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Niklas Amann, BSc

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Univ.-Prof. Dr. Urs Markus Nater

Mitbetreut von / Co-Supervisor:

Priv. Doz. Dr. Dr. Dipl.-Psych. Ricarda Nater-Mewes

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1 Introduction

Imagine being forced to flee from your home country due to war, violence, religious beliefs, or political opinions. Since Russia's invasion of Ukraine in February 2022, forced migration and the terrible experiences of the people affected are discussed in the media intensively. In the face of the ongoing crisis in Ukraine, other war-affected areas such as Afghanistan and Syria and the populations at risk for forced migration in these regions might easily be overlooked.

In fact, over the last decade, armed conflict, war, and political struggles in countries of the Middle East have been an increasing problem. The political and social destabilization of these areas has resulted in expanding numbers of people who have been forced to flee from conflict, persecution, and human rights violations to seek refuge and asylum. According to the United Nations High Commissioner for Refugees (UNHCR), global forced displacement has surpassed 84 million in August 2021, with more than nine million displaced from Afghanistan and Syria alone. Even though most forced migrants of the Middle East seek shelter in neighboring countries, there has been a dramatic increase in the number of people seeking asylum in the European Union (EU) (Hajak et al., 2021). In Austria alone, there have been approximately 40.000 applications for asylum in 2021, with most of the applicants being from Syria and Afghanistan (Federal Ministry of Interior, 2022).

The experience of flight is characterized by exposure to various stressors, which can have long-lasting negative effects on psychological well-being (Bogic et al., 2015; Fazel et al., 2005). Evidence suggests that asylum seekers and refugees have a high vulnerability to mental health conditions, including post-traumatic stress disorder (PTSD), major depression, and anxiety (Blackmore et al., 2020; Lindert et al., 2009). Up until now, most psychologists have sought to explain the vulnerability to mental health problems by focusing on experiences of pre-migration and traumatic experiences on the flight. However, the impact of post-migration stress was less considered in the past but has now been the aim of some research (James et al., 2019; Li et al., 2016). For asylum seekers and refugees resettling in Western countries, post-migration stressors include, but are not limited to, the experience of discrimination, unemployment, and poverty as well as a long asylum procedure and social isolation (Carlsson & Sonne, 2018; Schick et al., 2018).

In addition to the focus of psychological research on pre-migration and traumatic experiences on the flight, past research on mental health among asylum seekers and

refugees mainly focused on factors that make these groups more vulnerable to developing psychological distress and PTSD. But not all the people affected show mental health problems, even after exposure to tremendous traumatic events and post-migration stress. Surprisingly, only a few papers have studied protective factors in asylum seekers and refugees such as resilience. Resilience refers to (a) good mental health and developmental outcomes, despite (b) exposure to significant adversity (Luthar et al., 2000; Masten, 2001). Despite the unified opinion on the definition of resilience, there has been a lot of debate in psychology on the factors contributing to resilience and the processes underlying it (Herrman et al., 2011). As a construct, resilience has predominantly been tested within Western populations (Schlechter et al., 2021). In addition, most of the sparse literature on resilience in non-Western asylum seekers and refugees with flight experience focused on childhood and adolescence and did not employ a specific scale for resilience (Arnetz et al., 2013).

Thus, the present master's thesis aims to examine resilience as a protective factor in adult asylum seekers and refugees from Syria and Afghanistan and its impact on the relationship between post-migration stress and mental health disorder symptoms. The overarching goal is to contribute to the sparse scientific literature on resilience and post-migration stress in non-Western forced migrants.

In the following, the theoretical background and current state of research on this topic are presented. Afterwards, the research question and the hypotheses for the present master thesis are introduced before methods and results are described. The master thesis concludes with a detailed discussion of the results as well as limitations of the study and an outlook on further research possibilities.

2 Theoretical Background

In the following sections, the theoretical background of the master's thesis is presented. In the beginning, the terms "asylum seeker" and "refugee" are defined. It shows that these groups are highly vulnerable and at particular risk of developing mental health problems. Cultural values and norms and their influence on the expressions and beliefs on these mental health problems are discussed. Afterwards, post-migration stress is introduced as an often-overlooked factor that has been found to negatively impact mental health in asylum seekers and refugees. Finally, resilience is discussed as a potentially protective factor which could moderate the impact of stress on mental health outcomes.

