SCD and Content Analysis of CIs. Recognising the concept of reflexivity in qualitative research, it is essential to reflect on the study's design and outcomes, acknowledging the influence of the researcher and intersubjective elements. Reflexivity, as described by Finlay (2002a), involves examining how the researcher's own perspective and interactions with participants can shape the research process and outcomes. In qualitative research, possessing an empathic ability to relate to social and psychological realities while remaining open to changes in one's standpoint is crucial (Attia & Edge, 2017). As the researcher, therapist, and central figure of this research, my position and attitudes may have influenced participants' responses, data collection, and the interpretation of findings (Finlay, 2002b).

In the developmental approach to research methodology, Attia and Edge (2017) have proposed two interrelated characteristics of reflexivity: prospective and retrospective reflexivity. Prospective reflexivity concerns the impact of the researcher as a human being on

the research process. Conversely, retrospective reflexivity focuses on how the research itself has influenced the researcher. Considering the three levels of focus in reflexivity introduced by Wilkinson (1998), these characteristics are explored below at the personal, professional, and disciplinary levels:

Personal Level: This involves examining the individual motivations, possessed knowledge, and how these factors might have influenced research findings and expectations. It requires introspection into the researcher's personal biases, experiences, and values that may have subtly shaped the research process.

Professional Level: Here, the researcher's professional skills, dynamics, and communication with participants are evaluated to understand how they might have impacted the research process. Reflecting on one's expertise, ethical considerations, and interpersonal skills during data collection and analysis is essential for a comprehensive understanding of the study's dynamics.

Disciplinary Level: This level examines the researcher's stance in theory, field, and methodology, and how these factors might have influenced the overall research approach. It entails considering the broader disciplinary influences on the research, including theoretical frameworks, methodological paradigms, and ethical considerations that might have guided or constrained the study. By critically engaging with these levels of reflexivity, the researcher can gain a deeper awareness of the intricate ways in which their positionality and engagement have shaped the research process and outcomes. This reflective practice contributes to the transparency and rigor of the research, enhancing its credibility and validity within the broader academic discourse.

Prospective Reflexivity

Personal: Throughout my research journey, I encountered numerous challenges that tested my resilience, yet I also discovered sources of inspiration that fueled my determination to

persist until the completion of my study. Commencing my PhD in December 2019 coincided with the onset of the global Covid-19 pandemic, presenting immediate hurdles as I settled in the United Kingdom, far from my home, friends, and loved ones, including my husband. Compounded by the absence of my supervisor, nearly a year, I faced a significant lack of guidance during a critical phase of my research. Despite the limited time I spent under Nigel's mentorship, his introduction me with the NET technique left a profound impact on me, prompting my decision to become proficient in NET and incorporate it into my PhD research. Even before embarking on my doctoral journey, I was resolute in my commitment to conduct research involving Syrian refugees, drawing from my three years of experience as a psychologist in a social service in my home country, Turkiye. This experience equipped me with a deep understanding of the mental health challenges faced by this vulnerable population. The tragic image of three-year-old Syrian boy Alan Kurdi, whose lifeless body washed ashore in my hometown of Bodrum in 2015 while attempting to flee by sea with his family, left an indelible mark on me. Witnessing the struggles of many displaced individuals further fueled my determination to contribute to the betterment of the lives of those who have endured the ravages of war and faced additional hardships as refugees. Additionally, my personal experiences, including the turmoil of sending my brother to the conflict zone at the Turkiye -Syria border for his military duty in 2016 and surviving multiple earthquakes that instilled fear, provided a deep understanding of the ongoing trauma prevalent in Turkiye. Acknowledging Turkiye 's unique geopolitical and socio-political context, with the potential for further traumatic events, underscored the urgency of introducing a trauma-focused therapy technique tailored to this specific context. Thus, my research proposal was shaped by these deeply personal encounters and observations.

During my first-year confirmation review, I experienced firsthand the terror of an earthquake in Izmir, which struck just minutes after my online interview with my internal

examiner and collapsed several buildings around my apartment. This harrowing event left me grappling with anxiety, plagued by nightmares and sleepless nights for weeks. Recognising that many individuals in Turkiye have endured similar traumatic events, such as the devastating Turkiye -Syria earthquakes happened in Febraury, 2023, strengthened my rationale to introduce a trauma-focused therapy technique that could effectively address the mental health needs of individuals in the Turkish context. For this reason, NET emerged as the most fitting approach, aligning seamlessly with my research objectives and contextual considerations.

My personal motivations and unwavering dedication significantly influenced the trajectory of my research, shaping the selection of therapy techniques, the target population, and the overarching context of my study. I am confident that my passion and steadfast commitment will remain pivotal in conducting this research with utmost sincerity and effectiveness.

Professional: Navigating the challenges of securing appropriate training in the NET technique during the COVID-19 lockdown and restrictions on social gatherings presented a significant obstacle for me. However, the online training and workshops offered by the NET Institute, under the guidance of renowned experts of it such as Maggie Schauer, Elisabeth Kaiser, and Katy Robjant, proved to be a pivotal resource for advancing my NET skills. This comprehensive virtual training equipped me with the necessary skills to conduct effective NET sessions and provided essential guidance, albeit in a format that deviated from my preferred in-person sessions. On the other hand, the transition to an online intervention study brought forth unforeseen hurdles, especially in the context of engaging with a socioeconomically and culturally diverse participants, which necessitated innovative solutions such as creating a digital lifeline on a shared whiteboard to replace physical lifeline construction. Despite adeptly handling the technological intricacies, the absence of in-person

interactions with participants did pose occasional challenges and impacted my professional motivation. Furthermore, the unexpected withdrawal of three participants during the study's recruitment phase initially tested my perseverance. However, my unwavering dedication to the continuity of the research and the resilience exhibited by the remaining participants bolstered my resolve as both a researcher and therapist. Their continued commitment to the NET process and the positive feedback provided during the CIs emphasised the significance of my presence during sessions, fostering an environment conducive to open communication and trust. The diligent maintenance of reflective diaries throughout the NET sessions, coupled with my meticulous approach, significantly fortified the data analysis process. The integration of data from therapy sessions with external information about incidents occurring between sessions expanded the scope of the data analysis, enabling a more comprehensive understanding of the study's findings. My multifaceted role as a researcher and NET therapist facilitated a nuanced interpretation of the research outcomes, underscoring the impact of my professional perspective on the research process, data collection, and the ultimate success of the study.

Disciplinary: The intervention section of this research is underpinned by the philosophical framework of critical realism, as detailed in section 4.2.1, emphasising the incorporation of mixed methods to capture the underlying realities in both natural and social sciences. This study represents a valuable contribution to the understanding of the feasibility and efficacy of a novel technique in a new cultural and contextual environment. While this perspective entails a broader philosophical stance, the research implementation primarily prioritised my role as a researcher, intending to comprehensively explore the existing and unexplored aspects. Given that the application of NET in this particular context and culture is unprecedented, and its effectiveness has been demonstrated in various settings, my research was guided by an anticipation of positive outcomes, aligning with the empirical domain of

critical realism. Furthermore, acknowledging the multi-layered theoretical mechanisms influencing the research outcomes, particularly the link between NET and SCC, and recognising the intertwined nature of reality with human perception and behaviour, I opted for the SCD approach. This approach facilitated a detailed observation, interpretation, and in-depth analysis of the research data.

In the role of a researcher and psychologist with expertise in the field, I was mindful of the potential power dynamics during interactions with participants within and between sessions. These dynamics may have influenced participants' responses and experiences during the intervention phases. To mitigate any associated issues, I remained cognisant of my position as a NET therapist, consistently demonstrating empathy, cultural sensitivity, non-judgmental listening, and flexibility. Establishing clear boundaries was also crucial to maintaining a professional relationship during sessions. Despite these precautions, participants may have perceived me as an authority figure, potentially impacting their responses during data collection and their level of engagement with the intervention.

Retrospective Reflexivity

Personal: As previously mentioned, my motivation to undertake this study originated from various sources, particularly my empathy for the disadvantaged population who have faced numerous challenges. As I delved deeper into their experiences and struggles, the narratives shared by each participant played a significant role in deepening my empathy and enhancing my understanding of their hardships. This heightened awareness has made me more attuned to the diverse needs of this population, strengthening my resolve to make a positive impact through my research. However, it is crucial to acknowledge that conducting research in a trauma context was emotionally demanding at times, given the sensitivity of the topics shared and the distressing narratives of the participants. To manage this burden, I made a conscious effort to engage in socialising and leisure activities to alleviate the strain on my mind. Despite

the challenging emotional impact of witnessing such detrimental life experiences, I viewed this research as an opportunity for personal growth. It taught me how to cope with the emotional toll of the research process and build resilience in managing difficult situations. Moreover, engaging in research in a field that I am passionate about has brought a profound sense of personal fulfillment and satisfaction. Knowing that my work can contribute to the well-being of others and advance the field of refugee mental health has provided me with a strong sense of purpose. This sense of purpose has been a driving force throughout the research journey, motivating me to overcome obstacles and continue with unwavering determination. In conclusion, while the emotional demands of conducting research in a trauma context were challenging, my passion for the topic, empathy for the participants, and the potential for personal growth and contribution to the field have fueled my motivation and commitment to this study.

Professional: Conducting this multifaceted study, incorporating various research approaches, has played a crucial role in deepening my understanding of my role as both a researcher and therapist. It has provided me with invaluable insights into my limitations and strengths, fostering personal and professional development. Working in a sensitive and emotionally demanding context posed challenges, but overcoming these obstacles and successfully completing the research has significantly strengthened my problem-solving abilities and coping mechanisms. This enhanced self-awareness will undoubtedly inform and shape my future research endeavors and clinical practice. Throughout this research journey, I have honed various skills, including research design, data analysis, utilisation of therapeutic techniques, and proficient cross-cultural communication. These skills will serve as invaluable assets in my future career as a researcher. Undertaking a systematic review, conducting focus group discussions, and implementing an intervention study for my PhD underscore my expertise and unwavering commitment to the field of psychology, particularly in the realm of

refugee mental health. I am confident that this research will bolster my credibility as a researcher and therapist, opening doors for further collaboration and career advancement within academia. Moreover, this research endeavor has the potential to create networking opportunities and foster collaborations with other researchers, mental health professionals, and organisations engaged in refugee mental health and trauma work. Publishing my findings in reputable academic journals and presenting them at conferences have likely garnered recognition within the academic community, affirming my contributions and expertise. This recognition may enhance my confidence, strengthen my professional reputation, and potentially lead to invitations for participation in related projects and collaborative initiatives.

In conclusion, conducting this comprehensive study has been a transformative experience, enriching my professional skill set and contributing to my growth as a dedicated researcher and therapist. I am eager to leverage these experiences and opportunities to make meaningful contributions to the field of psychology and the overall well-being of vulnerable populations in the future.

Disciplinary: Working with Syrian refugees residing in Turkiye has been a transformative cross-cultural experience for me. This opportunity has significantly enriched my cross-cultural competence, enabling me to work effectively with diverse populations in various contexts. Establishing relationships with each participant while delivering the NET sessions has been a pivotal aspect of the research process. These connections with the participants have profoundly influenced my engagement with the data collection process, allowing me to identify my strengths and limitations as a researcher. Acknowledging my own position in the research as a researcher and psychologist has led to enhanced research skills, particularly in terms of transparency and credibility, facilitating the conduct of robust and insightful research. Throughout the research journey, I have taken a reflective approach, viewing the study through the lens of a researcher, which, in turn, has influenced my investigations

("ontology" - what is knowable about the world) and my worldview ("epistemology" - assumptions about the nature of knowledge) regarding this subject (Holmes, 2020). This self-awareness has been instrumental in shaping my understanding of the dynamics at play during the research process, allowing for a more nuanced interpretation of the collected data and the participants' narratives. By recognising my role in the research, I have been able to navigate the complexities of the study with increased sensitivity and cultural awareness, ultimately contributing to the depth and richness of the research findings.

Conclusion

One of the primary objectives of this study was to examine the prevalence and demographic factors related to PTSD, depression, anxiety, and stress among displaced Syrians. Furthermore, it sought to evaluate the feasibility and potential effectiveness of NET in the Syrian refugee population within the Turkish context. The systematic review uncovered notably elevated rates of PTSD, depression, anxiety, and stress among displaced Syrians in comparison to the general population, with rates being 8-9 times higher. Gender and socioeconomic status were identified as key predictors of mental health problems, particularly for female Syrians in Turkiye. The severity of symptoms was found to be linked to the number of traumatic events and post-migration challenges. Additionally, while the prevalence of anxiety was highest in the US, Turkiye exhibited the highest prevalence of PTSD and depression, with Germany reporting the lowest rates of these mental health problems among externally displaced Syrian populations.

The FC discussion, serving as a preliminary study, aimed to recognise barriers and challenges that could hinder the implementation of NET. It sought to devise practical solutions to address these obstacles and inform the design of the intervention study. The discussion emphasised the critical importance of the NET participant recruitment process,

highlighting criteria such as age, Turkish language proficiency, educational background, access to economic resources, and geographic location within Turkiye.

Concerning the NET intervention study in the displaced Syrian refugees in Turkiye, varying degrees of improvements were observed, with moderate to high treatment effects for PTSD symptoms. Although not all participants exhibited reliable and significant clinical changes, some participants demonstrated notable improvements. The study also indicated positive outcomes for depression, anxiety, and stress symptoms, suggesting the potential efficacy of NET in addressing these psychological problems among Syrian refugees in Turkiye. A noteworthy finding was the significant role of NET in enhancing SCC, which demonstrated substantial effectiveness for all participants. Therefore, the study concluded that NET shows promise as a therapeutic technique to alleviate trauma-related psychological issues among displaced Syrian refugees in the Turkish context, while also exerting a positive influence on SCC.

References

- Acarer, E. (2015). *Kamplardaki Kadin ticareti. Cumhuriyet (Women trafficking in refugee camps)*.
<https://www.cumhuriyet.com.tr/haber/kamplardaki-kadin-ticareti-188373>.
- Acarturk, C., Cetinkaya, M., Senay, I., Gulen, B., Aker, T., & Hinton, D. (2018). Prevalence and predictors of posttraumatic stress and depression symptoms among Syrian refugees in a refugee camp. *Journal of Nervous and Mental Disease*, 206(1), 40–45.
<https://doi.org/10.1097/NMD.0000000000000693>.
- Acarturk, C., Konuk, E., Cetinkaya, M., Senay, I., Sijbrandij, M., Cuijpers, P., & Aker, T. (2015). EMDR for Syrian refugees with posttraumatic stress disorder symptoms: Results of a pilot randomized controlled trial. *European Journal of Psychotraumatology*, 6(1).
<https://doi.org/10.3402/ejpt.v6.27414>.
- Acarturk, C., Konuk, E., Cetinkaya, M., Senay, I., Sijbrandij, M., Gulen, B., & Cuijpers, P. (2016). The efficacy of eye movement desensitization and reprocessing for post-traumatic stress disorder and depression among Syrian refugees: Results of a randomized controlled trial. *Psychological Medicine*, 46(12), 2583–2593. <https://doi.org/10.1017/S0033291716001070>.
- Acarturk, C., McGrath, M., Roberts, B., Ilkkursun, Z., Cuijpers, P., Sijbrandij, M., Sondorp, E., Ventevogel, P., McKee, M., Fuhr, D. C., & STRENGTHS consortium. (2020). Prevalence and predictors of common mental disorders among Syrian refugees in Istanbul, Turkey: a cross-sectional study. *Social Psychiatry and Psychiatric Epidemiology*, 56(3), 475–484.
<https://doi.org/10.1007/s00127-020-01941-6>.
- Acarturk, C., Uygun, E., Ilkkursun, Z., Carswell, K., Tedeschi, F., Batu, M., Eskici, S., Kurt, G., Anttila, M., Au, T., Baumgartner, J., Churchill, R., Cuijpers, P., Becker, T., Koesters, M., Lantta, T., Nosè, M., Ostuzzi, G., Popa, M., Purgato, M., Sijbrandij, M., Turrini, G., Välimäki, M., Walker, L., Wancata, J., Zanini, E., White, R.G., van Ommeren, M., & Barbui,

- C. (2022). Effectiveness of a WHO self-help psychological intervention for preventing mental disorders among Syrian refugees in Turkey: a randomized controlled trial. *World Psychiatry, 21*(1), 88-95. <https://doi.org/10.1002/wps.20939>.
- Achilli, L. (2015). *Syrian refugees in Jordan: A reality check*. Migration Policy Centre, Policy Briefs. <http://doi.org/10.2870/821248>.
- Adenauer, H., Catani, C., Gola, H., Keil, J., Ruf, M., Schauer, M., & Neuner, F. (2011). Narrative Exposure Therapy for PTSD increases top-down processing of aversive stimuli—evidence from a randomized controlled treatment trial. *BMC Neuroscience, 12*(1). <https://doi.org/10.1186/1471-2202-12-127>.
- Akcapar, S. K., & Simsek, D. (2018). The politics of Syrian refugees in Turkey: A question of inclusion and exclusion through citizenship. *Social Inclusion (Lisboa), 6*(1), 176–187. <https://doi.org/10.17645/si.v6i1.1323>.
- Akhtar, A., Giardinelli, L., Bawaneh, A., Awwad, M., Naser, H., Whitney, C., Jordans, M.J.D., Sijbrandij, M., Bryant, R.A., & STRENGTHS Consortium. (2020). Group problem management plus (gPM+) in the treatment of common mental disorders in Syrian refugees in a Jordanian camp: study protocol for a randomized controlled trial. *BMC Public Health, 20*(1), 1-8. <https://doi.org/10.1186/s12889-020-08463-5>.
- Akobeng, A.K. (2005). Understanding randomised controlled trials. *Archives of Disease in Childhood, 90*(8), 840-844. <https://doi.org/10.1136/adc.2004.058222>.
- Al Ibraheem, B., Kira, I. A., Aljakoub, J., & Al Ibraheem, A. (2017). The health effect of the Syrian conflict on IDPs and refugees. *Peace and Conflict: Journal of Peace Psychology, 23*(2), 140–152. <https://doi.org/10.1037/pac0000247>.

- Alghamdi, M., Hunt, N., & Thomas, S. (2015). The effectiveness of Narrative Exposure Therapy with traumatised firefighters in Saudi Arabia: A randomized controlled study. *Behaviour Research and Therapy*, *66*, 64–71. <https://doi.org/10.1016/j.brat.2015.01.008>.
- Alpak, G., Unal, A., Bulbul, F., Sagaltici, E., Bez, Y., Altindag, A., Dalkilic, A., & Savas, H.A. (2015). Post-traumatic stress disorder among Syrian refugees in Turkey: a cross-sectional study. *International Journal of Psychiatry Clinical Practice*, *19*(1), 45-50. <https://doi.org/10.3109/13651501.2014.961930>.
- Alvarez-Conrad, J., Zoellner, L. A., & Foa, E. B. (2001). Linguistic predictors of trauma pathology and physical health. *Applied Cognitive Psychology*, *15*(7). <https://doi.org/10.1002/acp.839>.
- American Psychiatric Association. (1952). *Diagnostic and statistical manual of mental disorders* (1st ed.).
- American Psychiatric Association. (1968). *Diagnostic and statistical manual of mental disorders* (2nd ed.).
- American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.).
- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., revised).
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.).
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders*. (5th Ed.). <https://doi.org/10.1176/appi.books.9780890425787>.
- Ansari, S., Hameed Panhwar, A., & Akbar Mahesar, G. (2016). Mixed methods research: ontological, epistemological, and methodological underpinnings. *ARIEL An International*

Research Journal of Language and Literature, 27, 133–141.

<https://sujo.usindh.edu.pk/index.php/ARIEL/article/view/1134>.

Aoun, A., Joundi, J., & El Gerges, N. (2018). Post-traumatic stress disorder symptoms and associated risk factors: a cross-sectional study among Syrian refugees. *British Journal of Medical Practitioners*, 11(1), a1106.

Apak, H. (2014). Suriyeli Göçmenlerin Kente Uyumları: Mardin Örneği. *Mukaddime*, 5(2), 53-70.
<https://dergipark.org.tr/tr/download/article-file/184154>.

Arenliu, A., Bertelsen, N., Saad, R., Abdulaziz, H., & Weine, S. M. (2020). War and displacement stressors and coping mechanisms of Syrian urban refugee families living in Istanbul. *Journal of Family Psychology*, 34(4), 392–401. <https://doi.org/10.1037/fam0000603>.

Arslan, A. A., & Kotan, S. K. (2021). Savaşın Toplumsal Etkileri Bağlamında Suriye İç Savaşı ve Sanat. *Sanat ve Tasarım Dergisi*, 28(1), 75–97.
<https://doi.org/10.18603/sanatvetasarim.1048547>

Attia, M., & Edge, J. (2017). Be(com)ing a reflexive researcher: a developmental approach to research methodology. *Open Review of Educational Research*, 4(1), 33-45.
<https://doi.org/10.1080/23265507.2017.1300068>.

Bachelor, A., Laverdiere, O., Gamache, D., & Bordeleau, V. (2007). Client's collaboration in therapy: Self-perceptions and relationships with client psychological functioning, interpersonal relations, and motivation. *Psychotherapy (Chicago, Ill.)*, 44(2), 175-192.
<https://doi.org/10.1037/0033-3204.44.2.175>.

Barawi, K. S., Lewis, C., Simon, N., & Bisson, J. I. (2020). A systematic review of factors associated with outcome of psychological treatments for post-traumatic stress

disorder. *European Journal of Psychotraumatology*, 11(1), 1774240.

<https://doi.org/10.1080/20008198.2020.1774240>.

Barbour, R. (2014). *Qualitative traditions: Epistemology and Ontology* (2nd ed.). SAGE

Publications. <https://doi.org/10.4135/9781526485045>.

Barlow, D. H., Nock, M. K., & Hersen, M. (2009). *Single case experimental designs: Strategies for studying behavior change* (3rd ed.). Pearson.

Basheti, I. A., Ayasrah, S. M., Basheti, M. M., Mahfuz, J., & Chaar, B. (2019). The Syrian refugee crisis in Jordan: a cross sectional pharmacist-led study assessing post-traumatic stress disorder. *Pharmacy practice*, 17(3), 1475. <https://doi.org/10.18549/PharmPract.2019.3.1475>.

Basheti, I. A., Qunaibi, E. A., & Malas, R. (2015). Psychological impact of life as refugees: a pilot study on a Syrian Camp in Jordan. *Tropical Journal of Pharmaceutical Research*, 14(9), 1695–1701. <https://doi.org/10.4314/tjpr.v14i9.22>.

Baxter, A. J., Scott, K. M., Vos, T., Whiteford, H. A. (2013). Global prevalence of anxiety disorders: a systematic review and meta-regression. *Psychological Medicine*, 43(5), 897–910.

<https://doi.org/10.1017/S003329171200147X>.

Beck, J. G., Grant, D. M., Read, J. P., Clapp, J. D., Coffey, S. F., Miller, L. M., & Palyo, S. A.

(2008). The Impact of Event Scale-Revised: Psychometric properties in a sample of motor vehicle accident survivors. *Journal of Anxiety Disorders*, 22(2), 187–198.

<https://doi.org/10.1016/j.janxdis.2007.02.007>.

Beiser, M., & Hou, F. (2001). Language acquisition, unemployment, and depressive disorder among Southeast Asian refugees: a 10-year study. *Social Science and Medicine*, 53(10), 1321–34.

[https://doi.org/10.1016/S0277-9536\(00\)00412-3](https://doi.org/10.1016/S0277-9536(00)00412-3).

- Bemak, F., & Chung, R.C.Y. (2015). Counseling refugees and migrants. In P. B. Pedersen, W. J. Lonner, J. G. Draguns, J. E. Trimble, & M. R. Scharron-del Rio (Eds.), *Counseling Across Cultures* (7th ed., pp. 323–346). Thousand Oaks. <https://doi.org/10.4135/9781483398921>.
- Ben Farhat, J., Blanchet, K., Juul Bjertrup, P., Veizis, A., Perrin, C., Coulborn, R. M., Mayaud, P., & Cohuet, S. (2019). Syrian refugees in Greece: Experience with violence, mental health status, and access to information during the journey and while in Greece. *BMC Medicine*, *16*(40), 1–12. <https://doi.org/10.1186/s12916-018-1028-4>.
- Benish, S. G., Quintana, S., & Wampold, B. E. (2011). Culturally adapted psychotherapy and the legitimacy of myth: A direct-comparison meta-analysis. *Journal of Counseling Psychology*, *58*(3), 279–289. <https://doi.org/10.1037/a0023626>.
- Berry, J.W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology*, *46*(1), 5–34. <https://doi.org/10.1111/j.1464-0597.1997.tb01087.x>.
- Bhaskar, R. (1998). Critical realism and dialectic. In Archer, M.S., Bhaskar, R., Collier, A., Lawson, T., & Norrie, A. (Eds.), *Critical Realism: Essential Readings* (pp. 575-641). Routledge. <https://doi.org/10.4324/9781315008592>.
- Bhugra D. (2004a). *Culture and self-harm: Attempted suicide in South Asians in London*. Psychology Press Hove.
- Bhugra D. (2004b). Migration and mental health. *Acta Psychiatrica Scandinavica*, *109*(4), 243–258. <https://doi.org/10.1046/j.0001-690x.2003.00246.x>.
- Bhugra D, & Bhui K. (2003). Eating disorders in teenagers in East London: a survey. *European Eating Disorders Review*, *11*(1), 46–57. <https://doi.org/10.1002/erv.486>.
- Bhugra, D., Gupta, S., Schouler-Ocak, M., Graeff-Calliess, I., Deakin, N. A., Qureshi, A., Dales, J., Moussaoui, D., Kastrup, M., Tarricone, I., Till, A., Bassi, M., & Carta, M. (2014). EPA

Guidance mental health care of migrants. *European Psychiatry*, 29(2), 107–115.

<https://doi.org/10.1016/j.eurpsy.2014.01.003>.

