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Post-migration struggles: An ecological momentary assessment study on post-traumatic stress disorder, everyday post-migratory stress and emotional dysregulation among asylum seekers living in Austria.

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Introduction

For most people, the idea of being forced to leave their homes due to unforeseen circumstances is a distant possibility. However, for people faced with natural disasters, violence or war staying in the same place can be impossible. What happens when individuals must abandon nearly everything familiar and resettle in a foreign country?

This harsh reality has become the fate of millions of individuals across the globe. In 2023, the UN High Commissioner for Refugees (2024) documented 117.3 million refugees worldwide, notably from conflict-ridden regions such as Afghanistan, Syria, and Venezuela. Although most forcibly displaced people seek refuge in neighboring countries (United Nations High Commissioner for Refugees, 2024), the European Union (EU) has also seen a renewed increase in asylum applications from non-European citizens, following a period of decline after the peak years of 2015 and 2016 (European Council, 2024). Austria, for example, received approximately 59,000 asylum applications in 2023, predominantly from Arabic- or Farsi-speaking population groups (Bundesministerium für Inneres, 2023). Since 2015 the majority of asylum applications in Austria have been submitted by people from Syria or Afghanistan (Bundesministerium für Inneres, 2024), underscoring the consistent representation of Arabic and Farsi-speaking populations among displaced individuals in Austria.

The causes of flight and experiences during the process of forced displacement are often highly stressful and potentially traumatic which can have long-term mental health effects (Bogic et al., 2015). Thus, forcibly displaced people frequently exhibit elevated levels of psychological distress (Steel et al., 2009). This is underlined by several systematic reviews stating that these populations suffer from higher rates of depression, anxiety disorders, and post-traumatic stress disorder (PTSD) compared to the general population (Blackmore et al., 2020; Nguyen et al., 2022).

While the arrival and filing of an asylum application in a hosting country may seem like an end to the displacement journey, it does not necessarily reduce the stress displaced individuals experience. The post-migration phase involves a unique set of complex challenges that contribute to existing distress (Gleeson et al., 2020), since the living conditions of asylum seekers are often marked by financial hardship, strict regulatory frameworks, and social exclusion (Jannesari et al., 2020; Nickerson et al., 2015). Moreover, in both the EU and Austria, negative public discourse surrounding

migration is pervasive, and recent reforms to the Common European Asylum System (CEAS) reflect intensified efforts to implement exclusionary asylum politics, hardening the situation for asylum seekers (Kratzmann & Hartl, 2019; Trauner, 2020). While earlier research primarily focused on pre-migration trauma as a predictor of mental health outcomes in forcibly displaced populations, recent studies increasingly emphasize the critical role of post-migration living conditions (Hynie, 2018). For example, post-migration stressors have been positively associated with symptoms of PTSD (Carswell et al., 2011; Specker et al., 2023).

Given these findings, it is of interest to understand how people in post-migration settings regulate their emotions in the face of mental distress and everyday post-migratory stress. Emotion regulation (ER), the ability to manage and respond to emotional experiences effectively, may play a critical role in influencing the psychological impact these stressors have (Nickerson, 2018). Focusing on ER in this context could offer valuable insights into the coping strategies of forcibly displaced individuals and highlight potential areas for psychological interventions aimed at fostering resilience amidst ongoing adversity.

Therefore, this Master's thesis seeks to examine the relationships of habitual ER, past traumatic experiences, the presence of PTSD symptoms, and perceptions of everyday post-migratory stress among forcibly displaced individuals in Austria.

Theoretical Background

Refugees and Asylum Seekers

Statistics on migration and applications for asylum summarize a variety of legal categories, including refugees and asylum seekers. While these terms are often used interchangeably in public discourse and academic literature, they refer to distinct legal situations. The term refugee is often broadly used to describe those who have fled their country of origin (World Health Organization, 2021). However, the designation as a refugee carries specific legal criteria that need to be met. According to the 1951 Geneva Refugee Convention, refugees are people who have been granted asylum as their experience or fear of persecution due to their religious beliefs, ethnicity, political views, or affiliation to certain social groups has been recognized (United Nations High Commissioner for Refugees, 2023). In contrast, asylum seeker is the term for individuals who migrated to another country, whose decision on the asylum process is

still pending (Amnesty International, 2021). Thus, while all refugees begin as asylum seekers, not all asylum seekers are granted a refugee status (International Organization for Migration, 2019).

It is important to acknowledge that these different legal statuses are linked to variations in living conditions, such as different access to the labor market, housing, or entitlement to receive social welfare that can impact post-migration stress (Jannesari et al., 2020; Ryan et al., 2009). However, other common post-migration stressors – such as discrimination, feelings of homesickness, ongoing separation from one's family, and, overall social isolation – can affect all individuals in forced displacement. As this study focuses on the post-migration period, which initially presents similar challenges for both groups, the terms 'forcibly displaced individuals/ people' or 'forced migrants' will primarily be used to refer to the study's participants.

The decision to migrate is driven by a complex set of reasons and motivations. Yet, forcibly displaced individuals are often compelled to leave their home countries due to confrontation with unbearable circumstances with traumatic potential (Ghumman et al., 2016; Koch, Liedl, Takano, et al., 2020). While most studies examining the traumatic histories of refugees and asylum seekers do not differentiate between experiences before and during migration, it is well-documented that forcibly displaced people frequently encounter extreme, potentially traumatic events before resettlement (Steel et al., 2009). For example, a study conducted across the EU with unaccompanied refugee youth from diverse backgrounds revealed that participants had frequently experienced life-threatening situations and major family disruptions in their home countries before leaving (Pfeiffer et al., 2022).

In addition to that, the displacement process is often marked by further human rights violations, life-threatening hardships and “extensive losses” (Carlsson & Sonne, 2018; Missing Migrants Project, 2023; Theisen-Womersley, 2021). On land, forcibly displaced people are regularly exposed to violence, torture, kidnapping for ransom, human trafficking, and sexual exploitation during flight (International Organization for Migration et al., 2024). At sea, they risk drowning due to unseaworthy boats and inadequate rescue responses. Some are not rescued in time by coastguards or other bystanders, while others face delays in disembarkation due to political barriers, or even pushbacks (United Nations High Commissioner for Refugees, n.d.). Additionally, forced migrants are often detained under concerning conditions in transit states, while

awaiting their asylum hearings or before their deportation from their intended host country (Beşer & Elfeitori, 2010; Council of Europe, 2010; Mentzelopoulou & Barlaoura, 2023).

It is evident that, in the context of forced displacement, the decision to migrate includes a substantial risk of exposure to potentially traumatic events (PTEs) along the journey. In line with this, a study on the mental health of Arabic-speaking refugees in collective accommodation centers showed that approximately 80% of participants reported having witnessed or experienced PTEs prior to their relocation to Germany (Georgiadou et al., 2017). The most commonly experienced events included military combat, severe accidents, or the unnatural loss of a loved one, e.g. through homicide. Alarming, most participants experienced multiple PTEs, with 20% reporting exposure to such events more than five times by the time of the study. Thus, it can be concluded that exposure to PTEs is a prevalent experience among individuals who have been forcibly displaced.

PTSD Among Forcibly Displaced Individuals

Experiencing a traumatic event firsthand, witnessing one, or learning that it happened to someone close can lead to the development of PTSD, a condition marked by stress- and trauma-related symptoms (American Psychiatric Association, 2013; van der Kolk et al., 2005). Affected individuals may experience intrusive symptoms such as distressing memories, flashbacks, or nightmares alongside inclined efforts to avoid reminders associated with the trauma. An integral component of PTSD is dysfunctional cognitions revolving around the perception of a pervasive threat (Ehlers, 1999). Along with this, mood and cognitions may be impacted, manifesting as persistent negative feelings or beliefs about oneself and one's environment, as well as feelings of social disconnection. According to the American Psychiatric Association (2013), individuals may experience adverse changes in arousal and reactivity, including heightened vigilance, sleep disturbances, difficulties with concentration, or increased irritability. For a formal PTSD diagnosis, as outlined in the DSM-5, these symptoms must persist for more than one month (American Psychiatric Association, 2013).

It has been shown that experiencing a greater number of PTEs is associated with an increased likelihood for development and maintenance as well as higher symptom severity of PTSD (Jakob et al., 2017; Johnson & Thompson, 2008). Beyond the sheer number of traumatic events, the type and quality of the experience(s) are

important factors in how they affect mental health (Jakob et al., 2017). Traumatic experiences are commonly classified into several categories: Natural vs. human-made, interpersonal vs. non-interpersonal, intentional vs. non-intentional, and single event vs. repeated events (Center for Substance Abuse Treatment, 2014). Among these, traumatic events that were caused by humans and involve recurrent and deliberate infliction of threat or harm, such as human-made, interpersonal, and intentional traumas, are more likely to progress into PTSD and linked to a higher symptom severity (Forbes et al., 2011; Haldane & Nickerson, 2016; Riaz et al., 2015; Santiago et al., 2013). As previously shown, forcibly displaced people are frequently subjected to such types of events in their countries of origin as well as along their journeys (Crepet et al., 2017; Haldane & Nickerson, 2016). For example, treatment-seeking refugees from various backgrounds commonly reported having been tortured, imprisoned, assaulted, or having experienced a combat situation before they resettled in Switzerland (Nickerson et al., 2015).

As a result, forced migrants are likely to endure PTSD due to the specific nature of their experiences, even following resettlement in what is presumed to be a safer place (Kindermann et al., 2020; Nikendei et al., 2019). Correspondingly, Georgiadou and colleagues (2017) discovered that within their highly trauma-experienced sample of Arabic-speaking asylum seekers, about one-third manifested symptoms indicative of PTSD after having arrived in Germany. This is further underscored by systematic reviews and meta-analyses on mental health issues among forcibly displaced people. These studies yielded prevalence rates of approximately 31% for PTSD among forcibly displaced populations, including refugees and asylum seekers (Blackmore et al., 2020; Nguyen et al., 2022; Patanè et al., 2022). Although it should be noted that not all forcibly displaced people develop PTSD post-migration (Theisen-Womersley, 2021), they are generally at increased risk compared to the general population (Blackmore et al., 2020).

Post-Migration Living Situation - Everyday Stress After Resettlement

However contrary to expectation, the arrival to a hosting country does not guarantee a sense of safety and security to those seeking refuge, as the resettlement phase is further characterized by persistent stressors and structural discrimination (Crepet et al., 2017; Eleftherakos et al., 2018). This is of high relevance since the

psychological distress of forcibly displaced people is not only shaped by past traumas but also to a significant extent by current stress (Hou et al., 2020).

The specific challenges of the post-migration living phase have been well-documented in past research. For example, a cross-sectional study examining the mental health and living conditions of recently arrived asylum seekers in Sicily identified several stressors during the post-migration period, including boredom, isolation, and fear of deportation (Crepet et al., 2017). Among the sample of predominantly West African origin, additional stressors were identified, such as a sense of neglect, distress related to insecure visa status, and difficulties in adjusting to the new environment (Crepet et al., 2017). Similar patterns were observed in refugees and asylum seekers from diverse backgrounds who had resettled in Switzerland for approximately three years (Nickerson et al., 2015). In this cross-sectional study by Nickerson and colleagues (2015), central post-migration stressors within the last year included loneliness, boredom, isolation, concerns for family members left behind, and difficulties with language acquisition. Additionally, a three-year longitudinal study found that these stressors were prominent even at ten years of displacement among a comparable sample of refugees and asylum seekers in Switzerland (Schick et al., 2018). The two Swiss studies demonstrated that the investigated post-migration stressors were highly relevant to the majority of participants at the time of study participation (Nickerson et al., 2015; Schick et al., 2018). Although the three-year follow-up revealed a significant reduction in the relevance of certain post-migratory stressors, persistent stress related to family separation, inadequate living conditions, financial difficulties, and discrimination perpetuated (Schick et al., 2018). This highlights the ongoing and multifaceted experience of unease in the post-migration period.

On a general level, Theisen-Wormesley (2021) emphasizes the importance of daily stress and concerns about the future for psychological strain among forcibly displaced populations. Following a meta-analysis by Hou and colleagues (2020), post-migratory stress among forced migrants is positively associated with heightened levels of PTSD symptoms. This is further supported by findings from a longitudinal study with refugees and asylum seekers over a two-year period, where a greater number of post-migration stressors was found to be antecedent to individual increases in PTSD symptoms six months later (Specker et al., 2023). Thus, there is substantial evidence that post-migration stressors are related to PTSD (Gleeson et al., 2020), even

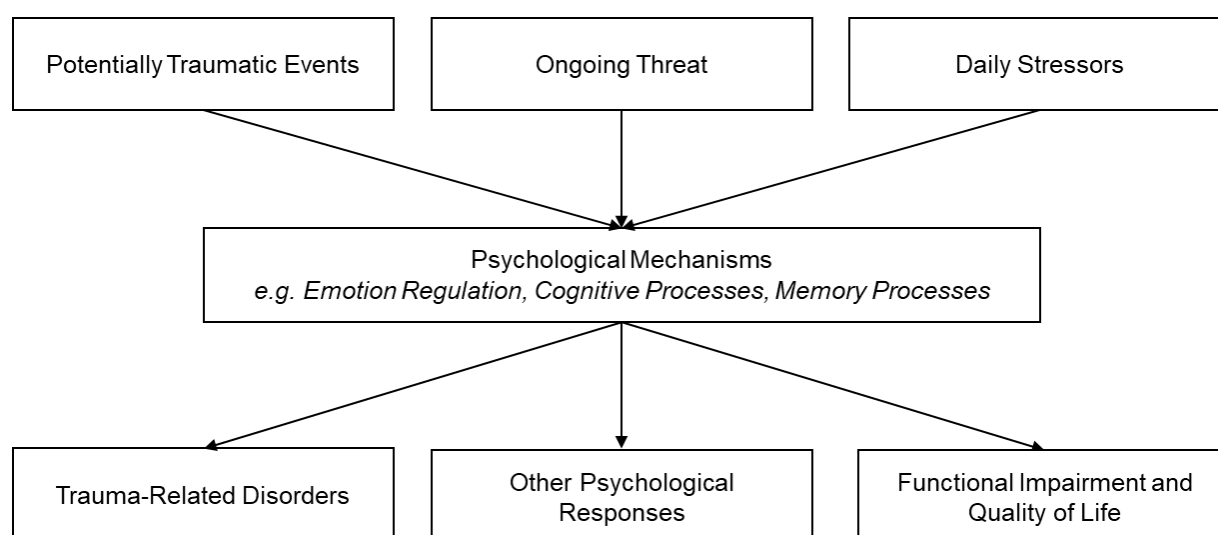
independently of prior trauma exposure (Cantekin & Gençöz, 2017; Lie, 2002). In conclusion, both past trauma and post-migration living conditions shape the progression of PTSD symptoms in forcibly displaced individuals. Yet, previous research has primarily assessed long-term stressors, leaving everyday post-migratory stress underexplored. While the adverse effect of daily stress on subsequent PTSD symptomatology has been shown on a day-to-day level in emergency responders (Ruggero et al., 2021), daily post-migratory stress of forcibly displaced people was not studied. To address this research gap, this study focuses on the experience of everyday post-migratory stress of forcibly displaced individuals in relation to PTSD.

ER and its Relation to PTSD

In the context of persistent mental health challenges, such as PTSD, and continuous exposure to stress in the post-migration period, a critical question arises: How do forcibly displaced individuals regulate the (intense) emotions triggered by these experiences? Addressing this issue, Nickerson and colleagues (2018) propose that one fundamental mechanism linking trauma history, everyday stress, and PTSD symptomatology is dysfunctional ER, as depicted in Figure 1 (Nickerson, 2018, p. 94).

Figure 1

Theoretical Model of Pathways from Refugee Experiences to Psychological Outcomes

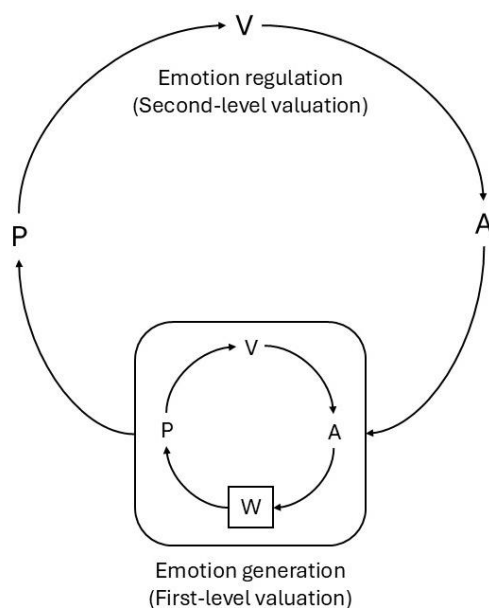


Note. Reproduced from Nickerson, A. (2018). "Pathways to Recovery: Psychological Mechanisms Underlying Refugee Mental Health." by Nickerson, A., 2018, in N. Morina & A. Nickerson (Eds.), *Mental Health of Refugee and Conflict-Affected Populations: Theory, Research and Clinical Practice*, pp. 91–109 (https://doi.org/10.1007/978-3-319-97046-2_5), Springer International Publishing.

According to their theoretical model, experiences related to displacement (e.g., exposure to PTEs, pervasive threat, and everyday stress) relate to psychological mechanisms (e.g., ER) which in turn affect a range of mental health outcomes, including trauma-related disorders like PTSD and other psychological responses (Nickerson, 2018, p. 94).

Gratz and Roemer (2004) delineate ER as the capacity to monitor and manage one's emotional responses while pursuing goal-oriented actions. Within their framework, effective ER encompasses several essential components. These include awareness and understanding of one's emotional reactions, acceptance of one's emotions, the ability to flexibly employ situationally appropriate ER strategies and restrain impulsive behaviors, as well as being able to act towards self-set goals even when distressed. In the absence of any of these skills, difficulties in regulating one's emotions are likely to arise.