2.1 Definition asylum seeker and refugee

The terms "asylum seeker" and "refugee" are often used interchangeably in everyday language. It seems like there is a lot of confusion about the distinct differences between these two groups in the general population, and even in the scientific literature, the terms are often used incorrectly. Due to the legal difference between these two terms, the correct wording is indeed important. According to the 1951 Refugee Convention of the United Nations High Commissioner for Refugees (UNHCHR), a refugee is any person who:

"owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country" (UNHCR, 1951).

A Refugee has been recognized under the 1951 Convention and is protected by international law. In addition, he or she obtains access to governmental aid and assistance.

In contrast, according to the human rights organization Amnesty International, an asylum seeker can be defined as:

"a person who has left their country and is seeking protection from persecution and serious human rights violations in another country, but who hasn't yet been legally recognized as a refugee and is waiting to receive a decision on

their asylum claim” (Amnesty International, 2021).

Therefore, a person is called an asylum seeker until they are given refugee status. It is important to remember, that every refugee starts as an asylum seeker, but not every asylum seeker is granted refugee status. The definitions above show that both groups share many aspects in common, but there are also many differences that must be remembered. Depending on the host country, refugees and asylum seekers have unequal access to support, aid, and legal rights. These factors also play a key role in the impact of post-migration stress, which will be discussed in detail later.

In the following chapters, the term forced migrants will be occasionally used to refer to the population of asylum seekers and refugees together if the experiences and factors discussed count for both groups. For the sake of simplicity, this has commonly been done in the literature (Mengistu & Manolova, 2019; Siriwardhana et al., 2014).

2.2 Mental health of asylum seekers and refugees

Asylum seekers and refugees are highly vulnerable groups and at particular risk of developing mental health problems (Bogic et al., 2015; Fazel et al., 2005; Nesterko et al., 2020). This does not seem surprising, considering the high likelihood of forced migrants to experience potentially traumatic events before and during flight. These include witnessing and experiencing war, physical and sexual violence, torture, abduction, traveling with unsafe means of transportation, and separation from family (Kalt et al., 2013; Nesterko et al., 2020). Using the Harvard Trauma Questionnaire (HTQ), a self-report checklist that investigates traumatic events and PTSD symptoms, a recent study with 100 Syrian refugees resettled in Iraq reported an average of 11.12 potentially traumatic events experienced by the participants (Ibrahim & Hassan, 2017). The authors furthermore showed that the number of potentially traumatic events was positively correlated with PTSD. This is in line with other research showing an association between traumatic events and symptoms of PTSD in forced migrants (Badri et al., 2012; Unni Krishnan Karunakara et al., 2004). Indeed, most people think about trauma and PTSD when they reflect on the mental health burden of asylum seekers and refugees, and even in the literature, there is a heavy focus on PTSD whilst largely ignoring other mental disorders (Naser Morina et al., 2018). However, there are other mental disorders that play an important role in the mental health of forced migrants. These include anxiety disorders and depression, the two most common

disorders next to PTSD in forced migrants (Henkelmann et al., 2020; Peconga & Høgh Thøgersen, 2020).

2.2.1 Prevalence of PTSD, anxiety, and depression in asylum seekers and refugees

As stated in the last chapter, the traumatic nature of displacement and flight can increase vulnerability to mental health conditions. In general, the literature documents high prevalence rates of PTSD, anxiety, and depression among forced migrants. A recent systematic review of 8,176 Syrian refugees resettled in 10 countries documented a prevalence of 43% for PTSD, 40% for depression, and 26% for anxiety (Peconga & Høgh Thøgersen, 2020). These prevalence rates are significantly higher than estimates of mental health burden in the general population. Blackmore et al. (2020) reported similar high prevalence rates after conducting a systematic review and meta-analysis of studies that diagnosed mental illness in asylum seekers and refugees exclusively from a clinical interview using a validated diagnostic assessment measure like the Clinician-Administered PTSD Scale for DSM-5 (CAPS), or the Mini-International Neuropsychiatric Interview (M.I.N.I). They reported a prevalence rate of 31% for PTSD and 31.5% for depression. In addition, prevalence rates did not differ between forced migrants displaced less than four years and those displaced longer, indicating that mental illness in this group may not just decrease over time.