Bhui, K., Abdi, A., Abdi, M., Pereira, S., Dualeh, M., Robertson, D., Sathyamoorthy, G., & Ismail, H. (2003). Traumatic events, migration characteristics and psychiatric symptoms among Somali refugees--preliminary communication. *Social Psychiatry and Psychiatric Epidemiology*, 38(1), 35–43. <https://doi.org/10.1007/s00127-003-0596-5>.

Bicer, N. (2017). The views of Syrian Refugees migrating Turkey on the Turkish language and culture: Kilis case. *Journal of Education and Training Studies*, 5(3), 97-109.

<https://doi.org/10.11114/jets.v5i3.2100>.

Bichescu, D., Neuner, F., Schauer, M., & Elbert, T. (2007). Narrative exposure therapy for political imprisonment-related chronic posttraumatic stress disorder and depression. *Behaviour Research and Therapy*, 45(9), 2212-2220. <https://doi.org/10.1016/j.brat.2006.12.006>.

Birmes, P., Hatton, L., Brunet, A., & Schmitt, L. (2003). Early historical literature for post-traumatic symptomatology. *Stress and Health*, 19(1), 17–26.

<https://doi.org/10.1002/smi.952>.

Bitoulas, A. (2015). *Asylum applications and first instance decisions on asylum applications: 2014*.

Eurostat, European Commission, Luxemburg. <https://ec.europa.eu/eurostat/web/products-data-in-focus/-/KS-QA-15-003>.

Bleich, A., Koslowsky, M., Dolev, A., & Lerer, B. (1997). Post-traumatic stress disorder and depression. An analysis of comorbidity. *The British Journal of Psychiatry: The Journal of Mental Science*, 170, 479–482. <https://doi.org/10.1192/bjp.170.5.479>.

Blight, K. J., Ekblad, S., Persson, J. O., & Ekberg, J. (2006). Mental health, employment and gender. Cross-sectional evidence in a sample of refugees from Bosnia-Herzegovina living in two

Swedish regions. *Social Science & Medicine* (1982), 62(7), 1697–1709.

<https://doi.org/10.1016/j.socscimed.2005.08.019>.

Bluck, S. (2003). Autobiographical memory: exploring its functions in everyday life. *Memory*, 11(2), 113–123. <https://doi.org/10.1080/741938206>.

Bluck, S., & Levine, L. (1998). Reminiscence as autobiographical memory: a catalyst for reminiscence theory development. *Ageing & Society*, 18(2), 185-208.

<https://doi.org/10.1017/S0144686X98006862>.

Boehnlein, J., Westermeyer, J., Scalco, M. (2016). Supplementary module 11: Immigrants and refugees. In R. Lewis-Fernandez, N.K. Aggarwal, L. Hinton, D.E. Hinton, & L.J. Kirmayer. (Eds.), *DSM-5 Handbook on the Cultural Formulation Interview* (pp. 173-181). American Psychiatric Publishing.

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(29).

<https://doi.org/10.1186/s12914-015-0064-9>.

Bonnano, G. A. (2004). Loss, Trauma, and Human Resilience. *American Psychologist*, 59(1), 20–28.

<https://doi.org/10.1037/0003-066X.59.1.20>.

Booth, C. M., & Tannock, I. F. (2014). Randomised controlled trials and population-based observational research: partners in the evolution of medical evidence. *British Journal of Cancer*, 110, 551-555. <https://doi.org/10.1038/bjc.2013.725>.

Borckardt, J.J. (2006). *Simulation modelling analysis user's guide: time series analysis program for short time series data streams*. (v.8.3.3). https://www.clinicalresearcher.org/SMA_Guide.pdf.

Borckardt, J. J., & Nash, M. R. (2014). Simulation modelling analysis for small sets of single-subject data collected over time. *Neuropsychological Rehabilitation*, 24(3–4), 492–506.

<https://doi.org/10.1080/09602011.2014.895390>

Borckardt, J. J., Nash, M. R., Murphy, M. D., Moore, M., Shaw, D., & O'Neil, P. (2008). Clinical practice as natural laboratory for psychotherapy research: a guide to case-based time-series analysis. *American Psychologist*, 63(2), 77–95. <https://doi.org/10.1037/0003-066X.63.2.77>.

Borho, A., Viazminsky, A., Morawa, E., Schmitt, G.M., Georgiadou, E., & Erim, Y. (2020). The prevalence and risk factors for mental distress among Syrian refugees in Germany: a register-based follow-up study. *BMC Psychiatry* 20(1), 1–13. <https://doi.org/10.1186/s12888-020-02746-2>.

Bradley, R., Greene, J., Russ, E., Dutra, L., Westen, D. (2005). A multidimensional meta-analysis of psychotherapy for PTSD. *American Journal of Psychiatry*, 162(2), 214-27.

<https://doi.org/10.1176/appi.ajp.162.2.214>.

Brady, F., Chisholm, A., Walsh, E., Ottisova, L., Bevilacqua, L., Mason, C., Werthern, M. von, Cannon, T., Curry, C., Komolafe, K., Robert, R. E., Robjant, K., & Katona, C. (2021). Narrative exposure therapy for survivors of human trafficking: feasibility randomised controlled trial. *British Journal of Psychiatry Open*, 7(6), 1–9.

<https://doi.org/10.1192/bjo.2021.1029>.

Bremner, J. D., Southwick, S. M., Johnson, D. R., Yehuda, R., & Charney, D. S. (1993). Childhood physical abuse and combat-related posttraumatic stress disorder in Vietnam veterans.

American Journal of Psychiatry, 150(2), 235-239.

Breslau N. (2002). Epidemiologic studies of trauma, posttraumatic stress disorder, and other psychiatric disorders. *Canadian Journal of Psychiatry. Revue canadienne de psychiatrie*, 47(10), 923–929. <https://doi.org/10.1177/070674370204701003>.

- Breslau, N. (2009). The epidemiology of trauma, PTSD, and other posttrauma disorders. *Trauma, Violence, & Abuse, 10*(3), 198-210. <https://doi.org/10.1177/1524838009334448>.
- Brewin C. R. (2001). A cognitive neuroscience account of posttraumatic stress disorder and its treatment. *Behaviour Research and Therapy, 39*(4), 373–393. [https://doi.org/10.1016/s0005-7967\(00\)00087-5](https://doi.org/10.1016/s0005-7967(00)00087-5).
- Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for post-traumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology, 68*(5), 748–766. <https://doi.org/10.1037/0022-006X.68.5.748>.
- Brewin, C. R., Dalgleish, T., & Joseph, S. (1996). A dual representation theory of posttraumatic stress disorder. *Psychological Review, 103*(4), 670–686. <https://doi.org/10.1037/0033-295X.103.4.670>.
- Brewin, C. R., Gregory, J. D., Lipton, M., & Burgess, N. (2010). Intrusive images in psychological disorders: Characteristics, neural mechanisms, and treatment implications. *Psychological Review, 117*(1), 210–232. <https://doi.org/10.1037/a0018113>.
- Brewin, C. R., & Holmes, E. A. (2003). Psychological theories of posttraumatic stress disorder. *Clinical Psychology Review, 23*(3), 339-376. [https://doi.org/10.1016/S0272-7358\(03\)00033-3](https://doi.org/10.1016/S0272-7358(03)00033-3).
- Briskman, L., & Latham, S. (2017). Refugees, islamophobia, and Ayaan Hirsi Ali: Challenging social work co-option. *Affilia, 32*(1), 108–111. <https://doi.org/10.1177/0886109916685801>.
- Brison, S. J. (1999). Trauma narratives and the remaking of the self. In M. Bal, J. Crewe, & L. Spitzer (Eds.), *Acts of Memory: Cultural recall in the present*. University Press of New England.

- Brown, T. A., Chorpita, B. F., Korotitsc, W., & Barlow, D. H. (1997). Psychometric properties of the depression anxiety stress scales (DASS) in clinical samples. *Behaviour Research and Therapy*, 35(1), 79–89. [https://doi.org/10.1016/S0005-7967\(96\)00068-X](https://doi.org/10.1016/S0005-7967(96)00068-X).
- Brune, M., Haasen, C., Krausz, M., Yagdiran, O., Bustos, E., & Eisenman, D. (2002). Belief systems as coping factors for traumatized refugees: a pilot study. *European Psychiatry*, 17(8), 451–458. [https://doi.org/10.1016/s0924-9338\(02\)00708-3](https://doi.org/10.1016/s0924-9338(02)00708-3).
- Bryant, R. A., Bawaneh, A., Awwad, M., Al-Hayek, H., Giardinelli, L., Whitney, C., Jordans, M. J. D., Cuijpers, P., Sijbrandij, M., Ventevogel, P., Dawson, K., & Akhtar, A. (2022). Effectiveness of a brief group behavioral intervention for common mental disorders in Syrian refugees in Jordan: a randomized controlled trial. *PLoS Medicine*, 19(3). <https://doi.org/10.1371/journal.pmed.1003949>.
- Bryman, A. & Bell, E. (2011). *Business research methods* (3rd ed.). Oxford University Press.
- Bukowska, M. (2021). Critical realism: one of the main theoretical orientations of the social sciences in the twentieth and twenty-first centuries. *Journal of Critical Realism*, 20(4), 441–447. <https://doi.org/10.1080/14767430.2021.1975212>.
- Burnett, A., & Ndovi, T. (2018). The health of forced migrants. *BMJ (Online)*, 363(October), 1–5. <https://doi.org/10.1136/bmj.k4200>.
- Byiers, B.J., Reichle, J., & Symons, F.J. (2012). Single-subject experimental design for evidence-based practice. *American Journal of Speech Language Pathology*, 21(4), 397-414. [https://doi.org/10.1044/1058-0360\(2012/11-0036\)](https://doi.org/10.1044/1058-0360(2012/11-0036)).
- Cakir, H. (2017). Suriyeli mülteci kadınların sosyo-kültürel değişime uyum çabaları: Yozgat örneği. *ÇÖMÜ Uluslararası Sosyal Bilimler Dergisi*, 2(4), 53-68. <https://doi.org/10.31454/usb.381481>.

- Campante, F. R., & Chor, D. (2012). Why was the Arab world posed for the revolution? Schooling, economic opportunities, and the Arab Spring. *Journal of Economic Perspectives*, *26*(2), 167-188. <https://doi.org/10.1257/jep.26.2.167>.
- Campbell J. D. (1990). Self-esteem and clarity of the self-concept. *Journal of Personality and Social Psychology*, *59*(3), 538–549.
- Campbell, J. D., Assanand, S., & Di Paula, A. (2003). The structure of the self-concept and its relation to psychological adjustment. *Journal of Personality*, *71*(1), 115–140. <https://doi.org/10.1111/1467-6494.t01-1-00002>.
- Campbell, J. D., Chew, B., & Scratchley, L. S. (1991). Cognitive and emotional reactions to daily events: The effects of self-esteem and self-complexity. *Journal of Personality*, *59*(3), 473–505. <https://doi.org/10.1111/j.1467-6494.1991.tb00257.x>
- Campbell, J. D., & Lavalley, L. E (1993). Who am I?: The role of self concept confusion in understanding the behavior of people with low self-esteem. In R. E Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard* (pp. 3-20). Plenum.
- Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavalley, L. F., & Lehman, D. R. (1996). Self-Concept Clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology*, *70*(1), 141–156. <https://doi.org/10.1037/0022-3514.70.1.141>.
- Cantekin, D., & Gencoz, T. (2017). Mental health of syrian asylum seekers in Turkey: The role of pre-migration and post-migration risk factors. *Journal of Social and Clinical Psychology*, *36*(10), 835–859. <https://doi.org/10.1521/jscp.2017.36.10.835>
- Cantor-Graae, E., & Selten, J. P. (2005). Schizophrenia and migration: a meta-analysis and review. *American Journal of Psychiatry*, *162*(1), 12–24. <https://doi.org/10.1176/appi.ajp.162.1.12>.

Carlson, E. B., Dalenberg, C., & Muhtadie, L. (2008). Etiology. In G. Reyes, J. D. Elhai, & J. D. Ford (Eds.), *Encyclopedia of Psychological Trauma* (pp. 257–264). Wiley.

Carlson, E. B., & Rosser-Hogan, R. (1991). Trauma experiences, posttraumatic stress, dissociation, and depression in Cambodian refugees. *The American Journal of Psychiatry*, *148*(11), 1548–1551. <https://doi.org/10.1176/ajp.148.11.1548>.

Center for Substance Abuse Treatment (US). (2014). Chapter 3: Understanding the Impact of Trauma, in *Treatment Improvement Protocol (TIP) Series 57* (pp. 59-90). Rockville. <https://www.ncbi.nlm.nih.gov/books/NBK207191/>.

Chambless, D. L., & Hollon, S. D. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology*, *66*(1), 7–18. <https://doi.org/10.1037//0022-006x.66.1.7>.

Chiang, C. A., Jhangiani, R. S., & Price, P. C. (2015). *Research Methods in Psychology* (2nd Ed.). BCcampus.

Christianson S., & Marren, J. (2012). The Impact of Event Scale - Revised (IES-R). *Official Journal of the Academy of Medical-Surgical Nurses*, *21*(5), 321-322.

Chung, M. C., AlQarni, N., AlMazrouei, M., Al Muhairi, S., Shakra, M., Mitchell, B., Al Mazrouei, S., & Al Hashimi, S. (2018b). The impact of trauma exposure characteristics on post-traumatic stress disorder and psychiatric co-morbidity among Syrian refugees. *Psychiatry Research*, *259*, 310–315. <https://doi.org/10.1016/j.psychres.2017.10.035>

Chung, M. C., AlQarni, N., AlMazrouei, M., Al Muhairi, S., Shakra, M., Mitchell, B., Al Mazrouei, S., & Al Hashimi, S. (2021). Post-traumatic stress disorder and psychiatric co-morbidity among Syrian refugees: The role of trauma exposure, trauma centrality, self-efficacy and emotional suppression. *JMIR Mental Health*, *30*(6), 681–689. <https://doi.org/10.1080/09638237.2020.1755023>.

- Chung, M. C., Shakra, M., AlQarni, N., AlMazrouei, M., Al Mazrouei, S., Al Hashimi, S. (2018a). Posttraumatic stress among Syrian refugees: trauma exposure characteristics, trauma centrality, and emotional suppression. *Psychiatry (New York)*, *81*(1), 54–70.
<https://doi.org/10.1080/00332747.2017.1354620>.
- Cicero, D.C. (2017). Self-Concept Clarity and psychopathology. In Lodi-Smith, J., DeMarree, K. (Eds.) *Self-Concept Clarity* (pp. 219-242). Springer. https://doi.org/10.1007/978-3-319-71547-6_12.
- Cicero, D. C., Becker, T. M., Martin, E. A., Docherty, A. R., & Kerns, J. G. (2013). The role of aberrant salience and self-concept clarity in psychotic-like experiences. *Personality Disorders*, *4*(1), 33–42. <https://doi.org/10.1037/a0027361>.
- Clark, L. A., & Watson, D. (1991a). Theoretical and empirical issues in differentiating depression from anxiety. In J. Becker & A. Kleinman (Eds.), *Psychosocial aspects of mood disorders* (pp. 39-65). Hillsdale, N J: Lawrence Erlbaum Associates.
- Clark, L. A., & Watson, D. (1991b). Tripartite model of anxiety and depression: Psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology*, *100*, 316-336.
- Cohen, M. L., & Quintner, J. L. (1996). The derailment of railwayspine: a timely lesson for post-traumatic fibromyalgia syndrome. *Pain Reviews*, *3*, 181–202.
<http://www.paineducation.com/100139.php>.
- Commission Européenne. (2016). *EU–Turkey statement: Questions and Answers*.
[http://europa.eu/rapid/press-release MEMO-16-963_fr.htm](http://europa.eu/rapid/press-release_MEMO-16-963_fr.htm).
- Connor, J. J., Hunt, S., Finsaas, M., Ciesinski, A., Ahmed, A., Robinson, B. E. (2016). From Somalia to US: shifts in gender dynamics from the perspective of female Somali refugees.

Journal of Feminist Family Therapy, 28(1), 1–29.

<https://doi.org/10.1080/08952833.2015.1130546>.

Conway, M.A. (2001a). Memory: Autobiographical. In Smelser, N. & Baltes, P.B (eds), *International Encyclopedia of the Social and Behavioral Sciences* (pp. 9563-9567).

<https://doi.org/10.1016/B0-08-043076-7/01495-9>.

Conway, M. A. (2001b). Sensory-Perceptual Episodic Memory and its context: Autobiographical Memory. *Philosophical Transactions: Biological Sciences*, 356(1413), 1375–1384.

<https://doi.org/10.1098/rstb.2001.0940>.

Conway, M. A., & Fthenaki, A. (2000). Disruption and loss of autobiographical memory. In L. Cermak (Ed.), *Handbook of neuropsychology: Memory and its disorders* (2nd ed., pp. 257-288). Elsevier.

Conway, M. A., & Pleydell-Pearce, C. W. (2000). The construction of autobiographical memories in the self-memory system. *Psychological Review*, 107(2), 261–288.

<https://doi.org/10.1037/0033-295x.107.2.261>.

Corapcioglu, A., Yargic, İ., Geyran, P., & Kocabaşoğlu, N. (2006). Validity and reliability of Turkish Version of “Impact of Event Scale-Revised” (IES-R). *Yeni Symposium Journal*, 44(1), 14–22.

Courtois, C. A., & Ford, J. D. (2009). *Treating complex traumatic stress disorders: An evidence-based guide*. Guilford Press.

Creamer, M., Bell, R., & Failla, S. (2003). Psychometric properties of the impact of event scale-revised. *Behaviour Research and Therapy*, 41(12), 1489-1496.

<https://doi.org/10.1016/j.brat.2003.07.010>.

- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, Sage Publications.
- Crombach, A., & Elbert, T. (2015). Controlling offensive behavior using Narrative Exposure Therapy: a randomized controlled trial of former street children. *Clinical Psychological Science*, 3(2), 270–282. <https://doi.org/10.1177/2167702614534239>.
- Cultural Orientation Research Centre. (2014). *Refugees from Syria*.
<http://www.culturalorientation.net/library/publications/refugees-from-syria>.
- Cuperus, A. A., Laken, M., Van Schie, K., Engelhard, I. M., & Van den Hout, M. A. (2019). Dual-tasking during recall of negative memories or during visual perception of images: Effects on vividness and emotionality. *Journal of Behavior Therapy and Experimental Psychiatry*, 62, 112–116. <https://doi.org/10.1016/j.jbtep.2018.10.003>.
- Dalgard, O. S., & Thapa, S. B. (2007). Immigration, social integration and mental health in Norway, with focus on gender differences. *Clinical Practice and Epidemiology in Mental Health*, 3, 24. <https://doi.org/10.1186/1745-0179-3-24>.
- Davidson, J., Smith, R., & Kudler, H. (1989). Validity and reliability of the DSM-III criteria for posttraumatic stress disorder: Experience with a structured interview. *Journal of Nervous and Mental Disease*, 177(6), 336–341. <https://doi.org/10.1097/00005053-198906000-00003>.
- Davidson, N., Skull, S., Chaney, G., Frydenberg, A., Jones, C., Isaacs, D., Kelly, P., Lampropoulos, B., Raman, S., Silove, D., Buttery, J., Smith, M., Steel, Z., & Burgner, D. (2004). Comprehensive health assessment for newly arrived refugee children in Australia. *Journal of Paediatrics and Child Health*, 40(9-10), 562-568. <https://doi.org/10.1111/j.1440-1754.2004.00465.x>.

- Davis, R., & Alchukr, R. (2014). *Refugees from Syria*. <http://www.culturalorientation.net/library/publications/refugees-from-syria>.
- De Cremer, D., & Sedikides, C. (2005). Self-uncertainty and responsiveness to procedural justice. *Journal of Experimental Social Psychology*, *41*(2), 157-173. <https://doi.org/10.1016/j.jesp.2004.06.010>.
- de Graaff, A. M., Cuijpers, P., Twisk, J. W. R., Kieft, B., Hunaidy, S., Elsayy, M., Gorgis, N., Bouman, T. K., Lommen, M. J. J., Acarturk, C., Bryant, R., Burchert, S., Dawson, K. S., Fuhr, D. C., Hansen, P., Jordans, M., Knaevelsrud, C., McDaid, D., Morina, N., Moergeli, H., ... STRENGTHS consortium. (2023). Peer-provided psychological intervention for Syrian refugees: results of a randomised controlled trial on the effectiveness of Problem Management Plus. *BMJ mental health*, *26*(1), e300637. <https://doi.org/10.1136/bmjment-2022-300637>.
- De Jong, J. T., Komproe, I. H., & Van Ommeren, M. (2003). Common mental disorders in post conflict settings. *Lancet (London, England)*, *361*(9375), 2128–2130. [https://doi.org/10.1016/S0140-6736\(03\)13692-6](https://doi.org/10.1016/S0140-6736(03)13692-6).
- DeMarree, K.G., & Bobrowski, M.E. (2017). Structure and validity of Self-Concept Clarity measures. In J. Lodi-Smith & K. DeMarree (Eds), *Self-Concept Clarity* (pp. 1- 17). Springer. https://doi.org/10.1007/978-3-319-71547-6_1.
- Demirbas, H. & Bekaroglu, E. (2013). Evden uzakta olmak: Sığınmacıların/mültecilerin psikolojik sorunları ve alınacak önlemler. *Kriz Dergisi*, *21*(1), 11-24. https://doi.org/10.1501/kriz_0000000334.
- Department General of Migration Management. (2022). *Gecici Korumamız Altındaki Suriyeliler*. <https://www.goc.gov.tr/gecici-korumamiz-altindaki-suriyeliler>.

- DeProspero, A., & Cohen, S. (1979). Inconsistent visual analyses of intrasubject data. *Journal of Applied Behavior Analysis*, *12*(4), 573-579. <https://doi.org/10.1901/jaba.1979.12-573>.
- Diehl, M., Hastings, C. T., & Stanton, J. M. (2001). Self-concept differentiation across the adult life span. *Psychology and Aging*, *16*(4), 643-654. <https://doi.org/10.1037/0882-7974.16.4.643>.
- Diehl, M., & Hay, E. L. (2007). Contextualized self-representations in adulthood. *Journal of Personality*, *75*(6), 1255-1283. <https://doi.org/10.1111/j.1467-6494.2007.00475.x>.
- Diehl, M., & Hay, E. L. (2011). Self-concept differentiation and self-concept clarity across adulthood: associations with age and psychological well-being. *International Journal of Aging & Human Development*, *73*(2), 125-152.
- DiGangi, J. A., Gomez, D., Mendoza, L., Jason, L. A., Keys, C. B., & Koenen, K. C. (2013). Pretrauma risk factors for posttraumatic stress disorder: a systematic review of the literature. *Clinical Psychology Review*, *33*(6), 728-744. <https://doi.org/10.1016/j.cpr.2013.05.002>.
- Easton, G. (2010). Critical realism in case study research. *Industrial marketing management*, *39*(1), 118-128. <https://doi.org/10.1016/j.indmarman.2008.06.004>.
- Ebbinghaus, H. (1913). *Memory: a contribution to experimental psychology* (H. A. Ruger & C. E. Bussenius, Trans.). Teachers College Press. <https://doi.org/10.1037/10011-000>.
- Ehlers, A., Bisson, J., Clark, D. M., Creamer, M., Pilling, S., Richards, D., Schnurr, P. P., Turner, S., & Yule, W. (2010). Do all psychological treatments really work the same in posttraumatic stress disorder? *Clinical Psychology Review*, *30*(2), 269-276. <https://doi.org/10.1016/j.cpr.2009.12.001>.
- Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy*, *38*(4), 319-345. [https://doi.org/10.1016/s0005-7967\(99\)00123-0](https://doi.org/10.1016/s0005-7967(99)00123-0).

- Eisenbruch, M. (1991). From post-traumatic stress disorder to cultural bereavement: diagnosis of Southeast Asian refugees. *Social Science & Medicine*, 33(6), 673–680.
[https://doi.org/10.1016/0277-9536\(91\)90021-4](https://doi.org/10.1016/0277-9536(91)90021-4).
- El Chammy, R., Kheir, W., & Alaouie, H. (2013). *Assessment of mental health and psychosocial support services for Syrian refugees in Lebanon*. United Nations High Commissioner for Refugees (UNHCR): Lebanon.
<https://www.moph.gov.lb/userfiles/files/Programs%26Projects/MentalHealthProgram/MentalhealthserviceassessmentDec2013.pdf>.
- Elbert, T., Schauer, M., & Neuner, F. (2015). Evidence based treatments for trauma-related psychological disorders. In U. Schnyder & M. Cloitre (Eds.), *Evidence Based Treatments for Trauma-Related Psychological Disorders*. Springer. <https://doi.org/10.1007/978-3-319-07109-1>.
- Elliott, R., Slatick, E., & Urman, M. (2001). Qualitative change process research on psychotherapy: alternative strategies. In J. Frommer and D.L. Rennie (Eds.), *Qualitative Psychotherapy Research: Methods and methodology* (pp. 69-111). Pabst Science Publishers.
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107–115. <https://doi.org/10.1111/j.1365-2648.2007.04569.x>.
- Enlow, M. B., Blood, E., & Egeland, B. (2013). Sociodemographic risk, developmental competence, and PTSD symptoms in young children exposed to interpersonal trauma in early life. *Journal of Traumatic Stress*, 26(6), 686–694. <https://doi.org/10.1002/jts.21866>.
- Epstein, S. (1991). The self-concept, the traumatic neurosis, and the structure of personality. In D. Ozer, J. M. Healy, Jr. & A. J. Steward (Eds.), *Perspectives in Personality* (pp. 63-98). Jessica Kingsley.