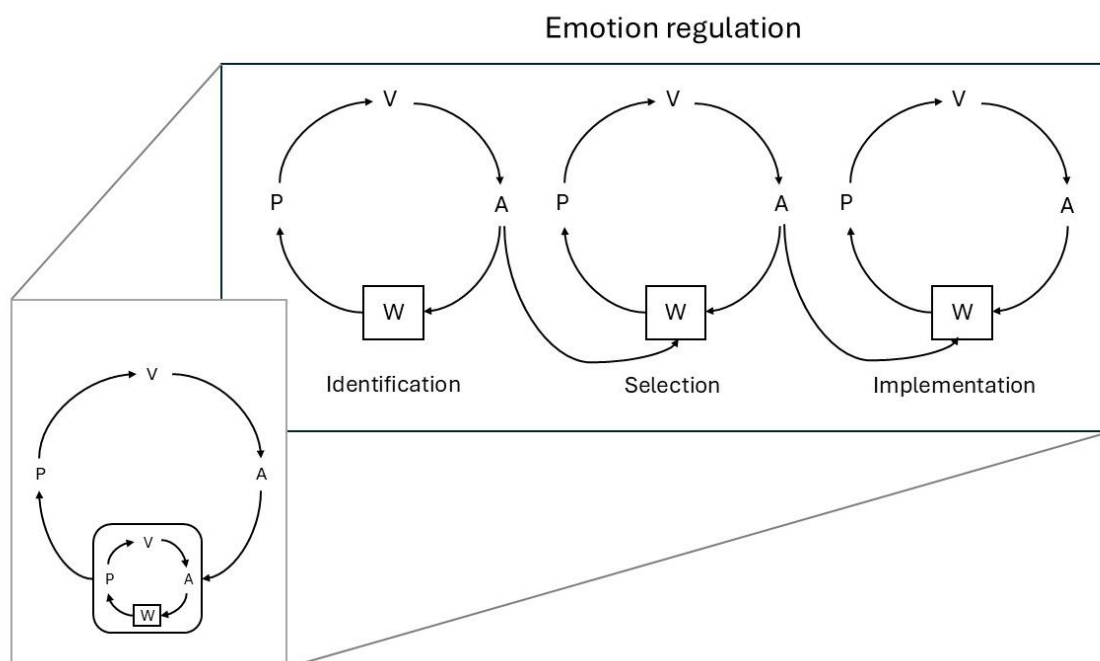
The extended process model of emotion regulation by Gross (2015a) explains how ER occurs in daily life and allows the identification of intersections where the success of ER can be affected. According to the theory, valuation is the pivotal mechanism of emotion generation and regulation. Valuation refers to the comparison between a representation of the (internal or external) world as it is perceived and a representation of how one would like it to be, called the target state. Gross (2015a) distinguishes between two levels of valuation systems: Emotions are generated in the first-level, while ER occurs in the second-level. Both valuation levels involve recurrent, circular processes, as depicted in Figure 2.

Figure 2*Emotion Generation and Emotion Regulation as Circular Valuation Systems*

Note. Adapted from Gross, J. J. (2015). Emotion Regulation: Current status and future Prospects. *Psychological Inquiry*, 26(1), 1–26. <https://doi.org/10.1080/1047840x.2014.940781>. The external environment or inner world (“W”) evokes perceptions (“P”). These perceptions are valued (“V”) as either negative or positive, predisposing actions (“A”) that can change the state of the world.

In each circular process, after stimuli from the internal or external world perceived, a valuation as described before is made. Subsequently, this valuation motivates actions that aim at altering either the initial state of the (internal) world or one’s perception of it (Gross, 1998).

Emotion generation (first-level valuation) occurs when a stimulus from the external world is perceived (e.g., one’s bike having a flat tire) and is evaluated as either beneficial or harmful for oneself. This valuation is based on personal goals and the comparison between the current and target state (e.g., the bike being unusable vs. wanting to ride the bike). The potential discrepancy between the present and target state gives rise to “experiential, behavioral and physical changes” that constitute specific emotions (e.g., feeling angry) (Gross, 2015a, p. 11). The model poses that the subsequent onsetting process of ER (second-level valuation) consists of a sequence of interrelated stages: *Identification*, *selection*, and *implementation*. At each of these three stages, a valuation cycle as ascribed before is proceeded through (see Figure 3).

Figure 3*The Three Stages of Emotion Regulation*

Note. Reproduced and adapted from Gross, J. J. (2015). Emotion Regulation: Current status and future Prospects. *Psychological Inquiry*, 26(1), 1–26. <https://doi.org/10.1080/1047840x.2014.940781>.

In the *identification stage*, an emotion emerging from the first-level valuation is recognized and evaluated as either positive or negative relative to personal goals (Gross, 2015a). Whether the emotion is further regulated depends on the activation of an emotional goal (e.g., wanting to feel less angry). Once the intention to influence the emotional trajectory is established, the *selection stage* begins. During this process, potential ER strategies are identified (e.g., suppressing one's emotion, reframing the situation, or venting the emotion), and each strategy is valued in terms of personal resources and its applicability to the situation. In this context, a strategy can be employed in multiple ways (e.g., anger release through kicking the bicycle or swearing). Based on this valuation, a specific ER strategy is identified as fitting. In the onsetting *implementation stage*, the chosen ER strategy is applied to the specific environmental context. Before specific behavior is enacted, relevant aspects of the situation and potential courses of action for the selected strategy are considered. Among these options, the most favorable approach to implementing the strategy is evaluated. The outcome of this stage is concrete behavioral action.

The extended process model assumes that each perception-valuation-action cycle provides input for the subsequent cycle along all three ER stages. The ER process ends when the state of the (external/ internal) world that initially triggered the valuation and the intended target state of the (external/ internal) world align sufficiently (Gross, 2015a).

However, given that ER is a complex, multi-stage process, it is prone to failure throughout the cycles (Sheppes et al., 2015). Notably, ER problems are strongly associated with various psychological disorders (Aldao et al., 2010; Gross, 2015b), including PTSD (McLean & Foa, 2017). A meta-analysis by Seligowski and colleagues (2015) confirmed that general emotion dysregulation, along with specific ER strategies like rumination, thought suppression, and experiential avoidance, were positively associated with PTSD symptoms. Given the intense, negative, and unpredictable emotional experiences, along with heightened arousal at the core of PTSD (Tull et al., 2020), greater regulation efforts are required (Gross, 2015a; Seligowski et al., 2015; Tull et al., 2007). Following the emotion regulation model of PTSD, the disbalance of processing requirements and processing capacities, and hence ER difficulties, contribute to the maintenance and exacerbation of the disorder (Foa & Kozak, 1986; McLean & Foa, 2017). In line with this, in a cross-sectional study with trauma experienced refugees, difficulties in ER fully mediated the relationship between traumatic experiences and PTSD symptoms (Nickerson et al., 2015).

Therefore, Gross's (2015a) extended process model of emotion regulation offers a deeper understanding of the interrelation of ER difficulties and PTSD. The model illustrates the bidirectional relationship between ER impairments and PTSD, as the smooth progression through all stages of ER can be affected by symptoms of PTSD in conjunction with common ER difficulties as proposed by Gratz and Roemer (2004).

Emotional awareness is a central competency determining the success of the first cycle of ER, the identification stage (Gross, 2015a). On the one hand, people with PTSD show enhanced emotional reactivity to trauma-related psychological or physiological cues (Badour & Feldner, 2013). On the other hand, emotional numbness, or emotional alexithymia are common affective symptoms of PTSD that could impede ER at the identification stage (Litz et al., 2000; Vine & Aldao, 2014). Additionally, *diminished emotional clarity* and PTSD symptom burden among traumatized refugees were positively related (Doolan et al., 2017; Nickerson et al., 2015). These aspects

could lead to changes in emotional competencies that might affect how emotions are perceived within the identification stage.

Further, the valuation sub-step of the identification stage could be influenced by general beliefs about emotions (Gross, 2015a). For example, beliefs that experiencing intense emotion will have adverse consequences for oneself, including the expectation that it will result in loss of control, were significantly associated with elevated PTSD symptoms in a sample of firefighters (Farnsworth & Sewell, 2011). Further, PTSD is associated with a tendency to attribute threat to arousing stimuli (Bardeen et al., 2013) or an inclination to reject one's emotional responses instead of accepting them (Tull et al., 2007). These aspects altogether – *lacking emotional awareness*, beliefs, and *non-acceptance of emotions* – could interfere with the valuation and subsequent decision-making process of whether the initially perceived emotion necessitates regulation.

The outcome of the subsequent selection stage depends on the accessibility of a diverse range of ER strategies, another core competence of functional ER following Gratz and Roemer (2004). The *perceived unavailability of effective ER strategies* was significantly linked to PTSD severity among trauma-experienced refugees (Doolan et al., 2017). Notably, the valuation of each strategy plays a crucial role in this process (Gross, 2015a). For example, individuals with PTSD were found to over-utilize maladaptive and avoidance-oriented strategies in their daily lives, indicating that these strategies offer more personal utility than others. This preference for avoidant strategies was related to the subsequent aggravation of PTSD symptoms (Short et al., 2018). Further, the effectiveness of the action sub-step of the selection stage depends on (emotional) self-efficacy, which refers to the self-confidence in one's ability to successfully carry out the chosen ER strategy (Gross, 2015a). These self-views may be distorted in PTSD, as evidenced by reduced general self-efficacy in Syrian refugees with PTSD compared to non-diagnosed individuals (Chung et al., 2021).

At the implementation stage, dysfunctional ER may become evident when certain behaviors are wrongly prioritized over other behaviors or are inadequately acted out. *Insufficient impulse control* or *difficulties in implementing goal-oriented behavior* are common aspects of dysfunctional ER that could interfere at the implementation stage. In line with this, PTSD is often associated with an increased tendency for risk behaviors, indicating lower levels of impulse control (Weiss et al., 2012). Further, a limited ability to employ goal-directed behavior and PTSD severity

were significantly related among trauma-experienced refugees (Doolan et al., 2017; Nickerson et al., 2015).

Altogether, emotional dysregulation is both an important contributing factor for PTSD progression (Koch, Liedl, Takano, et al., 2020; Pencea et al., 2020) as well as a type of functional impairment emerging from the disorder (van der Kolk et al., 2005).

In the context of refugees and asylum seekers, post-migration stressors could act as emotional triggers, interacting with already depleted ER capacities and potentially contributing to the persistence of PTSD. Supporting this, in a longitudinal study over a 2-year span both post-migratory stressors and deficits in ER together were found to perpetuate PTSD among refugees and asylum seekers in Australia (Specker et al., 2023). Beyond this, Nickerson and colleagues (2015) demonstrated that ER difficulties partially mediated the relationship between post-migration stress and PTSD in refugees. However, this effect was specific to two dimensions of ER deficits: Impairments in goal-directed behavior and reduced emotional clarity. In contrast, Specker and colleagues (2023) identified bidirectional relationships between post-migratory stress and ER dysregulation, hyperarousal symptoms and dysfunctional ER, as well as hyperarousal and post-migration stress. In those cases, increases in one variable preceded exacerbation in the other half a year later, with this reciprocal pattern reoccurring another six months past. These findings underscore the complex and intertwined nature of post-migratory stress, ER deficits, and PTSD. Building on recommendations for future research by Specker and colleagues (2023) to explore the interaction between emotional dysregulation and post-migratory stress in relation to PTSD, the present study aims to test whether ER difficulties moderate the positive relationship between everyday stress and PTSD symptoms among refugees and asylum seekers in Austria.

Research Gap and Objective

It has been established that the specific realities of Arabic- and Farsi-speaking forcibly displaced populations in Austria warrant particular attention. It has been shown that due to the increased likelihood of having experienced trauma in the context of forced displacement, these populations are at heightened risk for PTSD. Emotional dysregulation, closely linked to PTSD, plays a significant role in the development and maintenance of the disorder. Problematic ER is constituted by *'nonacceptance of emotional responses'*, *'difficulties engaging in goal-directed behavior'*, *'impulse control*

difficulties', '*limited access of emotion regulation strategies*', '*lack of emotional clarity*', and '*lack of emotional awareness*'. Based on current research it is assumed that these dimensions of ER problems are related to increased PTSD symptom severity, with past traumatic experiences relating to PTSD symptoms through dysfunctional ER (Nickerson et al., 2015).

Moreover, it has been stated that forcibly displaced populations experience significant post-migratory stress in the hosting country. Prior findings suggest that post-migration stressors can be expected to be related to more pronounced PTSD symptoms on a daily basis (Ruggero et al., 2021). Further, given that PTSD symptoms may vary over short periods (Schuler et al., 2021), and post-migration stressors are likely to be country-specific (e.g., laws, institutions, societal climate regarding migration politics) and dynamic over time (Kirmayer et al., 2011; Wu et al., 2021), a method that offers a nuanced and real-time assessment of these variables is essential.

Ecological momentary assessment (EMA) represents a methodological advancement by acknowledging the influence of context on behaviors and psychological experiences (Shiffman, 2009). Through continuous assessment in participants' usual environment, EMA allows for a more detailed recording of thoughts, feelings, and behaviors (Moskowitz & Young, 2006). This approach enhances construct validity, mitigates hindsight bias, and reduces measurement error (Moser et al., 2007; Müller et al., 2021; Shiffman, 2009). Despite the advantages of this approach, only two studies to date have applied EMA among forcibly displaced populations. Eltanamly and colleagues (2023) used EMA to investigate post-migration stress and parenting-related aspects among Syrian refugee parents in the Netherlands, while Koch and colleagues (2020) assessed daily affect, worry, and sleep among Afghan refugees and asylum seekers in Germany.

Given the paucity of research utilizing EMA in forcibly displaced populations, this study aims to address this gap by continuously monitoring daily PTSD symptoms and post-migratory stress among recently resettled refugees and asylum seekers in Austria over two weeks. Despite growing recognition of the role of emotional dysregulation in the persistence of PTSD symptoms, there remains a lack of understanding of how ER interacts with the everyday challenges of post-migration life (Nickerson et al., 2015). This study assumes that the degree of emotional dysregulation will moderate the relationship between everyday post-migratory stress

and PTSD symptoms. In short, this study aims to contribute valuable insights into the complex interplay of trauma history, daily post-migration stressors, ER, and PTSD in Arabic- and Farsi-speaking forcibly displaced populations resettling in Austria.

Research Questions and Hypotheses

Research Question 1. *What is the relationship between difficulties in ER, lifetime trauma and symptoms of PTSD?*

Hypothesis 1: The constructs '*nonacceptance of emotional responses*', '*difficulties engaging in goal-directed behavior*', '*impulse control difficulties*', '*limited access of emotion regulation strategies*', '*lack of emotional clarity*', and '*lack of emotional awareness*' of emotional dysregulation are each positively related to symptoms of PTSD.

Hypothesis 2: Habitual difficulties in ER mediate the positive association of lifetime trauma and symptom levels of PTSD.

Research Question 2. *How are post-migration stressors and PTSD symptoms in daily life related and what is the involvement of ER difficulties in that regard?*

Hypothesis 3: There is a positive association between momentary reports of post-migration stressors and momentary reports of PTSD-related symptomatology.

Hypothesis 4: Habitual difficulties in ER moderate the positive relationship between experienced post-migration stressors and simultaneous reports of PTSD-related symptoms by reinforcing it.

Method

This study is part of a larger research project, entitled "Mental Health Among Refugees and Asylum Seekers in Austria", conducted by Rojan Amini Nejad, a PhD student at the Outpatient Unit for Research, Teaching, and Practice at the University of Vienna. As part of the larger research project, the present study investigates everyday experiences and stress of Arabic and Farsi-speaking refugees and asylum seekers who have recently resettled in Austria. Since the current study uses a wide range of assessment tools, only measures and procedures relevant to this Master's thesis will be reported in the following sections.

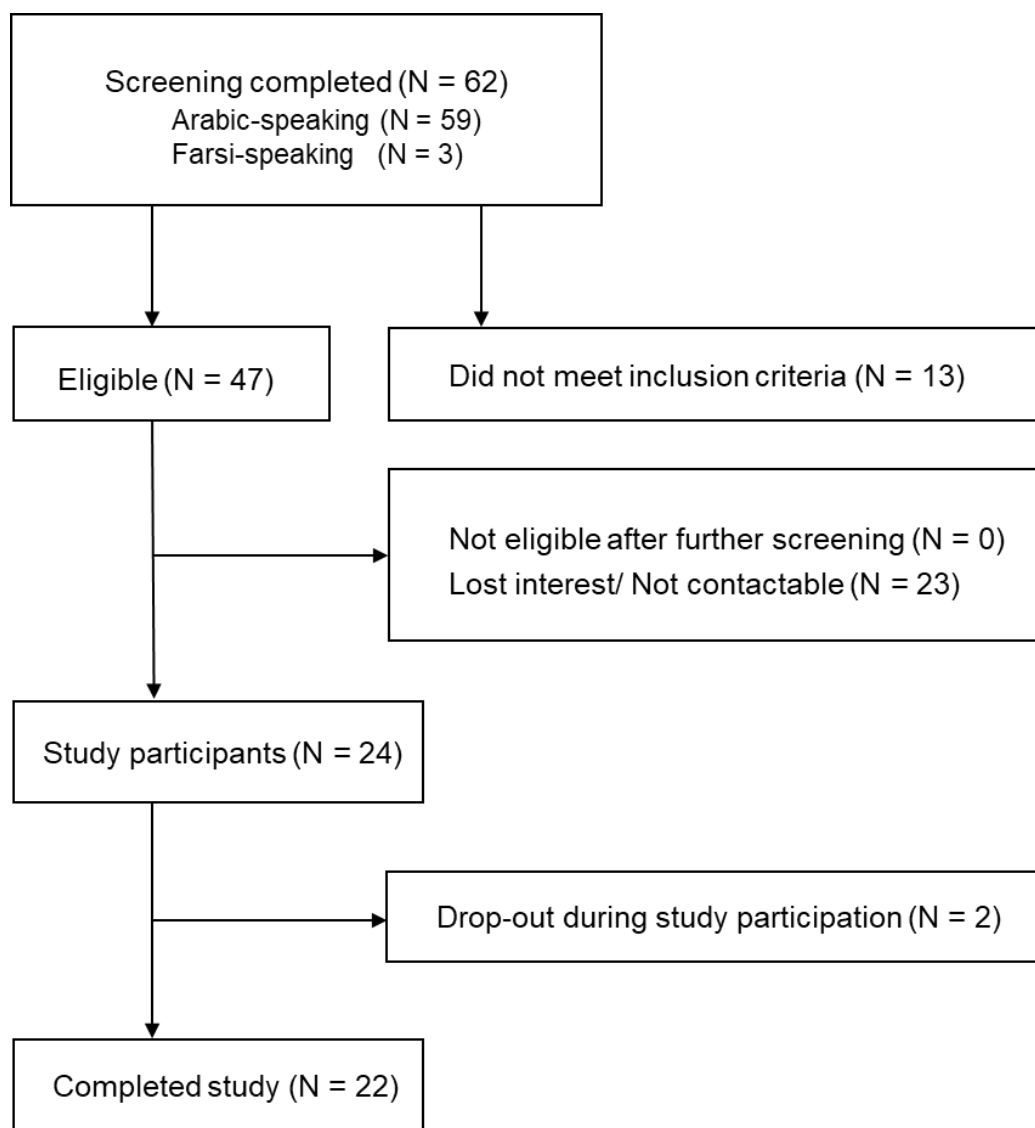
Eligibility Criteria

Participants were recruited at language courses and social counseling centers in Vienna, as well as through social media. Refugees and asylum seekers (18 – 65 years) who are native speakers of Arabic or Farsi and have been living in Austria for a maximum of 36 months were eligible to participate in the study. Participants were required to possess a foundational level of proficiency in the German language (equivalent to language level A1), along with a body mass index (BMI) between 18 and 30 kg/m². To assess biological stress markers by collecting saliva samples, it was necessary to impose a BMI restriction to enhance the reliability of this sensitive measure. However, the present work will not address the analysis of biological stress markers.