In contrast to the extraordinarily high prevalence rates proposed in the last two mentioned studies, Fazel et al. (2005) documented a significantly lower prevalence of 9% for PTSD, 5% for depression, and 4% for anxiety for forced migrants resettling in high-income countries in their meta-analysis. This raises the question of why estimates of the prevalence of mental illness in asylum seekers and refugees are so different, even at the level of meta-analyses and systematic reviews. In fact, several factors contribute to the variance in prevalence estimates in the literature. First, there are differences in the forced migrant populations included in prevalence studies. Rates of mental distress symptoms vary greatly from one forced migrant population to another, as well as within the same population across contexts (Bryant et al., 2009). For example, the prevalence rates of mental disorders for forced migrants from Syria may be very different from the prevalence rates of mental disorders for forced migrants from Eritrea. In addition, the variety in the severity and number of potentially traumatic events experienced and overall living conditions in the host countries contribute to the

differences in the reported prevalence rates across given forced migrant populations (Steel et al., 2009). Second, methodological differences may be responsible for the variation across individual studies. For instance, most of the studies investigating prevalence rates of mental disorders in forced migrants rely on self-report measures, which tend to overestimate symptomatology compared to diagnostic interviews (Blackmore et al., 2020). In general, large-scale studies with better methodology including random sampling report significantly lower rates of mental illness among forced migrants than prevalence studies with lower methodological standards (e.g. convenience or opportunistic sampling) (Giacco et al., 2018; Hynie, 2018). It is assumed that 50% of the variance in prevalence rates in the literature is accounted for by differences in methodology (Hynie, 2018). Lastly, survey timing seems to be an important factor, especially when immigration-related risk factors are taken into account, which have a strong negative impact on forced migrants' mental health in the long term (Bogic et al., 2012; Johnson & Thompson, 2008).

In any case, overestimating or underestimating the prevalence of mental disorders in forced migrants is concerning. Studies that underestimate the prevalence most likely contribute to a neglect of forced migrant mental health. This could lead to access barriers in formal treatment and unmet psychological needs. In contrast, studies that overestimate the prevalence may contribute to the stigmatization of forced migrants and give rise to incorrect assumptions about the symptomatology associated with mental illness (Jong & Komproe, 2002; Steel et al., 2002; Summerfield, 1999).

2.2.2 The influence of culture on mental health

Undoubtedly, our way of thinking and how our interactions are shaped are dependent on the cultural context a person is situated in. In a mental health context, culture influences how individuals show symptoms, evaluate psychological challenges and mental illness, and their trust in mental-health institutions (Eshun, 2009). But what is meant by “culture”?

Often, the word “culture” is used in everyday language as a term to describe the way of life of a group of people. This view on culture is quite simplistic and neglects the multilayered nature of the concept. A more comprehensive view is given by the United Nations Educational Scientific and Cultural Organization (UNESCO):

“Culture should be regarded as the set of distinctive, spiritual,

material, intellectual, and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions, and beliefs” (UNESCO, 2001).

It has been argued that these distinctive features, value systems, and beliefs of a group and the individual’s own experience of an illness, as well as associated symptoms, are embedded in each other (Sam & Moreira, 2012). For example, one of the key findings in the literature on cultural psychopathology suggests that Chinese psychiatric patients report more somatic symptoms of depression than patients from Western countries (Kleinman, 1982; Ryder et al., 2002). The emphasis on somatic symptoms led to the neglect of depression in this group. In fact, during the 1980s and 1990s, many Chinese people were diagnosed with neurasthenia instead of depression, because neurasthenia covers more somatic symptoms like fatigue, sleep problems, muscle pain, and headache (N. Lin, 1989; T. Y. Lin, 1989). In addition to cultural differences in the emphasis of symptoms in specific mental disorders, studies have consistently reported unique mental disorders in specific regions that have not been found in other regions. The newest editions of the *Diagnostic and Statistical Manual of Mental Disorders* responded to these findings and included a category which is known as culture-bound syndromes (American Psychiatric Association, 2013).

In an attempt to understand these cultural differences in mental health, researchers in the past examined the concept of *cultural scripts*. The term cultural script originally stems from linguistic research, which long recognizes that different language communities have different norms and conventions of linguistic interaction (Goddard & Wierzbicka, 2004). The cultural scripts spell out norms that are widely held in a given society and are formulated in the natural semantic metalanguage (Wierzbicka, 2002). In psychology and the mental health context, cultural scripts are quite similar to heuristics. They work as mechanisms that organize units of knowledge that allow for rapid automatic retrieval and use of information. Just like cultural scripts define “normal” behavior and social interaction, they also help people to make sense of pathology as best they can. This is vital considering the confusing and burdensome process of emerging psychopathology, which has a strong need for scripts (Taylor, 1983). Cultural scripts define, what is available in a person’s “symptom pool” and amplify the symptoms that best explain what is happening according to the person’s beliefs and values. The focus on certain symptoms while enlarging some experiences

and minimizing others leads to a looping effect, in which the severity of the experiences that best draw upon the cultural symptom pool increases (Ryder et al., 2011).