- Erdener, E. (2017). The ways of coping with post-war trauma of Yezidi refugee women in Turkey. *Women's Studies International Forum*, 65(July), 60–70.
<https://doi.org/10.1016/j.wsif.2017.10.003>
- Erdogan, M. M. (2018). *Türkiye'deki Suriyeliler: Toplumsal kabul ve uyum araştırması*. Ankara: İstanbul Bilgi Üniversitesi Yayınları.
- Eriksen, M. B., & Frandsen, T. F. (2018). The impact of patient, intervention, comparison, outcome (PICO) as a search strategy tool on literature search quality: A systematic review. *Journal of the Medical Library Association*, 106(4), 420–431. <https://doi.org/10.5195/jmla.2018.345>.
- Erikson, E. H. (1950). *Childhood and Society*. W. W. Norton.
- Erlingsson, C., & Brysiewicz, P. (2017). A hands-on guide to doing content analysis. *African Journal of Emergency Medicine*, 7(3), 93–99. <https://doi.org/10.1016/j.afjem.2017.08.001>.
- Ertl, V., Pfeiffer, A., Schauer, E., Elbert, T., & Neuner, F. (2011). Community-implemented trauma therapy for former child soldiers in Northern Uganda: a randomized controlled trial. *JAMA*, 306(5), 503–512. <https://doi.org/10.1001/jama.2011.1060>.
- Esin, M. N., Ardiç, A., Nar, Ş., Yıldırım, B., & Sunal, N. (2014). *İstanbul'un bir bölgesinde yaşayan Suriyeli göçmenlerin yaşam koşulları*. 17.Ulusal Halk Sağlığı Kongresi 2014, Edirne, Türkiye.
- Eskici, H. S., Hinton, D. E., Jalal, B., Yurtbakan, T., & Acarturk, C. (2023). Culturally adapted cognitive behavioral therapy for Syrian refugee women in Turkey: A randomized controlled trial. *Psychological Trauma: Theory, Research, Practice, and Policy*, 15(2), 189–198. <https://doi.org/10.1037/tra0001138>.
- European Commission. (2016). *EU–Turkey statement: questions and answers*. [http://europa.eu/rapid/press-release MEMO-16-963_fr.htm](http://europa.eu/rapid/press-release_MEMO-16-963_fr.htm).

- Fakih, A., & Ibrahim, M. (2016). The impact of Syrian refugees on the labor market in neighboring countries: Empirical evidence from Jordan. *Defence and Peace Economics*, 27, 64–86.
<https://doi.org/10.1080/10242694.2015.1055936>.
- Falconnier, L. (2009). Socioeconomic status in the treatment of depression. *American Journal of Orthopsychiatry*, 79(2), 148-158. <https://doi.org/10.1037/a0015469>.
- Fazel, M., Wheeler, J., & Danesh, J. (2005). Prevalence of serious mental disorder in 7000 refugees resettled in western countries: A systematic review. *Lancet*, 365(9467), 1309–1314.
[https://doi.org/10.1016/S0140-6736\(05\)61027-6](https://doi.org/10.1016/S0140-6736(05)61027-6).
- Feen-Calligan, H., Ruvolo Grasser, L., Debryn, J., Nasser, S., Jackson, C., Seguin, D., et al. (2020). Art therapy with Syrian refugee youth in the United States: an intervention study. *Arts Psychotherapy*, 69, 1–16. <http://doi.org/10.1016/j.aip.2020.101665>.
- Finlay, L. (2002a). Negotiating the swamp: The opportunity and challenge of reflexivity in research practice. *Qualitative Research*, 2(2), 209–230. <https://doi.org/10.1177/146879410200200205>.
- Finlay, L. (2002b). “Outing” the researcher: The provenance, process, and practice of reflexivity. *Qualitative Health Research*, 12(4), 531–545. <https://doi.org/10.1177/104973202129120052>.
- Fisher, W. W., Kelley, M. E., & Lomas, J. E. (2003). Visual aids and structured criteria for improving visual inspection and interpretation of single-case designs. *Journal of Applied Behavior Analysis*, 36(3), 387–406. <https://doi.org/10.1901/jaba.2003.36-387>.
- Foa, E. B., Dancu, C. V., Hembree, E. A., Jaycox, L. H., Meadows, E. A., & Street, G. P. (1999). A comparison of exposure therapy, stress inoculation training, and their combination for reducing posttraumatic stress disorder in female assault victims. *Journal of Consulting and Clinical Psychology*, 67(2), 194–200. <https://doi.org/10.1037//0022-006x.67.2.194>.

- Foa, E. B., Hembree, E. A., Cahill, S. P., Rauch, S. A., Riggs, D. S., Feeny, N. C., & Yadin, E. (2005). Randomized trial of prolonged exposure for posttraumatic stress disorder with and without cognitive restructuring: outcome at academic and community clinics. *Journal of Consulting and Clinical Psychology, 73*(5), 953–964. <https://doi.org/10.1037/0022-006X.73.5.953>.
- Foa, E. B., Hembree, E., & Rothbaum, B. O. (2007). *Prolonged exposure therapy for PTSD: Emotional processing of traumatic experiences therapist guide*. Oxford University Press.
- Foa, E. B., Keane, T. M., Friedman, M. J., & Cohen, J. A. (2009). *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies* (2nd ed.). The Guilford Press.
- Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin, 99*(1), 20–35. <https://doi.org/10.1037/0033-2909.99.1.20>.
- Foa, E. B., & Riggs, D. S. (1993). Posttraumatic stress disorder in rape victims. In J. Oldham, M. B. Riba, & A. Tasman (Eds.), *American Psychiatric Press Review of Psychiatry: v.12* (pp. 273–303). American Psychiatric Association.
- Foa, E. B., Steketee, G., & Rothbaum, B. O. (1989). Behavioral/cognitive conceptualizations of post-traumatic stress disorder. *Behavior Therapy, 20*(2), 155–176. [https://doi.org/10.1016/S0005-7894\(89\)80067-X](https://doi.org/10.1016/S0005-7894(89)80067-X).
- Forchuk, C., Nazarov, A., Hunt, R., Davis, B., St Cyr, K., & Richardson, J. D. (2020). The influence of depression-PTSD comorbidity on health-related quality of life in treatment-seeking veterans. *European Journal of Psychotraumatology, 11*(1). <https://doi.org/10.1080/20008198.2020.1748460>.

- Ford, J. D. (2018). Trauma memory processing in posttraumatic stress disorder psychotherapy: A unifying framework. *Journal of Traumatic Stress, 31*(6), 933–942.
<https://doi.org/10.1002/jts.22344>.
- Ford, J. D., Grasso, D. J., Elhai, J. D., & Courtois, C. A. (2015). *Posttraumatic stress disorder: Scientific and professional dimensions*. (2nd ed.). Elsevier Academic Press.
- Freud, S. (1896). The Aetiology of Hysteria. *The Standard Edition of the Complete Psychological Works of Sigmund Freud, 3*, 187-221.
- Fuhr, D. C., Acarturk, C., McGrath, M., Ilkkursun, Z., Sondorp, E., Sijbrandij, M., Ventevogel, P., Cujipers, P., McKee, M., & Roberts, B. (2019). Treatment gap and mental health service use among Syrian refugees in Sultanbeyli, Istanbul: a cross-sectional survey. *Epidemiology and Psychiatric Sciences, 29*(e70), 1–11. <https://doi.org/10.1017/S2045796019000660>.
- Furlong, M. J., & Wampold, B. E. (1981). Visual analysis of single-subject studies by school psychologists. *Psychology in the Schools, 18*(1), 80–86. [https://doi.org/10.1002/1520-6807\(198101\)18:1<80::AID-PITS2310180116>3.0.CO;2-X](https://doi.org/10.1002/1520-6807(198101)18:1<80::AID-PITS2310180116>3.0.CO;2-X).
- Gaffan, E. A., Tsaousis, I., & Kemp-Wheeler, S. M. (1995). Researcher allegiance and meta-analysis: the case of cognitive therapy for depression. *Journal of Consulting and Clinical Psychology, 63*(6), 966–980. <https://doi.org/10.1037//0022-006x.63.6.966>.
- Gammouh, O. S., Al-Smadi, A. M., Tawalbeh, L. I., & Khoury, L. S. (2015). Chronic diseases, lack of medications, and depression among Syrian refugees in Jordan, 2013-2014. *Preventing Chronic Disease, 12*, E10. <https://doi.org/10.5888/pcd12.140424>.
- Gaub, F. (2013). *Civil wars: a very short introduction*. European Union Institute for Security Studies (EUISS). <http://www.jstor.org/stable/resrep06775>.

- Gaya, H.J., & Smith, E.E. (2016). Developing a qualitative single case study in the strategic management realm: an appropriate research design? *International Journal of Business Management and Economic Research*, 7(2), 529-538.
- Gbrich C. (2007). *Qualitative data analysis:an introduction*. Sage.
- Georgiadou, E., Zbidat, A., Schmitt, G. M., & Erim, Y. (2018). Prevalence of mental distress among Syrian refugees with residence permission in Germany: a registry-based study. *Frontiers in Psychiatry*, 9, 393. <https://doi.org/10.3389/fpsy.2018.00393>.
- Ghumman, U., McCord, C. E., & Chang, J. E. (2016). Posttraumatic stress disorder in Syrian refugees: a review. *Canadian Psychology*, 57(4), 246–253. <https://doi.org/10.1037/cap0000069>.
- Giacco, D., Laxhman, N., & Priebe, S. (2018). Prevalence of and risk factors for mental disorders in refugees. *Seminars in Cell & Developmental Biology*, 77, 144–152. <https://doi.org/10.1016/j.semcdb.2017.11.030>.
- Giannopoulou, I., Dikaiakou, A., & Yule, W. (2006) Cognitive-behavioural group intervention for PTSD symptoms in children following the Athens 1999 earthquake: a pilot study. *Clinical Child Psychology and Psychiatry*, 11(4), 543-553. <https://doi.org/10.1177/1359104506067876>.
- Goffman, E. (1959). *The presentation of self in everyday life*. Doubleday.
- Gorski, P. S. (2013). “What is critical realism? And why should you care?” *Contemporary Sociology*, 42(5), 658–670. <https://doi.org/10.1177/0094306113499533>.
- Gray, M. J., Litz, B. T., Hsu, J. L., & Lombardo, T. W. (2004). Psychometric properties of the life events checklist. *Assessment*, 11(4), 330–341. <https://doi.org/10.1177/1073191104269954>.

Green, J., & Thorogood, N. (2004). Analysing qualitative data. In: Silverman, D. (ed.). *Qualitative Methods for Health Research* (pp.173–200). Sage.

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85(2), 348–362. <https://doi.org/10.1037/0022-3514.85.2.348>.

Gunter, R. W., & Bodner, G. E. (2008). How eye movements affect unpleasant memories: support for a working-memory account. *Behaviour Research and Therapy*, 46(8), 913–931. <https://doi.org/10.1016/j.brat.2008.04.006>.

Hagermoser Sanetti, L. M., & Kratochwill, T. R. (2009). Toward developing a science of treatment integrity: Introduction to the special series. *School Psychology Review*, 38(4), 445–459.

Halvorsen, J. Ø., Stenmark, H., Neuner, F., & Nordahl, H. M. (2014). Does dissociation moderate treatment outcomes of narrative exposure therapy for PTSD? A secondary analysis from a randomized controlled clinical trial. *Behaviour Research and Therapy*, 57, 21–28. <https://doi.org/10.1016/j.brat.2014.03.010>.

Hanley, A. W., & Garland, E. L. (2017). Clarity of mind: Structural equation modeling of associations between dispositional mindfulness, self-concept clarity and psychological well-being. *Personality and Individual Differences*, 106, 334-339. <http://doi.org/10.1016/j.paid.2016.10.028>.

Hapke, U., Schumann, A., Rumpf, H. J., John, U., & Meyer, C. (2006). Post-traumatic stress disorder: the role of trauma, pre-existing psychiatric disorders, and gender. *European Archives of Psychiatry and Clinical Neuroscience*, 256(5), 299–306. <https://doi.org/10.1007/s00406-006-0654-6>.

- Harbst, K. B., Ottenbacher, K. J., & Harris, S. R. (1991). Interrater reliability of therapists' judgments of graphed data. *Physical Therapy*, *71*(2), 107-115.
<http://doi.org/10.1093/ptj/71.2.107>.
- Hariton, E., & Locascio, J. J. (2018). Randomised controlled trials- the gold standard for effectiveness research: Study design: randomised controlled trials. *BJOG. An International Journal of Obstetrics and Gynaecology*, *125*(13), 1716. <https://doi.org/10.1111/1471-0528.15199>.
- Hassan, G, Kirmayer, LJ, Mekki-Berrada A., Quosh, C., el Chammay, R., Deville-Stoetzel, J.B., Youssef, A., Jefee-Bahloul, H., Barkeel-Oteo, A., Coutts, A., Song, S. & Ventevogel, P. (2015). Culture, context and the mental health and psychosocial wellbeing of Syrians: A review for mental health and psychosocial support staff working with Syrians affected by armed conflict. <https://www.unhcr.org/media/culture-context-and-mental-health-and-psychosocial-wellbeing-syrians-review-mental-health-and->
- Hassan, G., Ventevogel, P., Jefee-Bahloul, H., Barkil-Oteo, A., & Kirmayer, L. J. (2016). Mental health and psychosocial wellbeing of Syrians affected by armed conflict. *Epidemiology and Psychiatric Sciences*, *25*(2), 129–141. <https://doi.org/10.1017/S2045796016000044>.
- Helman C. (2007). *Culture, health, and illness*. (5th ed.). Hodder Arnold.
- Hendaus, M., Mourad, N., Younes, S., Hammoudi, D., Rahal, M., & Bashedi, I. (2021). The psychological impact of the Syrian crisis on refugees living in Lebanon. *Perspectives in Psychiatric Care*, *57*(3), 1376–1381. <https://doi.org/10.1111/ppc.12700>.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *The Behavioral and Brain Sciences*, *33*(2-3), 61–135.
<https://doi.org/10.1017/S0140525X0999152X>.

- Hensel-Dittmann, D., Schauer, M., Ruf, M., Catani, C., Odenwald, M., Elbert, T., & Neuner, F. (2011). Treatment of traumatized victims of war and torture: a randomized controlled comparison of narrative exposure therapy and stress inoculation training. *Psychotherapy and Psychosomatics*, 80(6), 345–352. <https://doi.org/10.1159/000327253>.
- Henry, J. D., & Crawford, J. R. (2005). The short-form version of the depression anxiety stress scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, 44(2), 227–239. <https://doi.org/10.1348/014466505X29657>.
- Herman, J. L. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress*, 5(3), 377–391. <https://doi.org/10.1002/jts.2490050305>
- Herman, J.L. (1997). *Trauma and recovery: The aftermath of violence—from domestic abuse to political terror*. New York: Basic Books.
- Hersoug, A. G., Høglend, P., Monsen, J. T., & Havik, O. E. (2001). Quality of working alliance in psychotherapy: therapist variables and patient/therapist similarity as predictors. *The Journal of Psychotherapy Practice and Research*, 10(4), 205–216.
- Hijazi, A. M., Lumley, M. A., Ziadni, M. S., Haddad, L., Rapport, L. J., & Arnetz, B. B. (2014). Brief narrative exposure therapy for posttraumatic stress in Iraqi refugees: a preliminary randomized clinical trial. *Journal of Traumatic Stress*, 27(3), 314–322. <https://doi.org/10.1002/jts.21922>.
- Hijazi, Z., & Weissbecker, I. (2015). Syria Crisis: Addressing Regional Mental Health Needs and Gaps in the Context of the Syria Crisis. *International Medical Corps*. <http://internationalmedicalcorps.org/document.doc?id=526>.

- Hjertman, M., Nauman, S., Vretemark, M., Williams, G., & Kjellin, A. (2018). The Social Impacts of War: Agency and Everyday Life in the Borderlands during the Early Seventeenth Century. *International Journal of Historical Archaeology*, 22(2), 226–244.
<https://doi.org/10.1007/s10761-017-0408-3>.
- Hoffmann, S., & Samuk, S. (2016). Turkish immigration politics and the Syrian refugee crisis. *Working Paper Research Division Global Issues*, 2016/No.01. https://www.swp-berlin.org/publications/products/arbeitspapiere/Working_paper_Hoffmann_Turkish_immigration_policy.pdf.
- Holdorff, B. (2011). The fight for 'traumatic neurosis', 1889-1916: Hermann Oppenheim and his opponents in Berlin. *History of psychiatry*, 22(88 Pt 4), 465–476.
<https://doi.org/10.1177/0957154X10390495>.
- Hollander A. C. (2013). Social inequalities in mental health and mortality among refugees and other immigrants to Sweden--epidemiological studies of register data. *Global Health Action*, 6, 21059. <https://doi.org/10.3402/gha.v6i0.21059>.
- Hollifield, M., Warner, T., Lian, N., Krakow, B., Jenkins, J., Kesler, J., Stevenson, J., & Westermeyer, J. (2002). Measuring trauma and health status in refugees; a critical review. *Journal of the American Medical Association*, 288(5), 611-621.
<https://doi.org/10.1001/jama.288.5.611>.
- Holmes, A. G. D. (2020). "Researcher Positionality- A consideration of its influence and place in qualitative research- A new researcher guide. *Shanlax International Journal of Education*, 8(4), 1-10.
- Horowitz, M. (1976). *Stress response syndromes*. New York: Jason Aranson.

- Horowitz, M. J. (1982). Stress response syndromes and their treatment. In L. Goldberger, & S. Breznitz (Eds.), *Handbook of stress: Theoretical and clinical aspects* (pp. 711-732). New York: Free Press.
- Horowitz, M. J. (1986). Stress-response syndromes: A review of posttraumatic and adjustment disorders. *Psychiatric Services, 37*(3), 241-249. <https://doi.org/10.1176/ps.37.3.241>.
- Horowitz, M., Wilner, N., & Alvarez, W. (1979). Impact of Event Scale: a measure of subjective stress. *Psychosomatic medicine, 41*(3), 209–218. <https://doi.org/10.1097/00006842-197905000-00004>.
- Howorth, P. (1996). W. H. R. Rivers's "An address on the repression of war experience". *Psychiatric Bulletin, 20*(7), 440-441. <https://doi.org/10.1192/pb.20.7.440>.
- Hove, M., & Mutanda, D. (2015). The Syrian Conflict 2011 to the Present: Challenges and Prospects. *Journal of Asian and African Studies, 50*(5), 559–570. <https://doi.org/10.1177/0021909614560248>.
- Hunt, N. (2010). *Memory, war and trauma*. Cambridge University Press.
- Hunt, N., & Gakenyi, M. (2005). Comparing refugees and nonrefugees: the Bosnian Experience. *Journal of Anxiety Disorders, 19*(6), 717–723. <https://doi.org/10.1016/j.janxdis.2004.08.004>.
- Human Rights Watch. (2016). *World Report*. https://www.hrw.org/sites/default/files/world_report_download/wr2016_web.pdf.
- Hyman, I. (2004). Setting the stage: reviewing current knowledge on the health of Canadian immigrants: what is the evidence and where are the gaps?. *Canadian Journal Of Public*

Health= Revue Canadienne De Sante Publique, 95(3), 14–18.

<https://doi.org/10.1007/BF03403658>.

Ibrahim, H., & Hassan, C. Q. (2017). Post-traumatic Stress Disorder Symptoms Resulting from Torture and Other Traumatic Events among Syrian Kurdish Refugees in Kurdistan Region, Iraq. *Frontiers in psychology*, 8, 241. <https://doi.org/10.3389/fpsyg.2017.00241>.

Institute of Medicine. (2008). *Treatment of Posttraumatic stress disorder: An assessment of the evidence*. National Academies Press.

Jacob, N., Neuner, F., Maedl, A., Schaal, S., & Elbert, T. (2014). Dissemination of psychotherapy for trauma spectrum disorders in postconflict settings: a randomized controlled trial in Rwanda. *Psychotherapy and Psychosomatics*, 83(6), 354–363. <https://doi.org/10.1159/000365114>.

Jacobson, N.S. & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, 59, 12–19.

Jaji, R. (2009). Masculinity on unstable ground: young refugee men in Nairobi, Kenya. *Journal of Refugee Studies*, 22(2), 177–194. <https://doi.org/10.1093/jrs/fep007>.

Janoff-Bulman, R. (1992). *Shattered assumptions: Towards a new psychology of trauma*. New York: Free Press.

Javanbakht, A., Amirsadri, A., Abu Suhaiban, H., Alsaud, M. I., Alobaidi, Z., Rawi, Z., & Arfken, C. L. (2019). Prevalence of Possible Mental Disorders in Syrian Refugees Resettling in the United States Screened at Primary Care. *Journal of Imigrant and Minority Health*, 21(3), 664–667. <https://doi.org/10.1007/s10903-018-0797-3>.

- Jefee-Bahloul, H., Moustafa, M. K., Shebl, F. M., & Barkil-Oteo, A. (2014). Pilot assessment and survey of Syrian refugees' psychological stress and openness to referral for telepsychiatry (PASSPORT Study). *Telemedicine Journal and E-Health: the official journal of the American Telemedicine Association*, 20(10), 977–979. <https://doi.org/10.1089/tmj.2013.0373>.
- Jensen, N. K., Norredam, M., Priebe, S., & Krasnik, A. (2013). How do general practitioners experience providing care to refugees with mental health problems? A qualitative study from Denmark. *BMC Family Practice*, 14(17). <https://doi.org/10.1186/1471-2296-14-17>.
- Jones, E., & Wessely, S. (2007). A paradigm shift in the conceptualization of psychological trauma in the 20th century. *Journal of Anxiety Disorders*, 21(2), 164–175. <https://doi.org/10.1016/j.janxdis.2006.09.009>.
- Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a Definition of Mixed Methods Research. *Journal of Mixed Methods Research*, 1(2), 112–133. <https://doi.org/10.1177/1558689806298224>.
- Johnson R. L. (2005). Gender differences in health-promoting lifestyles of African Americans. *Public Health Nursing*, 22(2), 130–137. <https://doi.org/10.1111/j.0737-1209.2005.220206.x>.
- Jongedijk, R. (2014). *Levensverhalen en Psychotrauma. Narratieve Exposure Therapie in theorie en praktijk*. Uitgeverij Boom.
- Jordan J. V. (2000). The role of mutual empathy in relational/cultural therapy. *Journal of Clinical Psychology*, 56(8), 1005–1016. [https://doi.org/10.1002/1097-4679\(200008\)56:8<1005::AID-JCLP2>3.0.CO;2-L](https://doi.org/10.1002/1097-4679(200008)56:8<1005::AID-JCLP2>3.0.CO;2-L).

- Kakaje, A., Al Zohbi, R., Hosam Aldeen, O., Makki, L., Alyousbashi, A., Alhaffar, M. B. A. (2021). Mental disorder and PTSD in Syria during wartime: a nationwide crisis. *BMC Psychiatry* 21(2). <https://doi.org/10.1186/s12888-020-03002-3>.
- Kaltenbach, E., Chisholm, M., Xiong, T., Thomson, D., Crombach, A., & McGrath, P. J. (2021). Online narrative exposure therapy for parents of children with neurodevelopmental disabilities suffering from posttraumatic stress symptoms- study protocol of a randomized controlled trial. *European Journal of Psychotraumatology*, 12(1). <https://doi.org/10.1080/20008198.2021.1991650>.
- Kaltenbach, E., Hermenau, K., Schauer, M., Dohrmann, K., Elbert, T., & Schalinski, I. (2020). Trajectories of posttraumatic stress symptoms during and after Narrative Exposure Therapy (NET) in refugees. *BMC Psychiatry*, 20(1), 1–14. <https://doi.org/10.1186/s12888-020-02720-y>.
- Kalyvas, S., & Kenny, P. (2017, published online). Civil Wars. *Oxford Research Encyclopedia of International Studies*. <https://doi.org/10.1093/acrefore/9780190846626.013.3>.
- Kangaslampi, S., Garoff, F., & Peltonen, K. (2015). Narrative exposure therapy for immigrant children traumatized by war: Study protocol for a randomized controlled trial of effectiveness and mechanisms of change. *BMC Psychiatry*, 15(127), 1–14. <https://doi.org/10.1186/s12888-015-0520-z>.
- Karaman, M. A., & Ricard, R. J. (2016). Meeting the mental health needs of Syrian refugees in Turkey. *About The Professional Counselor*, 6, 318–327.
- Kardiner, A. (1941). *The traumatic neuroses of war*. Hoeber.

- Katsounari, I. (2015). Narrative Exposure Therapy for Treating PTSD with psychotic features: A case study. *Clinical Case Studies, 14*(5), 342–356.
<https://doi.org/10.1177/1534650114559831>.
- Kaya, A., & Kirac, A. (2016). Vulnerability assessment of Syrian refugees in Istanbul.
<https://data2.unhcr.org/en/documents/download/54518>.
- Kaya, E., Kilic, C., Karadag Caman, O., & Uner, S. (2019). Posttraumatic stress and depression among Syrian refugees living in Turkey: Findings from an urban sample. *Journal of Nervous and Mental Disease, 207*(12), 995–1000. <https://doi.org/10.1097/NMD.0000000000001104>.
- Kazdin, A. E. (2011). *Single-case research designs: Methods for clinical and applied settings*. (2nd ed). Oxford University Press.
- Kazlauskas, E. (2017). Challenges for providing health care in traumatized populations: Barriers for PTSD treatments and the need for new developments. *Global Health Action, 10*(1).
<https://doi.org/10.1080/16549716.2017.1322399>.
- Kazour, F., Zahreddine, N. R., Maragel, M. G., Almustafa, M. A., Soufia, M., Haddad, R., & Richa, S. (2017). Post-traumatic stress disorder in a sample of Syrian refugees in Lebanon. *Comprehensive Psychiatry, 72*, 41–47. <https://doi.org/10.1016/j.comppsy.2016.09.007>.
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age of onset distributions of DSM-IV disorders in the national comorbidity survey replication. *Archives of General Psychiatry, 62*(6), 593–602.
<https://doi.org/10.1001/archpsyc.62.6.593>.
- Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the national comorbidity survey. *Archives of General Psychiatry, 52*(12), 1048–1060. <https://doi.org/10.1001/archpsyc.1995.03950240066012>.