Exclusion criteria encompassed individuals with chronic somatic illness, use of psychopharmaceuticals within the previous 14 days, and having a diagnosis of bipolar disorder, borderline personality disorder, or schizophrenia. Pregnancy or lactation and the use of certain medications, including hormonal contraceptives, were also excluded. Of those who completed the screening, 75.8% were considered eligible for the study (see Figure 4). Due to the further loss of contact and drop-outs that were attributable to personal challenges caused by study participation, a convenience sample of 22 individuals eventually completed the study. Due to technical issues with the study app, datasets from two participants were incomplete and thus unsuitable for analysis.

Figure 4

Flow Chart Depicting Inclusion and Drop-Out of Participants



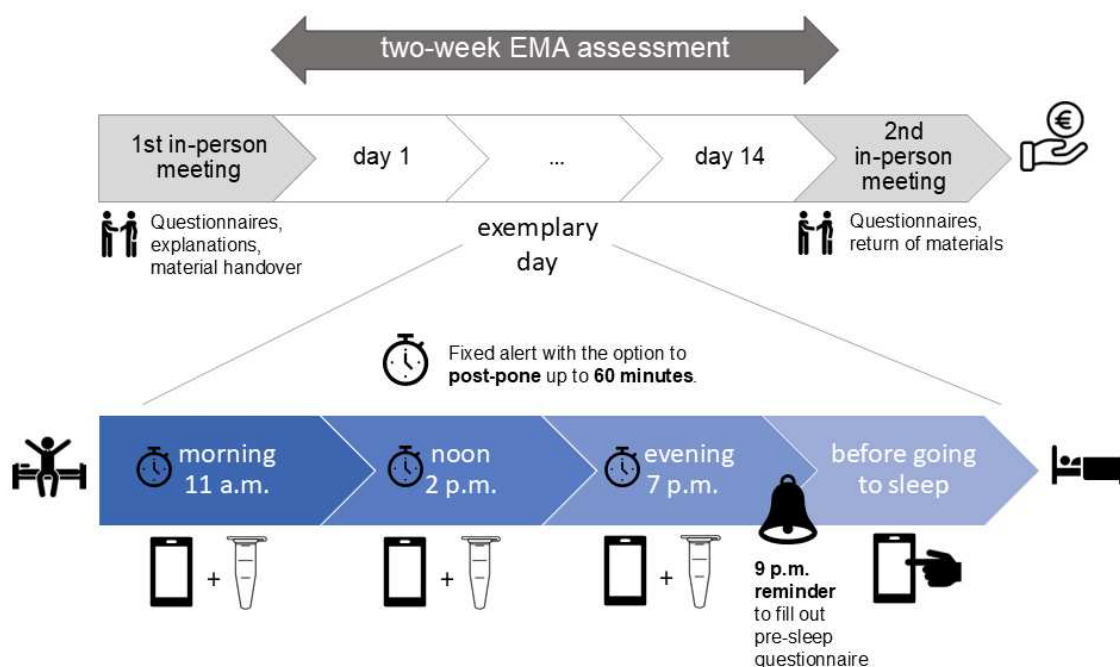
Procedure

Participants were initially invited to complete a screening questionnaire to assess their eligibility for the study and to provide an overview of the study procedures. This screening questionnaire was accessible via a QR code printed on study flyers. The questionnaire, available in both Arabic and Farsi, collected key information, including whether participants had been forcibly displaced, how long they had lived in Austria, their age, gender, mother tongue, and German language skills. Participants were also asked to report their height, weight, use of medication (including psychopharmaceuticals), chronic medical conditions, and any mental health diagnoses, such as borderline personality disorder, schizophrenia, or bipolar disorder.

After completing the screening, participants were given the option to leave their contact details.

Eligible participants were then contacted by the research team via email with a link to schedule an appointment using the online calendar tool 'Calendly', version 4.7.0.0 (Calendly, LLC, Atlanta, USA). Once an appointment was booked, participants attended an in-person orientation session, with an interpreter available to translate into their native language. At the start of this session, participants completed a comprehensive medical questionnaire that further assessed medical history, current acute stress, and suicidality – factors that could lead to exclusion from the study. Those who met the eligibility criteria and provided informed consent then completed a baseline set of questionnaires in their native language using the platform 'Unipark' (Tivian XI GmbH, Cologne, Germany). Following the baseline assessment, participants were trained in the study's procedures, and provided with a study smartphone, a study manual, and materials for collecting saliva samples.

The EMA phase began the following day. Over a two-week period, participants used the 'movisensXS' app, version 1.6.2 (movisens GmbH, Karlsruhe, Germany), which was installed on the study smartphone. They received three daily alerts at fixed times (11 a.m., 3 p.m., and 7 p.m.), with the option to delay each alert by up to 60 minutes. During each alert, participants completed a brief questionnaire assessing their momentary stress levels, psychological well-being, and other relevant variables. They were also instructed to provide a saliva sample after each alert to measure biological stress markers. At the end of each day, before going to bed, participants filled out a slightly longer questionnaire, where no saliva sample was taken. A detailed visualization of the study procedure and the alarm structure is provided in Figure 5. At the end of the 14 days, participants returned all study materials and provided feedback on their experiences in a second in-person meeting that was optionally supported by an interpreter. A reimbursement of 100€ was offered for full study participation.

Figure 5*Alarm Structure and Study Procedure***Measures**

All study measures and materials were presented in Arabic or Farsi. Language-adapted and validated versions in Arabic were available from earlier projects for the Posttraumatic Stress Disorder Checklist for DSM-5 (Weathers et al., 2013 translated by Ibrahim et al., 2018), the Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004 translated by Nickerson et al., 2015) and the Posttraumatic Diagnostic Scale (Foa et al., 1997 translated by Zentrum Überleben, Berlin). Further translations were commissioned for other materials, including the screening questionnaire, questions regarding socio-demographic data among the baseline, the Posttraumatic Diagnostic Scale in Farsi, and the study manual. The translation process was conducted by independent, native-speaking interpreters using forward-backward translation methodology.

Baseline Questionnaires

As part of the first in-person meeting, participants filled out multiple self-report questionnaires.

Socio-Demographic Data. First, participants responded to inquiries regarding general socio-demographic information, migration, and settlement details including the duration of residency, their educational background, as well as occupational and socioeconomic status.

Trauma History. Prior trauma experience was assessed using a combined checklist derived from the Posttraumatic Diagnostic Scale (PDS; Foa et al., 1997) and the Harvard Trauma Questionnaire (HTQ; Mollica et al., 1992). The PDS, initially consisting of 12 items, was created in the context of trauma-burdened western populations, whereas the original 17-item version of the HTQ was designed specifically for adult refugee cohorts (Sigvardsdotter et al., 2016). Given their recognition as common checklists for assessing trauma exposure across diverse contexts, both self-report measures were merged to cover a broader range of potentially traumatic experiences. In the final checklist, participants were presented with a selection of 23 potentially traumatic events (e.g., *natural catastrophe* or *unnatural death of a friend*). For each event, participants indicated whether they had personally experienced (1), witnessed (2), or heard of such an occurrence up to the present moment (3), or none of these options applied (4). For the analyses, the values were recoded and aggregated to reflect cumulative trauma exposure. This was achieved by aggregating reports across personal encounters with PTEs (experiencing, witnessing), yielding a quantitative measure of the number of different trauma types faced by an individual.

PTSD Symptoms. The assessment of PTSD symptoms employed the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5; Weathers et al., 2013), aligned with DSM-5 criteria for the disorder. Participants rated the severity of the 20 given symptoms (e.g., *having repeated, disturbing dreams of the stressful experience* or *feeling jumpy or easily startled*) in the past months using a scale from 1 (*not at all*) to 5 (*extremely*). The questionnaire has been thoroughly validated, overall exhibiting high internal consistency ($\alpha = .90 - .95$) and generally adequate psychometric properties (Blevins et al., 2015; Sveen et al., 2016). Further, among Arab and Kurdish refugee populations, a high internal consistency ($\alpha = .85$) and reasonable convergent validity were given (Ibrahim et al., 2018). In this study, the internal consistency was

considered excellent ($\alpha = .91$). For the analyses, values were recoded to produce a cumulative PTSD symptom score (ranging from 0 – 80) for each participant, with higher values indexing higher burden of PTSD symptoms.

Emotion Regulation Difficulties. Problems in ER were measured using the condensed version of the Difficulties in Emotion Regulation Scale (DERS-18) to reduce the assessment load (Gratz & Roemer, 2004). It asked participants to indicate how often typical aspects of dysfunctional ER apply to them on a scale from 1 (*almost never*) to 5 (*almost always*). The questionnaire entailed questions regarding non-acceptance of emotional responses (e.g., *When I'm upset, I feel ashamed with myself for feeling that way*), engagement in goal-directed behavior (e.g., *When I'm upset, I have difficulty focusing on other things*), impulse control difficulties (e.g., *When I'm upset, I become out of control*), access to ER strategies (e.g., *When I'm upset, I believe that wallowing in it is all I can do*), emotional clarity (e.g., *I am confused about how I feel*) and emotional awareness (e.g., *I am attentive to my feelings*) to account for typical ER difficulties. After reverse-scoring the emotional awareness items, a general emotion dysregulation score (range 18 – 90) was computed, with higher values representing more pronounced ER difficulties. The DERS-18 is an established measure in psychological research, even among refugee and asylum-seeking populations (Doolan et al., 2017). Prior research revealed high internal consistency across various samples ($\alpha \geq .80$) and confirmed the questionnaire's overall good psychometric properties (Victor & Klonsky, 2016). Despite the ongoing debate about the factor structure of the DERS, Doolan and colleagues (2017) suggested that the six-factor structure is equally suitable for use with refugee samples. In line with this, the internal consistency of the overall emotion dysregulation score in this study can be considered good ($\alpha = .80$). As shown in Appendix A, the internal consistencies of the subscales can be considered unsatisfactory in the case of the emotional clarity scale ($\alpha = .25$) and acceptable up to good for the other subscales ($\alpha = .71$ to $.90$).

Ecological Momentary Assessment

Since EMA involves repeated measurements in everyday life, only a limited number of items can be presented per prompt for practical reasons (Koch, Liedl, Takano, et al., 2020). Consequently, only portions of the employed questionnaires could be displayed at any given measurement point. Further, original items were adapted to fit the EMA format as well as the Austrian context in the conceptualization

of the study materials. Translations of the Arabic language versions were revised by interpreters during the recruitment phase to improve understandability (e.g., translation of the discrimination item and the angry outbursts item).

Post-Migration Stress. Everyday stress was assessed multiple times a day using a combination of items from the Post-Migration Living Difficulties Checklist (PMLD-C; Silove et al., 1997) and the Daily Hassles Scale (Holm & Holroyd, 1992). At each daytime measurement prompt (11 a.m., 3 p.m., 7 p.m.), participants were presented with a set of eleven “short-lived” stressors (e.g., *discrimination, being fearful of being sent back to your country of origin, communication difficulties*). Participants were asked to indicate those stressors they had experienced since the last prompt by single choice. Then, participants rated the perceived stressfulness of the afore-selected stressors on a scale ranging from 1 (*not at all*) to 5 (*very much*). Every night (before going to bed) a further set of six stressors (e.g., *difficulty finding employment or delays in the processing of asylum applications*), by theory more “stable” ones, were assessed in the same manner. All items are depicted in Appendix B for clarification. Stress ratings were only obtained for stressors that participants experienced and reported, resulting in missing data when no stressors were reported. To address this loss of data, two separate predictors were created. First, a quantitative stressor count was calculated by summing all reported post-migration stressors at each measurement point per participant (range 0 – 11). Second, a predictor of average stressfulness (range 0 – 5) was derived by summing the stress ratings of all reported stressors at each measurement point and dividing them by the number of reported stressors at that point.

Daily Symptom Expression of PTSD. Participants’ everyday PTSD symptom burden was captured using a combination of items from the Refugee Health Screener (Hollifield et al., 2013), the PTSD-Checklist (PCL-5; Weathers et al., 2013), and the Patient-Health Questionnaire (PHQ9; Spitzer et al., 1999). During each day-time measurement, participants were asked to rate how strongly they had experienced three different intrusion symptoms (e.g., *having had repeated, disturbing, and unwanted memories of a traumatic experience*) and two arousal- and reactivity-related symptoms (e.g., *having been jumpier, more easily startled and having had difficulties concentrating*) since the last measurement point on a scale ranging from 0 (*not at all*) to 4 (*extremely*). Further, during each daytime measurement, participants indicated the extent to which they currently experienced irritability and on a scale from 1 (*not at all*)

to 5 (*extremely*). All items corresponding to PTSD symptoms were recoded for further analyses and are displayed in Appendix C. Since internal consistencies supported the reliability of this measure ($\alpha = .85$) and items correlated sufficiently amongst each other ($r = .24 - .72$), all seven items were collapsed into a single scale. A mean PTSD symptom expression score at each measurement point was calculated for each participant as the dependent variable (ranging from 0 – 4) by averaging the symptom severity across the included items.

Statistical Analyses

All analyses were conducted with SPSS, version 29.0 (IBM SPSS Statistics for Windows, 2022). The mediation analysis was further performed using the PROCESS macro, version 4.2 (Hayes, 2022).

To analyze the first research question, the baseline data were examined. The dataset included 22 participants and had no missing data. First, a multiple linear regression analysis was conducted to examine the relationship between '*non-acceptance of emotional responses*', '*problems engaging in goal-directed behavior*', '*impulse control difficulties*', '*limited access to emotion regulation strategies*', '*lack of emotional clarity*' and '*lack of emotional awareness*' as predictors and PTSD symptom severity as the respective outcome. Age, gender, duration of residence in Austria, and prior trauma exposure were included as control variables in accordance with previous studies (Doolan et al., 2017; Gleeson et al., 2020). Prior to running the regression model, the PCL-5 values were recoded to align with the original questionnaire scaling, where responses ranged from 0 (*not at all*) to 4 (*extremely*) in terms of PTSD symptom burden. Assumption testing indicated no issues. Both independent and dependent variables were metrically scaled, and measurement independence was ensured by design. Linearity and homoskedasticity of relationships were verified through scatterplots. An examination of standardized residuals showed that 95% fell between -2.5 and 2.5, indicating normal distribution. Multicollinearity was not present, as suggested by Variance Inflation Factors (VIF) < 10 and Tolerance values > 0.1 . Additionally, analysis of multivariate outliers, using Mahalanobis distance compared to a chi-square distribution with 10 degrees of freedom, revealed no significant cases ($p < .001$).

Further, a mediation analysis to investigate the relationship between trauma history, ER problems, and PTSD symptom severity controlling for age, gender, and

duration of residency in Austria was run. Prior to the analysis reports of PTEs were recoded. The recoding captured that a PTE had been encountered in the past when participants had experienced or witnessed it (1) while mere knowledge or having no connection was coded as a non-encounter (0). Likewise, key assumptions for the analysis were examined. The study design ensured the independence of measurement, while temporal precedence of the predictor regarding the mediator variable had to be assumed by theory. Scatterplots revealed that the variables possessed linear relationships and homoscedasticity was given. The normal distribution was confirmed analogous to the previous testing of assumptions, so the appropriateness of the statistical tests could be assured. Relying on Mahalanobis distance, no cases exhibited significant deviation from the expected chi-square distribution. Hence, all participants were retained in the analysis. Finally, Tolerance and VIF revealed no issues with collinearity among predictors. Nevertheless, the final mediation model with trauma history as a predictor, ER difficulties as a mediator, and PTSD symptoms as the outcome were performed with heteroscedasticity-consistent (HC3) standard errors.

Due to the nested data structure, multilevel modeling (MLM) was performed to investigate the second research question. More specifically, the relationship between momentary experiences of post-migratory stress and momentary symptoms of PTSD as well as the potentially moderating role of ER problems was tested. Due to the unreliability of two datasets from the EMA phase, data from only 20 participants were analyzed. In addition, since the daytime and nighttime alarms displayed different items (see Appendix B and C), the selection of measurement points was narrowed down to T1-T3 for comparability purposes, resulting in a total of 42 potential measurement points per participant. As preparation a total stressor count of reported post-migration stressors per measurement point and participant was calculated. Since 22.9% of all available measurement points had not been answered, cases with missing data on the count of post-migration stressors were excluded from further analysis. Further, a variable capturing the average stressfulness of the experienced/reported post-migration stressors was calculated. Since the stressfulness of post-migration stressors can only be rated after at least one stressor has been experienced and reported, a further substantial number of measurement points were marked as missing (22.2%). In these cases, participants indicated that they had not experienced any of the presented stressors since the last EMA prompt. Therefore, they were not asked to

report their associated levels of distress in the following. In order to obtain a complete dataset for the multilevel analyses, missing values on the stressfulness variable resulting from these circumstances were recoded to zero. This adjustment was based on the theoretical assumption that if no post-migration stressor was reported as experienced, then the associated stressfulness of any given stressor should be equal to zero. In the end, a total number of 648 out of 840 available cases were included in the multilevel model. Regarding the outcome variable, all items relevant to the analyses were recoded to entail the same scaling to represent PTSD symptom burden estimations of *not at all* (0) up to experiencing them *very strongly* (4). A total of 0.8% of cases were missing on the outcome variable.