The cultural symptom pool is, among other things, driven by the stigma of mental illness. Mental illness is stigmatized all over the world, including in the Western world, but even more so in cultures of the Middle East (Mohammadzadeh et al., 2020). For example, a common traditional belief in the Middle East is that mental disorders are a punishment of God to make justice for sins, or that they are caused by wicked spirits going into the person's body due to bad behavior (Pridmore & Pasha, 2004; Sewilam et al., 2015). These ideas pave the way for stigmatization by other people because a developing mental disorder is attributed to the actions of the individual, which suggests personal responsibility. Indeed, studies about the stigmatization of mental disorders in the Middle East suggest that negative approaches such as rejection, denial, and avoidance are more common than constructive approaches in these regions (Al-Krenawi, 2005; Coker, 2005). Rejection and avoidance may be responsible for the fact that a lot of people with mental health problems in the Middle East are unwilling to seek help and try to hide their problems. In addition, people have to worry about looking weak or embarrassing their parents and family when they openly talk about mental health issues (Netemeyer et al., 2015). If expressing mental health issues is stigmatized and leads to rejection and avoidance, people may express these issues in another way. This influences the symptom pool. For this reason, people of the Middle East may express psychological symptoms somatically (Abdullah & Brown, 2011). Rohlof et al. (2014) showed in their review that asylum seekers from non-Western countries including Middle East countries display more unexplained somatic symptoms than the general Western population. The authors argue that stigmatization is partially responsible for these findings. Patients may consciously or unconsciously prefer to display somatic problems to avoid being called insane by their doctor, family, and friends. In addition, the health system in many non-Western countries is oriented towards somatic problems. Furthermore, psychiatry is often seen as a care system for people with psychoses, which decreases the help-seeking tendencies of people with depression or anxiety.

By all means, culture impacts how people express mental health problems and how they treat them. If forced migrants from non-Western cultures arrive in Western host countries, they are often confronted with different beliefs and attitudes on psychological problems and mental health. This is an important notion when it comes

to the treatment of mental health problems in forced migrants. Rather new approaches like “multicultural psychotherapy” recognize differences in mental health perceptions between cultures and take them into account during therapy.

2.3 Post-migration stress

In the last section, it was shown that cultural values and norms influence how people process and express mental health problems. In addition, forced migrants from non-Western cultures that arrive in Western host countries are confronted with different cultural values and norms in regard to a lot of questions in everyday life. A potentially very stressful experience! The cultural differences can be seen as a stressor that one could put in the category of “post-migration stressors” because they appear after successfully arriving in the host country. But what is stress? In the following sections, stress as a concept is introduced. Afterwards, post-migration stress is discussed, which has been found to negatively impact mental health in forced migrants on top of the effect of traumatic experiences before and during flight.

2.3.1 Definition stress

Stress is a term that everyone seems to understand naturally and uses freely in everyday language. There is probably no one who hasn't said the sentence: “I am stressed” after a long day of work with a lot of difficult tasks. Stress is an unavoidable part of everyday life and can be seen as a reaction to a challenging situation. Hans Selye, one of the first stress researchers in the middle of the 20th century, referred to stress as everything that threatens homeostasis or the “maintenance of the physiologic internal environment” (Selye, 1956). Selye worked with laboratory animals, mostly rats, and exposed them to severe environmental stress, such as food deprivation, electric shocks, and maximal temperatures. These threats to organisms are called “stressors”. After he watched the animals deal with the stressors, he proposed three stages of physiological reactions to stressful events: the alarm, resistance, and exhaustion stage. Furthermore, he linked the last stage, the exhaustion stage, which contains the diminishment of defenses from the body against stress, to an increased risk of cardiovascular diseases and high blood pressure (Selye, 1956).