- Kienzler, H. (2008). Debating war-trauma and post-traumatic stress disorder (PTSD) in an interdisciplinary arena. *Social Science and Medicine*, 67(2), 218–227.
<https://doi.org/10.1016/j.socscimed.2008.03.030>.
- Kinzie, J. D. (2015). Post-Traumatic Stress Disorder. *International Encyclopedia of the Social & Behavioral Sciences: Second Edition* (pp. 702-706). Elsevier Inc. <https://doi.org/10.1016/B978-0-08-097086-8.27051-7>.
- Kirmayer, L. J., Narasiah, L., Munoz, M., Rashid, M., Ryder, A. G., Guzder, J., Hassan, G., Rousseau, C., Pottie, K., & Canadian Collaboration for Immigrant and Refugee Health (CCIRH). (2011). Common mental health problems in immigrants and refugees: general approach in primary care. *CMAJ: Canadian Medical Association journal = journal de l'Association medicale canadienne*, 183(12), E959–E967.
<https://doi.org/10.1503/cmaj.090292>.
- Kirmayer, L. J., Rousseau, C., Jarvis, G. E., & Guzder, J. (2015). The cultural context of clinical assessment. In A. Tasman, J. Kay, J.A. Lieberman, M.B. First, M.B. Riba. *Psychiatry* (4th ed.) John Wiley & Sons. <https://doi.org/10.1002/9781118753378.ch4>
- Kleinman, A., & Benson, P. (2006). Anthropology in the clinic: the problem of cultural competency and how to fix it. *PLoS Medicine*, 3(10), e294. <https://doi.org/10.1371/journal.pmed.0030294>.
- Kocijan-Hercigonja, D., Rijavec, M., Marusic, A., Hercigonja, V. (1998). Coping strategies of refugee, displaced, and non-displaced children in a war area. *Nordic Journal of Psychiatry* 52(1), 45–50. <https://doi.org/10.1080/080394898422562>.
- Kratochwill, T. R., Hitchcock, J., Horner, R. H., Levin, J. R., Odom, S. L., Rindskopf, D. M & Shadish, W. R. (2010). *Single-case designs technical documentation*.
<https://files.eric.ed.gov/fulltext/ED510743.pdf>.

- Kratochwill, T. R., Hitchcock, J. H., Horner, R. H., Levin, J. R., Odom, S. L., Rindskopf, D. M., & Shadish, W. R. (2013). Single-Case Intervention Research Design Standards. *Remedial and Special Education, 34*(1), 26–38. <https://doi.org/10.1177/0741932512452794>.
- Kratochwill, T. R., & Levin, J. R. (Eds.). (2014). *Single-Case Intervention Research: Methodological and Statistical Advances*. American Psychological Association.
- Krippendorff, K. (2004). *Content Analysis: An Introduction to its Methodology*. (2nd ed). Thousand Oaks, Sage.
- Kusec, A., Tallon, K., & Koerner, N. (2016). Intolerance of uncertainty, causal uncertainty, causal importance, self-concept clarity and their relations to generalized anxiety disorder. *Cognitive Behavioral Therapy, 45*(4), 307-323. <https://doi.org/10.1080/16506073.2016.1171391>.
- Kyngas, H. & Vanhanen, L. (1999). *Content analysis a research method. Hoitotiede, 11*, 3–12.
- Laban, C.J., Gernaat, H.B., Komproe, I.H., Schreuders, B.A., De Jong, J.T (2004). Impact of a long asylum procedure on the prevalence of psychiatric disorders in Iraqi asylum seekers in The Netherlands. *Journal of Nervous and Mental Disease, 192*(12), 843–851. <http://doi.org/10.1097/01.nmd.0000146739.26187.15>.
- Lane, R. D., & Garfield, D. A. S. (2005). Becoming aware of feelings: Integration of cognitive-developmental, neuroscientific, and psychoanalytic perspectives. *Neuro-Psychoanalysis, 7*(1), 5–30. <https://doi.org/10.1080/15294145.2005.10773468>.
- LeMaster, J. W., Broadbridge, C. L., Lumley, M. A., Arnetz, J. E., Arfken, C., Fetters, M. D., Jamil, H., Pole, N., & Arnetz, B. B. (2018). Acculturation and post-migration psychological symptoms among Iraqi refugees: A path analysis. *The American Journal of Orthopsychiatry, 88*(1), 38–47. <https://doi.org/10.1037/ort0000240>.
- Lifton, R. J. (1967). *Death in life: Survivors of Hiroshima*. New York: Random House.

- Lindencrona, F., Ekblad, S., & Hauff, E. (2008). Mental health of recently resettled refugees from the Middle East in Sweden: the impact of pre-resettlement trauma, resettlement stress and capacity to handle stress. *Social Psychiatry and Psychiatric Epidemiology*, *43*(2), 121–131. <https://doi.org/10.1007/s00127-007-0280-2>.
- Lamprecht, F., & Sack, M. (2002). Posttraumatic stress disorder revisited. *Psychosomatic Medicine*, *64*(2), 222–237. <https://doi.org/10.1097/00006842-200203000-00005>.
- Lang, P.J. (1977). Imagery in therapy: an information processing analysis of fear. *Behavior Therapy*, *8*(5), 862–886. [https://doi.org/10.1016/S0005-7894\(77\)80157-3](https://doi.org/10.1016/S0005-7894(77)80157-3).
- Lang, P. J. (1979). A bio-informational theory of emotional imagery. *Psychophysiology*, *16*(6), 495–512. <https://doi.org/10.1111/j.1469-8986.1979.tb01511.x>.
- Lang, P. J. (1987). Image as action: A reply to Watts and Blackstock. *Cognition and Emotion*, *1*(4), 407–426. <https://doi.org/10.1080/02699938708408060>.
- Lantz, J. (2004). Research and Evaluation Issues in Existential Psychotherapy. *Journal of Contemporary Psychotherapy: On the Cutting Edge of Modern Developments in Psychotherapy*, *34*(4), 331–340. <https://doi.org/10.1007/s10879-004-2527-5>.
- Larsson G. (2000). Dimensional analysis of the Impact of Event Scale using structural equation modeling. *Journal of Traumatic Stress*, *13*(2), 193–204. <https://doi.org/10.1023/A:1007798326052>.
- Lasiuk, G. C., & Hegadoren, K. M. (2006). Posttraumatic stress disorder part I: Historical development of the concept. *Perspectives in Psychiatric Care*, *42*(1), 13–20. <https://doi.org/10.1111/j.1744-6163.2006.00045.x>.

- Lenz, A. S., Speciale, M., & Aguilar, J. V. (2012). Relational-cultural therapy intervention with incarcerated adolescents: A single-case effectiveness design. *Counseling Outcome Research and Evaluation, 3*(1), 17-29. <http://doi.org/10.1177/2150137811435233>.
- Lenz, A. S. (2013). Calculating effect size in single-case research: A comparison of nonoverlap methods. *Measurement and Evaluation in Counseling and Development, 46*(1), 64-73. <https://doi.org/10.1177/0748175612456401>.
- Levine, B., Svoboda, E., Hay, J. F., Winocur, G., & Moscovitch, M. (2002). Aging and autobiographical memory: dissociating episodic from semantic retrieval. *Psychology and Aging, 17*(4), 677–689. <http://doi.org/10.1037//0882-7974.17.4.677>.
- Leykin, Y., & DeRubeis, R. J. (2009). Allegiance in psychotherapy outcome research: Separating association from bias. *Clinical Psychology: Science and Practice, 16*(1), 54–65. <https://doi.org/10.1111/j.1468-2850.2009.01143.x>
- Li, S., Xi, Z., Barnett, P., Saunders, R., Shafran, R., & Pilling S. (2023). Efficacy of culturally adapted interventions for common mental disorders in people of Chinese descent: a systematic review and meta-analysis. *Lancet Psychiatry, 10*(6), 426-440. [https://doi.org/10.1016/S2215-0366\(23\)00118-9](https://doi.org/10.1016/S2215-0366(23)00118-9).
- Linville, P.W. (1985). Self-complexity and affective extremity: Don't put all your eggs in one cognitive basket. *SocialCognition, 3*(1), 94-120. <https://doi.org/10.1521/soco.1985.3.1.94>.
- Linville P. W. (1987). Self-complexity as a cognitive buffer against stress-related illness and depression. *Journal of Personality and Social Psychology, 52*(4), 663–676. <https://doi.org/10.1037//0022-3514.52.4.663>.
- Llosa, A. E., Ghantous, Z., Souza, R., Forgione, F., Bastin, P., Jones, A., Antierens, A., Slavuckij, A., & Graiss, R. F. (2014). Mental disorders, disability and treatment gap in a protracted

refugee setting. *The British Journal of Psychiatry*, 204(3), 208–213.

<https://doi.org/10.1192/bjp.bp.112.120535>.

Lobo, M. A., Moeyaert, M., Cunha, A. B., & Babik, I. (2017). Single-case design, analysis, and quality assessment for intervention research. *Journal of Neurologic Physical Therapy*, 41(3), 187–197. <https://doi.org/10.1097/NPT.0000000000000187>.

Lowe, W. (2004). Content analysis and its place in the (methodological) scheme of things.

Qualitative & Multi-Method Research, 2(1), 25-27. <https://doi.org/10.5281/zenodo.998692>.

Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scales* (2nd ed.). Psychology Foundation of Australia. <https://doi.org/10.1037/t39835-000>.

Luborsky, L., Singer, B., & Luborsky, L. (1975). Comparative studies of psychotherapies. Is it true that "everywon has one and all must have prizes"? *Archives of General Psychiatry*, 32(8), 995–1008. <https://doi.org/10.1001/archpsyc.1975.01760260059004>.

Ma, H.H. (2006). An alternative method for quantitative synthesis of single-subject researches: percentage of data points exceeding the median. *Behavior Modification*, 30(5), 598–617.

<https://doi.org/10.1177/0145445504272974>.

Macklin, M. L., Metzger, L. J., Litz, B. T., McNally, R. J., Lasko, N. B., Orr, S. P., & Pitman, R. K.

(1998). Lower precombat intelligence is a risk factor for posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*, 66(2), 323–326.

<https://doi.org/10.1037//0022-006x.66.2.323>.

Marlowe, D. H. (2001). *Psychological and Psychosocial Consequences of Combat and Deployment with Special Emphasis on the Gulf War*. RAND Corporation.

https://www.rand.org/pubs/monograph_reports/MR1018z11.html.

Matto, H., & Realo, A. (2001). The Estonian Self-Concept Clarity Scale: psychometric properties and personality correlates. *Personality and Individual Differences*, 30(1): 59-70.

[https://doi.org/10.1016/S0191-8869\(00\)00010-6](https://doi.org/10.1016/S0191-8869(00)00010-6)

Mayring, P. (2000). Qualitative Content Analysis. *Forum: Qualitative Social Research*, 1(2).

<https://doi.org/10.17169/fqs-1.2.1089>.

McAdams, D. P. (1985). *Power, intimacy, and the life story: Personological inquiries into identity*.

New York: Guilford Press.

McLean, C. P., Asnaani, A., Litz, B. T., & Hofmann, S. G. (2011). Gender differences in anxiety disorders: prevalence, course of illness, comorbidity and burden of illness. *Journal of Psychiatric Research*, 45(8), 1027–1035. <https://doi.org/10.1016/j.jpsychires.2011.03.006>.

McNally R. J. (1997). Implicit and explicit memory for trauma-related information in PTSD. *Annals of the New York Academy of Sciences*, 821, 219–224. <https://doi.org/10.1111/j.1749-6632.1997.tb48281.x>.

Mellman, T. A., Kulick-Bell, R., Ashlock, L. E., & Nolan, B. (1995). *Sleep events among veterans with combat-related posttraumatic stress disorder*. *The American Journal of Psychiatry*, 152(1), 110–115. <https://doi.org/10.1176/ajp.152.1.110>.

Miller, K. E., & Rasmussen, A. (2010). War exposure, daily stressors, and mental health in conflict and post-conflict settings: bridging the divide between trauma-focused and psychosocial frameworks. *Social Science & Medicine* (1982), 70(1), 7–16.

<https://doi.org/10.1016/j.socscimed.2009.09.029>.

Mingers, J. (2004). Real-izing information systems: critical realism as an underpinning philosophy for information systems. *Information and Organization*, 14(2), 87-103.

<https://doi.org/10.1016/j.infoandorg.2003.06.001>.

- Modell, J., & Haggerty, T. (1991). The Social Impact of War. *Annual Review of Sociology*, 17, 205–224. <http://www.jstor.org/stable/2083341>.
- Moghaddam, H. T., Sayedi, S. J., Emami Moghadam, Z., Bahreini, A., Ajilian Abbasi, M., & Saeidi, M. (2017). Refugees in the Eastern Mediterranean Region: Needs, Problems and Challenges. *International Journal of Pediatrics*, 5(3), 4625-4639. <https://doi.org/10.22038/ijp.2017.8452>.
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS Medicine*, 6(7), e1000097. <https://doi.org/10.1371/journal.pmed.1000097>.
- Mollica, R. F., Cardozo, B. L., Osofsky, H. J., Raphael, B., Ager, A., & Salama, P. (2004). Mental health in complex emergencies. *The Lancet*, 364(9450), 2058–2067. [https://doi.org/10.1016/S0140-6736\(04\)17519-3](https://doi.org/10.1016/S0140-6736(04)17519-3).
- Mollica, R.F., McInnes, K., Pham, T., Smith Fawzi, M.C., Murphy, E., & Lin, L., (1998a). The dose-effect relationships between torture and psychiatric symptoms in Vietnamese expolitical detainees and a comparison group. *Journal of Nervous and Mental Disease*, 186(9), 543–553. <https://doi.org/10.1097/00005053-199809000-00005>.
- Mollica, R.F., McInnes, K., Poole, C., & Tor, S. (1998b). Dose-effect relationships of trauma to symptoms of depression and post-traumatic stress disorder among Cambodian survivors of mass violence. *British Journal of Psychiatry*, 173, 482– 488. <https://doi.org/10.1192/bjp.173.6.482>
- Mollica, R. F., Sarajlic, N., Chernoff, M., Lavelle, J., Sarajlic, I. V., & Massagli, M. P. (2001). Longitudinal study of psychiatric symptoms, disability, mortality, and emigration among Bosnian refugees. *The Journal of the American Medical Association*, 286(5), 546–54. <https://doi.org/10.1001/jama.286.5.546>.

- Mollica, R. F., Wyshak, G., & Lavelle, J. (1987). The psychosocial impact of war trauma and torture on Southeast Asian refugees. *The American Journal of Psychiatry*, *144*(12), 1567–1572.
<https://doi.org/10.1176/ajp.144.12.1567>.
- Momartin, S., Silove, D., Manicavasagar, V., & Steel, Z. (2004). Comorbidity of PTSD and depression: associations with trauma exposure, symptom severity and functional impairment in Bosnian refugees resettled in Australia. *Journal of Affective Disorders*, *80*(2-3), 231–238.
[https://doi.org/10.1016/S0165-0327\(03\)00131-9](https://doi.org/10.1016/S0165-0327(03)00131-9).
- Moore, L.A. (2006). Empathy: A clinician's perspective. *ASHA Leader*.
<https://doi.org/10.1044/leader.FTR5.11102006.16>.
- Morgan, D. (1996). Focus Groups. *Annual Review of Sociology*, *22*(1): 129–152.
<http://doi.org/10.1146/annurev.soc.22.1.129>.
- Morgan, D. L., & Morgan, R. K. (2009). *Single-case research methods for the behavioral and health sciences*. SAGE Publications. <https://doi.org/10.4135/9781483329697>.
- 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), 1-15. <https://doi.org/10.3389/fpsy.2018.00433>.
- Morley, S. (2018). *Single-case methods in clinical psychology: A practical guide*. (C. Masterson & C. J. Main, eds.). Taylor & Francis.
- Morley, S., & Dowzer, C.N. (2014). *Manual for the Leeds Reliable Change Indicator: Simple Excel(tm) applications for the analysis of individual patient and group data*. University of Leeds, Leeds, UK.
- Mowrer, O. H. (1947). On the dual nature of learning—a re-interpretation of "conditioning" and "problem-solving." *Harvard Educational Review*, *17*, 102–148.

Mowrer, O. H. (1960). *Learning theory and behavior*. Wiley.

Mørkved, N., Hartmann, K., Aarsheim, L. M., Holen, D., Milde, A. M., Bomyea, J., & Thorp, S. R. (2014). A comparison of narrative exposure therapy and prolonged exposure therapy for PTSD. *Clinical Psychology Review, 34*(6), 453-467. <https://doi.org/10.1016/j.cpr.2014.06.005>.

Murthy, R. S., & Lakshminarayana, R. (2006). Mental health consequences of war: a brief review of research findings. *World Psychiatry: Official Journal of the World Psychiatric Association, 5*(1), 25–30.

Myers, C. S. (1915). A contribution to the study of Shell Shock: Being an account of three cases of loss of memory, vision, smell, and taste, admitted into the Duchess of Westminster's War Hospital, Le Touquet. *The Lancet, 185*, 316–320. [https://doi.org/10.1016/S0140-6736\(00\)52916-X](https://doi.org/10.1016/S0140-6736(00)52916-X)

Myers, C. S. (1940). *Shell shock in France, 1914-18*. Cambridge University Press.

Naja, W. J., Aoun, M. P., el Khoury, E. L., Abdallah, F. J. B., & Haddad, R. S. (2016). Prevalence of depression in Syrian refugees and the influence of religiosity. *Comprehensive Psychiatry, 68*, 78–85. <https://doi.org/10.1016/j.comppsy.2016.04.002>.

National Institute of Health and Care Excellence (NICE). (2005). *Post-traumatic Stress Disorder (PTSD): The management of PTSD in adults and children in primary and secondary care*. <https://www.nice.org.uk/guidance/ng116>.

National Institute of Mental Health. (2017). *Major Depression*. www.nimh.nih.gov/health/statistics/prevalence/major-depression-among-adults.shtml.

- Nel, N. M., Romm, N. R. A., & Tlale, L. D. N. (2015). Reflections on focus group sessions regarding inclusive education: Reconsidering focus group research possibilities. *Australian Educational Researcher*, 42(1): 35–53. <https://doi.org/10.1007/s13384-014-0150-3>.
- Neuner, F., Elbert, T., & Schauer, M. (2020). Narrative exposure therapy for PTSD. In L. F. Bufka, C. V. Wright, & R. W. Halfond (Eds.), *Casebook to the APA Clinical Practice Guideline for the treatment of PTSD* (pp. 187–205). American Psychological Association. <https://doi.org/10.1037/0000196-009>.
- Neuner, F., Kurreck, S., Ruf, M., Odenwald, M., Elbert, T., & Schauer, M. (2010). Can asylum-seekers with posttraumatic stress disorder be successfully treated? A randomized controlled pilot study. *Cognitive Behaviour Therapy*, 39(2), 81–91. <https://doi.org/10.1080/16506070903121042>.
- Neuner, F., Schauer, M., Klaschik, C., Karunakara, U., & Elbert, T. (2004). A comparison of narrative exposure therapy, supportive counseling, and psychoeducation for treating posttraumatic stress disorder in an african refugee settlement. *Journal of Consulting and Clinical Psychology*, 72(4), 579–587. <https://doi.org/10.1037/0022-006X.72.4.579>.
- Neuner, F., Schauer, M., Roth, W., & Elbert, T. (2002). A narrative exposure treatment as intervention in a refugee camp: A case report. *Behavioural and Cognitive Psychotherapy*, 30(2), 205-209. <https://doi.org/10.1017/S1352465802002072>.
- Neuner, F., Onyut, P. L., Ertl, V., Odenwald, M., Schauer, E., & Elbert, T. (2008). Treatment of posttraumatic stress disorder by trained lay counselors in an African refugee settlement: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 76(4), 686–694. <https://doi.org/10.1037/0022-006X.76.4.686>.

- Nezlek, J. B., & Plesko, R. M. (2001). Day-to-day relationships among self-concept clarity, self-esteem, daily events, and mood. *Personality and Social Psychology Bulletin*, 27(2), 201-211. <https://doi.org/10.1177/0146167201272006>.
- Ng, Q. X., Lim, D. Y., & Chee, K. T. (2020). Reimagining the spectrum of affective disorders. *Bipolar Disorders*, 22(6), 638–639. <https://doi.org/10.1111/bdi.12960>.
- Nicholl, C., & Thompson, A. (2004). The psychological treatment of Post Traumatic Stress Disorder (PTSD) in adult refugees: A review of the current state of psychological therapies. *Journal of Mental Health*, 13(4), 351-362. <https://doi.org/10.1080/09638230410001729807>.
- Nickerson, A., Bryant, R. A., Schnyder, U., Schick, M., Mueller, J., & Morina, N. (2015). Emotion dysregulation mediates the relationship between trauma exposure, post-migration living difficulties and psychological outcomes in traumatized refugees. *Journal of Affective Disorders*, 173, 185–192. <https://doi.org/10.1016/j.jad.2014.10.043>
- Nickerson, A., Bryant, R. A., Silove, D., & Steel, Z. (2011). A critical review of psychological treatments of posttraumatic stress disorder in refugees. *Clinical Psychology Review*, 31(3), 399-417. <https://doi.org/10.1016/j.cpr.2010.10.004>.
- Nixon, R. (2006). *Cognitive-Behavioral Therapies for Trauma*. (2nd ed.). The Guilford Press.
- Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking Rumination. *Perspectives on psychological science: A journal of the Association for Psychological Science*, 3(5), 400–424. <https://doi.org/10.1111/j.1745-6924.2008.00088.x>.
- Norris, F. H., Friedman, M. J., & Watson, P. J. (2002). 60,000 disaster victims speak: Part II. Summary and implications of the disaster mental health research. *Psychiatry*, 65(3), 240–260. <https://doi.org/10.1521/psyc.65.3.240.20169>.

- Nosè, M., Ballette, F., Bighelli, I., Turrini, G., Purgato, M., Tol, W., & Priebe, S., & Barbui, C. (2017). Psychosocial interventions for post-traumatic stress disorder in refugees and asylum seekers resettled in high-income countries: systematic review and meta-analysis. *PLoS ONE*, *12*(2). <https://doi.org/10.1371/journal.pone.0171030>.
- Oliver, P. (2010). *The Student's guide to research ethics*. (2nd ed.). Open University Press.
- Olthuis, J. V., Kaltentbach, E., Giberson, E., Saryeddine, T., Asmundson, G. J. G., Carleton, R. N., Cramm, H., Crombach, A., Devlin, J., Mack, J., Lingley-Pottie, P., Rao, S., Sullivan, M., Wozney, L., & McGrath, P. J. (2023). Paraprofessional delivery of online narrative exposure therapy for firefighters. *Journal of Traumatic Stress*, *36*(4), 772–784. <https://doi.org/10.1002/jts.22941>.
- Onyut, L. P., Neuner, F., Schauer, E., Ertl, V., Odenwald, M., Schauer, M., & Elbert, T. (2005). Narrative Exposure Therapy as a treatment for child war survivors with posttraumatic stress disorder: two case reports and a pilot study in an African refugee settlement. *BMC Psychiatry*, *5*, 7. <https://doi.org/10.1186/1471-244X-5-7>.
- Orang, T., Ayoughi, S., Moran, J. K., Ghaffari, H., Mostafavi, S., Rasoulia, M., & Elbert, T. (2018). The efficacy of narrative exposure therapy in a sample of Iranian women exposed to ongoing intimate partner violence: A randomized controlled trial. *Clinical Psychology and Psychotherapy*, *25*(6), 827–841. <https://doi.org/10.1002/cpp.2318>.
- Ozkaleli, U. (2018). Displaced selves, dislocated emotions and transforming identities: Syrian refugee women reinventing selves. *Women's Studies International Forum*, *70*(June), 17–23. <https://doi.org/10.1016/j.wsif.2018.07.010>.
- Ozen, H., & Cerit, C. (2018). Savaş Nedeniyle Türkiye'ye Göç Ederek İnsani Yardım Kuruluşunda Çalışan Suriyeli Mültecilerde Travma Sonrası Stres Bozukluğu ve İlişkili Etmenler. *Kocaeli Üniversitesi Sağlık Bilimleri Dergisi*, *4*(3), 70–69. <https://doi.org/10.30934/kusbed.431796>.

- Pabst, A., Schauer, M., Bernhardt, K., Ruf-Leuschner, M., Goder, R., Elbert, T., Rosentraeger, R., Robjant, K., Aldenhoff, J., & Seeck-Hirschner, M. (2014). Evaluation of narrative exposure therapy (NET) for borderline personality disorder with comorbid posttraumatic stress disorder. *Clinical Neuropsychiatry*, *11*(4), 108–117.
- Park, J. K., Park, J., Elbert, T., & Kim, S. J. (2020). Effects of Narrative Exposure Therapy on posttraumatic stress disorder, depression, and insomnia in traumatized North Korean Refugee youth. *Journal of Traumatic Stress*, *33*(3), 353–359. <https://doi.org/10.1002/jts.22492>.
- Parker, R. I., Vannest, K. J. & Davis, J.L. (2011). Effect size in single-case research: a review of nine non-overlap techniques. *Behavior Modification*, *35*(4), 303–22. <https://doi.org/10.1177/0145445511399147>.
- Parsonson, B. S., & Baer, D. M. (1992). The visual analysis of data, and current research into the stimuli controlling it. In T. R. Kratochwill & J. R. Levin (Eds.), *Single-case research design and analysis: New directions for psychology and education* (pp. 15–40). Routledge.
- Pavlov, I. P. (1927). *Conditioned reflexes: An investigation of the physiological activity of the cerebral cortex*. Oxford University Press.
- Pedersen, D. (2002). Political violence, ethnic conflict, and contemporary wars: Broad implications for health and social well-being. *Social Science & Medicine*, *55*(2), 175–190. [http://doi.org/10.1016/S0277-9536\(01\)00261-1](http://doi.org/10.1016/S0277-9536(01)00261-1).
- Piccinelli, M., & Wilkinson, G. (2000). Gender differences in depression. Critical review. *The British Journal of Psychiatry: The Journal of Mental Science*, *177*, 486–492. <https://doi.org/10.1192/bjp.177.6.486>.