A Two-Level Model was applied and fitted with Maximum Likelihood (ML), with EMA prompts nested within persons. The two predictors (stressor count and average stressfulness) were person-mean centered to capture within-person fluctuations and correct for potential violations of assumptions of normality. Further, the moderating variable (ER difficulties) was group-mean centered prior to the analysis. First, a null model for PTSD symptoms without predictors was estimated by including random intercepts. Calculations of the intraclass correlation (*ICC*) were based on the null model and indicated the distribution of variances among the level 1 variables. After introducing both predictors to the model, first randomness of the intercepts and followingly randomness within slopes was allowed. Finally, ER problems were introduced as a moderating variable in the model. The model fit was assessed using chi-square tests to compare the differences in log-likelihood ratios and degrees of freedom between the null model, and the main and the interaction models. The final models are defined by the following equations.

Random intercept random slope model (RIRS) with level 1 predictors:

$$PTSD_{ij} = \gamma_{00} + \gamma_{10}Stressor\ count_{ij} + \gamma_{20}Stressfulness_{ij} + u_{0j} + u_{1j}Stressor\ count_{ij} \\ + u_{2j}Stressfulness_{ij} + e_{ij}$$

Final cross-level interaction model with level 1 and level 2 predictors:

$$PTSD_{ij} = \gamma_{00} + \gamma_{01}ER\ problems_j + \gamma_{10}Stressor\ count_{ij} \\ + \gamma_{11}(Stressor\ count_{ij} * ER\ problems_j) + \gamma_{20}Stressfulness_{ij} \\ + \gamma_{21}(Stressfulness_{ij} * ER\ problems_j) + u_{0j} + u_{1j}Stressor\ count_{ij} \\ + u_{2j}Stressfulness_{ij} + e_{ij}$$

Results

Descriptive Statistics

Sample Characteristics and Response Behavior

Table 1 presents the demographic characteristics of the final sample, consisting of 22 participants. While most participants came from Syria (90.9%), one participant indicated the United Arab Emirates as their place of origin and another Iran. At the time of the study, participants were on average 33.9 years old ($SD = 8.8$, range 18 – 53). The average duration from departure from their place of origin to arrival in Austria was approximately seven months ($M = 7.1$, $SD = 9.5$). By the time they participated in the study, they had spent approximately 23 months in Austria ($M = 23.2$, $SD = 9.1$). Notably, none of the participants with partner and children had their entire family present in Austria.

Table 1*Socio-demographic data*

		Total Sample	
		n	%
Gender	Male	20	90.9
	Female	2	9.1
Native Tongue	Arabic	20	90.9
	Farsi/ Dari	1	4.5
	Kurdish	1	4.5
Ethnic Identity	Arab	15	68.3
	Muslim	3	13.6
	Armenian	2	9.1
	Iranian	1	4.5
	Kurdish	1	4.5
Educational Attainment	University degree	10	45.5
	High school/A-level	9	40.9
	Primary school	2	9.1
	Other ^a	1	4.5
Residence Status	Temporary residence permit during asylum procedure	3	13.6
	Entitlement to subsidiary protection	5	22.7
	Other ^b	14	63.7
Marital Status	Married	9	40.9
	In a relationship	1	4.5
	Divorced	1	4.5
	Single	11	50.0
Having Children	Yes	10	45.5
	No	12	54.5
Accommodation	Own apartment	9	40.9
	Shared accommodation	10	45.5
	Staying with family members/ friends	2	9.1
	Other ^c	1	4.5

Note. Overview of the socio-demographic characteristics of the sample.

^a No further information about other educational attainments was provided by the participant(s).

^b Information about other types of residence status could not be obtained due to flaws in the dataset.

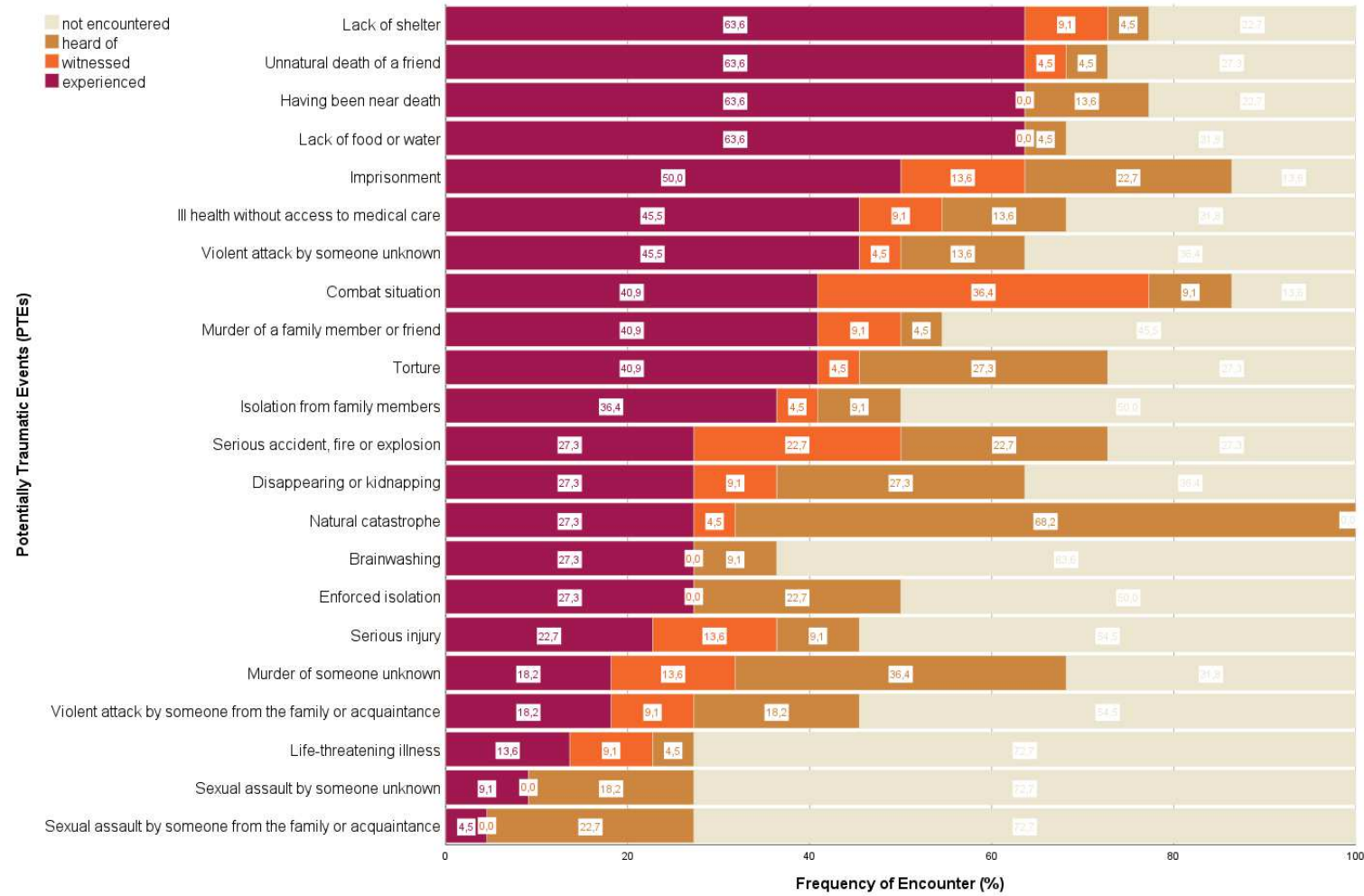
^c Other types of accommodation included living in a studio with the participants' brother.

The EMA yielded high compliance rates among participants. Out of all EMA prompts including the three daytime and one nighttime assessment, 75.4% of all prompts were fully completed, 2.9% were partially completed, and 21.7% were left unanswered. On average, participants took less than five minutes to complete a prompt ($M = 4.1$, $SD = 3.5$). Compliance was consistent across different times of day, with rates ranging between 77.1% and 79.3% among the three analyzed measurement points (11 a.m., 3 p.m., and 7 p.m.). Only three participants responded to less than half of all prompts.

PTEs, ER Problems, and Psychological Burden

On average, participants in the study had been exposed to multiple PTEs throughout their lives ($M = 9.6$, $SD = 4.7$). A detailed analysis of the frequency of experiencing, witnessing, or hearing about specific PTEs is provided in Figure 6.

Figure 6

Lifetime Encounters of PTE

Problems with ER were reported with a mean score of 38.5 ($SD = 8.6$) across the sample, with subscale means detailed in Table 2. Baseline PTSD symptoms were generally low ($M = 24.5$, $SD = 13.3$). More specifically, over half of the participants (54.5%) did not exhibit relevant PTSD scores following cut-offs by Meurling and colleagues (2023). Conversely, 13.6% of participants displayed mild symptoms, another 13.6% fell within the moderate range, and 18.2% exhibited high levels of PTSD symptoms. During the EMA phase, symptoms indicating heightened arousal and reactivity were, on average, slightly more pronounced than symptoms related to re-experiencing (see Table 3).

Table 2*Correlations of Baseline Variables*

Variable	<i>M (SD)</i>	1 ^p	2	3 ^p	4 ^p	5	6	7	8	9
1. Acceptance of emotions ^p	5.91 (3.26)	-	.16	.20	.17	.34	-.09	.56**	.38	.29
2. Goal-directed behavior	8.45 (2.58)		-	.61**	.51*	.39	-.27	.64**	.33	.06
3. Impulse control ^p	5.36 (2.40)			-	.67**	.17	.15	.75**	.16	-.16
4. Emotion regulation strategies ^p	5.27 (2.14)				-	.38	-.08	.64**	.21	.21
5. Emotional clarity	5.09 (1.63)					-	.10	.61**	.16	.51*
6. Emotional awareness	8.45 (2.70)						-	.21	-.33	.10
7. Total emotion regulation problems	-							-	.20	.31
8. Trauma history	-								-	.25
9. PTSD symptoms	-									-

Note. This table presents the means and standard deviations of typical ER problem areas (range: 0–15), along with the correlations among all baseline study variables for $N = 22$ participants. Pearson correlation coefficients (r) are displayed, except for the variables ‘*impulse control difficulties*’, ‘*limited access to emotion regulation strategies*’, and ‘*lacking emotional awareness*’, which were not normally distributed. For these variables, non-parametric Spearman-Rho correlations (ρ) were calculated. Statistical significance is indicated by * $p < .05$ and ** $p < .01$.

Table 3*PTSD Symptom Expression on Everyday Level*

Variable	<i>M</i>	<i>SD</i>
Concentration difficulties ^b	1.43	1.17
Exaggerated startle response ^b	0.87	1.24
Heightened vigilance ^b	0.86	1.11
Intrusive memories of traumatic event(s) ^a	0.72	1.00
Reexperiencing of traumatic event(s) ^a	0.70	1.02
Physical reactions when reminded of traumatic event(s) ^a	0.68	1.01
Irritable behavior ^b	0.36	0.75

Note. A total of 630 measurement points per item across the two-week assessment included (T1 – T3).

M = Average symptom severity across all measurement points, measured on a scale from 0 to 4.

^a Symptoms pertaining to the intrusion symptom cluster (B-cluster) in DSM-5.

^b Symptoms pertaining to alterations in arousal and reactivity symptom cluster (E-cluster) according to DSM-5.

Everyday Experiences of Post-Migratory Stress

On a daily basis, worrying about one's family, not having enough financial resources, boredom, and isolation emerged as the most often experienced stressors (Table 4). Although less frequently reported, the most stressful experiences included fear of deportation, feelings of homesickness as well as financial insecurity, and racial discrimination. The daily night-time reports of post-migration stress indicated that delays in the processing of asylum applications were most often experienced and highly distressing. Additionally, having had contact with the Federal Office of Immigration and Asylum (BFA) revealed the second highest stress ratings among the "more stable" stressors (see Table 5).

Table 4*Total Occurrence and Average Stressfulness of Everyday Post-Migration Stressors*

Post-Migration Stressor	Experienced <i>N</i> (%)	<i>M</i>	<i>SD</i>
Worries about family ^a	268 (41.4)	3.80	1.11
Lacking financial resources	262 (40.4)	4.40	0.89
Boredom	207 (31.9)	4.07	1.08
Isolation	200 (30.9)	4.01	1.07
Language and communication difficulties	194 (29.9)	4.14	0.99
Homesickness	138 (21.3)	4.56	0.81
Too many things to do ^a	136 (21.0)	3.94	1.05
Not having enough privacy	92 (14.2)	4.03	1.05
Fearing being deported	75 (11.6)	4.77	0.56
Racial discrimination	63 (9.7)	4.17	0.94
Worries about not receiving medical treatment	51 (7.9)	3.25	0.66
None of the stressors apply	158 (24.4)	-	-

Note. A total of 840 measurement points per item across the two-week assessment was included (T1 - T3). Among each item around 22.9% (*N* = 192) of all available data points were missing.

N = Number of times a stressor has been reported as experienced across all daily measurement points and participants.

M = Average stressfulness of an experienced stressor across all measurement points and participants, measured on a scale from 1 to 5.

^a The mean stressfulness of this stressor has each been calculated with one value missing on the respective stressfulness rating scale.

Table 5

Total Occurrence and Average Stressfulness of Post-Migration Stressors Reported at Night-Time

Post-Migration Stressor	Experienced <i>N</i> (%)	<i>M</i>	<i>SD</i>
Delays in the processing of asylum applications	85 (39.4)	4.55	0.79
Unsuitable (or unpleasant) living situation	70 (32.4)	4.26	0.93
Separation from the family	54 (25.0)	3.76	1.15
Difficulty finding employment	50 (23.1)	4.36	0.85
Contact with the Federal Office for Immigration and Asylum (BFA)	24 (11.1)	4.46	0.83
Poor working conditions	3 (1.4)	2.67	0.58

Note. A total of 280 measurement points per item across the two-week assessment was included (T4). Out of all measurement points, 22.9% were considered missing.

N = Number of times a stressor has been reported as experienced across all daily measurement points and participants.

M = Average stressfulness of an experienced stressor, measured on a scale from 1 to 5.

Relationship of Aspects of Emotional Dysregulation and PTSD Symptoms

Out of all aspects of dysfunctional ER, only a '*lack of emotional clarity*' was significantly and positively correlated with PTSD symptom severity ($r = .51, p = .02$). This indicates that higher levels of emotional confusion are associated with greater severity of PTSD symptoms. Further correlations of the study variables are shown in Table 2.

As highlighted in Table 2 '*lack of emotional awareness*' as well as '*difficulties engaging in goal-directed behavior*' were the major ER issues within the sample. Multiple linear regression was conducted to predict PTSD symptom severity from all six constructs of ER problems and control variables. The overall model was not significant, indicating that the predictors did not collectively account for a significant proportion of variance in PTSD symptoms ($F(10,11) = 1.30, p = .34$). The model explained 54% of the variance in PTSD symptoms ($R^2 = .54$). However, the adjusted R^2 of .12 indicated that this explanatory power was substantially reduced when accounting for the number of predictors in the model. None of the individual predictors nor the control variables were significantly associated with PTSD symptom severity ($p > .05$) as depicted in Table 6.

Table 6

Association Between Typical Areas of Emotion Dysregulation and PTSD Symptom Severity

Variable	<i>b</i>	(<i>SE</i>)	β	<i>t</i>	<i>p</i>
Age	0.51	0.65	.34	0.78	.45
Gender	2.57	17.61	.06	0.15	.89
Time of residency in Austria	0.07	0.45	.04	0.13	.89
Acceptance of emotions	0.30	1.05	.07	0.29	.78
Goal-directed behavior	-0.87	1.85	-.17	-0.47	.65
Impulse control	-3.3	2.15	-.60	-1.54	.15
ER strategies	5.05	2.80	.82	1.82	.10
Emotional clarity	1.76	2.43	.22	0.72	.48
Emotional awareness	1.97	1.56	.40	1.26	.23

Note. The dependent variable is PTSD total symptom score ($N = 22$). Statistical significance is denoted by * $p < .05$ and ** $p < .01$.

Relationship of Trauma History, Emotional Dysregulation, and PTSD Symptoms

A mediation analysis was performed to examine the relationship between the history of trauma exposure and PTSD, with a focus on the potential mediating role of ER problems. The overall mediation model was not significant ($F(5, 16) = 0.55, p = .74$). As displayed in Table 7, there was no significant relationship between trauma history and PTSD symptoms, nor was there a significant relationship between trauma history and ER difficulties, or between ER difficulties, and PTSD symptoms. Correspondingly, there was no significant indirect effect of past traumatic experiences through problems with ER on present PTSD symptoms. However, the length of residency in Austria was significantly negatively associated with ER difficulties ($b = -0.30, t(16) = -2.29, p = 0.04$) indicating that longer times of residency in Austria were related to less pronounced emotional dysregulation.

Table 7*Mediation Analysis on the Relation of Trauma History, ER Problems and PTSD**Symptom Severity*

Direct effects	<i>b</i>	<i>SE</i>	β	95% <i>CI</i>	<i>p</i>
<i>PTSD symptom severity</i>					
Age	0.002	0.52	.001	[-1.09; 1.10]	.99
Gender	12.13	20.25	.27	[-30.80; 55.05]	.56
Time of residency	-0.21	0.50	-.15	[-1.26; 0.83]	.67
Trauma history	0.33	0.85	.12	[-1.46; 2.12]	.70
ER problems	0.36	0.43	.23	[-0.55; 1.27]	.41
<i>ER problems</i>					
Age	-0.21	0.33	-.22	[-0.90; 0.48]	.52
Gender	-3.34	5.47	-.12	[-14.89; 8.21]	.55
Time of residency	-0.30	0.13	-.32	[-0.58; -0.02]	.04*
Trauma history	0.70	0.60	.38	[-0.51; 1.89]	.24
Indirect effects	<i>b</i>	<i>SE</i>	β	95% <i>CI</i>	<i>p</i>
Total effect	0.58	0.81	.21	[-1.14; 2.30]	.49
Total indirect effect	0.25	0.41	.09	[-0.36; 1.30]	

Note. CI = Confidence Interval. *SE* = Standard Error. *SE* and CI of the total indirect effect obtained by bootstrapping. Statistical significance is denoted by * $p < .05$ and ** $p < .01$.