In general, early stress theories focused heavily on biological activity. But stress responses of organisms are not only limited to biological factors, but also psychological ones. The most important stress theory which includes psychological components is

the *transactional stress model* by Lazarus and Folkman (Lazarus & Folkman, 1984). According to the transactional stress model, stress results from an imbalance between the demands of a situation and the individual's evaluation of their own resources. In contrast to former stress theories, Lazarus and Folkman emphasized the role of the individual's subjective appraisal of a situation or stimulus. Accordingly, being confronted with the same demanding situation doesn't lead to the same stress response in two individuals. One individual could be stressed, the other not. Demands are just events until we deem them to be stressful (Eshun, 2009). The transactional stress model proposes that we make two major consecutive appraisals when we deal with demanding situations or stimuli. During primary appraisals, the confronting event is interpreted as either irrelevant, positive, or stressful/negative. The first two categories do not evoke further processes in this model. Stressful/negative transactions however may further be appraised as harmful, threatening, or challenging. Threat and harm lead to negative emotions, whereas challenge appraisals may produce positive emotions if the individual interprets the event as potentially rewarding and there are sufficient coping resources available to deal with the challenging event (Hobfoll, 1989; Lazarus, 1991). The evaluation of whether or not there are sufficient coping resources available is done during secondary appraisals. During secondary appraisals, the individual assesses what can be done to manage the stressful/negative event. If the result of that cognitive process is that there are not enough resources, a stress reaction is induced. Depending on the individual's available coping resources, former coping styles, and situational variables, a coping action is then enacted to resolve the event. If the coping action is later evaluated as successful, the person learns to better cope with similar harmful or threatening events in the future or maybe even appraises the event as challenging. On the contrary, if a person evaluates the coping action as unsuccessful, a potentially challenging event could be evaluated as a threatening or harmful event in the future (Lazarus & Folkman, 1984).

2.3.2 Acute stress and chronic stress

After an acute stressor is identified, there are changes in the individual's nervous, cardiovascular, endocrine, and immune systems (Schneiderman et al., 2005). These changes prepare the organism to either stay and handle a threat or to run away to a safe place. This is known as the fight-or-flight response (Cannon, 1915). The fight-or-flight response is highly adaptive and has been critical for survival since the

beginning of humanity. In particular, two major processes make the acute stress response adaptive. First, stress hormones, namely catecholamines and cortisol, are released by the sympathetic nervous system and the hypothalamic-pituitary-adrenocortical (HPA) axis to enable energy stores, which are directly available (Chrousos, 2009). Second, the energy distribution changes in the way that energy is primarily distributed to the skeletal muscles and the brain maximizing the possibility for muscular exertion and increasing reaction time. Accordingly, this chain of reactions leads to an increase in heart rate, blood pressure, trembling, etc. (Gordan et al., 2015). As mentioned before, acute stress responses are highly adaptive and critical for survival. Typically, they do not impose a health burden. However, the acute stress response can become prolonged and a health hazard, if the threat posed by a stressor is persistent. Chronic stress and the constant state of alarm that comes with it feed on mental and physical reserves. Nowadays, most people are exposed to chronic stress in at least one area of their life such as marriage, parenting, family, work, finances, or health. McEwen (1998) used the word *allostasis* to refer to changes in biological set points as a result of exposure to chronic stressors. The biological cost of these changes is known as *allostatic load*. Allostatic load is the prize the body pays for repeatedly being forced to adapt to chronic stressors. It can be measured in many ways including systolic and diastolic blood pressure, indices of cardiovascular activity, and waist-to-hip ratio (McEwen, 2000). Physiologically, chronic stress leads to a persistent increase in blood pressure and vascular hypertrophy due to overstimulation of the sympathetic nervous system (Henry et al., 1975; Schneiderman et al., 2005). This is why chronic stress is also a risk factor for the development of cardiovascular diseases (Kivimäki & Steptoe, 2018). Furthermore, chronic stress suppresses the immune system in the long term, which increases the risk of various infectious diseases (Stoop et al., 2005). In light of the additional loss of immune function that is associated with aging, this is particularly troublesome for the elderly.

In addition to its physiological effects, chronic stress may also adversely affect the mental health of vulnerable individuals. People who are exposed to uncontrollable chronic stress show higher rates of depression, anxiety, sleeping problems, and trauma (Hapke et al., 2013; Mohr et al., 2014; Schneiderman et al., 2005). Chronic stressors may also inhibit healthy behaviors such as a healthy diet, exercising, and socializing and can give rise to unhealthy behaviors such as substance use and smoking (Schetter & Dolbier, 2011). The inhibition of healthy behaviors and the

promotion of unhealthy behaviors due to stress may worsen already pronounced mental disorder symptoms and negatively affect overall life satisfaction.