- Pitman, R. K., Rasmusson, A. M., Koenen, K. C., Shin, L. M., Orr, S. P., Gilbertson, M. W., Milad, M. R., & Liberzon, I. (2012). Biological studies of post-traumatic stress disorder. *Nature reviews. Neuroscience*, 13(11), 769–787. <https://doi.org/10.1038/nrn3339>.
- Poole, D. N., Hedt-Gauthier, B., Liao, S., Raymond, N.A., Barnighausen, T. (2018). Major depressive disorder prevalence and risk factors among Syrian asylum seekers in Greece. *BMC Public Health* 18(1), 1–9. <https://doi.org/10.1186/s12889-018-5822-x>.
- Pope, C., Ziebland, S. & Mays, N. (2006). Analysing qualitative data. In: C. Pope, & N. Mays (eds). *Qualitative Research in Health Care* (3rd ed, pp.63-81). Blackwell Publishing.
- Porges S. W. (2009). The polyvagal theory: new insights into adaptive reactions of the autonomic nervous system. *Cleveland Clinic journal of medicine*, 76 Suppl 2(Suppl 2), S86–S90. <https://doi.org/10.3949/ccjm.76.s2.17>
- 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. <https://doi.org/10.1001/jama.294.5.602>.
- Potts, M. K. (1994). Long-term effects of trauma: post-traumatic stress among civilian internees of the Japanese during World War II. *Journal of Clinical Psychology*, 50(5), 681–698. [https://doi.org/10.1002/1097-4679\(199409\)50:5<681::aid-jclp2270500504>3.0.co;2-3](https://doi.org/10.1002/1097-4679(199409)50:5<681::aid-jclp2270500504>3.0.co;2-3).
- Pratschke, J. (2003). Realistic models? Critical realism and statistical models in the social sciences. *Philosophica*, 7(1), 13-38. <http://doi.org/10.21825/philosophica.82236>.
- Pukay-Martin, N. D., Pontoski, K. E., Maxwell, M. A., Calhoun, P. S., Dutton, C. E., Clancy, C. P., Hertzberg, M. A., Collie, C. F., & Beckham, J. C. (2012). The influence of depressive symptoms on suicidal ideation among U.S. Vietnam-era and Afghanistan/Iraq-era veterans

with posttraumatic stress disorder. *Journal of Traumatic Stress*, 25(5), 578–582.

<https://doi.org/10.1002/jts.21741>.

Rasmussen, A., & Annan, J. (2010). Predicting Stress Related to Basic Needs and Safety in Darfur Refugee Camps: A Structural and Social Ecological Analysis. *Journal of Refugee Studies*, 23(1), 23–40. <https://doi.org/10.1093/jrs/fep044>.

Regel, S. & Joseph, S. (2017). *Post traumatic Stress*. (2nd ed.). Oxford University Press.

Reid, J., Silove, D., & Tarn, R. (1990). The development of the New South Wales Service for the Treatment and Rehabilitation of Torture and Trauma Survivors (STARTTS): The first year. *The Australian and New Zealand Journal of Psychiatry*, 24(4), 486–495. <https://doi.org/10.3109/00048679009062904>.

Resick, P. A., & Schnicke, M. K. (1992). Cognitive processing therapy for sexual assault victims. *Journal of Consulting and Clinical Psychology*, 60(5), 748–756. <https://doi.org/10.1037//0022-006x.60.5.748>.

Resick, P. A. (2014). *Stress and trauma*. Psychology Press.

Ritchie, T. D., Sedikides, C., Wildschut, T., Arndt, J., & Gidron, Y. (2011). Self-concept clarity mediates the relation between stress and subjective well-being. *Self and Identity*, 10(4), 493–508. <https://doi.org/10.1080/15298868.2010.493066>.

Roberts, B., Damundu, E.Y., Lomoro, O., & Sondorp, E. (2009). Post-conflict mental health needs: a cross-sectional survey of trauma, depression and associated factors in Juba, Southern Sudan. *BMC Psychiatry*, 9(7), 7-9. <https://doi.org/10.1186/1471-244X-9-7>

Robinson, L. A., Berman, J. S., & Neimeyer, R. A. (1990). Psychotherapy for the treatment of depression: A comprehensive review of controlled outcome research. *Psychological Bulletin*, 108(1), 30–49. <https://doi.org/10.1037/0033-2909.108.1.30>.

- Robjant, K., & Fazel, M. (2010). The emerging evidence for Narrative Exposure Therapy: A review. *Clinical Psychology Review, 30*(8), 1030–1039. <https://doi.org/10.1016/j.cpr.2010.07.004>.
- Rosenberg, M., (1979). *Conceiving the Self*. Basic Books.
- Rosenberg, E., Kirmayer, L.J., Xenocostas, S., Dao, M.D., & Loignon, C. (2007). GPs' strategies in intercultural clinical encounters. *Family Practice, 24*(2), 145-151. <https://doi.org/10.1093/fampra/cmm004>.
- Roszell, D. K., McFall, M. E., & Malas, K. L. (1991). Frequency of symptoms and concurrent psychiatric disorder in Vietnam veterans with chronic PTSD. *Hospital & Community Psychiatry, 42*(3), 293–296. <https://doi.org/10.1176/ps.42.3.293>.
- Roth, G., Ekblad, S., & Agren, H. (2006). A longitudinal study of PTSD in a sample of adult mass-evacuated Kosovars, some of whom returned to their home country. *European Psychiatry, 21*(3), 152–159. <https://doi.org/10.1016/j.eurpsy.2005.11.004>.
- Rothbaum, B. O., Foa, E. B., Riggs, D. S., Murdock, T., & Walsh, W. (1992). A prospective examination of post-traumatic stress disorder in rape victims. *Journal of Traumatic Stress, 5*(3), 455–475. <https://doi.org/10.1002/jts.2490050309>.
- Sagaltici, E., Alpak, G., & Altindag, A. (2019). Traumatic life events and severity of posttraumatic stress disorder among Syrian refugees residing in a camp in Turkey. *Journal of Loss and Trauma 25*(1), 47–60. <https://doi.org/10.1080/15325024.2019.1654691>.
- Sahloul, Z., Sankri-Tarbichi, A. G., & Kherallah, M. (2012). Evaluation report of health care services at the Syrian refugee camps in Turkey. *Avicenna Journal of Medicine, 2*(2), 25–28. <https://doi.org/10.4103/2231-0770.99148>.
- Sandelowski, M. & Barroso, J. (2003). Classifying the findings in qualitative studies. *Qualitative Health Research, 13*(7): 905-23. <http://dx.doi.org/10.1177/1049732303253488>.

- Sandström, M., Wiberg, B., Wikman, M., Willman, A.K., Högberg, U. (2008). A pilot study of eye movement desensitisation and reprocessing treatment (EMDR) for post-traumatic stress after childbirth. *Midwifery*, 24(1), 62-73. <http://doi.org/10.1016/j.midw.2006.07.008>.
- Saricam, H. (2018). The psychometric properties of Turkish version of Depression Anxiety Stress Scale-21 (DASS-21) in health control and clinical samples. *Journal of Cognitive Behavioral Psychotherapy and Research*, 7(1), 19–30. <https://doi.org/10.5455/JCBPR.274847>.
- Schaaf, K. K., & McCanne, T. R. (1998). Relationship of childhood sexual, physical, and combined sexual and physical abuse to adult victimization and posttraumatic stress disorder. *Child Abuse & Neglect*, 22(11), 1119-1133. [httpS://doi.org/10.1016/S0145-2134\(98\)00090-8](httpS://doi.org/10.1016/S0145-2134(98)00090-8).
- Schaal, S., Elbert, T., & Neuner, F. (2009). Narrative exposure therapy versus interpersonal psychotherapy. A pilot randomized controlled trial with Rwandan genocide orphans. *Psychotherapy and psychosomatics*, 78(5), 298–306. <https://doi.org/10.1159/000229768>.
- Schauer, M. (2015). Narrative Exposure Therapy. In: James D. Wright(editor-in-chief), *International Encyclopedia of the Social & Behavioral Sciences*. (2nd ed., pp. 198-203). Oxford: Elsevier.
- Schauer, M., Elbert, T., Gotthardt, S., Rockstroh, B., Odenwald, M., & Neuner, F. (2006). Wiedererfahrung durch psychotherapie modifiziert geist und gehirn [Imaginary reliving in psychotherapy modifies mind and brain]. *Verhaltenstherapie*, 16(2), 96-103. <https://doi.org/10.1159/000093195>.
- Schauer, M., Elbert, T., Neuner, F. (2007). Interaktion von Neurowissenschaftlichen Erkenntnissen und Psychotherapeutischen Einsichten am Beispiel von Angst und traumatischem Stress. In: Becker, R., Wunderlich, H.-P. (Eds.), *Wie wirkt Psychotherapie: Forschungsgrundlagen für die Praxis* (pp.87-108). Thieme-Verlag.

- Schauer, M., Neuner, F., & Elbert, T. (2005). *Narrative Exposure Therapy: A short-term intervention for traumatic stress disorders after war, terror, or torture*. Hogrefe & Huber.
- Schauer, M., Neuner, F., & Elbert, T. (2011). *Narrative Exposure Therapy: A short-term treatment for traumatic stress disorders*. (2nd ed.). Hogrefe.
- Schauer, M., & Schauer, E. (2010). Trauma-focused public mental-health interventions: A paradigm shift in humanitarian assistance and aid work. In: Martz, E. (Ed.), *Trauma Rehabilitation after War and Conflict* (pp. 361-430). Springer.
- Schlechter, P., Kamp, S., Wanninger, K., Knausenberger, J., Wagner, U., Wilkinson, P. O., Nohr, L., & Hellmann, J. H. (2021). Help-seeking attitudes and distress disclosure among Syrian refugees in Germany. *The Counseling Psychologist*, 49(3), 330–352. <https://doi.org/10.1177/0011000020974934>.
- Schnurr, P. P., & Green, B. L. (2004). Understanding relationships among trauma, posttraumatic stress disorder, and health outcomes. In P. P. Schnurr & B. L. Green (Eds.), *Trauma and health: Physical health consequences of exposure to extreme stress* (pp. 247–275). Washington, DC: American Psychological Association.
- Schnyder, U., Ehlers, A., Elbert, T., Foa, E. B., Gersons, B. P., Resick, P. A., Shapiro, F., & Cloitre, M. (2015). Psychotherapies for PTSD: what do they have in common? *European Journal of Psychotraumatology*, 6, 28186. <https://doi.org/10.3402/ejpt.v6.28186>.
- Schubert, C. C., & Punamaki, R. L. (2011). Mental health among torture survivors: cultural background, refugee status and gender. *Nordic Journal of Psychiatry*, 65(3), 175–182. <https://doi.org/10.3109/08039488.2010.514943>.

- Schulz, K. F., Altman, D. G., Moher, D., & CONSORT Group (2010). CONSORT 2010 statement: updated guidelines for reporting parallel group randomised trials. *BMJ (Clinical research ed.)*, 340, c332. <https://doi.org/10.1136/bmj.c332>.
- Schweitzer, R., Melville, F., Steel, Z., & Lacherez, P. (2006). Trauma, post-migration living difficulties, and social support as predictors of psychological adjustment in resettled Sudanese refugees. *The Australian and New Zealand Journal of Psychiatry*, 40(2), 179–187. <https://doi.org/10.1080/j.1440-1614.2006.01766.x>.
- Scruggs, T. E., & Mastropieri, M. A. (1998). Summarizing Single-Subject Research: Issues and Applications. *Behavior Modification*, 22(3), 221-242. <https://doi.org/10.1177/01454455980223001>.
- Scruggs, T.E. & Mastropieri, M.A. (2001). How to Summarize Single-Participant Research: Ideas and Applications. *Exceptionality*, 9(4), 227- 244. https://doi.org/10.1207/S15327035EX0904_5.
- Segal, S. P., Khoury, V. C., Salah, R., & Ghannam, J. (2018). Contributors to screening positive for mental illness in Lebanon's Shatila Palestinian refugee camp. *The Journal of Nervous and Mental Disease*, 206(1), 46–51. <https://doi.org/10.1097/NMD.0000000000000751>.
- Shalev, A. Y. (1996a). Stress versus traumatic stress: From acute homeo- static reactions to chronic psychopathology. In B. A. van der Kolk, A. C. McFarlane, & L. Weisaeth (Eds.), *Traumatic stress* (pp. 77-101). New York: Guilford Press.
- Shalev, A. Y., Bonne, O., & Eth, S. (1996). Treatment of posttraumatic stress disorder: a review. *Psychosomatic Medicine*, 58(2), 165–182. <https://doi.org/10.1097/00006842-199603000-00012>.

- Shapiro F. (1989). Eye movement desensitization: a new treatment for post-traumatic stress disorder. *Journal of Behavior Therapy and Experimental Psychiatry*, 20(3), 211–217. [https://doi.org/10.1016/0005-7916\(89\)90025-6](https://doi.org/10.1016/0005-7916(89)90025-6).
- Sheather J. (2022). As Russian troops cross into Ukraine, we need to remind ourselves of the impact of war on health. *BMJ (Clinical research ed.)*, 376, o499. <https://doi.org/10.1136/bmj.o499>.
- Shepherd, J., Stein, K., & Milne, R. (2000). Eye movement desensitization and reprocessing in the treatment of post-traumatic stress disorder: a review of an emerging therapy. *Psychological medicine*, 30(4), 863–871. <https://doi.org/10.1017/s0033291799002366>.
- Silove, D., Sinnerbrink, I., Field, A., Manicavasagar, V., Steel, Z. (1997). Anxiety, depression and PTSD in asylum seekers: associations with pre-migration trauma and post-migration stressors. *British Journal of Psychiatry*, 170, 351-357. <https://doi.org/10.1192/bjp.170.4.351>
- Silove, D., Ventevogel, P., & Rees, S. (2017). The contemporary refugee crisis: an overview of mental health challenges. *World psychiatry: Official Journal of the World Psychiatric Association*, 16(2), 130–139. <https://doi.org/10.1002/wps.20438>.
- Silver, R. C., Holman, E. A., Andersen, J. P., Poulin, M., McIntosh, D. N., & Gil-Rivas, V. (2013). Mental- and physical-health effects of acute exposure to media images of the September 11, 2001, attacks and the Iraq War. *Psychological Science*, 24(9), 1623–1634. <https://doi.org/10.1177/0956797612460406>.
- Sim, K. (2019). The Psychiatric Comorbidity in Disaster Victims with PTSD: Comorbidity Rates, Severity of Psychological Disorders and Factors Predicting Comorbidities. *Korean Journal of Stress Research*, 27(3), 259-267. <https://doi.org/10.17547/kjsr.2019.27.3.259>.

- Simich, L., Hamilton, H., & Baya, B. K. (2006). Mental distress, economic hardship, and expectations of life in Canada among Sudanese newcomers. *Transcultural Psychiatry*, *43*(3), 418–444. <https://doi.org/10.1177/1363461506066985>.
- Singer, J. A., Blagov, P., Berry, M., & Oost, K. M. (2013). Self-Defining Memories, Scripts, and the Life Story: Narrative Identity in Personality and Psychotherapy. *Journal of Personality*, *81*(6), 569–582. <https://doi.org/10.1111/jopy.12005>.
- Sir, A., Bayram, Y., & Özkan, M. (1998). A preliminary study about the effects of forced internal migration on mental health. *Klinik Psikiyatri*, *2*, 83–88.
- Skinner, B. F. (1938). *The behavior of organisms*. Appleton- Century-Crofts.
- Slobodin, O., & de Jong, J. T. (2015). Mental health interventions for traumatized asylum seekers and refugees: What do we know about their efficacy? *The International Journal of Social Psychiatry*, *61*(1), 17-26. <https://doi.org/10.1177/0020764014535752>.
- Smith J. D. (2012). Single-case experimental designs: a systematic review of published research and current standards. *Psychological Methods*, *17*(4), 510–550. <https://doi.org/10.1037/a0029312>.
- Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology*, *30*(4), 526–537. <https://doi.org/10.1037/h0037039>.
- Song, S. J., Subica, A., Kaplan, C., Tol, W., & de Jong, J. (2018). Predicting the Mental Health and Functioning of Torture Survivors. *The Journal of Nervous and Mental Disease*, *206*(1), 33–39. <https://doi.org/10.1097/NMD.0000000000000678>.
- Spikol, E., Robinson, M., McGlinchey, E., Ross, J., & Armour, C. (2022). Exploring complex-PTSD comorbidity in trauma-exposed Northern Ireland veterans. *European Journal of Psychotraumatology*, *13*(1), 2046953. <https://doi.org/10.1080/20008198.2022.2046953>.

STATISTA. (2022). *Ranking of the largest Syrian refugee-hosting countries in 2022*.

<https://www.statista.com/statistics/740233/major-syrian-refugee-hosting-countries-worldwide/>.

STATISTA. (2023). *Refugees- major source countries worldwide as of 2022*.

<https://www.statista.com/statistics/272999/refugees-by-source-country/>

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. *The Journal of the American Medical Association*, 302(5), 537-49.

<https://doi.org/10.1001/jama.2009.1132>.

Steel, Z., Silove, D., Phan, T., & Bauman, A. (2002). Long-term effect of psychological trauma on the mental health of Vietnamese refugees resettled in Australia: A population-based study.

Lancet, 360(9339), 1056–1062. [https://doi.org/10.1016/S0140-6736\(02\)11142-1](https://doi.org/10.1016/S0140-6736(02)11142-1).

Stenmark, H., Catani, C., Neuner, F., Elbert, T., & Holen, A. (2013). Treating PTSD in refugees and asylum seekers within the general health care system. A randomized controlled multicenter study. *Behaviour Research and Therapy*, 51(10), 641–647.

<https://doi.org/10.1016/j.brat.2013.07.002>.

Steuwe, C., Rullkötter, N., Ertl, V., Berg, M., Neuner, F., Beblo, T., & Driessen, M. (2016).

Effectiveness and feasibility of Narrative Exposure Therapy (NET) in patients with borderline personality disorder and posttraumatic stress disorder- a pilot study. *BMC psychiatry*, 16, 254. <https://doi.org/10.1186/s12888-016-0969-4>.

Sterling M. (2008). The Impact of Event Scale (IES). *The Australian Journal of*

Physiotherapy, 54(1), 78. [https://doi.org/10.1016/s0004-9514\(08\)70074-6](https://doi.org/10.1016/s0004-9514(08)70074-6).

- Stewart, D. W., Shamdasani, P. N., & Rook, D. W. (2007). *Focus groups*. (2nd ed.). SAGE Publications. <https://www.doi.org/10.4135/9781412991841>.
- Storr, C. L., Ialongo, N. S., Anthony, J. C., & Breslau, N. (2007). Childhood antecedents of exposure to traumatic events and posttraumatic stress disorder. *The American Journal of Psychiatry*, *164*(1), 119–125. <https://doi.org/10.1176/ajp.2007.164.1.119>.
- Stratton, S. J. (2021). Population Research: Convenience Sampling Strategies. *Prehospital and Disaster Medicine*, *36*(4), 373–374. <https://doi.org/10.1017/S1049023X21000649>.
- Strømme, E. M., Haj-Younes, J., Hasha, W., Fadnes, L. T., Kumar, B., Igland, J., & Diaz, E. (2020). Health status and use of medication and their association with migration related exposures among Syrian refugees in Lebanon and Norway: A cross-sectional study. *BMC Public Health*, *20*(1), 1–9. <https://doi.org/10.1186/s12889-020-8376-7>.
- Sumer, N., & Gungor, D. (1999). Yetişkin bağlanma stilleri ölçeklerinin Türk örnekleme üzerinde psikometrik değerlendirilmesi ve kültürlerarası bir karşılaştırma [Psychometric evaluation of adult attachment measures on Turkish samples and a cross-cultural comparison]. *Türk Psikoloji Dergisi*, *14*(43), 71–109.
- Summerfield D. A. (1997). Legacy of war: beyond "trauma" to the social fabric. *Lancet (London, England)*, *349*(9065), 1568. [https://doi.org/10.1016/s0140-6736\(05\)61627-3](https://doi.org/10.1016/s0140-6736(05)61627-3).
- Swift, J. K., & Greenberg, R. P. (2012). Premature discontinuation in adult psychotherapy: A meta-analysis. *Journal of Consulting and Clinical Psychology*, *80*(4), 547–559.
- Syria Needs Analysis Project. (2013). *Legal Status of Individuals Fleeing Syria*. https://www.acaps.org/fileadmin/Data_Product/Main_media/24_legal_status_of_individuals_fleeing_syria.pdf.

- Taha, P. H., Taib, N. I., & Sulaiman, H. M. (2016). Posttraumatic stress disorder and its relationship with psychological traumas among Syrian refugees in Duhok, Iraqi Kurdistan. *Arab Journal of Psychiatry*, 27(2), 180–189. <https://doi.org/10.12816/0029097>.
- Tastan, C., Haklı, S. H., & Osmanoğlu, E. (2017). *Suriyeli sığınmacılara dair tehdit algısı: Önyargılar ve gerçekler*. Polis Akademisi Yayınları.
- Tate, R. L., & Perdices, M. (2019). *Single-Case Experimental Designs For Clinical Research And Neurorehabilitation Settings*. Routledge.
- Tedeschi, R. G., & Calhoun, L. G. (1995). *Trauma & transformation: Growing in the aftermath of suffering*. Sage Publications, Inc. <https://doi.org/10.4135/9781483326931>.
- Tedeschi, R. G., & Calhoun, L. G. (2004). Target Article: "Posttraumatic Growth: Conceptual Foundations and Empirical Evidence". *Psychological Inquiry*, 15(1), 1–18. https://doi.org/10.1207/s15327965pli1501_01.
- Tekeli-Yesil, S., Isik, E., Unal, Y., Aljomaa Almossa, F., Konsuk Unlu, H., & Aker, A. T. (2018). Determinants of Mental Disorders in Syrian Refugees in Turkey Versus Internally Displaced Persons in Syria. *American Journal of Public Health*, 108(7), 938–945. <https://doi.org/10.2105/AJPH.2018.304405>.
- Teodorescu, D. S., Heir, T., Hauff, E., Wentzel-Larsen, T., & Lien, L. (2012). Mental health problems and post-migration stress among multi-traumatized refugees attending outpatient clinics upon resettlement to Norway. *Scandinavian Journal of Psychology*, 53(4), 316–332. <https://doi.org/10.1111/j.1467-9450.2012.00954.x>.
- The British Psychological Society. (2018). *Code of Ethics and Conduct Guidance*. <https://www.bps.org.uk/guideline/code-ethics-and-conduct>.

- Tinghog, P., Malm, A., Arwidson, C., Sigvarsdotter, E., Lundin, A., & Saboonchi, F. (2017). Prevalence of mental ill health, traumas and postmigration stress among refugees from Syria resettled in Sweden after 2011: A population-based survey. *British Medical Journal Open*, 7(12), e018899. <https://doi.org/10.1136/bmjopen-2017-018899>.
- Tol, W. A., Kohrt, B. A., Jordans, M. J., Thapa, S. B., Pettigrew, J., Upadhaya, N., & de Jong, J. T. (2010). Political violence and mental health: A multi-disciplinary review of the literature on Nepal. *Social Science & Medicine*, 70(1), 35–44. <https://doi.org/10.1016/j.socscimed.2009.09.037>.
- Tulving, E. (1972). Episodic and semantic memory. In E. Tulving & W. Donaldson, *Organization of memory*. Academic Press.
- Tulving, E. (1993). What is episodic memory? *Current Directions in Psychological Science*, 2(3), 67–70. <https://doi.org/10.1111/1467-8721.ep10770899>.
- Tulving E. (2002). Episodic memory: from mind to brain. *Annual Review of Psychology*, 53, 1–25. <https://doi.org/10.1146/annurev.psych.53.100901.135114>.
- Tulving, E., & Schacter, D. L. (1990). Priming and human memory systems. *Science (New York)*, 247(4940), 301–306. <https://doi.org/10.1126/science.2296719>.
- Turner, S. W., Bowie, C., Dunn, G., Shapo, L., & Yule, W. (2003). Mental health of Kosovan Albanian refugees in the UK. *The British Journal of Psychiatry: The Journal of Mental Science*, 182, 444–448.
- Ullman, S. E., & Filipas, H. H. (2001). Predictors of PTSD symptom severity and social reactions in sexual assault victims. *Journal of Traumatic Stress*, 14(2), 369–389. <https://doi.org/10.1023/A:1011125220522>.

- United Nations High Commissioner for Refugees (UNHCR). (1951). *Convention and protocol relating to the status of refugee*. <https://www.unhcr.org/4ae57b489.pdf>.
- United Nations High Commissioner for Refugees (UNHCR). (2011a). *Temporary protection in Türkiye*. <https://help.unhcr.org/turkiye/information-for-syrians/temporary-protection-in-turkey/>
- United Nations High Commissioner for Refugees (UNHCR). (2011b). *The legal framework for protecting refugees*. <https://www.unhcr.org/media/1951-convention-relating-status-refugees-and-its-1967-protocol>.
- United Nations High Commissioner for Refugees (UNHCR). (2013). *The labour market integration of resettled refugees*. <https://www.unhcr.org/fr-fr/en/media/labour-market-integration-resettled-refugees>.
- United Nations High Commissioner for Refugees (UNHCR). (2014). *Assessment of mental health and psychosocial support needs of displaced Syrian in Jordan*. <https://data.unhcr.org/en/documents/details/41640>.
- United Nations High Commissioner for Refugees (UNHCR). (2015a). *UNHCR Global Appeal 2015 Update-Turkey*. <https://www.unhcr.org/media/unhcr-global-appeal-2015-update-turkey>.
- United Nation High Commissioner Refugees. (2015b). *Asylum Trends 2014*. <https://www.unhcr.org/uk/statistics/unhcrstats/551128679/asylum-levels-trends-industrialized-countries-2014.html>
- United Nations High Commissioner for Refugees (UNHCR). (2017). *Desperate Journeys. Refugees and migrants entering and crossing Europe via the Mediterranean and Western Balkans routes*. <http://www.unhcr.org/news/updates/2017/2/58b449f54/desperate-journeys-refugees-migrants-entering-crossing-europe-via-mediterranean.html>.