Everyday Association Between Post-Migratory Stress, PTSD Symptoms, and Emotional Dysregulation

A MLM was conducted to investigate the relationship between momentary post-migration stress and momentary PTSD symptoms. Participants reported an average of 2.6 ($SD = 2.7$) stressors each time they filled out the daily forms. The stressfulness of these reported stressors averaged 3.0 ($SD = 0.1$) at each measurement point. In the null model, the *ICC* was .69, meaning that 69% of the total variability of PTSD symptoms was between-subject variability and 31% was within-subject variability.

This suggests that interindividual differences are meaningful, and contextual variables need to be considered to explain the variability within PTSD symptoms. To meet these requirements, MLM is a suitable method for the analyses.

After introducing both predictors, adding random slopes significantly improved the model fit compared to the random intercept model ($\chi^2(2) = 50.16, p < .001$). In the random intercept random slope model (RIRS) both the number of momentary stressors ($b = 0.07, t(20.36) = 2.65, p = .02$) and the average stressfulness of a stressor ($b = 0.09, t(13.22) = 2.87, p = .01$) were significant predictors of momentary PTSD symptoms. This indicates that experiencing more stressors and perceiving greater stressfulness from post-migration stressors at a given time point is positively related to a more intense PTSD symptomatology. However, random effects of the predictors were not significant for stressor count ($b = 0.006, p = .054$) nor stressfulness ($b = 0.01, p = .11$). This suggests that the relationship between everyday post-migratory stress and PTSD symptoms is overall similar for all participants (see Appendix D).

In the final step, ER difficulties were added as a moderating variable to the RIRS model to test the last hypothesis. Including the interactions of both predictors with the moderator did not significantly improve the model fit ($\chi^2(4) = 9.08, p > .05$). Both stressor-related predictors remained significantly related to PTSD symptoms, as shown in Table 8. Yet, ER difficulties did not significantly predict the outcome. In addition, the interaction terms of *stressor count*ER problems* and *stressfulness*ER problems* were not significantly related to momentary PTSD symptomatology. The absence of interaction effects indicates that ER difficulties did not moderate the relationship between everyday post-migratory stress and PTSD symptoms.

Table 8*Cross-Level Interaction Model*

Fixed Effects	Estimate	SE	<i>t</i>	<i>p</i>
Intercept (Y_{00})	0.75	0.14	5.55	<.001***
Stressor count (level 1) (Y_{10})	0.06	0.02	2.56	.02*
Stressfulness (level 1) (Y_{20})	0.10	0.03	3.06	.01*
ER Problems (level 2) (Y_{01})	0.02	0.02	1.07	.30
Interaction <i>stressor count</i> * <i>ER problems</i> (Y_{11})	0.001	0.003	0.43	.67
Interaction <i>stressfulness</i> * <i>ER problems</i> (Y_{21})	-0.006	0.003	-1.81	.10
95% CI				
Random Effects	Estimate	LB	UB	<i>p</i>
Residual variance (r_{ij})	0.13	0.12	0.15	<.001***
Random intercept (u_{0j})	0.35	0.18	0.66	<.01**
Random slope (stressor count) (u_{1j})	0.003	0.002	0.02	.34
Random slope (stressfulness) (u_{2j})	0.009	0.02	0.03	.15

Note. Dependent variable = PTSD symptoms (level 1). *SE* = standard error; CI = confidence interval; LB = lower bound; UB = upper bound. Statistical significance is denoted by * $p < .05$, ** $p < .01$ and *** $p < .001$.

Discussion

This study investigated the relationship between emotional dysregulation, trauma history, and PTSD symptoms, as well as the interplay of ER problems, perceived momentary stress, and PTSD symptoms in the everyday life of refugees and asylum seekers in Austria. The main finding was that higher quantity and stronger perceived intensity of post-migratory stress were significantly related to exacerbated PTSD symptoms on an everyday basis. Despite these insights and contrary to expectations, the current study found no relationship between ER problems and PTSD symptoms, neither at baseline nor during everyday assessment. Moreover, dysfunctional ER did not emerge as a mediator to the relationship of trauma history and PTSD symptoms at baseline nor was it a moderator for the association of everyday stress and PTSD.

The present study's lack of significant associations between various aspects of emotional dysregulation and PTSD contrasts with prior research that associated trauma-related outcomes, such as PTSD, with increasingly maladaptive ER (McLean & Foa, 2017; Seligowski et al., 2015). This discrepancy may reflect inconsistencies in the existing literature, since much of the previous research has focused on overall ER difficulties or specific strategies rather than on the distinct subdomains of ER in relation to PTSD. Studies that have examined particular aspects of ER have exhibited considerable heterogeneity (Pugach et al., 2020). While some research has identified significant associations across all aspects of emotional dysregulation with PTSD (Ehring & Quack, 2010; Frewen et al., 2012), other studies could not find such relationship for emotional awareness (Jones et al., 2018; Short et al., 2016; Tull et al., 2007; Weiss et al., 2012), goal-orientation (Jones et al., 2018) and emotional clarity (Weiss, 2012) with PTSD. Contributing to that, there is an ongoing debate regarding the validity of the emotional awareness subscale (Doolan et al., 2017). The lack of a significant correlation with the overall emotion dysregulation score in the present study further reinforces these validity concerns.

Further, overall ER difficulties were not significantly related to PTSD symptoms and contrary to expectation, did not mediate the assumed relationship of trauma history with PTSD in the present study. It is possible that the relationship between emotional dysregulation and PTSD symptoms hence needs to be considered in more differentiated ways. In line with this, in a recent study on the association of various

PTSD symptom clusters and overall ER difficulties among U.S. military veterans suffering from PTSD, only symptoms of altered arousal and reactivity were significantly related to the outcome out of all PTSD symptom clusters (Boska et al., 2024).

As the mediation hypothesis was disproved, another unexpected finding was that the number of trauma types experienced over a lifetime was not significantly associated with PTSD severity. As Seligowski et al. (2015) have shown in their meta-analysis, prior studies have consistently linked cumulative trauma exposure with PTSD symptoms. However, Hinchey and colleagues (2023) revealed that the type of trauma was a better predictor for subsequent PTSD among Middle Eastern refugees than simply the quantity of trauma exposure. In their study, PTEs involving victimization, such as physical and sexual assault were significantly related to PTSD, whereas trauma types such as death threats and accidents or injuries were not. This raises the question of whether the specific types of trauma experienced or witnessed in the current study were qualitatively less predictive of PTSD. Additionally, it needs to be noted that within our measure of trauma history, we specifically assessed the number of different types of trauma that were experienced, which is not equivalent to a cumulative measure of lifetime trauma exposure. Further, the limited sample size may have contributed to the non-significant findings by failing to provide sufficient variance, potentially resulting in ceiling effects that obscured meaningful relationships.

The rejection of hypotheses one and two suggests that PTSD may involve more complex mechanisms beyond impaired ER as a central feature. For example, the predictive processing model of PTSD posits that traumatic exposure alters the brain's information processing, leading to overly strong and rigid predictions about potential threats in the environment (Kube et al., 2020). According to this model, the reduced ability to learn from the mismatch between prediction and non-threatening reality contributes to the maintenance of PTSD symptoms. While the predictive processing model does not directly contradict emotional processing theories, Litz and colleagues (2002) argue that PTSD is not characterized by a general decrease in emotional processing capacities. Instead, they suggest that ER skills before the traumatic encounter remain intact, but adaptive emotion processing is constrained when trauma-related cues activate the "trauma-network". Therefore, ER deficits in PTSD may be rather context-dependent than universal (Litz et al., 2002).

However, the significant correlation between diminished emotional clarity and the baseline PTSD scores in our study supports the overarching assumption that ER may be a relevant factor in PTSD (Koch, Liedl, & Ehring, 2020). In the current study, this relationship might have been obscured through methodological and sample-related factors. Specifically, our sample exhibited lower emotional dysregulation scores than those reported in previous studies involving refugees (Lacour et al., 2020). In conjunction with that, our sample showed particularly low emotional awareness, which might have made it difficult for participants to provide general statements about their typical ER behaviors. Furthermore, the varying internal consistencies of the ER subscales indicated that not all subscales measured the intended underlying construct equally reliably, thereby potentially contributing to the null findings. In conclusion, the present results indicate that the relationship between ER and PTSD is more nuanced than initially assumed.

Hypotheses three and four looked at experiences of post-migration stress and PTSD symptoms in everyday life. In line with hypothesis three, the EMA revealed a significant positive association between the number and stressfulness of post-migration stressors and PTSD symptoms. This adds to the substantial evidence highlighting the detrimental impact of stress specific to forcibly displaced people's living situations on PTSD symptoms (Gleeson et al., 2020; Silove et al., 1997). Comparably to our findings, in their longitudinal study Specker and colleagues (2023) found that reports of post-migration stressors and hyperarousal symptoms of PTSD were bidirectionally associated over longer periods, one reinforcing the other. Further, they revealed that these specific stressors preceded increases in intrusion symptoms six months into the future. It is even likely that the association of everyday stress and PTSD symptoms was underestimated in the current study due to adjustments in the stressfulness measure. Specifically, missing values had been replaced with zero prior to the analyses. This approach assumed that when information about the stressfulness of a particular post-migration stressor was absent, no stress was experienced. However, other reasons that might have caused the missingness of the value (e.g., lack of time to answer thoroughly, boredom, annoyance, or avoidance) are possible. Therefore, the adjustments likely underestimated the actual levels of stress experienced.

Previous cross-sectional research has identified key post-migration stressors of forcibly displaced people, including boredom and social isolation, fears related to

insecure visa status, family-related concerns, and difficulties with language acquisition (Crepet et al., 2017; Nickerson et al., 2015; Schick et al., 2018). Partially consistent with these findings, the present study revealed that concerns about family well-being, limited financial resources, and obstacles in the asylum application process were among the most significant post-migratory stressors encountered in daily life by the participants. Moreover, this study extends the existing literature by demonstrating that the most intense subjective stress often arises from less frequently reported experiences, such as the fear of being returned to the country of origin, delays in asylum application processing, homesickness, and financial instability. Altogether, this underscores the crucial role that social, organizational, and environmental living conditions within the new country of residence play in PTSD progression and recovery of forcibly displaced people (Lie, 2002).

Contrary to the expectation outlined in hypothesis four, ER problems did not moderate this relationship. Several factors may account for the absence of this effect, including the static assessment of dispositional ER issues at baseline, which may have limited the ability to detect effects at the everyday level. Additionally, factors that applied at baseline, such as the in part questionable reliability of the measure, low reported levels of ER difficulties, and limited emotional awareness within a relatively small sample may have further contributed to this outcome. The additional rejection of hypothesis four aligns with the rejection of hypotheses one and two, indicating that the centrality of ER in the context of PTSD needs to be reconsidered.

Looking at relevant factors across the hypotheses, a significant negative relationship was observed between longer residency in Austria and reduced ER problems. Yet, other than expected the control variables age, gender, and length of residency were not significantly related to PTSD symptoms at baseline. In accordance with this, Chung and colleagues (2021) found that age did not significantly predict PTSD among Syrian refugees. However, in a study by Georgiadou and colleagues (2018), older age was significantly associated with increased PTSD levels (Georgiadou et al., 2018). In the case of the present study, the narrow age range among the sample may have precluded the detection of potential age effects. Further, some studies suggest that PTSD severity decreases over time spent in the host country (Björkenstam et al., 2020; Steel et al., 2002; Teodorescu et al., 2012). Steel and colleagues (2002) attribute this effect to reduced post-migration stress as adaptation occurs in the hosting country. The absence of a significant association between length

of stay and PTSD in this study could suggest that factors affecting the course of PTSD symptoms, such as the challenges of resettlement or marginalization (Björkenstam et al., 2020; Uribe Guajardo et al., 2016) had not yet changed during the sample's residency in Austria. Furthermore, as we did not investigate the effects of other important factors influencing PTSD progression, such as the type or validity of residency permits or time passed since the traumatic exposure (Georgiadou et al., 2018; Steel et al., 2009), the lack of significant association remains inconclusive. Regarding gender, prior studies have indicated a higher vulnerability of female refugees for more severe PTSD, which is linked to the increased likelihood of experiencing family or sexual violence (Mundy et al., 2020). Yet, the limited participation of women in the study does not allow for a detailed examination of the effects of gender.

Strengths and Limitations

Few studies to date have employed EMA within refugee and asylum-seeker cohorts. Previous EMA research has been conducted with Syrian refugees in the Netherlands (Eltanamy et al., 2023) and Afghan refugees in Germany (Koch, Liedl, & Ehring, 2020). While the effects of post-migratory stress on mental health outcomes have been studied previously, the application of EMA in this context remains novel. Further, providing study materials and supervision in the native language of our participants enabled the best possible accessibility to the study, therefore contributing to the representativity of our sample. In terms of representativity, the socio-demographic characteristics of the study broadly reflect those of refugee populations in general. Consistent with global trends, our sample is predominantly male and rather of young age (United Nations High Commissioner for Refugees, 2024). Additionally, Syrians constitute the largest group of asylum seekers in Austria, as reflected in our mainly Arabic-speaking sample. Although experiences of Farsi-speaking and female refugees and asylum seekers are underrepresented, overall, these factors enhance the generalizability of the results in this study.

However, several limitations must be considered when interpreting the findings. One potential source of bias arises from the likelihood that individuals with lower levels of psychological burden were more inclined to participate. The study required relatively high levels of psychosocial functioning, such as making appointments with the research team, attending two in-person meetings, and engaging in the study multiple

times a day over two weeks. Given that PTSD is often associated with avoidance behavior related to trauma-reactivating stimuli, individuals experiencing higher levels of distress may have been discouraged, potentially leading to an underestimation of PTSD prevalence rates among forcibly displaced populations in Austria. Another limitation is the reliance on self-reported data for PTSD symptoms, without the use of in-person diagnostic assessments. This approach may have further impeded an accurate estimation of PTSD prevalence in the study population. Additionally, not all aspects of PTSD, particularly avoidance behaviors, were comprehensively assessed in the everyday measurements, which could result in an incomplete understanding of the condition and its relationship to ER within this sample. Further, the sample size also presents a limitation, as it may have been too small to yield reliable estimates. Prior research recommends a minimum of 50 units for MLM to ensure statistical reliability, a threshold not met in this study (O'Dwyer & Parker, 2014).

Overall, the study object required a complex study design that comes with inherent limitations. Nevertheless, the current study provides a valuable descriptive overview of the mental health aspects and daily challenges relevant to Arabic and Farsi speaking refugees and asylum seekers in Austria.

Implications and Future Research

This study aimed to deepen the understanding of the mental health and everyday post-migratory stressors of refugees and asylum seekers in the resettlement phase in Austria. The focus on ER difficulties was intended to inform low-threshold interventions and programs to assist post-migration adjustment. However, the current findings indicate a different point of focus. As has been shown in the discussion of hypothesis three, the political, economic, and social conditions created for forcibly displaced individuals in Austria have a substantial negative impact on their mental health and should therefore receive primary attention.

In that regard, interventions on both individual and structural levels are needed. Beyond disorder-specific psychological treatment to alleviate mental health burden, improving stress-management skills could benefit refugees and asylum seekers to cope with the inevitable challenges of post-migration life. In line with that, a former randomized clinical trial study revealed that stress-management training compared to cognitive restructuring was equally effective for treating PTSD symptoms among refugees, and even more effective for decreasing anxiety short- and long-term, as well

as decreasing somatization and improving psychosocial functioning long-term (Barhoma et al., 2021; Carlsson et al., 2018). Stress management interventions could thus be a promising, easily accessible approach that may help refugees and asylum seekers master everyday life with increased mental well-being.

Further and equally importantly, it is crucial to address and change the structural conditions contributing to these stressful post-migration living situations. Specifically, efforts should be made to improve access to secure residence titles, facilitate social integration, and allocate financial resources, enabling individuals to establish a sense of purpose and safety during resettlement. As Barkil-Oteo and colleagues (2018, S. 11) noted, ‘psychological recovery comes from improvements in the overall circumstances (political, economic, and societal) and the meanings people find in their lives, and not simply from resolving their traumatic stories’.

While this study provides a close-to-reality depiction of the everyday experiences of refugees and asylum seekers in Austria, further research is needed to explore the role of ER in relation to PTSD. The current findings could be extended by employing more dynamic measures of ER in future studies, to capture the contextual nature of ER processes among psychological disorders in the face of a stressful post-migratory life. This is particularly important since trait measures of ER, like the one used in the present study, have been shown to only correspond loosely with ER in practice (Brockman et al., 2017). For example, ER variability has been suggested as an important factor in managing PTSD symptoms (Specker & Nickerson, 2023), making this a promising area for future research. Further, a more in-depth assessment of the ER strategies used by refugees and asylum seekers to cope with everyday stress and their interplay with PTSD symptomatology could enhance psychoeducation and interventions.

Beyond that, future studies could dedicate themselves to a qualitative assessment of post-migration living difficulties to expand knowledge on the specific everyday stress among refugees and asylum seekers in Austria. The necessary abstraction of post-migratory stressors for the present research may have obscured individual meanings behind these experiences, which could be illuminated by mixed-method approaches of future studies. In the present study, stressors associated with obtaining residency permits caused incomparably high stress levels. Therefore, a further investigation of the individual contributions of relevant post-migration stressors

to PTSD could provide a foundation for targeted critiques and concrete recommendations for political decision-making.

Conclusion

Refugees and asylum seekers are at increased risk of developing PTSD due to specific experiences associated with flight. Yet, even after arrival in a hosting country they are confronted with extreme stress associated with a post-migration living situation. In the current study, ER problems were investigated as one psychological mechanism, through which post-migratory stress and PTSD symptoms in everyday life are related. It has been shown that Arabic- and Farsi-speaking forcibly displaced populations in Austria are substantially burdened with everyday stress specific to their living situation. Among these stressors, concerns about the well-being of the family, financial challenges, and feelings of alienation were especially recurrent. Further, most stress was induced by insecurities related to obtaining a title of residency. Overall, experiencing more intense post-migration stress went along with increased symptom severity of PTSD in everyday life. Dysfunctional ER did not emerge as a moderator to this relationship, and neither were single aspects of emotional dysregulation significantly related to PTSD symptom severity. These findings raise further questions regarding the relationship between ER problems and PTSD. Further, the findings highlight the urgency to address post-migration stressors on a structural level and call policymakers into action. In addition, the findings imply that a stress-management approach to further support individuals in their coping with these eminent stressors might be of benefit.