2.3.3 Post-migration stress in asylum seekers and refugees

The literature on stress in the group of forced migrants has always been skewed in its focus on the effect of exposure to stressors and traumatic events before and during the flight while neglecting the psychological impact of post-migration stressors (Summerfield, 1999). In fact, forced migrants are confronted with various challenges and tasks even after successfully arriving in the host country. Stressors after migration include social isolation, the experience of discrimination, a long and exhausting asylum procedure, unemployment, housing insecurity, the loss of social status, and separation from family. Post-migration related stress has been found to negatively impact mental health in forced migrants on top of the effect of traumatic experiences before and during flight (Bogic et al., 2015; Carlsson & Sonne, 2018; Li et al., 2016; Schick et al., 2018; Silove et al., 1998). In one of the first studies which addressed post-migration stress, Silove et al. (1998) compared post-migration living difficulties in Tamil asylum seekers currently living in Australia with post-migration living difficulties in Tamil refugees and Tamil immigrants, both with permanent residency statuses in Australia. The authors developed a scale with 23 items, the post-migration living difficulties scale (PMLD), which covers difficulties in the areas of employment, separation from family, access to medical care, acculturation problems, poverty, and difficulties in applying for refugee status. The results showed that Tamil asylum seekers got significantly higher scores on all dimensions compared to immigrants. Compared to refugees, asylum seekers showed higher scores in three of the five dimensions of the PMLD: higher scores in 1. Problems with the refugee determination process, 2. Health, welfare, and asylum problems, and 3. Family concerns. The findings indicate that not all groups of migrants are exposed to the full set of post-migration stressors in the same way. For example, asylum seekers differed from refugees in relation to immediate problems concerning the insecure residency status, but they did not differ in acculturation stress that they are expected to share with refugees.

While mental health problems in forced migrants are impacted by post-migration factors as well as pre-migration factors, their complex interaction and causal pathways are still the subject of repeated debates. Correspondingly, there are two schools of thought: On the one hand, the trauma-focused model assumes that post-migration

stress is, at least to some degree, a consequence of trauma-related psychological impairment (Neuner & Elbert, 2007). The advocates of the trauma-focused model argue that an improvement in trauma-related symptoms will lead to a gain or regain of resources and an improvement in functionality and increased adaptation to post-migration stress. This is why trauma-related interventions such as narrative exposure therapy and eye movement desensitization and reprocessing (EMDR) are considered first-line approaches in the treatment of mental health problems in forced migrants according to this model (Schick et al., 2018). On the other hand, the psychosocial approach suggests that interventions should primarily target daily stressors for the purpose of psychological stabilization, which would increase available resources and facilitate better coping with traumatic stress symptoms (Miller & Rasmussen, 2010). The debate between these two approaches has a long history and is partly fueled by disagreements over the degree to which people are resilient or vulnerable when dealing with chronic stress (Bonanno, 2004). In addition, there are disagreements over the efficiency of trauma-related interventions in areas where distress is omnipresent and individual care is practically impossible to implement, and disagreements over the application of Western therapy standards and psychiatric diagnoses to mostly non-Western people (Miller & Rasmussen, 2010; Neuner et al., 2004; Rasco & Miller, 2004). It has been argued that, due to the trauma-focused model, there has been a rather narrow focus on examining the direct effect of war exposure and the experience of flight on mental health while neglecting post-migration stress (Miller & Rasmussen, 2010). More recently, however, there is growing support for the psychosocial approach which includes the impact of post-migration stress in the overall model. For instance, Schick et al. (2018) examined the relationship between change in depression and anxiety symptoms and PTSD and change in post-migration stressors with a longitudinal design. Participants were refugees from different countries receiving treatment and social counseling in a specialized clinic. The sample was assessed at baseline and after a three-year follow-up. Results showed that a reduction in post-migration stressors predicted a significant decrease in depression and anxiety symptoms, but not in PTSD symptoms. The regression model was the most predictive when depression and anxiety symptoms were used as the outcome variables and changes in post-migration stressors were used as the independent variable. In contrast, the opposite model with post-migration stressor changes as the outcome variable and depression/anxiety scores as the independent variables was less