United Nation High Commissioner Refugees. (2018). *Syria Emergency*.

<https://www.unhcr.org/tr/en/syria-emergency>.

United Nation High Commissioner Refugees (UNHCR). (2021a). *Refugee Data Finder*.

<https://www.unhcr.org/refugee-statistics/>.

United Nation High Commissioner Refugees. (2021b). *Syrian Regional Refugee Response*.

https://data2.unhcr.org/en/situations/syria#_ga=2.135700088.831666727.1597060028-15174612.1597060028.

United Nation High Commissioner Refugees. (2021c). *Lebanon*.

<https://www.unhcr.org/countries/lebanon>.

United Nations High Commissioner for Refugees (UNHCR). (2022). *Figures at Glance*.

<https://www.unhcr.org/uk/about-unhcr/who-we-are/figures-glance>.

United Nations High Commissioner for Refugees (UNHCR). (2023a). *Refugee Data Finder*.

<https://www.unhcr.org/refugee-statistics/>

United Nations High Commissioner for Refugees (UNHCR). (2023b). *Syrian Regional Refugee Response*. <https://data2.unhcr.org/en/situations/syria>.

United Nations High Commissioner for Refugees (UNHCR). (2023c). *Syria Emergency*.

<https://www.unhcr.org/emergencies/syria-emergency>.

United Nations International Children's Emergency Fund (UNICEF). (2020). *Syria Crisis:*

Humanitarian Situation Report. <https://www.unicef.org/media/96446/file/Syria-Crisis-Humanitarian-SitRep-December-2020.pdf>.

Uygun, E., Ilkkursun, Z., Sijbrandij, M., Aker, A. T., Bryant, R., Cuijpers, P., Fuhr D. C., Graff, A, M., Jong, J., McDaid.,D., Morina, N., Park, A., Roberts,B., Ventevogel,P., Yurtbakan, T., & Acarturk, C. (2020). Protocol for a randomized controlled trial: Peer-to-peer Group Problem

Management plus (PM+) for adult Syrian refugees in Turkey. *Trials*, 21(1): 1–10.

<https://doi.org/10.1186/s13063-020-4166-x>.

Vaismoradi, M., Jones, J., Turunen, H., & Snelgrove, S. (2016). Theme development in Qualitative content analysis and thematic analysis. *Journal of Nursing Education and Practice*, 6(5).

<https://doi.org/10.5430/jnep.v6n5p100>.

Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis:

Implications for conducting a qualitative descriptive study. *Nursing and Health Sciences*, 15(3), 398–405. <https://doi.org/10.1111/nhs.12048>.

van den Hout, M. A., & Engelhard, I. M. (2012). How does EMDR work? *Journal of Experimental Psychopathology*, 3(5), 724–738. <https://doi.org/10.5127/jep.028212>.

van der Kolk, B. A., & Fisler, R. E. (1995). Dissociation and the fragmentary nature of traumatic memories: Overview and exploratory study. *Journal of Traumatic Stress*, 8(4), 505–525.

van der Kolk, B. A., McFarlane, A. C., & van der Hart, O. (1996a). A general approach to treatment of posttraumatic stress disorder. In B. A. van der Kolk, A. C. McFarlane, L. Weisaeth (Eds.), *Traumatic stress: The effects of over-whelming experience on mind, body, and society* (pp. 417–440). Guilford Press.

van der Kolk, B. A., Weisaeth, L., & Van der Hart, O. (1996b). History of trauma in psychiatry. In B.A. Van der Kolk, A.C. McFarlane, & L. Weisaeth (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body, and society* (pp. 47–74). Guilford Press.

van Der Kolk, B.A. (1998). Trauma and memory. *Psychiatry and Clinical Neurosciences*, 52(1): S52-S64. <https://doi.org/10.1046/j.1440-1819.1998.0520s5S97.x>

- van Schie, K., Engelhard, I. M., & van den Hout, M. A. (2015). Taxing Working Memory during Retrieval of Emotional Memories Does Not Reduce Memory Accessibility When Cued with Reminders. *Frontiers in psychiatry*, 6, 16. <https://doi.org/10.3389/fpsyt.2015.00016>.
- Vogt, D. S., King, D. W., & King, L. A. (2007). Risk pathways for PTSD: Making sense of the literature. In M. J. Friedman, T. M. Keane, & P. A. Resick (Eds.), *Handbook of PTSD: Science and practice* (pp. 99–115). Guilford.
- von Collani, G., & Werner, R (2005). Self-related and motivational constructs as determinants of aggression. An analysis and validation of a German version of the Buss–Perry Aggression Questionnaire. *Personality and Individual Differences*, 38(7), 1631–1643. <https://doi.org/10.1016/j.paid.2004.09.027>.
- Vonk, J. (2022). *Sustainable Water and Sanitation in Sierra Leone: Impact evaluation of the 'Improved WASH Services in WAU and WAR Districts' project*. Oxfam.
- Waldrep, E., & Benight, C. C. (2008). Social cognitive theory. In G. Reyes, J. D. Elhai, & J. D. Ford (Eds.), *Encyclopedia of Psychological Trauma* (pp. 604–606). Wiley.
- Wampold, B. E. (2001). Contextualizing psychotherapy as a healing practice: Culture, history, and methods. *Applied and Preventive Psychology*, 10(2), 69–86.
- Wampold B. E. (2015). How important are the common factors in psychotherapy? An update. *World psychiatry: Official Journal of the World Psychiatric Association (WPA)*, 14(3), 270–277. <https://doi.org/10.1002/wps.20238>.
- Wampold, B. E., & Imel, Z. E. (2015). *The great psychotherapy debate: The evidence for what makes psychotherapy work*. (2nd ed.). Routledge.
- Watson, J. B. (1925). *Behaviorism*. Norton.

- Weathers, F.W., Blake, D.D., Schnurr, P.P., Kaloupek, D.G., Marx, B.P., & Keane, T.M. (2013). *The Life Events Checklist for DSM-5 (LEC-5)*. www.ptsd.va.gov.
- Weine, S. M., Kulenovic, A. D., Pavkovic, I., & Gibbons, R. (1998). Testimony psychotherapy in Bosnian refugees: a pilot study. *The American Journal of Psychiatry*, *155*(12), 1720–1726. <https://doi.org/10.1176/ajp.155.12.1720>.
- Weinhold, S. L., Göder, R., Pabst, A., Scharff, A. L., Schauer, M., Baier, P. C., Aldenhoff, J. Elbert, T., & Seeck-Hirschner, M. (2017). Sleep recordings in individuals with borderline personality disorder before and after trauma therapy. *Journal of Neural Transmission*, *124*(1), 99–107. <https://doi.org/10.1007/s00702-016-1536-3>.
- Weiss, D.S. (2004). The Impact of Event Scale-Revised. In J.P. Wilson, & T.M. Keane (Eds.), *Assessing psychological trauma and PTSD: A practitioner's handbook* (2nd ed., pp. 168–189). Guilford Press.
- Weiss, D.S., & Marmar, C.R. (1997). The Impact of Event Scale-Revised. In J.P. Wilson, & T.M. Keane (Eds.), *Assessing Psychological Trauma and PTSD: A Practitioner's Handbook* (pp. 399–411). Guilford Press.
- Welsh, E. A., & Brodsky, A. E. (2010). After every darkness is light: Resilient Afghan women coping with violence and immigration. *Asian American Journal of Psychology*, *1*(3), 163–174. <https://doi.org/10.1037/a0020922>.
- Wenzlaff, R. M., & Wegner, D. M. (2000). *Thought suppression*. *Annual Review of Psychology*, *51*, 59–91. <https://doi.org/10.1146/annurev.psych.51.1.59>.
- Whelton W. J. (2015). Memory reconsolidation and self-reorganization. *The Behavioral and Brain Sciences*, *38*, e29. <https://doi.org/10.1017/S0140525X14000338>.
- White, M., & Epston, D. (1990). *Narrative means to therapeutic ends*. WW Norton.

- White, M. D., & Marsh, E. E. (2006). Content analysis: A flexible methodology. *Library Trends*, 55(1), 22–45. <https://doi.org/10.1353/lib.2006.0053>.
- Wilker, S., & Kolassa, I.T. (2013). The Formation of a Neural Fear Network in Posttraumatic Stress Disorder: Insights From Molecular Genetics. *Clinical Psychological Science*, 1(4), 452–469. <https://doi.org/10.1177/2167702613479583>.
- Wilkinson, S. (1988). The role of reflexivity in feminist psychology. *Women's Studies International Forum*, 11(5), 493–502. [https://doi.org/10.1016/0277-5395\(88\)90024-6](https://doi.org/10.1016/0277-5395(88)90024-6).
- Williams, M. T., Cahill, S. P., & Foa, E. B. (2010). Psychotherapy for posttraumatic stress disorder. In D. J. Stein, E. Hollander, & B. O. Rothbaum (Eds.), *Textbook of anxiety disorders* (pp. 603–626). American Psychiatric Publishing, Inc.
- Wilson, A. E., & Ross, M. (2003). The identity function of autobiographical memory: Time is on our side. *Memory*, 11(2), 137–149. <https://doi.org/10.1080/741938210>.
- Wilson J. P. (1994). The historical evolution of PTSD diagnostic criteria: from Freud to DSM-IV. *Journal of traumatic stress*, 7(4), 681–698.
- Wilson, J. P. (2006). *The posttraumatic self: Restoring meaning and wholeness to personality*. Routledge.
- Wilson, J. P. & Drozdek, B. (2004). *Broken spirits: The treatment of traumatized asylum seekers, refugees and war and torture victims*. Brunner-Routledge.
- Wilson, J. P., Friedman, M. J., & Lindy, J. D. (2001). An overview of clinical consideration and principles in the treatment of PTSD. In J. P. Wilson, M. J. Friedman, & J. D. Lindy (Eds.), *Treating psychological trauma and PTSD* (pp. 59–94). New York: Guilford Publications.
- Wolery, M., & Harris, S. R. (1982). Interpreting results of single-subject research designs. *Physical Therapy*, 62(4), 445–452. <https://doi.org/10.1093/ptj/62.4.445>.

Wolery, M., Busick, M., Reichow, B., & Barton, E. E. (2010). Comparison of overlap methods for quantitatively synthesizing single-subject data. *The Journal of Special Education, 44*(1), 18–28. <https://doi.org/10.1177/0022466908328009>.

World Health Organization (WHO), 2002. *Gender and Mental Health*.
<https://iris.who.int/handle/10665/68884?&locale-attribute=ru>.

World Health Organization. (WHO). (2004). *The Global Burden of Disease: 2004 update*.
<https://www.who.int/publications/i/item/9789241563710>.

World Health Organization

(WHO). (2015). *World Health Organization Syrian Arab Republic*. http://applications.emro.who.int/dsaf/EMROPUB_2015_EN_1876.pdf?ua=1.

World Health Organization (WHO). (2022). *ICD-11: International classification of diseases* (11th revision). <https://icd.who.int/>

Yalim, A. C., & Kim, I. (2018). Mental Health and Psychosocial Needs of Syrian Refugees: A Literature Review and Future Directions. *Advances in Social Work, 18*(3), 833–852.
<https://doi.org/10.18060/21633>.

Yazgan, P., Utku, D.E., Sirkeci, I., 2015. Syrian crisis and migration. *Migration Letters, 12*(3), 181–192.

Yıldırım, S., İslamoğlu, E., & İyem, C. (2017). Suriyeli Sığınmacıların Toplumsal Kabul ve Uyum Sürecine İlişkin Bir Araştırma. *Bilgi, 35*, 107-126.

Yurtsever, A., Konuk, E., Akyüz, T., Zat, Z., Tükel, F., Çetinkaya, M., Savran, C., & Shapiro, E. (2018). An Eye Movement Desensitization and Reprocessing (EMDR) Group Intervention for Syrian Refugees With Post-traumatic Stress Symptoms: Results of a Randomized Controlled Trial. *Frontiers in psychology, 9*, 493. <https://doi.org/10.3389/fpsyg.2018.00493>.

- Zang, Y., Hunt, N., & Cox, T. (2013). A randomised controlled pilot study: The effectiveness of narrative exposure therapy with adult survivors of the Sichuan earthquake. *BMC Psychiatry*, *13*(14). <https://doi.org/10.1186/1471-244X-13-41>.
- Zang, Y., Hunt, N., & Cox, T. (2014). Adapting Narrative Exposure Therapy for Chinese earthquake survivors: A pilot randomised controlled feasibility study. *BMC psychiatry*, *14*(262), 1-12. <https://doi.org/10.1186/s12888-014-0262-3>.
- Zetter, R., & Ruaudel, H. (2014). Development and protection challenges of the Syrian refugee crisis. *Forced Migration Review*, *47*, 6-10.
- Zimbardo, G. (1988). *Psychology and Life*. (12th ed.). Forsman and Company.
- Zlomuzica, A., Woud, M. L., Machulska, A., Kleimt, K., Dietrich, L., Wolf, O. T., Assion, H. J., Huston, J. P., De Souza Silva, M. A., Dere, E., & Margraf, J. (2018). Deficits in episodic memory and mental time travel in patients with post-traumatic stress disorder. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, *83*, 42–54. <https://doi.org/10.1016/j.pnpbp.2017.12.014>.

Appendices

Appendix A: Journal Guidelines- JAD-Reports

Journal Guidelines

Description

The Journal of Affective Disorders Reports is an open access companion journal to Journal of Affective Disorders that publishes papers concerned with affective disorders in the widest sense: depression, mania, mood spectrum, emotions and personality, anxiety and stress.

Manuscript Submission

The *Journal of Affective Disorders Reports* 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/jadr>, 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).

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

For further information visit <https://www.sciencedirect.com/journal/journal-of-affective-disorders-reports/publish/guide-for-authors>.

Appendix B: JBI Critical Appraisal Checklist

JBI Critical Appraisal Checklist for Studies Reporting Prevalence Data

Reviewer _____ Date _____

Author _____ Year _____ Record Number _____

	Yes	No	Unclear	Not applicable
1. Was the sample frame appropriate to address the target population?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were study participants sampled in an appropriate way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Was the sample size adequate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were the study subjects and the setting described in detail?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Was the data analysis conducted with sufficient coverage of the identified sample?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Were valid methods used for the identification of the condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Was the condition measured in a standard, reliable way for all participants?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Was there appropriate statistical analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Was the response rate adequate, and if not, was the low response rate managed appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal: Include Exclude Seek further info

Comments (Including reason for exclusion)



DPAP Committee : 20/07/2021
Supervisor: Professor Thomas Schroder
Applicant: Fatma Aysazci

Project ID : 2816

Project : The feasibility and effectiveness of Narrative Exposure Therapy for the treatment of traumatic stress in the displaced Syrian population residing in Turkey and its influence on self-concept clarity

Dear Fatma,

A favourable opinion is given to the above named study on the understanding that the applicants conduct their research as described in the above numbered application. Applicants need to adhere to all conditions under which the ethical approval has been granted and use only materials and documentation that have been approved.

If you need to make any any changes (for example to the date or place of data collection, or measures used), an Amendment Form should be submitted. This can be done by the Supervisor in 'Create Sub Form' in the Actions Menu on the left hand side of the page on the on-line system: Select 'Amendment Form'

Yours

Professor David Daley
 Co-Chair DPAP Ethics Subcommittee

Professor Amanda Griffiths
 Co-Chair DPAP Ethics Subcommittee

Journal Guidelines

Description

International Journal of Social Sciences (IJSS) is a double-blind peer-reviewed, international, multidisciplinary, social fields. IJSS aims to be a leading peer-reviewed platform and an authoritative source of information for analyses, reviews and evaluations related to social sciences and other relevant disciplines.

The primary target audience of the journal is researchers or practitioners.

The Journal follows a double-blind peer-review process, whereby authors do not know reviewers and vice versa. Double-blind peer review is a method used to make sure scientific publications are produced with the highest quality. Appropriate papers are sent to independent reviewers for evaluation. Reviewers, receive author's article with no mention of their identity including their work and ethnicity. The authors as well are not informed about the reviewers' identity.

Manuscript Submission

International Journal of Social Sciences (IJSS) receives all manuscript online through, only. Therefore, manuscripts must be submitted via the journal's online submission system. Our Manuscript system allows for rapid submission of original and revised manuscripts, as well as facilitating the review process and internal communication between authors, editors and reviewers via a web-based platform.

Papers that are submitted to the IJSS for publication should not be under review at other journals. Submission of a manuscripts indicates that it reports unpublished work and that is

not under active consideration for publication elsewhere, nor been accepted for publication, nor been published previously (except in abstract form).

For further information visit <https://www.sobider.net/?pnum=6&pt=Guide+for+Authors>.

Appendix E: Focus Group Semi-Structured Interview Questions

Focus Group Structure and Questions

After giving general information about the purpose of the main research, the first moderator (independent researcher) explains the purpose of this group discussion, what is expected from the group participants and the rules of the group. After that the psychoeducation about the nature, structure, function and effectiveness of NET for about 10 minutes will be given and the following questions will be asked to the group. While the first moderator asks these questions, the second moderator (the researcher of this study) takes notes of the group discussion.

General Questions:

- What do you think in general about delivering this new therapy technique to Syrian Refugees? (positive and negative aspects)

Accessibility and communication questions:

- What can be the conveniences/difficulties that we might encounter in reaching the participants to carry out this research?
- What can be the conveniences/difficulties that the participants might experience in reaching/using the mobile devices (phone or computer)?
- What can be the conveniences/difficulties that the participants might experience in accessing the internet?
- What can be done to deal with these difficulties (if there is any)?
- To what extent do you think it is possible to reach participants who can speak Turkish moderately/fluently?
- What do you think about delivering the therapy sessions in Turkish? (Advantages and disadvantages)
- What can be the other communication problems (except language and online communication) that we might experience with this population?

Other:

- Is there anything else you would like to add about Syrian Refugees living in Turkey in terms of our research aim?
- Do you think is there anything we should consider or especially be careful about when delivering this therapy technique to this group?
- Anything else you would like to add?

Appendix F: Example questions targetting elements of fear structure in NET

Element of fear structure	Past	Present
Sensory	"What did the mutilated body look like?" "Could you smell the dead bodies?" "Could you hear the others screaming?" "Could you feel the gun in your back?" "Did you feel the pain in your legs?"	"Do you have the pictures of the mutilated bodies in your mind right now like it was then? What can you see?" "Can you see the soldier right now like he was then? What does he look like?" "Can you smell the dead bodies right now like you could smell them then?" "Do you feel the gun in your back right now like you felt it then?" "Can you feel the pain in your legs right now like it hurt then? How does it feel?"
Cognitive	"Did you think that you would die at this moment?"	"What did you think then; what now?"
Emotional	"Did you feel intense horror at that moment?"	"Can you feel the horror right now, like it felt then?"
Physiological	"Did your heart beat fast at that moment?" "Did you sweat a lot at that time?"	"Can you feel your heart beating fast right now, like it was beating then?" "Are your hands sweating right now, like they were sweating then?"

(Retrieved from Schauer et al., 2011, p.49)

Appendix G: Change Interview Structure and Questions

Interviewer introduces himself and say something such as “Following on from your therapy with Fatma, I would like to find out about your thoughts about it. I have several questions to ask you today as part of this interview. It’s important to say that today is not a therapy session and so we won’t be discussing your difficulties, that was something you did with Fatma. Today the plan will be to go through the following questions that I have down here, is that ok? [interviewer does not follow up on clinical material just remind client that interview is not for discussing difficulties].

{-Before we do this, I would like you to fill in 3 questionnaires that you will probably remember completing before. [ask client to complete IES-R, DASS 21, SCCS].}

This is an opportunity to gather a further data point on any of your measures if you wanted to.

General questions

- How are you feeling generally?

Feasibility and acceptability questions

- Looking back now, what was therapy like for you?
- How did you get on with having therapy via video link for you?
- NET has a psychoeducation component. This is where Fatma will have talked to you about what happens in our minds when we have experienced traumatic stress and how the therapy is meant to help with that – did it make sense to you?
- Can you recall any of it/what was the most important thing you remember/anything else?

- Looking back now, what did you make of the lifeline?
- You were asked to fill in two questionnaires during each session, what did you make of them?
- You were also asked to fill in a questionnaire at different times after the therapy sessions regarding your perception towards yourself, what did you make of it?
- The therapy was structured/time limited – how was that for you?
- What was it like having someone reread your narrative back to you each session?
- What was it like talking about the context (i.e., specific details of each event such as what did rooms look like etc) of each trauma event?

Change questions

- Have you noticed any change(s)?
- If you have noticed a change, how important is this to you?
- Were you surprised by the change(s)?
- How would you describe your “self” before and after NET sessions? Is there any change(s)?
- Do you think is there anything that has helped you to understand your “self” better during NET sessions?
- Do you think change is due to the therapy, or other things (i.e., things that happened outside therapy room that might have influenced the outcome)

Helpful or unhelpful aspect questions

- Was any aspect of therapy particularly helpful?
- Was any aspect of therapy unhelpful?
- Anything unexpected or took you by surprise?
- Was there any point where you thought you could not carry on? If so, what helped you to complete therapy?

Appendix H: Ethics Committee Amended Approval Letter



DPAP Committee

18/01/2022

Supervisor:

Applicant : Fatma AYSAZCI

Project: Project Id The feasibility and effectiveness of Narrative Exposure Therapy for the treatment of traumatic stress in the displaced Syrian population residing in Turkey and its influence on self-concept clarity

Your amendment ref: DPAP - 2022 - 2816 - 1 has been approved. Please conduct your study following your approved procedures or you will be operating outside your ethical approval.

yours sincerely

A handwritten signature in cursive script that reads 'David Daley'.

Professor David Daley

Co-Chair of DoPAP Ethics Subcommittee

A handwritten signature in cursive script that reads 'Amanda Griffiths'.

Professor Amanda Griffiths

Co-Chair of DPAP Ethics Subcommittee

Appendix I: Consent Form



**University of
Nottingham**
UK | CHINA | MALAYSIA

School of Medicine

University of Nottingham
Medical School
Nottingham
NG7 2UH

Participant Consent

STUDENT RESEARCH PROJECT ETHICS REVIEW

Division of Psychiatry & Applied Psychology

Project Title: The feasibility and effectiveness of Narrative Exposure Therapy for the treatment of traumatic stress in the displaced Syrian population residing in Turkey and its influence on self-concept clarity

Researcher: Fatma AYSAZCI (FATMA.AYSAZCI1@nottingham.ac.uk)

Supervisors: Prof Thomas SCHRODER (lwzts@exmail.nottingham.ac.uk)

Dr Nigel HUNT (lwznch@exmail.nottingham.ac.uk)

Ethics Reference Number: *[insert when your project has received ethical approval]*

Please read below items and click on either YES or NO boxes relevant to your answer.

	YES	NO
1- Have you read and understood the Participant Information sheet that given to you by the researcher on <i>(insert date)</i> ?	<input type="checkbox"/>	<input type="checkbox"/>
2- Have you understood that participation in this study is voluntary, and you are free to withdraw at any time without giving a reason?	<input type="checkbox"/>	<input type="checkbox"/>
3- Have you understood that if you withdraw from this study, we will no longer collect any data from you, but we will keep the information that we have already obtained as we will use your data (obtained before your withdrawal) for the final analysis?	<input type="checkbox"/>	<input type="checkbox"/>
4- Do you give permission for video recordings (in Microsoft Teams) of your therapy sessions and interviews?	<input type="checkbox"/>	<input type="checkbox"/>
5- The content of the therapy sessions would be discussed with the researcher's supervisor and the data collected in the study may be looked at by authorised individuals from the University of Nottingham. Do you give permission for these individuals to have access to the records obtained during the research?	<input type="checkbox"/>	<input type="checkbox"/>
6- Do you understand that the narrations of the sessions will not be used as data during this research?	<input type="checkbox"/>	<input type="checkbox"/>
7- Have you understood that your personal details will be kept confidential and anonymous in this study?	<input type="checkbox"/>	<input type="checkbox"/>
8- Do you know how to contact the researcher if you have questions about this study?	<input type="checkbox"/>	<input type="checkbox"/>



**University of
Nottingham**

UK | CHINA | MALAYSIA

9- I agree that this research could be used in a further academic research report or publication. (We will make sure that your anonymity is protected).	<input type="checkbox"/>	<input type="checkbox"/>
10- I agree that my quotes can be used in this study and further research or publication. (We will make sure that your anonymity is protected).	<input type="checkbox"/>	<input type="checkbox"/>
11- I confirm that I am 18 years old or over.	<input type="checkbox"/>	<input type="checkbox"/>
12- I agree to take part in this study about "The feasibility and effectiveness of Narrative Exposure Therapy for the treatment of traumatic stress in the displaced Syrian population residing in Turkey and its influence on self-concept clarity	<input type="checkbox"/>	<input type="checkbox"/>

- If you would like to have a summary of the research findings, please insert your email address here:

Name of Participant:

Date:

- "By clicking this button, I indicate that I understand what the study involves, and I agree to take part."**

Appendix J: Participant Information Sheet



School of Medicine
University of Nottingham
Medical School
Nottingham
NG7 2UH

PARTICIPANT INFORMATION

STUDENT RESEARCH PROJECT ETHICS REVIEW

Division of Psychiatry & Applied Psychology

Project Title: The feasibility and effectiveness of Narrative Exposure Therapy for the treatment of traumatic stress in the displaced Syrian population residing in Turkey and its influence on self-concept [clarity](#)

Researcher/Student: Fatma [AYSANCI](#) (FATMA.AYSANCI1@nottingham.ac.uk)

Supervisor/Chief Investigator: Prof Thomas [SCHROEDER](#) (twzts@exmail.nottingham.ac.uk)

Second Supervisor: Dr Nigel C. HUNT) (hwznch@exmail.nottingham.ac.uk)

Independent Researcher: Sahin CAKAR (sahincakar@outlook.com),

Phone: +905370217235

Ethics Reference Number: *[insert when your project has received ethical approval]*

Thank you for showing an interest in my research project. My name is Fatma [Aysanci](#) and I am a full-time PhD student in 'Clinical Psychology' at the University of Nottingham. Before starting my PhD, I worked as a psychologist in social service in Turkey for 3 years, mainly with Syrian Refugees, and I am still carrying out my research interest with this population.