Reference List

- Aldao, A., Nolen-Hoeksema, S., & Schweitzer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, 30(2), 217–237. <https://doi.org/10.1016/j.cpr.2009.11.004>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5™, 5th ed* (S. xlv, 947). American Psychiatric Publishing, Inc. <https://doi.org/10.1176/appi.books.9780890425596>
- Amnesty International. (2021). *Refugees, Asylum Seekers and Migrants*. <https://www.amnesty.org/en/what-we-do/refugees-asylum-seekers-and-migrants/>
- Badour, C. L., & Feldner, M. T. (2013). Trauma-related reactivity and regulation of emotion: Associations with posttraumatic stress symptoms. *Journal of Behavior Therapy and Experimental Psychiatry*, 44(1), 69–76. <https://doi.org/10.1016/j.jbtep.2012.07.007>
- Bardeen, J. R., Kumpula, M. J., & Orcutt, H. K. (2013). Emotion regulation difficulties as a prospective predictor of posttraumatic stress symptoms following a mass shooting. *Journal of Anxiety Disorders*, 27(2), 188–196. <https://doi.org/10.1016/j.janxdis.2013.01.003>
- Barhoma, M., Sonne, C., Lommen, M. J. J., Mortensen, E. L., & Carlsson, J. (2021). Stress management versus cognitive restructuring in trauma-affected refugees—A follow-up study on a pragmatic randomised trial. *Journal of Affective Disorders*, 294, 628–637. <https://doi.org/10.1016/j.jad.2021.07.007>
- Barkil-Oteo, A., Abdallah, W., Mourra, S., & Jeeff-Bahloul, H. (2018). Trauma and Resiliency: A Tale of a Syrian Refugee. *American Journal of Psychiatry*, 175(1), 8–12. <https://doi.org/10.1176/appi.ajp.2017.17030358>
- Beşer, M. E., & Elfeitori, F. (2010). *Libya Detention Centres: A State of Impunity*. Yıldırım Beyazıt University.
- Björkenstam, E., Helgesson, M., Norredam, M., Sijbrandij, M., de Montgomery, C. J., & Mittendorfer-Rutz, E. (2020). Common mental disorders among young refugees in Sweden: The role of education and duration of residency. *Journal of Affective Disorders*, 270, 189–197. <https://doi.org/10.1016/j.jad.2020.02.039>
- Blackmore, R., Boyle, J. A., Fazel, M., Ranasinha, S., Gray, K. M., Fitzgerald, G., Misso, M., & Gibson-Helm, M. (2020). The prevalence of mental illness in refugees and asylum seekers: A systematic review and meta-analysis. *PLoS Medicine*, 17(9), e1003337. <https://doi.org/10.1371/journal.pmed.1003337>
- Blevins, C. A., Weathers, F. W., Davis, M. T., Witte, T. K., & Domino, J. L. (2015). The Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5): Development and Initial Psychometric Evaluation. *Journal of Traumatic Stress*, 28(6), 489–498. <https://doi.org/10.1002/jts.22059>
- Bogic, M., Njoku, A., & Priebe, S. (2015). Long-term mental health of war-refugees: A systematic literature review. *BMC International Health and Human Rights*, 15(1), 29. <https://doi.org/10.1186/s12914-015-0064-9>
- Brockman, R., Ciarrochi, J., Parker, P., & Kashdan, T. (2017). Emotion regulation strategies in daily life: Mindfulness, cognitive reappraisal and emotion suppression. *Cognitive Behaviour Therapy*, 46(2), 91–113. <https://doi.org/10.1080/16506073.2016.1218926>

- Bundesministerium für Inneres. (2023). *Asyl-Statistik 2022* [Report]. https://www.bmi.gv.at/301/Statistiken/files/Jahresstatistiken/Asylstatistik_Jahresstatistik_2022.pdf
- Bundesministerium für Inneres. (2024). *Asyl-Statistik 2023* [Report]. Wien. https://www.bmi.gv.at/301/Statistiken/files/Jahresstatistiken/Asylstatistik_Jahresstatistik_2023_20240325.pdf
- Cantekin, D., & Gençöz, 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>
- Carlsson, J., & Sonne, C. (2018). Mental Health, Pre-migratory Trauma and Post-migratory Stressors Among Adult Refugees. In N. Morina & A. Nickerson (Hrsg.), *Mental Health of Refugee and Conflict-Affected Populations: Theory, Research and Clinical Practice* (S. 15–35). Springer International Publishing. https://doi.org/10.1007/978-3-319-97046-2_2
- Carlsson, J., Sonne, C., Vindbjerg, E., & Mortensen, E. L. (2018). Stress management versus cognitive restructuring in trauma-affected refugees—A pragmatic randomised study. *Psychiatry Research, 266*, 116–123. <https://doi.org/10.1016/j.psychres.2018.05.015>
- Carswell, K., Blackburn, P., & Barker, C. (2011). The Relationship Between Trauma, Post-Migration Problems and the Psychological Well-Being of Refugees and Asylum Seekers. *International Journal of Social Psychiatry, 57*(2), 107–119. <https://doi.org/10.1177/0020764009105699>
- Center for Substance Abuse Treatment (US). (2014). *Trauma-Informed Care in Behavioral Health Services*. Substance Abuse and Mental Health Services Administration (US). <http://www.ncbi.nlm.nih.gov/books/NBK207201/>
- Chung, M. C., AlQarni, N., AlMazrouei, M., Al Muhairi, S., Shakra, M., Mitchell, B., Al Mazrouei, S., & Al Hashimi, S. (2021). Posttraumatic stress disorder and psychiatric comorbidity among Syrian refugees: The role of trauma exposure, trauma centrality, self-efficacy and emotional suppression. *Journal of Mental Health, 30*(6), 681–689. <https://doi.org/10.1080/09638237.2020.1755023>
- Council of Europe. (2010). *Parliamentary Assembly: Detention of asylum seekers and irregular migrants in Europe*. Resolution 1707. <https://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=17813&lang=en>
- Crepet, A., Rita, F., Reid, A., Van den Boogaard, W., Deiana, P., Quaranta, G., Barbieri, A., Bongiorno, F., & Di Carlo, S. (2017). Mental health and trauma in asylum seekers landing in Sicily in 2015: A descriptive study of neglected invisible wounds. *Conflict and Health, 11*(1), 1. <https://doi.org/10.1186/s13031-017-0103-3>
- Doolan, E. L., Bryant, R. A., Liddell, B. J., & Nickerson, A. (2017). The conceptualization of emotion regulation difficulties, and its association with posttraumatic stress symptoms in traumatized refugees. *Journal of Anxiety Disorders, 50*, 7–14. <https://doi.org/10.1016/j.janxdis.2017.04.005>
- Ehlers, A. (1999). *Posttraumatische Belastungsstörung* (1. Auflage, Bd. 8). Hogrefe Verlag GmbH & Company KG. <https://www.hogrefe.com/at/shop/posttraumatische-belastungsstoerung-64464.html>
- Ehring, T., & Quack, D. (2010). Emotion Regulation Difficulties in Trauma Survivors: The Role of Trauma Type and PTSD Symptom Severity. *Behavior Therapy, 41*(4), 587–598. <https://doi.org/10.1016/j.beth.2010.04.004>

- Eleftherakos, C., van den Boogaard, W., Barry, D., Severy, N., Kotsioni, I., & Roland-Gosselin, L. (2018). „I prefer dying fast than dying slowly“, how institutional abuse worsens the mental health of stranded Syrian, Afghan and Congolese migrants on Lesbos island following the implementation of EU-Turkey deal. *Conflict and Health*, 12(1), 38. <https://doi.org/10.1186/s13031-018-0172-y>
- Eltanamy, H., Leijten, P., van Roekel, E., & Overbeek, G. (2023). Postmigration stress compromises refugee parents' self-efficacy and autonomy-supportive parenting: An experience sampling study. *Journal of Family Psychology: JFP: Journal of the Division of Family Psychology of the American Psychological Association (Division 43)*, 37(3), 295–304. <https://doi.org/10.1037/fam0001059>
- European Council. (2024, April 11). *Asylum applications in the EU* [Infographic]. Asylum Applications in the EU. <https://www.consilium.europa.eu/en/infographics/asylum-applications-eu/>
- Farnsworth, J. K., & Sewell, K. W. (2011). Fear of emotion as a moderator between PTSD and firefighter social interactions. *Journal of Traumatic Stress*, 24(4), 444–450. <https://doi.org/10.1002/jts.20657>
- Foa, E. B., Cashman, L., Jaycox, L., & Perry, K. (1997). The validation of a self-report measure of posttraumatic stress disorder: The Posttraumatic Diagnostic Scale. *Psychological Assessment*, 9(4), 445–451. <https://doi.org/10.1037/1040-3590.9.4.445>
- 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>
- Forbes, D., Fletcher, S., Parslow, R., Phelps, A., O'Donnell, M., Bryant, R. A., McFarlane, A., Silove, D., & Creamer, M. (2011). Trauma at the Hands of Another: Longitudinal Study of Differences in the Posttraumatic Stress Disorder Symptom Profile Following Interpersonal Compared With Noninterpersonal Trauma. *The Journal of Clinical Psychiatry*, 72(3), 21208. <https://doi.org/10.4088/JCP.10m06640>
- Frewen, P. A., Dozois, D. J. A., Neufeld, R. W. J., & Lanius, R. A. (2012). Disturbances of emotional awareness and expression in posttraumatic stress disorder: Meta-mood, emotion regulation, mindfulness, and interference of emotional expressiveness. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4(2), 152–161. <https://doi.org/10.1037/a0023114>
- Georgiadou, E., Morawa, E., & Erim, Y. (2017). High Manifestations of Mental Distress in Arabic Asylum Seekers Accommodated in Collective Centers for Refugees in Germany. *International Journal of Environmental Research and Public Health*, 14(6), Article 6. <https://doi.org/10.3390/ijerph14060612>
- 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. <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 / Psychologie Canadienne*, 57(4), 246–253. <https://doi.org/10.1037/cap0000069>
- Gleeson, C., Frost, R., Sherwood, L., Shevlin, M., Hyland, P., Halpin, R., Murphy, J., & Silove, D. (2020). Post-migration factors and mental health outcomes in asylum-seeking and refugee populations: A systematic review. *European Journal of Psychotraumatology*, 11(1), 1793567. <https://doi.org/10.1080/20008198.2020.1793567>

- Gratz, K. L., & Roemer, L. (2004). Multidimensional Assessment of Emotion Regulation and Dysregulation: Development, Factor Structure, and Initial Validation of the Difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment*, 26(1), 41–54. <https://doi.org/10.1023/B:JOBA.0000007455.08539.94>
- Gross, J. J. (2015a). Emotion Regulation: Current Status and Future Prospects. *Psychological Inquiry*, 26(1), Article 1. <https://doi.org/10.1080/1047840X.2014.940781>
- Gross, J. J. (2015b). The Extended Process Model of Emotion Regulation: Elaborations, Applications, and Future Directions. *Psychological Inquiry*, 26(1), 130–137. <https://doi.org/10.1080/1047840X.2015.989751>
- Haldane, J., & Nickerson, A. (2016). The Impact of Interpersonal and Noninterpersonal Trauma on Psychological Symptoms in Refugees: The Moderating Role of Gender and Trauma Type. *Journal of Traumatic Stress*, 29(5), 457–465. <https://doi.org/10.1002/jts.22132>
- Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. (3. Aufl.). The Guilford Press.
- Hinchey, L. M.-E., Grasser, L. R., Saad, B., Gorski, K., Pernice, F., & Javanbakht, A. (2023). The Predictive Utility of Trauma Subtypes in the Assessment of Mental Health Outcomes for Persons Resettled as Refugees. *Journal of Immigrant and Minority Health*, 25(2), 274–281. <https://doi.org/10.1007/s10903-022-01407-8>
- Hou, W. K., Liu, H., Liang, L., Ho, J., Kim, H., Seong, E., Bonanno, G. A., Hobfoll, S. A., & Hall, B. J. (2020). Everyday life experiences and mental health among conflict-affected forced migrants: A meta-analysis. *Journal of Affective Disorders*, 264, 50–68. <https://doi.org/10.1016/j.jad.2019.11.165>
- Hynie, M. (2018). The Social Determinants of Refugee Mental Health in the Post-Migration Context: A Critical Review. *The Canadian Journal of Psychiatry*, 63(5), 297–303. <https://doi.org/10.1177/0706743717746666>
- Ibrahim, H., Ertl, V., Catani, C., Ismail, A. A., & Neuner, F. (2018). The validity of Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5) as screening instrument with Kurdish and Arab displaced populations living in the Kurdistan region of Iraq. *BMC Psychiatry*, 18(1), 259. <https://doi.org/10.1186/s12888-018-1839-z>
- International Organization for Migration. (2019). *Glossary on migration*. https://publications.iom.int/system/files/pdf/iml_34_glossary.pdf
- International Organization for Migration, Mixed Migration Centre, & Office of the United Nations High Commissioner for Refugees). (2024). *On this journey, no one cares if you live or die: Abuse, protection and justice along routes between East and West Africa and Africa's Mediterranean Coast - Volume 2*. (2). IOM, MMC, UNHCR. <https://www.unhcr.org/media/journey-no-one-cares-if-you-live-or-die-abuse-protection-and-justice-along-routes-between-1>
- Jakob, J. M. D., Lamp, K., Rauch, S. A. M., Smith, E. R., & Buchholz, K. R. (2017). The Impact of Trauma Type or Number of Traumatic Events on PTSD Diagnosis and Symptom Severity in Treatment Seeking Veterans. *The Journal of Nervous and Mental Disease*, 205(2), 83. <https://doi.org/10.1097/NMD.0000000000000581>
- Jannesari, S., Hatch, S., Prina, M., & Oram, S. (2020). Post-migration Social-Environmental Factors Associated with Mental Health Problems Among Asylum Seekers: A Systematic Review. *Journal of Immigrant and Minority Health*, 22(5), 1055–1064. <https://doi.org/10.1007/s10903-020-01025-2>

- Johnson, H., & Thompson, A. (2008). The development and maintenance of post-traumatic stress disorder (PTSD) in civilian adult survivors of war trauma and torture: A review. *Clinical Psychology Review*, 28(1), 36–47. <https://doi.org/10.1016/j.cpr.2007.01.017>
- Jones, A. C., Badour, C. L., Alex Brake, C., Hood, C. O., & Feldner, M. T. (2018). Facets of Emotion Regulation and Posttraumatic Stress: An Indirect Effect via Peritraumatic Dissociation. *Cognitive Therapy and Research*, 42(4), 497–509. <https://doi.org/10.1007/s10608-018-9899-4>
- Kindermann, D., Zeyher, V., Nagy, E., Brandenburg-Ceynowa, H., Junne, F., Friederich, H.-C., Bozorgmehr, K., & Nikendei, C. (2020). Predictors of asylum seekers' mental health course in the early stages of resettlement: Results of a longitudinal study. *Journal of Psychosomatic Research*, 132, 109977. <https://doi.org/10.1016/j.jpsychores.2020.109977>
- Kirmayer, L. J., Narasiah, L., Munoz, M., Rashid, M., Ryder, A. G., Guzder, J., Hassan, G., Rousseau, C., & Pottie, K. (2011). Common mental health problems in immigrants and refugees: General approach in primary care. *CMAJ: Canadian Medical Association Journal*, 183(12), E959–E967. <https://doi.org/10.1503/cmaj.090292>
- Koch, T., Liedl, A., & Ehrling, T. (2020). Emotion regulation as a transdiagnostic factor in Afghan refugees. *Psychological Trauma: Theory, Research, Practice, and Policy*, 12(3), 235–243. <https://doi.org/10.1037/tra0000489>
- Koch, T., Liedl, A., Takano, K., & Ehrling, T. (2020). Daily Worry in Trauma-Exposed Afghan Refugees: Relationship with Affect and Sleep in a Study Using Ecological Momentary Assessment. *Cognitive Therapy and Research*, 44(3), 645–658. <https://doi.org/10.1007/s10608-020-10091-7>
- Kratzmann, K., & Hartl, K. (2019). *Common Home. Migration and Development in Austria*. (Common Home Series). Caritas Austria. https://www.caritas.at/fileadmin/storage/global/caritas-at/Hilfe-Angebote/Migration-Flucht/MIND_Common_Home_Studie_Austria.pdf
- Kube, T., Berg, M., Kleim, B., & Herzog, P. (2020). Rethinking post-traumatic stress disorder – A predictive processing perspective. *Neuroscience & Biobehavioral Reviews*, 113, 448–460. <https://doi.org/10.1016/j.neubiorev.2020.04.014>
- Lacour, O., Morina, N., Spaaij, J., Nickerson, A., Schnyder, U., von Känel, R., Bryant, R. A., & Schick, M. (2020). Prolonged Grief Disorder Among Refugees in Psychological Treatment—Association With Self-Efficacy and Emotion Regulation. *Frontiers in Psychiatry*, 11. <https://www.frontiersin.org/articles/10.3389/fpsy.2020.00526>
- Lie, B. (2002). A 3-year follow-up study of psychosocial functioning and general symptoms in settled refugees. *Acta Psychiatrica Scandinavica*, 106(6), 415–425. <https://doi.org/10.1034/j.1600-0447.2002.01436.x>
- Litz, B. T., Litz, B. T., & Gray, M. J. (2002). Emotional Numbing in Posttraumatic Stress Disorder: Current and Future Research Directions. *Australian & New Zealand Journal of Psychiatry*, 36(2), 198–204. <https://doi.org/10.1046/j.1440-1614.2002.01002.x>
- Litz, B. T., Orsillo, S. M., Kaloupek, D., & Weathers, F. (2000). Emotional processing in posttraumatic stress disorder. *Journal of Abnormal Psychology*, 109(1), 26–39. <https://doi.org/10.1037/0021-843X.109.1.26>
- McLean, C. P., & Foa, E. B. (2017). Emotions and emotion regulation in posttraumatic stress disorder. *Current Opinion in Psychology*, 14, 72–77. <https://doi.org/10.1016/j.copsyc.2016.10.006>

Mentzelopoulou, M. M., & Barlaoura, N. (2023). *Detention of migrants*. 12.