predictive. Several implications can be derived from the findings of this longitudinal study. First, the results provide primary evidence regarding the question of whether exposure to post-migration stressors causes greater psychopathology or if it is poor psychological functioning that causes an inability to cope with post-migration stressors. The findings indicate that post-migrations stressors indeed play a causal role in the development of anxiety and depression symptoms in forced migrants, rather than vice versa. Second, the longitudinal data suggests that psychosocial interventions with a focus on post-migration stress should be implemented to increase treatment response with regard to symptoms of anxiety and depression. The advantage of psychosocial interventions, such as problem management and enabling social support, are that they can be provided by helpers without a long education in the health-professional background (Sijbrandij et al., 2017). However, this does not mean that trauma-focused interventions should be neglected: As stated above, changes in post-migration stressors were unable to predict changes in PTSD symptoms. In general, the variance in PTSD rates appears to be better explained by trauma-related factors, whereas post-migration stress specifically impacts rates of anxiety and mood disorders, over and above the effect of past trauma (Li et al., 2016; Miller & Rasmussen, 2010).

To conclude, post-migration stress plays a key role in the mental health of forced migrants and needs to be considered alongside traumatic experiences before and during flight to understand the psychological effects of the forced migrant experience. In many high-income countries, the barriers for forced migrants are kept high to avoid pull factors, which further worsen post-migration stress due to socioeconomic difficulties, discrimination experiences, missing access to education and health services, separation from family, and a long asylum procedure.

2.4 Resilience

The term resilience is derived from the Latin word *resilire*, which means “to jump back” or “recoil”. Originally, the word was used to describe the physical ability of a material or an object to return to its original shape after being compressed or stretched (Thun-Hohenstein et al., 2020). An example of such an object would be a rubber band, which bounces back to its original size and shape after getting stretched and put under pressure. The rubber band is often used as an analogy to describe the concept of resilience in the field of psychology. This analogy stems from everyday language, where the term resilience is used to describe people who “bounce back” like a “rubber

band” and recover after facing severe stressors or potentially traumatic events in their lives. More scientifically, the American Psychological Association (APA) defines resilience as follows:

“Resilience is the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioral flexibility and adjustment to external and internal demands” (American Psychological Association, 2015).

This view on resilience is similar to the definition by important resilience researchers such as Ann S. Masten or Sunya S. Luthar, who define Resilience as (a) good mental health and developmental outcomes, despite (b) exposure to significant adversity (Luthar et al., 2000; Masten, 2001). The definitions above capture an important notion: Individuals with good mental health and development are not considered resilient if there has never been significant adversity or challenging life experiences. But why are some people able to “bounce back” from adversity or maintain mental health after exposure to severe stressors, while others become chronically symptomatic and experience a decrease in overall functioning?

In one of the first and most famous studies on this issue, Werner and Smith conducted a longitudinal study on the Hawaiian island of Kauai (Werner & Smith, 1979). The study examined the impact of several psychosocial and biological risk factors, severe stressors, and protective factors on 698 children born in 1955 on the island. Social workers, doctors, psychologists, and other mental health workers monitored the development of the participants for over 40 years with specific surveys at ages 1, 2, 10, 18, 32, and 40. A third of the children on the island naturally belonged to a high-risk group and were exposed to severe stressors and difficult life conditions from the start of their lives. For instance, children from the high-risk group were born and raised in poverty, often experienced birth complications, divorce or developing psychopathology of the parents, and lived in families with constant conflicts. Subsequently, two-thirds of the children from the high-risk group developed learning or behavioral problems while growing up and showed high rates of mental health problems and criminal activities by age 18 (Werner, 2004). However, the other one-third of the children from the high-risk group showed normal development and no behavioral problems. In addition, these children succeeded in school, managed their

social life, pursued a regular job by the age of 40, and showed lower rates of chronic illness. The intriguing question now was: what made approximately one-third of the children in the high-risk group so extraordinarily resilient?