We invite you to take part in a research study to understand the effectiveness of a specific psychological intervention in the displaced Syrian population residing in Turkey.

What is the purpose of this study?

This study aims to understand whether a specific psychological treatment, Narrative Exposure Therapy (NET), is effective in the displaced Syrian population in reducing their psychological problems. NET is an approach that aims to focus on a life span story from birth to present of those having negative and unfavourable life experiences. NET has been found as an effective treatment in reducing psychological problems and burdens of negative life experiences in refugee populations from different backgrounds. However, no study has investigated the effectiveness of NET in the Syrian population. So, we would like to answer the question of whether NET is as effective in the Syrian displaced population as it has been in other refugee populations. Additionally, we also would like to know that whether this treatment has a potential role in the regulation of one's stable and consistent perception towards himself or herself.

As the Syrian population face to face with the biggest refugee crises in our century and are living through different phases of migration, they are at a high risk of suffering from psychological disorders. That is why, with the results of this study, we might be able to offer an effective psychological treatment for this population and help them to reduce the burdens of war and displacement. This study will also serve as an academic assessment for the researcher's doctoral degree from the University of Nottingham.

Why have I been invited?



You are invited because as a Syrian refugee residing in Turkey you might need psychological support due to war-related negative life experiences. To reach out to potential research participants, we have distributed our research advertisement leaflets via social media (Twitter and Facebook). The research leaflet had reached to you and you have contacted the research team to participate in this study.

Do I have to take part?

It is up to you to decide whether or not to take part. You may change your mind about being involved at any time. You are free to withdraw at any point before or during the study without giving a reason. If you withdraw, we will no longer collect any information from you, but we will keep the information about you that we have already obtained. Because this information may have already been used in some analysis and may still be used in the final study analysis. To safeguard your rights, we will use the minimum of personally identifiable information (e.g., name- which will be replaced with a pseudonym-, age, gender, contact details, someone closes' contact details). If you do decide to take part, you will be given this information sheet to keep and asked to sign a consent form.

What will I be asked to do?

If you are eligible and decide to take part in this study:

1. You will receive this sheet and a consent form (via e-mail) which must be read carefully. You are asked to sign and send back the consent form to the researcher again via e-mail. If you do not reply our email in a week, we will send you a reminder to sign and send back to the document. If we cannot hear from you for a week later this reminder or if you indicate that you do not want to consent, we will not be keeping any contact details of you and we will delete them from our records which signify that you no longer be considered as a participant in this research, and we will not get in touch with you anymore.

2. If you have no objections after reading this information sheet and signing and sending back to the consent form, you will be one of the participants of this research. You will be asked to complete three questionnaires (via an online surveys link which will be shared with you).

3. As the Covid-19 pandemic has restricted travelling and gatherings, we will conduct the sessions via an online communication channel called "Microsoft Teams (MST)", which is an online meeting channel. We will ask you to create a Microsoft 365 account (if you do not have any) and obtain a mobile or desktop application of MST, which is free of charge, to have NET sessions throughout the research. The researcher of this study and the University's Information Technology team will help you if you experience any difficulties with this application. The researcher will get in touch with you to set a time for the NET sessions after being sure all technical settings work well for both parties. We will also ask you to share the contact details of someone close to you in case any emergency occurs (e.g., dissociation, intense distress or internet loss) during the sessions. This information neither will be used as data in this research nor will be shared with any other parties. These contact details will be kept under password protected files and will be treated confidentially as any other research data. The obtained contact details will be destroyed a year later after the study finishes.

4. Then, your NET sessions will be launched and will continue as a weekly scheduled time for you.



5. You will be asked to complete different questionnaires at different point of times before and after the NET sessions (via the online surveys link which will be shared with you). You will receive a notification each time when you are asked to complete these questionnaires.

6. In the first session, you will be given detailed information about specific psychological problems that refugees might suffer, the nature and the process of NET and how it works.

7. Next, you will go on with the therapy sessions where you will create a lifeline from birth to present (in a shared whiteboard screen that both you and the therapist can do adjustments on it) with the help of the therapist, symbolisation of positive and negative life events on it and narration of these symbolised life events.

8. The therapist will write down each session's narration after the session finishes and the narration of the previous session will be read to you by the therapist at the beginning of the next session.

9. Subsequent sessions will continue in the same structure where you and the researcher work on your lifeline narration together.

10. During and after the completion of the NET sessions, an independent researcher will have an interview with you to ask about your experiences regarding your NET sessions.

11. NET will be delivered a number of between 8-12 weekly sessions for each participant and each session will last between 60-90 minutes.

What will happen to the information I provide?

Anyone who takes part in this research will remain entirely anonymous. For storing and handling your data anonymously, you will be asked to choose a pseudonym that must not identify you. This pseudonym will be used on all study materials (including questionnaires, only Turkish versions of written narrations, audio recordings) through all phases of the research (data collection, data analysis and outcomes). The questionnaires that you complete (with pseudonyms) via an online surveys link will be downloaded and transferred to password protected files and they will be deleted from the online survey servers. Your online NET sessions and interviews will be recorded in Microsoft Teams as a video format. If you are uncomfortable with video recordings, please notify the researcher beforehand as video recording is essential for this research. These recordings and all data collected (including someone close's contact details) will be kept under password-protected files in the researcher's institutional digital storage where only the researcher can gain access. We will not keep any physical copies of these documents. All data will be collected and stored following the University's Code of Conduct and Research Ethics and data protection regulations. More information is provided below (in section "Data Protection"). The content of the sessions would be discussed with the researcher's supervisors mentioned above. No revealing information about participants or content of the narrations will be shared with other parties. All data collected during this research will be dispelled a year after the completion of this research.

The information that you provide will be used to write a dissertation for the fulfilment of a doctoral degree in Clinical Psychology. There is a possibility that this research could be used in a further report or publication. We may like to quote what you say in a report or a publication. We will make sure that your anonymity is protected. But if you do not wish us to do so or if you have any questions, please let us know.

Are there any possible disadvantages or risks in taking part?

Participation in this study is unlikely to cause you any harm. However, as you will be asked to give detailed information about your good and bad life experiences during each NET session, you



are likely to experience high bodily and emotional arousals. You might feel bad and sad regarding your negative life experiences as you might feel good and happy regarding your positive life experiences. You and your therapist will work on it together. You will be led by the researcher/therapist. This is what we aim in the NET sessions. These arousals will be covered in a session with the help of the therapist. No session will be finished before you go back to your normal emotional and bodily status. However, sometimes unexpected situations might occur when you leave the therapy, and you might remember some details of a negative life experience which makes you feel bad, or you might feel uncomfortable after the sessions. If you experience something similar, we advise you to reach the researcher from the above addresses. The researcher regularly checks her emails and enable the e-mail notifications. If you still cannot reach the researcher, then please get in touch with the independent researcher (Sahin CAKAR) via either email or phone call from the contact details (an emergency helpline only to use in this research) indicated above. We will arrange a session for you as soon as possible, in 48 hours at the least.

Will the research be of any personal benefit to you?

Even though NET is an effective approach for the treatment of psychological distress of refugees, we cannot guarantee its effectiveness in advance, as the Syrian population may have some distinctive features (e.g., severity and number of negative life experiences). However, we are expecting it to be beneficial and effective in the Syrian displaced population as well. Therefore, you will be given free therapy sessions aiming to reduce your psychological problems.

If you wish to know about the summary of the research outcomes, we can be contacted at the above addresses.

Who is organising and funding the research?

This research is being organised by the University of Nottingham and is part of a doctoral research project. The researcher is funded by the Republic of Turkey Ministry of National Education throughout her doctoral education.

Data Protection

We will follow ethical and legal practice and all information will be handled in confidence. Under the UK Data Protection laws the University is the Data Controller (legally responsible for the data security) and the Chief Investigator of this study (named above) is the Data Custodian (manages access to the data). This means we are responsible for looking after your information and using it properly. Your rights to access, change or move your information are limited as we need to manage your information in specific ways to comply with certain laws and for the research to be reliable and accurate. To safeguard your rights, we will use the minimum personally identifiable information possible.

You can find out more about how we use your information and read our privacy notice at:

<https://www.nottingham.ac.uk/utilities/privacy.aspx>

(If you wish to read our privacy notice in Turkish, please consult the researcher)

We would like your permission to use anonymised data in future studies, and to share our research data (e.g., in online databases) with other researchers in other Universities and organisations both inside and outside the European Union. This would be used for research in health and social care. Sharing research data is important to allow peer scrutiny, re-use (and therefore avoiding duplication of research) and to understand the bigger picture in particular areas of research. All personal information that could identify you will be removed or changed before the information is shared with other researchers or results are made public.



The data collected for the study will be looked at and stored by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people from regulatory organisations to check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant and we will do our best to meet this duty.

At the end of the project, all raw data will be kept securely by the University under the terms of its data protection policy after which it will be disposed of securely. The data will not be kept elsewhere and will be destroyed a year later after the study finishes.

If you have any questions or concerns, please do not hesitate to ask. We can be contacted before and after your participation at the email addresses above.

What if there is a problem?

If you have any queries or complaints, please contact the student's supervisor/chief investigator in the first instance. If this does not resolve your query, please write to the Administrator to the Division of Psychiatry & Applied Psychology's Research Ethics Sub-Committee adrian.pantry@nottingham.ac.uk who will pass your query to the Chair of the Committee.

If you remain unhappy and wish to complain formally, you should then contact the Faculty of Medical and Health Sciences Ethics Committee Administrator, Faculty Hub, Medicine and Health Sciences, E41, E Floor, Medical School, Queen's Medical Centre Campus, Nottingham University Hospitals, Nottingham, NG7 2UH or via E-mail: FMHS-ResearchEthics@nottingham.ac.uk

As mentioned elsewhere, the number of NET sessions is designed as 8-12 weekly sessions. We will check you and your psychological well-being periodically after completing the NET sessions. Addition to that if you experience something unpleasant after the sessions, we advise you to reach the researcher from the above addresses. The researcher regularly checks her emails and enable the e-mail notifications. If you still cannot reach the researcher, then please get in touch with the independent researcher (Sahin CAKAR) via either email or phone call from the contact details (an emergency helpline only to use in this research) indicated above. We will arrange a session for you as soon as possible, in 48 hours at the least. An independent researcher conducting the change interviews will monitor you and signpost to an appropriate resource if necessary. If we think that you might need further psychological support, we will try to help you. You might be directed to one of the below addresses that would offer you psychological support in Turkey:

-Syrian American Medical Society (SAMS) Association- Gaziantep:

In May 2019, SAMS launched a Mental Health and Psychosocial Support (MHPSS) centre in Gaziantep, Turkey, providing individual and group counselling sessions, group activities, and workshops to vulnerable individuals who had endured various traumatic experiences due to the ongoing conflict in Syria. The centre provides services free of charge throughout the week.

Address: Mücahitler Mah. 10031 Nolu Sok.YASEM IŞM. NO:42/203 Gaziantep, Turkey

E-mail: Turkey@sams-usa.net

Phone: +90 342 502 08 38 / +90 342 502 08 39

Website: <https://www.sams-usa.net/turkey/>

-Refugees and Asylum Seekers Assistance and Solidarity Association (RASAS):

It was established in 2014 in Istanbul to find a solution to people who left their country and need international protection. It has different units under its roof support finding solutions to refugees' vital needs, basic problems, psychological problems and speed up their integration with society as fast as possible. In the Mental Health Unit of RASAS, clinical



University of
Nottingham

UK | CHINA | MALAYSIA

psychologists and psychiatrists give psychological help and free medicine support is also given. Besides individual sessions, group sessions are also given.

Address: Turgut Reis Mah. Fatih Bulvari No:6 Sultanbeyli/Istanbul

Phone: +905538095820

Email: info@multeciler.org.tr

Website: <https://multeciler.org.tr/eng/>

-The Association for Solidarity with Asylum Seekers and Migrants (SGDD-ASAM):

SGDD-ASAM's vision is to create a place where all asylum seekers and migrants can enjoy their fundamental rights and services and live in a harmony with the host community. SGDD-ASAM strives for creating a safe place and ensuring well-being for asylum seekers and refugees.

The Head Quarter of SGDD-ASAM is in Ankara. However, it has many offices located in different provinces of Turkey. The contact details of the nearest office can be found in the following link: (http://en.sgdd.org.tr/?page_id=11)

E-mail: sgdd@sgdd.org.tr

Website: <https://sgdd.org.tr>

Appendix K: Study Outline

STUDY OUTLINE

The feasibility and effectiveness of Narrative Exposure Therapy for the treatment of traumatic stress in the displaced Syrian population residing in Turkey and its influence on self-concept clarity

Rationale: Since the civil war started in Syria, thousands of people displaced to save their lives. At the end of 2019, the United Nations High Commissioner for Refugees (UNHCR) reported that at least 5.6 million Syrian had been externally displaced (UNHCR, 2020). Being exposed to war-related life experiences and living through different phases of migration, refugees are faced with various and common psychological disorders. Post-Traumatic Stress Disorder (PTSD) is the most common mental health problem in refugees, and it is comorbid with other psychological disorders such as depression and anxiety. It is reported that nearly 13.1 million people from Syria need humanitarian (UNHCR, 2018) and psychological assistance. World Health Organization (WHO) (2015) reported that the number of refugees who are suffering from severe mental illness and in need of psychological treatments is approximately 600.000 and another 4 million may be suffering. However, considering the vast influx of Syrian refugees in resettlement countries, addressing the mental health difficulties generally is not a priority.

A variety of psychological interventions such as Trauma-Focused Cognitive Behavioral Therapy and Eye Movement Desensitization and Reprocessing are found to be highly successful at reducing the symptoms of PTSD. However, these interventions are not easily accessible, costly, or time-consuming, especially in the post-conflict areas where psychological help might be needed urgently. Narrative Exposure Therapy (NET) has also been evidenced as an effective intervention for the treatment of PTSD (NICE, 2018). NET aims to form a lifeline from birth to the present and focuses on a life span narrative and offers a safe confrontation with thoughts and memories that have been avoided by the person since a traumatic event occurred. Even though NET is evidenced as one of the most effective interventions for the treatment of PTSD in different refugee populations, no study has investigated the feasibility and effectiveness of NET in the Syrian displaced population.

Due to the ongoing conflicts in the area since 2011, 3.6 million of the Syrian population are seeking safety in Turkey. Turkey now has the largest refugee population in the world (UNHCR, 2020). The Turkish Government has developed health action plans for this population; however, budget limitations have hampered the integration of mental health into primary and community care. That has resulted in unmet mental health care needs and a treatment gap for Syrian Refugees residing in Turkey. Few studies have tried to offer effective evidence-based psychological interventions for this population residing in Turkey. For example, Problem Management Plus (PM+) project developed by WHO has been adopted for Syrian Refugees in Turkey (e.g., Fuhr et al., 2020). PM+ aims to combine problem management skills for adults having common mental health problems and exposed adversity in the community. To our knowledge, this is the only evidence-based project/study that has been offered as a psychological intervention for Syrian Refugees living in Turkey. Except for psychological guidance and counselling delivered by local mental health services, there is no structured and adopted commonly used psychological intervention for this population in Turkey. That is why evidence-based, structured and practical psychological intervention needs to be offered and implemented in this country for the treatment of mental health problems of Syrian Refugees. As mentioned above, NET is evidence-based and manualized short-term intervention that has been used for the treatment of posttraumatic stress and other related mental health problems in refugee populations. In this direction, firstly, as NET has not been delivered or studied in Turkey, this research aims to understand the feasibility of NET in the Turkish context. Secondly, as the effectiveness of NET has not been studied in the displaced Syrian population, this study aims to understand its effectiveness in reducing traumatic stress, depression, anxiety, and general stress in this population. Lastly, as NET is built upon a theoretical understanding of autobiographical

memory (which contains the dimensions of self-knowledge and conceptual self), this study also aims to understand the potential influence of NET in self-concept clarity.

Research Questions:

1. Is NET feasible for the displaced Syrian population in the Turkish context?
2. Can NET be effective in the displaced Syrian population as it has been in other refugee populations in reducing traumatic stress?
3. Can NET be effective in reducing depression, anxiety, and general stress in the displaced Syrian population?
4. Does NET have a potential role in the regulation of self-concept clarity?

Participants and Access: Eligible participants will be adult Syrians (age of 18 or over) resettled in Turkey due to the Syrian civil war. There is no gender restriction. Participants must be literate and fluent in the Turkish language. Participants must not be using any psychiatric medication, must not receive any simultaneous psychotherapy and must have experienced at least one war-related traumatic event. The participants will be reached out via research advertisement leaflets distributed via new social media accounts (on Twitter and Facebook) created by this research. The leaflets will be shared with hashtags and tags relevant to Syrian Refugees and their mental health problems.

Location of Data Collection: As the Covid-19 pandemic restricted travelling and gatherings, NET will be delivered remotely by the researcher who was trained by EREMO Institute in January and March 2021. The practical guideline of e-NET has been introduced and published by Kaltenebach et al. (2020). Remote sessions will be held via an online and virtual meeting application Microsoft Teams (MST) according to this guideline. Therapy sessions are planned as between 8 to 12 weekly sessions as the length of the sessions highly depend on the complexity and the severity of the participant's traumatic life experiences. The duration of each session is planned between 60-90 minutes.

Data Collection Technique and Process: For ensuring the contextual feasibility of NET, a group of local professionals (4-5 participants) will be gathered to investigate their view regarding the practical feasibility of NET in the Syrian population residing in Turkey with focus group research. A qualitative analysis of the transcript of the discussion will lead the researcher to identify any challenges before conducting the intervention study. Drawing on local knowledge, it will also be established whether any additions are needed to the Kaltenebach et al. (2020) guidelines to deliver NET remotely to this population, and then an intervention study investigating both acceptability and potential effectiveness of NET will follow. If necessary, the amendments will be made for the ethics application of the intervention study. The intervention study is designed as a series of single case-studies. Potential Syrian participants will be asked to complete the Life Events Checklist-5 (LEC-5) to identify the existence of traumatic events experienced. Before applying the LEC-5, they will be asked to read and sign a preliminary consent form to inform that they might not participate in this study if they do not meet the eligibility criteria. Eligible participants will be given the Participant Information Sheet (PIS) and Consent Form (CF). After having their consents, they will be asked to complete the Impact of Event Scale (IES-R), Depression Anxiety and Stress Scale-21 (DASS-21) and Self-Concept Clarity Scale (SCCS) for the baseline measurements (after having their consent and before the first session). Before every session, they will be required to fill in IES-R and DASS-21 questionnaires. SCCS will be applied after the first, mid and last session. All scales will be given in the Turkish versions. The psychometric property of LEC-5 is not available as it aims to screen potentially traumatic events in a respondent's lifetime. Psychometric validities of the other instruments in the Turkish context are as following: IES-Revised, Cronbach alpha (α)=.94 (Çorapçıođlu et al., 2006); DASS-21, α =.91 for depression, .84 for anxiety, .90 for stress (Bilgel and Bayram, 2009); SCCS, α =.89 (Sümer and Güngör, 1999). Turkish versions of the scales will be completed via Jisc Online Surveys. During the NET session, the researcher will separately note down her observations as an expert experience of feasibility. Change interviews will be completed by an independent researcher (a local social worker) to explore

the feasibility and acceptability of NET, participants' experience of NET and attribution of changes, and, if necessary, to signpost individuals to further help.

Data Analysis: The quantitative data will be collected during weekly sessions (with the questionnaires completed via Jisc Online Surveys) for examining the clinical changes obtained by pre-post measurements. Qualitative data collected from the Focus Group discussion will be analysed and summarised by the researcher. Qualitative data obtained from the change interviews will be analysed using NVivo software.

Data Storage and Confidentiality: NET sessions will be recorded in Microsoft Teams to accomplish fidelity check which will be done by the researcher's supervisor. As a nature of NET, the therapist (researcher) will write down the narration of each session to reread to the participants in the next session. The written narrations, recordings of the NET sessions and all relevant data obtained throughout the research will be stored under password protected files, under the researcher's institutional cloud storage (OneDrive). Parameters of confidentiality during sessions and in the data collection and analysis process will be explained to each participant in detail. They will be asked to choose a pseudonym which will be used on all study materials. Participants will be informed about the content of the sessions would be discussed with the researcher's supervisors. Participants will be assured their identity will remain entirely anonymized, including any subsequent dissemination of the research.

Participation in this study is unlikely to cause any harm. However, during NET sessions, participants are likely to experience high bodily and emotional arousals. These arousals will be covered in a session with the help of the therapist. No session will be finished before participants go back to their normal emotional and bodily status. However, sometimes unexpected situations might occur when they leave the therapy, and they might remember some details of a negative life experience which makes them feel uncomfortable. If they experience something similar, we advise them to reach us from the given contact details to arrange a session as soon as possible. In case participants cannot reach us via email, an emergency helpline (a new phone number only to be used for this research) will be obtained by the independent researcher and will be available 24/7. We will arrange a session for them as soon as possible, in 48 hours at the least.

Justification of final sample size: As the intervention study is designed as a series of single-case studies, the sample size of 3 will enable to address of research questions. However, considering any dropouts or withdrawals from the research, 6 cases (two representations for each case is a standard for replication and reference in a case-series study) will be suitable for the continuity and stability of the research.

References:

- Bilgel, N., & Bayram, N. (2010). Depresyon anksiyete stres ölçeğinin (DASS-42) Türkçeye uyarlanmış şeklinin psikometrik özellikleri. *Noropsikiyatri Arsivi*, 47(2), 118–126. <https://doi.org/10.4274/npa.5344>.
- Corapcioglu, A., Yargıç, İ., Geyran, P., & Kocabaşoğlu, N. (2006). Validity and Reliability of Turkish Version of "Impact of Event Scale-Revised" (IES-R. *Yeni Symposium Journal*, 44(1), 14–22.
- Fuhr, D. C., Acarturk, C., Uygun, E., McGrath, M., Ilkkursun, Z., Kaykha, S., Sondorp, E., Sijbrandij, M., Ventevogel, P., Cuijpers, P., & Roberts, B. (2020). Pathways towards scaling up Problem Management plus in Turkey: A theory of change workshop. *Conflict and Health*, 14(1), 1–9. <https://doi.org/10.1186/s13031-020-00278-w>.
- Kaltenbach, E., McGrath, P. J., Schauer, M., Kaiser, E., Crombach, A., & Robjant, K. (2021). Practical guidelines for online Narrative Exposure Therapy (e-NET)—a short-term treatment for posttraumatic stress disorder adapted for remote delivery. *European Journal of Psychotraumatology*, 12(1). <https://doi.org/10.1080/20008198.2021.1881728>.
- Sümer, N., & Derya, G. (1999). Yetişkin Bağlanma Stilleri Ölçeklerinin Türk Örneklemleri Üzerinde Psikometrik Değerlendirmesi ve Kültürlerarası Bir Karşılaştırma. *Türk Psikoloji Dergisi*, 14(43), 71–106.
- United Nation High Commissioner Refugees. (2018). *Syria Emergency*. Retrieved February 5, 2021, from <https://www.unhcr.org/syria-emergency.html>.
- United Nation High Commissioner Refugees. (2020). *Syrian Regional Refugee Response*. Retrieved February 5, 2021, available at: https://data2.unhcr.org/en/situations/syria#_ga=2.135700088.831666727.1597060028-15174612.1597060028.
- National Institute for Health and Care Excellence (2018). Post-Traumatic Stress Disorder. <https://www.nice.org.uk/guidance/ng116/resources/posttraumatic-stress-disorder-pdf-66141601777861>.
- World Health Organization. (2015). *World Health Organization Syrian Arab Republic*. Retrieved February 16, 2021, available at http://applications.emro.who.int/dsaf/EMROPUB_2015_EN_1876.pdf?ua=1.

Appendix L: Data Management Plan



**University of
Nottingham**
UK | CHINA | MALAYSIA

Data Management Plan

The feasibility and effectiveness of Narrative Exposure Therapy for the treatment of traumatic stress in the displaced Syrian population residing in Turkey and its influence on self-concept clarity

1. Data description

What data will you create?

Quantitative data will be generated by the measurements of the Life Events Checklist-5 (LEC-5) for the identification of the existence and the number of traumatic events experienced; Impact of Event Scale-Revised (IES-R) for the assessment of traumatic stress; Depression, Anxiety and Stress Scale (DASS-21) for the assessment of depression, anxiety and general stress symptoms; and Self-Concept Clarity Scale (SCCS) for the assessment of changes and stability in self-concept. As this quantitative (intervention) study aims to investigate the feasibility and effectiveness of Narrative Exposure Therapy (NET) in the Syrian Refugee population residing in Turkey, the Turkish versions of the scales will be applied to the participants.

Qualitative data will be collected in two different phases of this research. The first one will be gathered during Focus Group (FG) discussions, where an interview will be held with a group of professionals working with the Syrian population in Turkey to identify any obstacles and circumstances that might need to be considered before applying intervention (NET) study. The qualitative data will be gathered from the transcripts of the group discussion. After FG, the intervention of the NET study will be carried out, where quantitative data will be collected as mentioned above. After NET sessions, the second qualitative data will be collected from the change interviews where an independent researcher will ask participants about their experiences about NET sessions. Thematic analysis (TA) will be utilised to collect qualitative data from the change interviews which will be obtained by analysing each participant's transcript independently and identifying themes and subthemes. These qualitative data will be analysed using NVivo software.