Meurling, J., Rondung, E., Leiler, A., Wasteson, E., Andersson, G., Richards, D., Shahnava, S., & Bjärtå, A. (2023). An online tiered screening procedure to identify mental health problems among refugees. *BMC Psychiatry*, 23(1), 7. <https://doi.org/10.1186/s12888-022-04481-2>

Missing Migrants Project. (2023). *Missing Migrants. Middle East & North Africa—Mid-year Regional Overview, January—June 2023*, (S. 5). International Organization for Migration. https://mena.iom.int/sites/g/files/tmzbd1686/files/documents/2023-07/mmp_report_rdh_27072023_0.pdf

Mollica, R. F., Caspi-Yavin, Y., Bollini, P., Truong, T., Tor, S., & Lavelle, J. (1992). The Harvard Trauma Questionnaire. Validating a cross-cultural instrument for measuring torture, trauma, and posttraumatic stress disorder in Indochinese refugees. *The Journal of Nervous and Mental Disease*, 180(2), 111–116.

Moser, J. S., Hajcak, G., Simons, R. F., & Foa, E. B. (2007). Posttraumatic Stress Disorder Symptoms in Trauma-exposed College Students: The Role of Trauma-Related Cognitions, Gender, and Negative Affect. *Journal of anxiety disorders*, 21(8), 1039–1049. <https://doi.org/10.1016/j.janxdis.2006.10.009>

Moskowitz, D. S., & Young, S. N. (2006). Ecological momentary assessment: What it is and why it is a method of the future in clinical psychopharmacology. *Journal of Psychiatry and Neuroscience*, 31(1), 13–20.

Müller, L. R. F., Gossmann, K., Schmid, R. F., Rosner, R., & Unterhitzberger, J. (2021). A pilot study on ecological momentary assessment in asylum-seeking children and adolescents resettled to Germany: Investigating compliance, post-migration factors, and the relation between daily mood, sleep patterns, and mental health. *PLOS ONE*, 16(2), e0246069. <https://doi.org/10.1371/journal.pone.0246069>

Mundy, S. S., Foss, S. L. W., Poulsen, S., Hjorthøj, C., & Carlsson, J. (2020). Sex differences in trauma exposure and symptomatology in trauma-affected refugees. *Psychiatry Research*, 293, 113445. <https://doi.org/10.1016/j.psychres.2020.113445>

Nguyen, T. P., Guajardo, M. G. U., Sahle, B. W., Renzaho, A. M. N., & Slewa-Younan, S. (2022). Prevalence of common mental disorders in adult Syrian refugees resettled in high income Western countries: A systematic review and meta-analysis. *BMC Psychiatry*, 22(1), 15. <https://doi.org/10.1186/s12888-021-03664-7>

Nickerson, A. (2018). Pathways to Recovery: Psychological Mechanisms Underlying Refugee Mental Health. In N. Morina & A. Nickerson (Hrsg.), *Mental Health of Refugee and Conflict-Affected Populations: Theory, Research and Clinical Practice* (S. 91–109). Springer International Publishing. https://doi.org/10.1007/978-3-319-97046-2_5

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>

Nikendei, C., Kindermann, D., Brandenburg-Ceynowa, H., Derreza-Greeven, C., Zeyher, V., Junne, F., Friederich, H.-C., & Bozorgmehr, K. (2019). Asylum seekers' mental health and treatment utilization in a three months follow-up study after transfer from a state registration- and reception-center in Germany. *Health Policy*, 123(9), 864–872. <https://doi.org/10.1016/j.healthpol.2019.07.008>

- Patanè, M., Ghane, S., Karyotaki, E., Cuijpers, P., Schoonmade, L., Tarsitani, L., & Sijbrandij, M. (2022). Prevalence of mental disorders in refugees and asylum seekers: A systematic review and meta-analysis. *Global Mental Health (Cambridge, England)*, 9, 250–263. <https://doi.org/10.1017/gmh.2022.29>
- Pencea, I., Munoz, A. P., Maples-Keller, J. L., Fiorillo, D., Schultebrasucks, K., Galatzer-Levy, I., Rothbaum, B. O., Ressler, K. J., Stevens, J. S., Michopoulos, V., & Powers, A. (2020). Emotion dysregulation is associated with increased prospective risk for chronic PTSD development. *Journal of Psychiatric Research*, 121, 222–228. <https://doi.org/10.1016/j.jpsychires.2019.12.008>
- Pfeiffer, E., Behrendt, M., Adeyinka, S., Devlieger, I., Rota, M., Uzureau, O., Verhaeghe, F., Lietaert, I., & Derluyn, I. (2022). Traumatic events, daily stressors and posttraumatic stress in unaccompanied young refugees during their flight: A longitudinal cross-country study. *Child and Adolescent Psychiatry and Mental Health*, 16(1), 26. <https://doi.org/10.1186/s13034-022-00461-2>
- Pugach, C. P., Campbell, A. A., & Wisco, B. E. (2020). Emotion regulation in posttraumatic stress disorder (PTSD): Rumination accounts for the association between emotion regulation difficulties and PTSD severity. *Journal of Clinical Psychology*, 76(3), 508–525. <https://doi.org/10.1002/jclp.22879>
- Riaz, M. N., Malik, S., Nawaz, S., Riaz, M. A., Batool, N., & Shujaat, J. M. (2015). Well-Being and Post-Traumatic Stress Disorder due to Natural and Man-Made Disasters on Adults. *Pakistan Journal of Medical Research*.
- Ruggero, C. J., Schuler, K., Waszczuk, M. A., Callahan, J. L., Contractor, A. A., Bennett, C. B., Luft, B. J., & Kotov, R. (2021). Posttraumatic stress disorder in daily life among World Trade Center responders: Temporal symptom cascades. *Journal of Psychiatric Research*, 138, 240–245. <https://doi.org/10.1016/j.jpsychires.2021.04.002>
- Ryan, D. A., Kelly, F. E., & Kelly, B. D. (2009). Mental Health Among Persons Awaiting an Asylum Outcome in Western Countries: A Literature Review. *International Journal of Mental Health*, 38(3), 88–111. <https://doi.org/10.2753/IMH0020-7411380306>
- Santiago, P. N., Ursano, R. J., Gray, C. L., Pynoos, R. S., Spiegel, D., Lewis-Fernandez, R., Friedman, M. J., & Fullerton, C. S. (2013). A Systematic Review of PTSD Prevalence and Trajectories in DSM-5 Defined Trauma Exposed Populations: Intentional and Non-Intentional Traumatic Events. *PLOS ONE*, 8(4), e59236. <https://doi.org/10.1371/journal.pone.0059236>
- Schick, M., Morina, N., Mistridis, P., Schnyder, U., Bryant, R. A., & Nickerson, A. (2018). Changes in Post-migration Living Difficulties Predict Treatment Outcome in Traumatized Refugees. *Frontiers in Psychiatry*, 9, 476. <https://doi.org/10.3389/fpsy.2018.00476>
- Schuler, K., Ruggero, C. J., Mahaffey, B., Gonzalez, A., L Callahan, J., Boals, A., Waszczuk, M. A., Luft, B. J., & Kotov, R. (2021). When Hindsight Is Not 20/20: Ecological Momentary Assessment of PTSD Symptoms Versus Retrospective Report. *Assessment*, 28(1), 238–247. <https://doi.org/10.1177/1073191119869826>
- Seligowski, A. V., Lee, D. J., Bardeen, J. R., & Orcutt, H. K. (2015). Emotion regulation and posttraumatic stress symptoms: A meta-analysis. *Cognitive Behaviour Therapy*, 44(2), 87–102. <https://doi.org/10.1080/16506073.2014.980753>
- Sheppes, G., Suri, G., & Gross, J. J. (2015). Emotion Regulation and Psychopathology. *Annual Review of Clinical Psychology*, 11(1), 379–405. <https://doi.org/10.1146/annurev-clinpsy-032814-112739>

- Shiffman, S. (2009). Ecological momentary assessment (EMA) in studies of substance use. *Psychological Assessment*, 21(4), 486–497. <https://doi.org/10.1037/a0017074>
- Short, N. A., Boffa, J. W., Clancy, K., & Schmidt, N. B. (2018). Effects of emotion regulation strategy use in response to stressors on PTSD symptoms: An ecological momentary assessment study. *Journal of Affective Disorders*, 230, 77–83. <https://doi.org/10.1016/j.jad.2017.12.063>
- Short, N. A., Norr, A. M., Mathes, B. M., Oglesby, M. E., & Schmidt, N. B. (2016). An examination of the specific associations between facets of difficulties in emotion regulation and posttraumatic stress symptom clusters. *Cognitive Therapy and Research*, 40(6), 783–791. <https://doi.org/10.1007/s10608-016-9787-8>
- Sigvardsson, E., Malm, A., Tinghög, P., Vaez, M., & Saboonchi, F. (2016). Refugee trauma measurement: A review of existing checklists. *Public Health Reviews*, 37(1), 10. <https://doi.org/10.1186/s40985-016-0024-5>
- 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. *The British Journal of Psychiatry*, 170(4), 351–357. <https://doi.org/10.1192/bjp.170.4.351>
- Specker, P., Liddell, B. J., O'Donnell, M., Bryant, R. A., Mau, V., McMahon, T., Byrow, Y., & Nickerson, A. (2023). The Longitudinal Association Between Posttraumatic Stress Disorder, Emotion Dysregulation, and Postmigration Stressors Among Refugees. *Clinical Psychological Science*, 21677026231164393. <https://doi.org/10.1177/21677026231164393>
- Steel, Z., Chey, T., Silove, D., Marnane, C., Bryant, R. A., & van Ommeren, M. (2009). Association of Torture and Other Potentially Traumatic Events With Mental Health Outcomes Among Populations Exposed to Mass Conflict and Displacement: A Systematic Review and Meta-analysis. *JAMA*, 302(5), 537–549. <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 (London, England)*, 360(9339), 1056–1062. [https://doi.org/10.1016/S0140-6736\(02\)11142-1](https://doi.org/10.1016/S0140-6736(02)11142-1)
- Sveen, J., Bondjers, K., & Willebrand, M. (2016). Psychometric properties of the PTSD Checklist for DSM-5: A pilot study. *European Journal of Psychotraumatology*, 7, 30165. <https://doi.org/10.3402/ejpt.v7.30165>
- 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>
- Theisen-Womersley, G. (2021). *Trauma and Resilience Among Displaced Populations: A Sociocultural Exploration*. Springer International Publishing. <https://doi.org/10.1007/978-3-030-67712-1>
- Trauner, F. (2020). Asylpolitik. In W. Weidenfeld, W. Wessels, & F. Tekin (Hrsg.), *Europa von A bis Z* (S. 1–5). Springer Fachmedien. https://doi.org/10.1007/978-3-658-24456-9_26-2
- Tull, M. T., Barrett, H. M., McMillan, E. S., & Roemer, L. (2007). A Preliminary Investigation of the Relationship Between Emotion Regulation Difficulties and Posttraumatic Stress Symptoms. *Behavior Therapy*, 38(3), 303–313. <https://doi.org/10.1016/j.beth.2006.10.001>

United Nations High Commissioner for Refugees. (2023). *Flucht und Trauma im Kontext Schule. Handbuch für Pädagog*innen*. (7. Aufl.).

United Nations High Commissioner for Refugees. (2024). *Global Trends. Forced Displacement in 2023*. <https://www.unhcr.org/global-trends-report-2023>

United Nations High Commissioner for Refugees. (n.d.). *Überfahrten über das Mittelmeer*. UNHCR Deutschland. <https://www.unhcr.org/dach/de/aktuelles/ueberfahrten-ueber-das-mittelmeer>

Uribe Guajardo, M. G., Slewa-Younan, S., Smith, M., Eagar, S., & Stone, G. (2016). Psychological distress is influenced by length of stay in resettled Iraqi refugees in Australia. *International Journal of Mental Health Systems*, 10(1), 4. <https://doi.org/10.1186/s13033-016-0036-z>

van der Kolk, B. A., Roth, S., Pelcovitz, D., Sunday, S., & Spinazzola, J. (2005). Disorders of extreme stress: The empirical foundation of a complex adaptation to trauma. *Journal of Traumatic Stress*, 18(5), 389–399. <https://doi.org/10.1002/jts.20047>

Victor, S. E., & Klonsky, E. D. (2016). Validation of a Brief Version of the Difficulties in Emotion Regulation Scale (DERS-18) in Five Samples. *Journal of Psychopathology and Behavioral Assessment*, 38(4), 582–589. <https://doi.org/10.1007/s10862-016-9547-9>

Vine, V., & Aldao, A. (2014). Impaired emotional clarity and psychopathology: A transdiagnostic deficit with symptom-specific pathways through emotion regulation. *Journal of Social and Clinical Psychology*, 33(4), 319–342. <https://doi.org/10.1521/jscp.2014.33.4.319>

Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). *The PTSD Checklist for DSM-5 (PCL-5)*. Scale available from the National Center for PTSD at www.ptsd.va.gov.

Weiss, N. H., Tull, M. T., Viana, A. G., Anestis, M. D., & Gratz, K. L. (2012). Impulsive behaviors as an emotion regulation strategy: Examining associations between PTSD, emotion dysregulation, and impulsive behaviors among substance dependent inpatients. *Journal of Anxiety Disorders*, 26(3), 453–458. <https://doi.org/10.1016/j.janxdis.2012.01.007>

World Health Organization. (2021). *Refugees and migrants in times of COVID-19: Mapping trends of public health and migration policies and practices*. World Health Organization. <http://www.ncbi.nlm.nih.gov/books/NBK577921/>

Wu, S., Renzaho, A. M. N., Hall, B. J., Shi, L., Ling, L., & Chen, W. (2021). Time-varying associations of pre-migration and post-migration stressors in refugees' mental health during resettlement: A longitudinal study in Australia. *The Lancet Psychiatry*, 8(1), 36–47. Scopus. [https://doi.org/10.1016/S2215-0366\(20\)30422-3](https://doi.org/10.1016/S2215-0366(20)30422-3)

Appendix

Appendix A: Internal Consistencies of the DERS Subscales

DER Subscale	α
Acceptance of emotions	.90
Goal-directed behavior	.73
Impulse control	.72
Emotion regulation strategies	.70
Emotional clarity	.25
Emotional awareness	.71

Note. α = Cronbach's Alpha. Internal consistencies below $\leq .70$ should be considered unsatisfactory.

Appendix B: Everyday Assessment of Post-Migratory Stress

	Measurement point			T4 (before bed)	
	T1 (11 a.m.)	T2 (3 p.m.)	T3 (7 p.m.)		
Instruction	Which of the following stressors have you experienced since the last entry?			Which of the following stressors have you experienced today?	
Response format	<i>not at all (1) - very much (5)</i>				
Post-Migration Stressors	Worries about not receiving treatment for health problems				
	Worries about the family				
	Boredom				
	Isolation (being or feeling alone)				
	Homesickness				
	No privacy				
	Fear of being deported				
	Too many things to do				
	Not having enough money				
	Discrimination ^R				
	Communication and language problems				
				Separation from the family	
				Poor working conditions	
				Not finding a job	
				Unsuitable (or unpleasant) housing situation	
				Contact with the BFA	
				Delays in the processing of asylum applications	

Note. ^R Item translation had been revised by native-speaking interpreters after the study had started.

Appendix C: Everyday Assessment of Post-Traumatic Stress Disorder Symptoms

	Measurement point			
	T1 (11 a.m.)	T2 (3 p.m.)	T3 (7 p.m.)	T4 (before bed)
Instruction Response format	Did you have disturbing dreams about traumatic experiences last night? <i>no (0)/ yes (1)</i>			
	Did you have disturbing dreams about traumatic experiences last night? (B2)			
Instruction Response format	Since the last entry, how much have you... <i>not at all (0) - extremely (4)</i>			
	...had repeated, disturbing, and unwanted memories of the traumatic experiences? (B1) ...had the experience of reliving traumatic experiences, acting or feeling as if it were happening again? (B3) ...been having physical reactions (e.g. palpitations, difficulty breathing, sweating) when reminded of a traumatic experience? (B5) ...been jumpier, more easily startled? (E4) ...difficulty concentrating (E5)			
Instruction Response format	At the moment I feel... <i>not at all (1) - extremely (5)</i>			
	...irritable (e.g., outbursts of anger, aggressive behavior) ^R (E1) ...vigilant, on heightened alert (E3)			
				...detached from other people or as if cut off (D6)

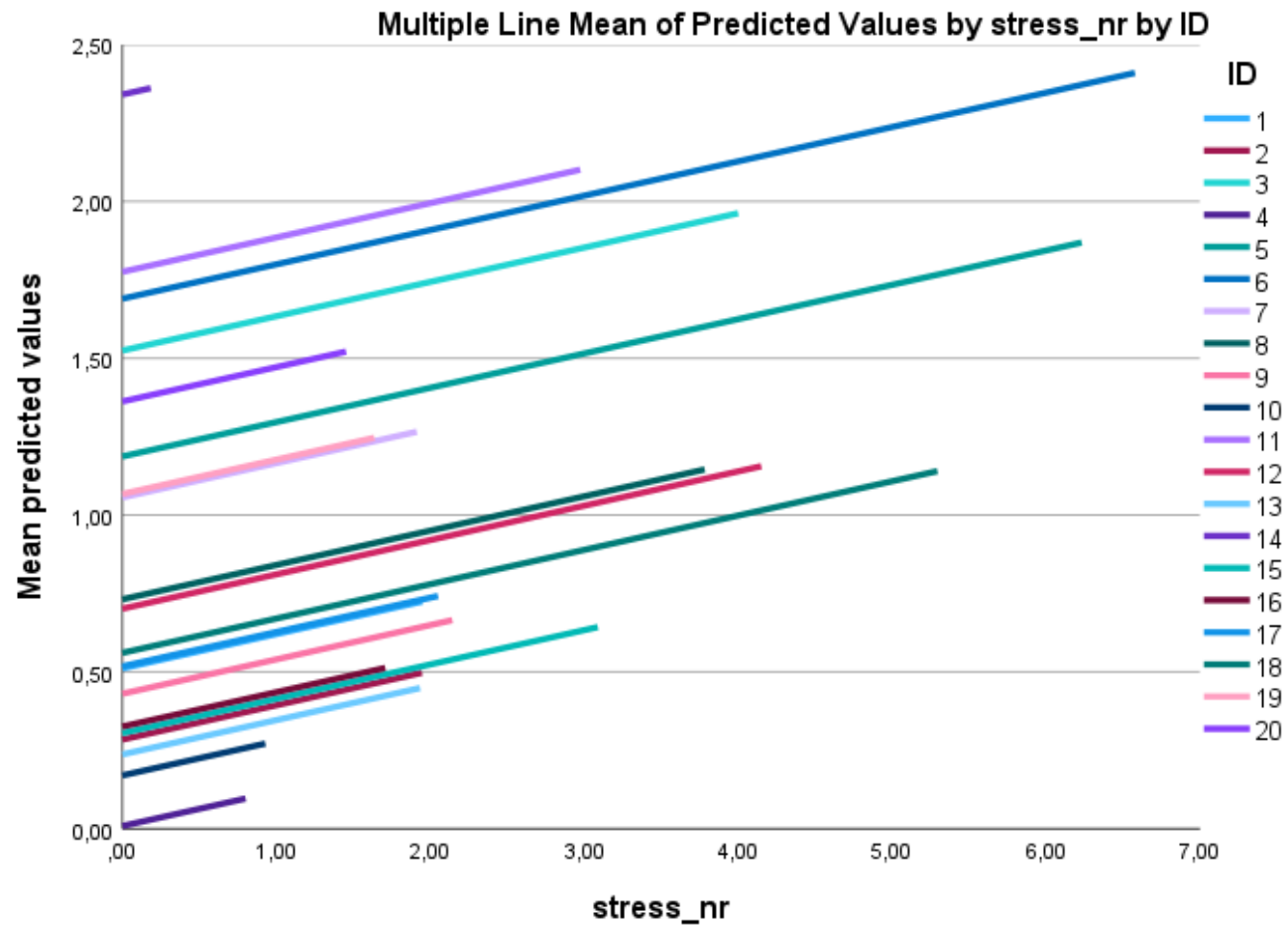
Note. Depiction of PTSD-correspondent items following DSM V.