2. Data collection and/or generation

What are your methodologies for data collection/generation? How will you ensure data quality? What data standards will you use?



**University of
Nottingham**

UK | CHINA | MALAYSIA

This research has a preliminary FG study. FG will be carried out to investigate the contextual (practical) feasibility of NET in the Syrian Population living in Turkey with a group of professionals. The qualitative data obtained from the group discussion will be transcribed and analysed by the researcher. This study will be conducted in the Turkish language (as this is a contextual study) which is also the native language of the researcher. For ensuring the data quality of FG, an independent researcher (moderator 1) will lead the FG and the main researcher (moderator 2) will join the group as an observer and for notetaking. Any discrepancies that occur between two moderators will be discussed and if necessary, the chief supervisor will be consulted with the translation of the transcript. According to the results of FG, the research team will revise the intervention study's outline (if necessary, the ethics application as well) to deliver NET robustly to this population.

As the feasibility and effectiveness of the intervention study will be conducted with Syrian displaced people residing in Turkey, the data collection will be carried out in the Turkish language. The first scale (LEC-5) will be applied during the participant's recruitment process to identify trauma history. If they have experienced traumatic life experiences, they will be eligible to participate in the study and they will be asked to complete IES-R, DASS-21 and SCCS for the first baseline measurements (just after having their consents). And the second baseline measurements will be applied just before the first NET session.

As this study is designed as remote NET sessions, participants will be asked to have a Microsoft 365 username and password that will allow them to use the online virtual meeting channel Microsoft Teams (MST). MST is the organizational virtual meeting and learning channel of the University of Nottingham (UoN). That is why remote NET sessions will be carried out via MST. Online NET sessions (between 8 to 12 weekly sessions) will be recorded in a video format via MST's record function. These recordings will be translated into English from Turkish during the meeting with the help of MST's translation function which allows users to have a conversation in a preferred language. Considering the possible mistranslation risk of MST, as the researcher (Fatma Aysazci) is bilingual, she will carefully check the translations of the sessions from Turkish to English. That would mitigate the translation mistakes. After testing and being sure that the application works easily for both parties, NET sessions will be started. The Turkish versions of IES-R, DASS-21 and SCCS will be administered at the determined point of times during NET sessions. IES-R and DASS will be applied before every session, and SCCS will be applied after the first, mid and final NET sessions. These measurements will be completed by the 6 participants via Jics Online Surveys at appointed times as mentioned above. The participant will get a notification (a function of Jics Online Surveys) when they are asked to complete the questionnaires. The



**University of
Nottingham**
UK | CHINA | MALAYSIA

quantitative data gathered from measurements will be analysed using SPSS software version 27. Thus, the outcomes from these three questionnaires will allow the researcher to investigate the effectiveness of NET via the changes in a case and cross-case analysis in the time of course. The translated recordings will be also used for the fidelity checks of NET which will be carried out by the researcher's principal supervisor to ensure accuracy of the delivery of NET and quality of data gathering. The narrations of each NET session will be written down in a Word document by the researcher in Turkish as this is a part of the NET protocol. These narrations will not be translated into the English language from Turkish, because they will not be used and considered as data in this research. As a pillar of the NET technique, these narrations (previous session's) will be read to the participants by the researcher at the beginning of each session.

Qualitative data for the intervention study will be generated from the researcher's (therapist's) notes of her observations and subjective expert experiences during the delivery of NET and the participant's experiences about NET sessions by conducting change interviews with an independent researcher. These change interviews will be recorded and translated from Turkish to English by MST and transcribed by the researcher. This situation (not being able to carry out the research in the English language) prevents the researcher from using the UoN's Automated Transcription Service, which is fast, secure and cost-effective.

Thus, the researcher will gather three perspectives (the researcher's narrative data, the participant's narrative data from change interviews and the participant's self-report data from the questionnaires) which will allow the researcher to investigate the feasibility of NET in this particular context.

3. Ethics & Privacy

Are there any ethical, commercial, or privacy issues that will affect the collection and storage of your data?

This study will follow standard ethical procedures of the Division of Psychiatry and Applied Psychology and the University of Nottingham. As the aim of the study is to collect personal data regarding professional experiences and personal experiences of participants, the research team has the responsibility of any ethical and legal implications during data collection, data storage and security of the data collected.

Basic demographics of the participants will be collected and pseudonymised for FG and the intervention of NET.



University of
Nottingham

UK | CHINA | MALAYSIA

For the intervention study, email addresses will be collected from six participants for communication (setting therapy/interview times and dates). Additionally, at the beginning of the study, Syrian participants will be asked to provide the telephone number of someone close in case any emergency (intense distress, internet connection loss, etc.) occurs during the therapy sessions. This information will not be used for data analysis or publication. To ensure confidentiality, each participant will be asked to choose a pseudonym that must not identify them. The chosen pseudonyms will be used in forms, copies of questionnaires, recordings, transcriptions, other research documents, and the electronic database throughout the research. For Quantitative data collection via Jisc Online Surveys, participants will be asked to enter their pseudonyms. Any identifiable details will be removed from the study and anonymised. Participants will be made aware that their anonymity will be protected throughout the study and in any dissemination of the research.

All data collected during this research (including the demographics, someone close's contact details, the transcripts of FG, data collected from scales via Jisc Online Surveys, video recordings and narrations of NET sessions, Turkish and English versions of the transcripts of the change interviews) will be transferred into encrypted files. Parameters of confidentiality of interviews and NET sessions will be explained to each participant in detail. As the FG and NET therapy sessions and change interviews will be conducted remotely via MST, the researchers will make sure that the meetings are being held in a confidential space with a headphone, and it will be the researchers' responsibility to check this case for participants as well. Participants will be asked to read the Participant Information Sheet (PIS) and read and sign the Consent Form (CF). Participants will be informed about the content of the sessions and interviews will be discussed with the researcher's supervisors. The research team will ensure that the instructions of the Data Protection Act 2018 will be complied with, including GDPR requirements. This will include informing participants about the relevant privacy information and ensuring appropriate safeguards for the storage of the data.

4. Data storage and security

Where and how your data will be stored, backed up, transferred, and secured during the active phase (short to medium term) of research?

Quantitative data generated from the intervention study will be collected via Jisc Online Surveys. The participants will receive a notification for completing the online surveys at baseline measurements and before/after the sessions. Once they have completed the surveys, the outcome data will be downloaded and deleted from the Jisc Online Survey



servers. This data will be stored in password-protected files under the researcher's UoN OneDrive. Licensed by UoN, OneDrive storage and processing services comply with ISO 27001 international standards and BS7799 British standards of information management and security. It automatically backs up data, offers continual failover support with a maximum of one-hour data loss, and encrypts data both in transit and at rest. Along with the data outcome obtained via the online survey server, the transcript and video recording of FG, basic demographics of the participants, and someone closes' contact details. video recordings and narrations of NET sessions, video recordings and Turkish and English versions of transcripts of change interviews, and the therapist's subjective notes from the sessions will also be stored in the researcher's institutional cloud storage, OneDrive. The data stored in OneDrive will be kept in password-protected files under the pseudonyms given to the participants. The content of the research will be shared with the supervisors of the researcher with the pseudonyms of participants. The fidelity checks will also be anonymised and transferred to password-protected files in the researcher's UoN OneDrive. The video recordings will be erased from the researcher's UoN laptop as soon as they have been transferred into password-protected OneDrive files. All data collected will be treated confidentially and erased from the University's repository (OneDrive) one year after the study is completed.

5. Data management, documentation, and curation

What are your principles, systems, and major standards for data management and creation? What metadata and documentation will you keep?

All data will be managed according to the University of Nottingham's data management policy:

<https://www.nottingham.ac.uk/library/research/research-data-management/index.aspx> ;

<https://uniofnottm.sharepoint.com/sites/DigitalResearch/SitePages/Research-Data-Management-Policy.aspx>

As the Covid-19 pandemic has restricted to face-to-face gatherings and this research is designed as online interviews and therapy sessions, all data will be generated remotely via an online communication channel (emails), survey service (Jisc Online Surveys), virtual meeting application (MST) and storage platform (OneDrive). Once the participants are recruited, they will be asked to read the PIS and read and sign the CF online (via e-mail) for both the FG and Intervention study.



**University of
Nottingham**

UK | CHINA | MALAYSIA

In FG, the transcript and the video recordings, the documents obtained from the participants (PI, Consent form and demographics) will be kept in the researcher's UoN OneDrive under the password-protected files with their pseudonyms (Professional1, Professional2.....)

In the feasibility of the intervention study, as mentioned before, the questionnaires will be completed before/after the sessions at determined point of times according to the study outline. The questionnaires completed by the participants will only be accessed by the researcher through a password-protected website:

<https://uniofnottm.sharepoint.com/sites/JiscOnlinesurveysatUniversityofNottingham>

The questionnaires will be downloaded from this website and they will be stored in the researcher's UoN OneDrive under the password-protected files created for each participant and labelled with their pseudonyms. Each file will contain each session's video recordings, narrations, transcripts and data outcome. Each participant's file will be divided into subsections labelled as "Forms" (PIS and CF), "Sessions" (session1, session2...) which will include the video recordings and the narrations of the sessions and data outcomes collected via Jisc Online Surveys. Once each session is finished, the recordings will be transferred to each participant's file. The narrations of each session will be written in a Word document (only in Turkish as these narrations will not be treated as data) and will be stored under password-protected files of participants. Lastly, each participant's file will have a "Change Interview" subsection which includes transcripts, translations and the video recordings of change interviews.

Any content in the files will be shared using pseudonyms (as labelled in the files) with the supervisors via OneDrive for the fidelity checks. All identifiable information will be kept separately from the research data and will be stored in separate password-protected files in OneDrive. Any data generated during the research will be treated as confidential documents and held securely following GDPR, 2018.

6. Data preservation

How will you ensure the long-term storage and preservation of data?

The researcher and her supervisors will be responsible for the protection of the participants' rights, privacy and research data. The Research team, including the independent researcher that will take place in FG and change interviews, will abide University of Nottingham General Data Protection Regulation (GDPR), 2018. It replaces the Data Protection Act 1998 (DPA) and introduces greater protections for how personal data is used and stored.



**University of
Nottingham**

UK | CHINA | MALAYSIA

The University of Nottingham uses Microsoft OneDrive for the storage of data. Study datasets will be stored within the researcher's OneDrive under the password-protected files of each participant as detailed in the "Data management, Documentation, and Curation" section. The files will be accessible only to the researcher and can be shared with the supervisors with pseudonyms. As mentioned above, this study will be carried out remotely and there will be no physical contact with the participants. Thereby, there will be no physical data formats (e.g., paper forms and datasheets) taken from the participants. That is why all data will be stored in University's licensed cloud storage OneDrive. These data will be stored for a year after the research completed in the researcher's UoN OneDrive and then be deleted according to the terms of The University of Nottingham GDPR, 2018.

7. Data sharing, publication and access

How will the data generated be shared and published?

This research will serve as an academic assessment for Fatma AYSAZCI's doctoral degree from the University of Nottingham. The findings will be disseminated through articles in peer-reviewed journals and conference presentations.

The participants will be informed that the research team may like to quote what they said in a report or a publication. The research team make sure that participants' anonymity will be protected in case of dissemination of this research. Participants will be given an opportunity to obtain a summary of the research outcomes if they desire. Datasets will not be published. All data processing and sharing will adhere to the University of Nottingham Data Protection Policy:

<https://www.nottingham.ac.uk/governance/records-and-information-management/data-protection/data-protection-policy.aspx>

8. Roles & responsibilities

Who will be responsible for managing data, data security, data quality, and data security both during the award and post-award?

The chief investigator Prof Thomas Schroder and the main researcher Fatma Aysazci will be responsible for the storage and management of the data in this research. The overall responsibility for data security is held by the University of Nottingham Chief information security officer. Both research supervisors (Prof Thomas Schroder and Dr Nigel Hunt) will have oversight of data management and security. They will also ensure and supervise the



**University of
Nottingham**

UK | CHINA | MALAYSIA

quality, accuracy and appropriateness of the data. In addition, the independent researcher will obey the same rules and terms during his part in this research. He will also be responsible for the security and confidentiality of the data he obtained.

9. Relevant policies

What are the relevant institutional, departmental or study policies on data sharing and data security?

The University of Nottingham abides by the General Data Protection Regulation (GDPR). The University is the Data Controller under UK Data Protection laws (legally responsible for the data security). For further information:

<https://www.nottingham.ac.uk/utilities/privacy/privacy.aspx>

Specifically, relevant policies include:

- University of Nottingham Research Data Management Policy
- Records Management Policy
- Records Retention Policy
- Data Protection Policy
- Data Handling Standards Policy
- Information Security Policy

Participants' contact details, all recordings and the data collected will be kept for a year after the end of the study and the Chief Investigator Prof Thomas Schroder will be the data custodian. All information will be destroyed, a year after the research completed. Data will be archived within the University of Nottingham data repository. Any identifiable data will be handled as described above.

10. IPR

Who will own the copyright and IPR of any data that you will collect or create? Will you create a licence(s) for its use and reuse? If you are planning to use existing data as part of your research, do any copyright or other restrictions determine its use?

The data will be owned by the University of Nottingham and the intellectual property of the research outcomes will remain within the University of Nottingham.

11. Budgeting

What are the costs or funding required for capturing, processing, storing, and archiving your data?



**University of
Nottingham**

UK | CHINA | MALAYSIA

The researcher has access to around £5000 research budget to cover all study expenses.

12. Further Help

Would you like your plan to be reviewed by specialists in Libraries?

No.

Appendix M: Intervention Study Advertisement Leaflet

The feasibility and effectiveness of Narrative Exposure Therapy for the treatment of traumatic stress in the displaced Syrian population residing in Turkey and its influence on self-concept clarity



YOU ARE INVITED!

The purpose of this study is to investigate the feasibility and effectiveness of Narrative Exposure Therapy in the treatment of psychological disturbances caused by the Syrian civil war and experienced after the migration. Narrative Exposure Therapy aims to reduce the psychological problems experienced after the traumatic events, by focusing on the positive and negative (traumatic) life events of the individual from birth to the present. The study will be conducted as weekly therapy sessions of 60-90 minutes between 8-12 weeks.

We are looking for adult Syrian participants (18 years and over) who are escaped from the Syrian civil war and settled in Turkey and can speak Turkish at intermediate/advanced levels.



Since the Covid-19 outbreak is still ongoing and the research is being conducted from the UK (University of Nottingham), therapy sessions will be held online. Therefore, the participants must have access to the Internet and smartphones/computers.



In this study, the participants will have a chance to have free psychological support and we'll try to help them to reduce the burden of their war trauma experiences

IF YOU WOULD LIKE TO PARTICIPATE IN THE STUDY, PLEASE CONTACT THE RESEARCHER:

FATMA AYSAZCI*

(FATMA.AYSAZCI@NOTTINGHAM.AC.UK) (TEL. +905335291101)

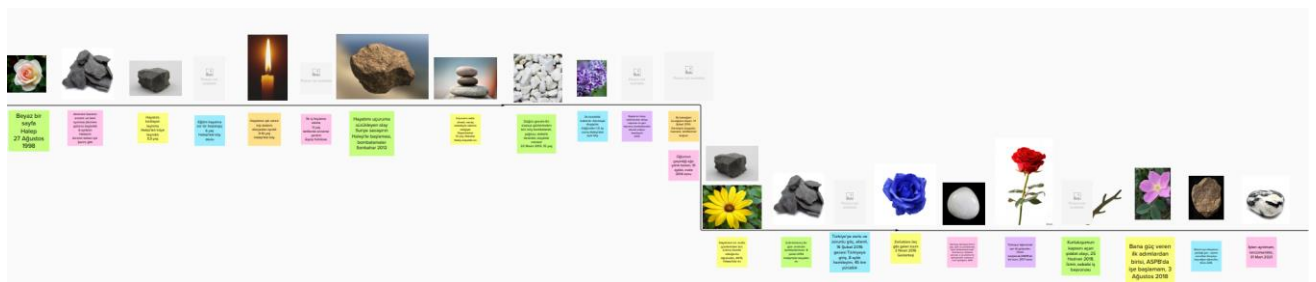
(* THE RESEARCHER OF THIS STUDY IS BEING FUNDED BY THE REPUBLIC OF TURKEY/MINISTRY OF NATIONAL EDUCATION THROUGHOUT HER DOCTORAL EDUCATION)

Appendix N: NET Participants' Lifelines

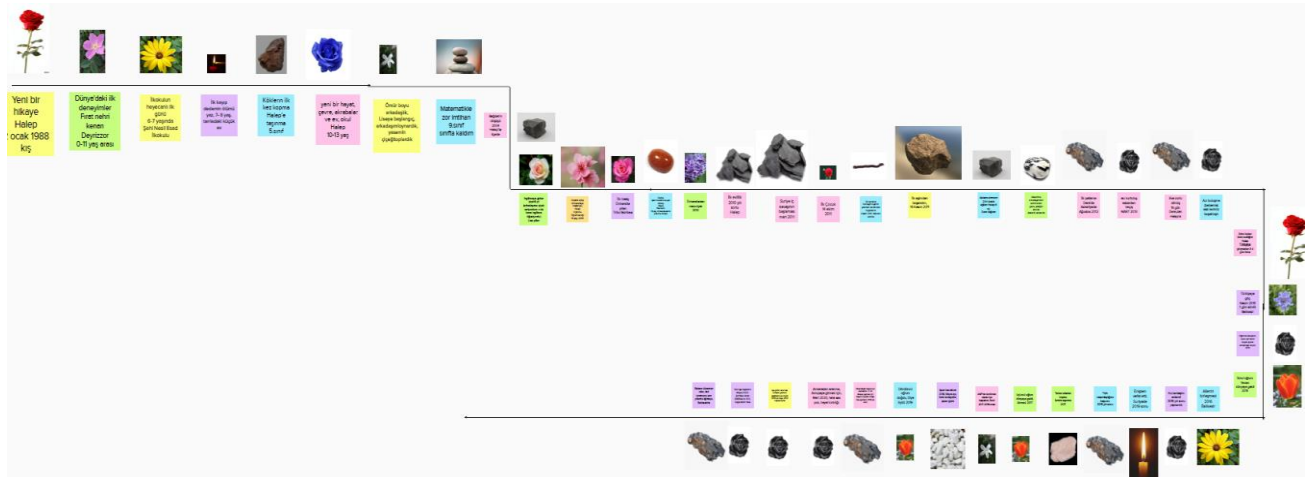
Sibel's Lifeline



Banu's Lifeline



Hamza's Lifeline



Appendix O: Fidelity Checklist (Psychoeducation)

Quality check – Remote NET protocol (Psychoeducation session)

Pseudonym of the participant:	
Session no.	
Remote delivery: Checking if the participant is in a safe, confidential space.	
Brief introduction of the therapist/researcher and her background	
Asking brief introduction from the participant about himself/ herself (Did the person experience the Syrian civil war in person, when did the participant leave Syria, what does the participant do now in Turkey, etc.)	
Review of the session's purpose and process	
Initial participant education about traumatic event, its impact on memory and body, symptoms of Post-Traumatic Stress Disorder, and comorbid disorders	
Explaining difference between 'hot' and 'cold' memories, including explanation of autobiographic memory.	
Normalization, legitimization, and descriptions of trauma reactions and symptoms. (e.g., explaining that trauma symptoms keep the person in a state of vigilance unless the trauma is unresolved or explaining why avoidance occurs in traumatized people.	
Explaining NET processes (i.e. habituation through exposure and autobiographical integration).	
Explaining overview of therapy sessions (e.g. content, number, length of NET sessions etc.).	
Discussing possible negative reactions and adverse events that might be experienced during narration.	
Asking participant to have a glass of water, cologne, or a mint gum/candy near them during the sessions, just in case to use if dissociation emerges.	
Reminding participant to have her/his meal before the session, not attending sessions being hungry.	
Explaining written narrations (testimony).	
Explaining different feelings, bodily reactions, emotions, and behaviours might be experienced out of sessions.	
Ensuring participant knows the emergency contact and in which circumstances he/she can reach the researcher/ independent researcher.	
Invites questions and comments.	

0 = never, 1 = sometimes, 2 = often, 3 = most of the time, 4 = always. ✓ = yes, ✗ = no

Criterion: Both scaled items are scored 2 or above **and** no more than 3 items (20%) scored ✗ = no

Appendix P: Fidelity Check (Lifeline)

Quality check – Remote NET protocol (Lifeline session)

Pseudonym of the participant:	
Session no.	
Remote delivery: checking video and sound, recording and sharing the whiteboard.	
Remote delivery: Does Microsoft Teams work for both parties or has an alternative been found ?	
Remote delivery: Checking if the participant is in a safe, confidential space.	
Remote delivery: Ensures both the participant and the lifeline/whiteboard are visible.	
Review of lifeline instructions, including the meaning of the symbols (flowers, stones, candles, and sticks).	
A reminder of lifeline purpose and difference with narration sessions (i.e. 'bird's eye view' versus exposure through detailed narration)	
Facilitating building of the lifeline chronologically (such as asking what happened next, do you remember anything particular before this event, etc.)	
Asking appropriate questions about the events (e.g., when and where, age).	
Describing the event with a brief headline (What name does this symbol have / What is the meaning of this event for the participant?)	
Labelling: Putting sticky notes under/above the symbol that are briefly describing the meaning and the details of the event (place, time, region etc.)	
Deviations from tasks are appropriately managed. (Such as labelling an event together when the participant feels unable to name it or helping the participant to place the symbols on the lifeline if any technical issues emerge while using the whiteboard)	
Invites reflection on the overall lifeline and process.	
Ensure that the lifeline stays open, any corrections and additions can be made during the sessions.	
Review of how the lifeline will be used in future sessions, inviting for questions, communicating the number of forecast sessions.	
Ensuring to finish the lifeline creation in a session	

0 = never, 1 = sometimes, 2 = often, 3 = most of the time, 4 = always. ✓ = yes, ✗ = no

Criterion: 4 scaled items (80%) scored 2 or above **and** no more than 2 items (20%) scored ✗ = no

Appendix R: Fidelity Check (Narration)

Quality check – Remote NET protocol (Narration sessions)

Participant pseudonym:	
Session no.:	
Reading the previous session's written narration.	
Further details / corrections elicited in re-narration	
Not interrupting further processing in re-narration.	
Label of the event:	
General context elicited.	
Event-specific contextual information elicited (e.g., time, setting, location, activity etc.).	
Establishing and working through the incident from the participant's imagination/ point of view.	
Focusing on sensory information of the incident (e.g. shape and colours of the objects, smell, pain etc.).	
Generate memory cues with currently experienced sensory information.	
Focusing on bodily reactions and locating them during the incident and narration (then and now).	
Reinforcing reality: ensuring the participant stays with the therapist in the present when talking about the past (preventing avoidance, dissociation, and flashbacks)	
Focusing on experience "here and now"	
Summary of the symbol/event	
Not stopping a session during the height of fear and anxiety.	
Staying in trauma narration until arousal has subsided.	
Ensuring the chronology has been adhered (preventing going back and forth in time).	
Not mixing exposure and closure	
Narration ends at a 'point of safety'.	

0 = never/not, 1 = sometimes/a little, 2 = often/partially, 3 = most of the time/mostly, 4 = always/fully.
 ✓ = yes, ✗ = no, N/A = not applicable in this episode.

Appendix S: Fidelity Check (Final Session/ Renarration)

Quality check – Remote NET protocol (Final session)

Pseudonym of the participant: Hamza	
Session no. 12	Final session
Whole written narration has been read to the participant	
All final corrections are made	
Ensuring recalling the narrative/testimony lost its arousing impact	
Allow time for participant to make some comments on the written narrative	
Peacebuilding, personal growth or appreciation experiences gained by participant after hearing whole narrative	
Asking about future plans and expectations	
Signing the narration (by the therapist and participant)	
Handing a copy of the narration to the participant (if desired)	

0 = never, 1 = sometimes, 2 = often, 3 = most of the time, 4 = always. ✓ = yes, ✗ = no

Publications and Academic Studies

- September 2020- "2-minute poster presentation"- "Investigation of the Effectiveness of Narrative Exposure Therapy (NET) in the Syrian refugee population and the potential role of NET on Self Concept Clarity: Mixed-Method Study", School of Medicine Research Impact Forum, University of Nottingham, UK.
- May 2021- Institute of Mental Health Research Day- "A Systematic Review of Prevalence and Correlates of Post-Traumatic Stress Disorder, Depression and Anxiety in displaced Syrian Population". (Video presentation). University of Nottingham, UK.
- March 2022- "Faces of War" International Conference- Online presentation- London, UK.
- April 2022- Sue Watson Postgraduate Oral Presentation Event- "Feasibility and Effectiveness of Narrative Exposure Therapy for the Treatment of Psychological Problems of Syrian Refugees living in Turkey". University of Nottingham, UK.
- May 2022- Institute of Mental Health Oral Presentation Event- "Practical Feasibility of Narrative Exposure Therapy in the displaced Syrian population residing in Turkey: Focus Group". University of Nottingham, UK.
- August 2022- "Narrating Lives" International Conference on Storytelling, (Auto)Biography and (Auto)Ethnography- An Autoethnographic Study of Experiencing Secondary Trauma while working with war-affected Syrian Children. Poster presentation. London, UK.

- Aysazci-Cakar, F., Schroder, T., & Hunt, N. (2022). A Systematic Review of Prevalence and Correlates of Post-Traumatic Stress Disorder, Depression and Anxiety in the displaced Syrian Population. *Journal of Affective Disorders Report*, 10. <http://0.1016/j.jadr.2022.100397>.
- Aysazci-Cakar, F., Schroder, T., & Hunt, N. (2023). Practical feasibility of Narrative Exposure Therapy in Syrian Refugee population residing in Turkiye: A Focus Group Study. *International Journal of Social Sciences*, 7(32), 1-25.
<https://doi.org/10.52096/usbd.7.32.01>.