B = Intrusion Symptom Cluster according to DSV V. E = Alterations in Arousal and Reactivity Symptom Cluster according to DSM V.

^R Item translation had been revised by native-speaking interpreters after the study had started.

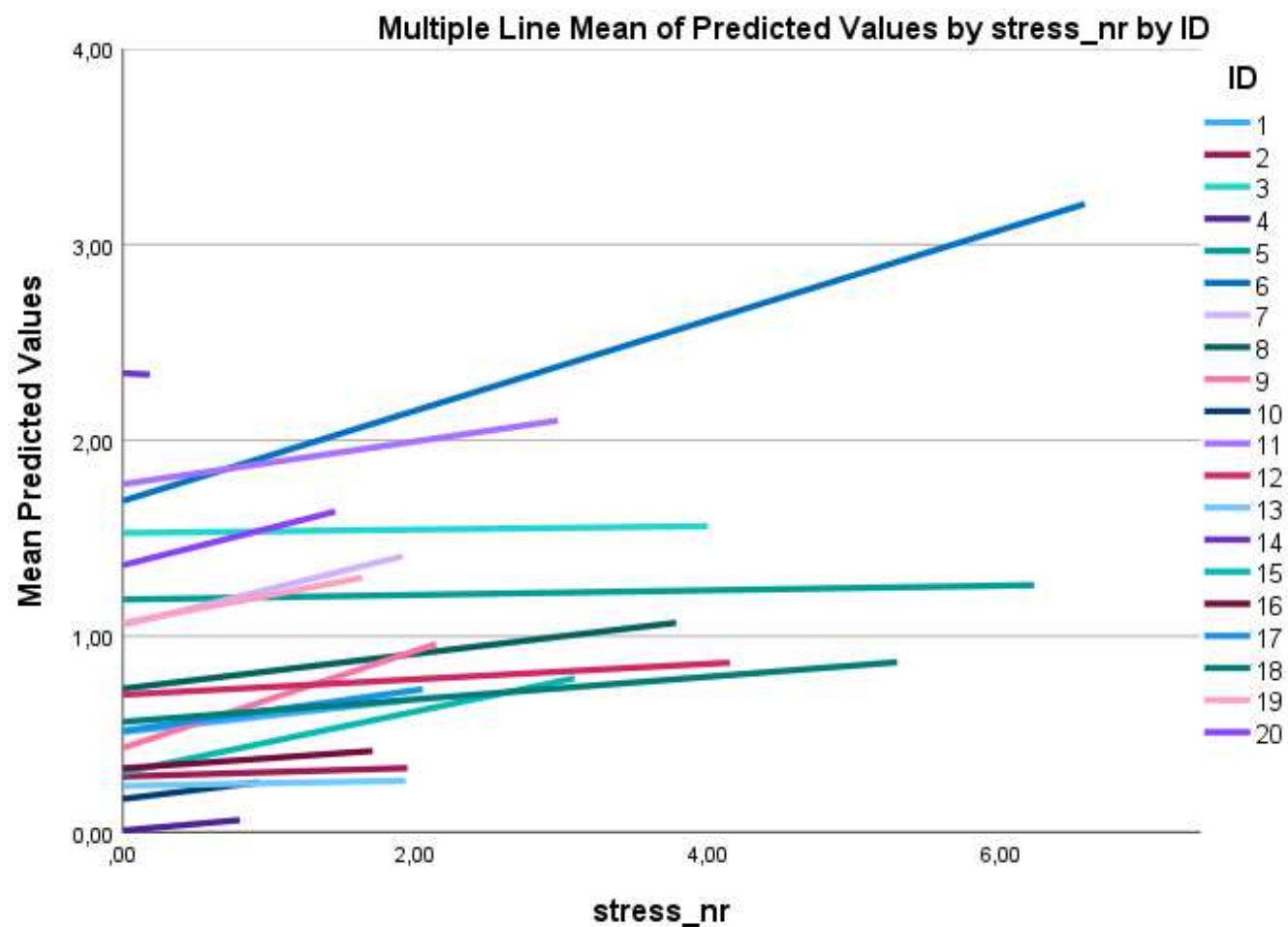
Appendix D: MLM-Plots

RI-Model of Hypothesis 2.1 with Stressor Count as Predictor



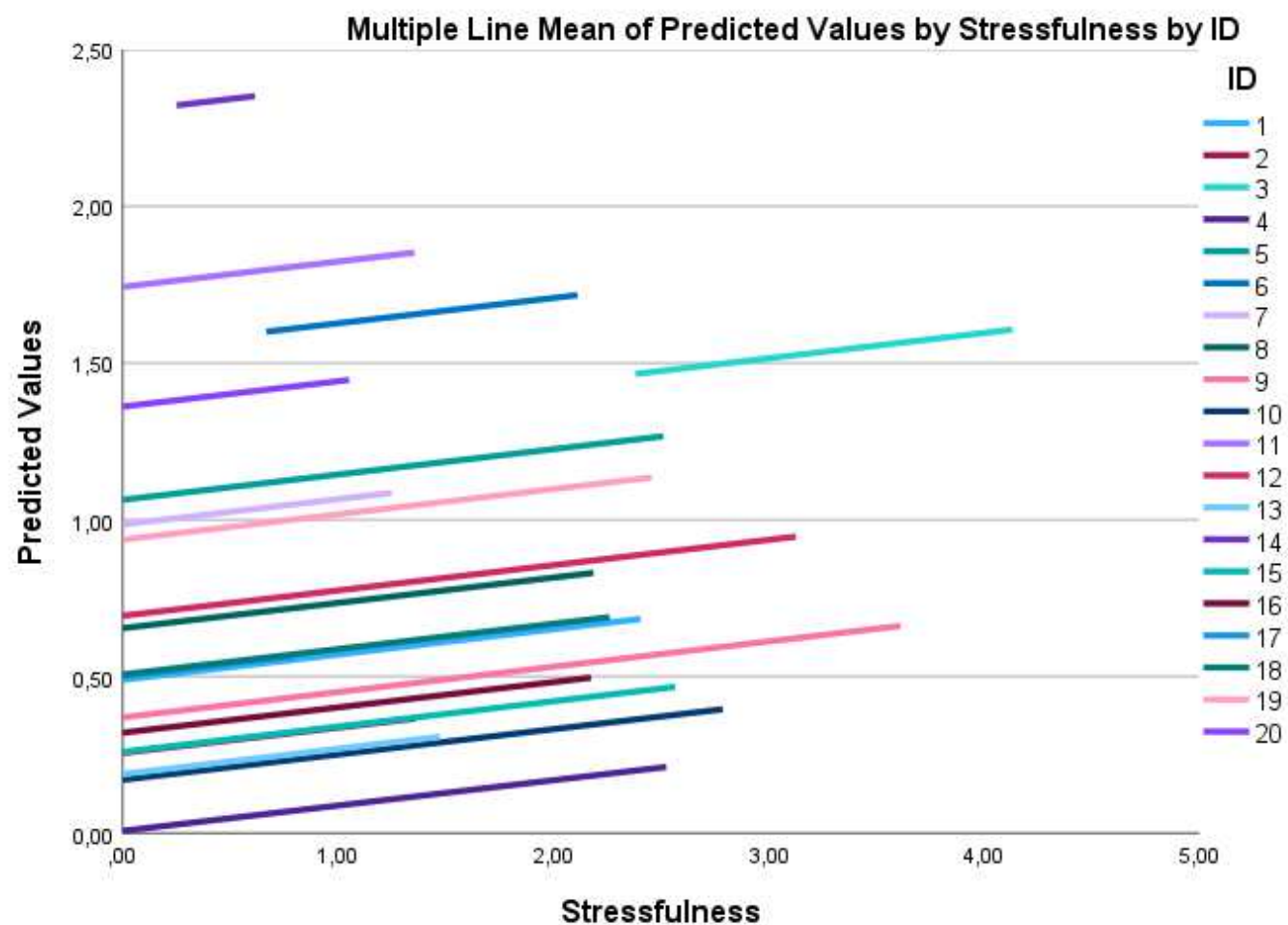
Note. Predicted values for momentary stressor load (stress_nr). Every line represents one participant (ID).

RIRS-Model of Hypothesis 2.1 with Stressor Count as Predictor



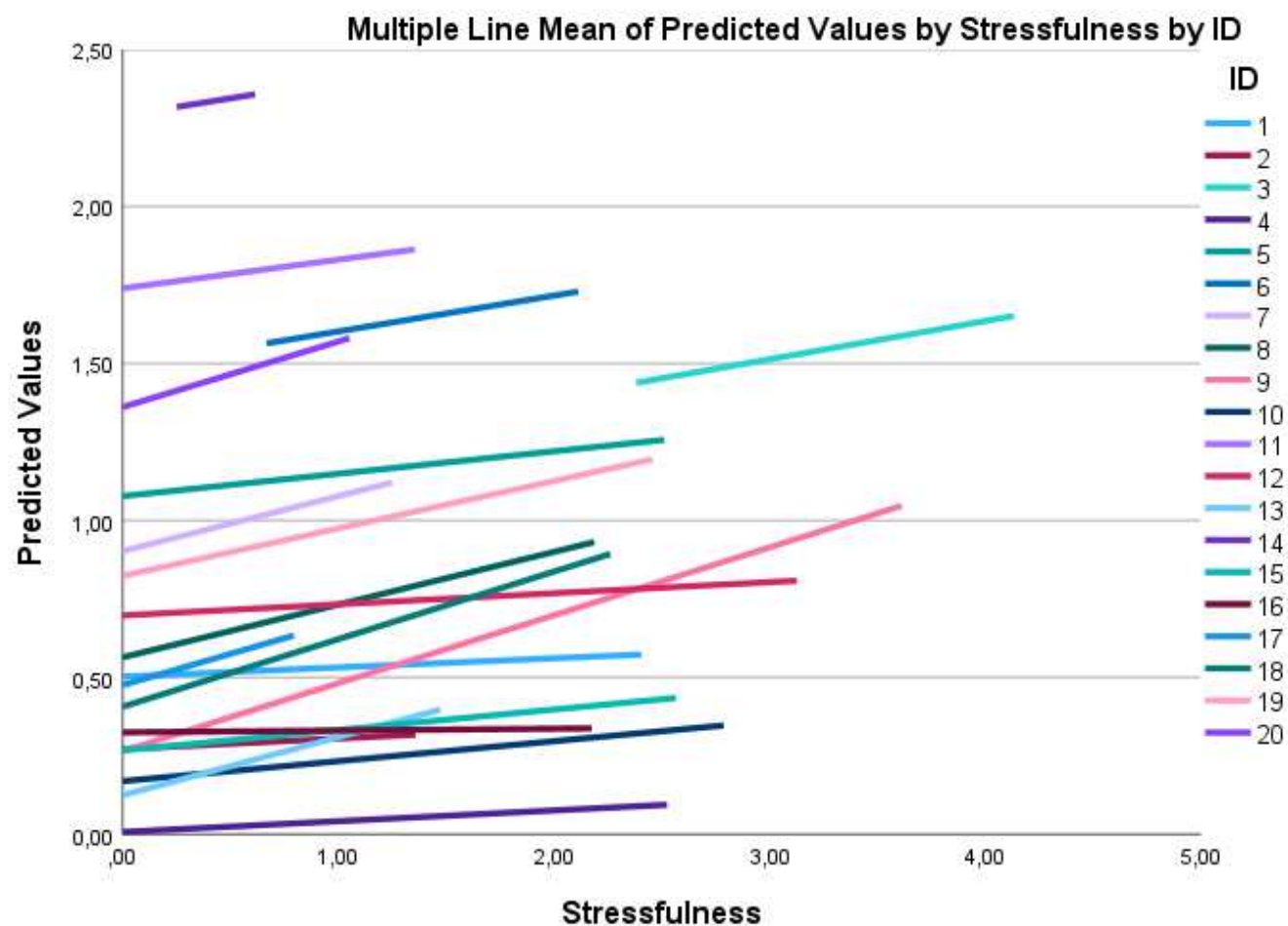
Note. Predicted values for momentary stressor load (stress_nr). Every line represents one participant (ID).

RI-Model of Hypothesis 2.1 with Stressfulness as Predictor



Note. Predicted values for momentary stressfulness (stressfulness). Every line represents one participant (ID).

RIRS-Model of Hypothesis 2.1 with Stressfulness as Predictor



Note. Predicted values for momentary stressfulness (stressfulness). Every line represents one participant (ID).

Appendix E: Abstracts

Abstract

Background: Forcibly displaced populations are at increased risk of experiencing trauma and developing post-traumatic stress disorder (PTSD), while facing further stress that can exacerbate symptoms in resettlement. Impaired emotion regulation (ER) has been suggested as a relevant factor for PTSD in prior cross-sectional research. As the first study to use ecological momentary assessment (EMA) among forced migrants in Austria, the associations between trauma exposure, ER problems, and PTSD, and ER's role in the relationship between daily post-migratory stress and PTSD were examined.

Method: A two-week smartphone-assisted EMA study was conducted with 22 Arabic- and Farsi-speaking forced migrants. Participants completed standardized questionnaires on sociodemographic data, trauma history, ER, and PTSD symptoms. Momentary post-migration stress and PTSD symptoms were assessed three times daily during the following EMA period. Multiple linear regression and multilevel models (MLM) depicted associations between trauma history, ER, post-migration stress, and PTSD.

Results: Participants experienced multiple types of potentially traumatic events ($M = 9.6$, $SD = 4.7$), with 45.5% showing elevated PTSD symptoms. MLM indicated significant positive associations between momentary post-migration stress and PTSD symptoms, while dysfunctional ER and trauma history were not significantly linked to PTSD.

Conclusions: Refugees and asylum seekers in Austria face strong and persistent post-migration stress, which is related to increased PTSD symptoms in everyday life. These findings highlight the need for improved living conditions and expanded support. Future research should reassess ER's role in PTSD, considering present limitations such as static ER measures and unexamined avoidance behaviors.

Abstract in German

Hintergrund: Geflüchtete haben ein erhöhtes Risiko Traumata zu erleben und eine posttraumatische Belastungsstörung (PTBS) zu entwickeln. Auch im Einleben im Aufnahmeland sind sie mit langanhaltendem Stress konfrontiert, welcher die PTBS-Symptome verstärken kann. Dysfunktionale Emotionsregulation (ER) wurde in vergangenen Querschnittsstudien als relevanter Faktor für PTBS suggeriert. Diese ist die erste Studie, die Ecological Momentary Assessment (EMA) bei Geflüchteten in Österreich einsetzt, um den Zusammenhang zwischen Traumavorgeschichte, ER-Problemen und PTBS sowie die Rolle der ER im Zusammenhang von täglichem Postmigrationsstress und PTBS-Symptomen zu untersuchen.

Methode: Eine zweiwöchige, smartphone-gestützte EMA-Studie wurde mit 22 arabisch- und farsi-sprachigen Geflüchteten durchgeführt. Die Teilnehmenden füllten standardisierte Fragebögen zu soziodemografischen Daten, Trauma-Vorgeschichte, ER und PTBS-Symptomen aus. Momentaner Postmigrationsstress und PTBS-Symptome wurden während der nachfolgenden EMA-Phase dreimal täglich erfasst. Multiple lineare Regressionen und Mehrebenenmodelle (MLM) analysierten Zusammenhänge zwischen Traumavorgeschichte, ER, Postmigrationsstress und PTBS.

Ergebnisse: Die Teilnehmenden berichteten im Durchschnitt von 9.6 verschiedenen potenziell traumatischen Ereignistypen und 45.5% der Stichprobe wiesen erhöhte PTBS-Symptome auf. Die MLM ergaben signifikant positive Zusammenhänge zwischen momentanem Postmigrationsstress und PTBS-Symptomen, während dysfunktionale ER und die Trauma-Vorerfahrung nicht signifikant mit PTBS assoziiert waren.

Diskussion: Flüchtlinge und Asylsuchende in Österreich sind starkem und anhaltendem Postmigrationsstress ausgesetzt, der mit verstärkten PTBS-Symptomen im Alltag zusammenhängt. Diese Ergebnisse verdeutlichen den Bedarf an verbesserten Lebensumständen und erweiterter Unterstützung. Zukünftige Forschung sollte die Rolle der ER bei PTBS unter Berücksichtigung gegenwärtiger Limitationen, wie einer statischen Erfassung von ER und nicht untersuchtem Vermeidungsverhalten als Kernsymptom von PTBS vertieft betrachten.