Werner and Smith tried to answer this question and proposed several protective factors, which differentiated resilient children who developed well and overcame difficult life conditions from their peers who showed severe problems coping with these circumstances as a child and later as an adult (Werner, 2004). First, there were factors within the individual, such as high scores on optimism, self-efficacy, and social skills that seemed to influence resilience. In addition, a certain type of temperament as a baby, which elicited positive reactions from their caregivers was identified as a protective factor. Secondly, there were protective factors within the family, such as a close bond with at least one competent and stable family member (often an uncle, aunt, siblings, and grandparents). Resilient children were particularly adept to find these attachment figures and attentively hold onto them. Lastly, Werner and Smith identified protective factors in the community, for instance helpful neighbors and a good and caring teacher, which seemed to strengthen the resilience of the children in the high-risk group. Therefore, the study identified factors within the individual - or personal factors, and factors outside of the individual - or environmental factors, that constituted resilience. Up to date, researchers still debate whether resilience is more influenced by the former or the latter (Karidi et al., 2018; Navrady et al., 2018). Most likely, these factors interact with each other to increase resilience relative to adversity. In general, the literature suggests that resilience can be best described with an interactive model using multiple sources and pathways including psychological, biological, and dispositional factors as well as characteristics of social systems and social support (Friborg et al., 2003; Herrman et al., 2011; Masten, 2001).

Personal factors which are associated with resilience include personality traits such as extraversion, openness to experience and agreeableness, self-efficacy, optimism, an internal locus of control, a certain type of cognitive appraisal (positive interpretation of events and acceptance of adversity into self-concept), hardiness and flexibility (Herrman et al., 2011; Oshio et al., 2018; Stewart & Yuen, 2011).

Studies of biological factors in resilience indicate that exposure to severe stressors early in life, as it was the case with the high-risk group in the Kauai longitudinal study, can lead to changes in developing brain structure and neurobiological systems (Cicchetti, 2010). Brain size, neurotransmitter processes, and

the sensitivity of receptors may change as a result and increase the vulnerability to psychopathology. Exposure to highly stressful environments causes a chronically elevated cortisol level which may decrease resilience (Gladstone et al., 2004). On the other hand, Oxytocin, a hormone released by the pituitary gland, suppresses the HPA axis and may increase resilience due to its positive effect on social interactions and stress-reducing effects (Carter, 2005).

In addition to personal and biological factors, there are characteristics of the social system which seem to strongly impact resilience in children and adults. Social support and strong relationships with family members and peers are strongly associated with resilience (Herrman et al., 2011; Schlechter et al., 2021). Furthermore, good schools, religion, and community services can contribute to resilience by increasing systemic support and helping the individual to deal and cope with personal crises (Luthar et al., 2000). The factors mentioned above all interact with each other to account for resilience. Due to its multidimensional and dynamic characteristics, resilience is context and time specific and cannot be expected to be present across all life domains (Pietrzak & Southwick, 2011). For example, a mother of four who adapts well to stress in the workplace or an academic setting may fail to adapt well to stress at home with the children or her husband. In addition, some factors which would initially be regarded as protective factors or resilience-enhancing, such as a high degree of maternal care during childhood, may interfere with individuation during adolescence or young adulthood and potentially decrease resilience in these individuals. The examples above show that the attribution of resilience always depends on how resilience is operationalized as a construct and on the angle, you look at it from. In the past, resilience has particularly been looked at from three different angles, or orientations: trait-orientation, process-orientation, and outcome-orientation.

A trait-oriented approach assumes that resilience is a personal trait, which increases the possibility of the individual adapting to stress and adversity (Chmitorz et al., 2018; Ong et al., 2006). When conceptualized as a trait, Resilience is thought to be an intrinsic attribute and relatively stable. Resilience scales like the Connor-Davidson Resilience Scale (CD-RISC), which drew inspiration for its items from previous studies of trait-hardiness, look at resilience mostly from a trait-oriented view (Connor & Davidson, 2003).

In recent years, resilience is more and more viewed as a dynamic process of adaptation itself (process-orientation), which emphasizes the temporal aspects of the

concept (Bonanno et al., 2015). In addition, the baseline functioning (functioning before adversity) and characteristics of the stressor (e.g. acute or chronic) are considered as well as several pathways of adjustment. According to the process-orientation, resilience is only one way of post-adversity adjustment.

Finally, the outcome-orientation regards resilience solely as an outcome: mental health is regained or even maintained during exposure to significant stressors or adversity (Kalisch et al., 2017). This orientation comes closest to the definitions stated at the beginning of the chapter. Exposure to significant adversity is a fundamental prerequisite of resilience in this view. Furthermore, resilience as an outcome is thought to be modifiable and can be predicted by multiple personal and environmental protective factors.

In the following section, the associations between resilience, stress, and mental health are discussed. Afterwards, the literature on resilience in the groups of refugees and asylum seekers will be evaluated.

2.4.1 Resilience, stress, and mental health

Individuals exposed to chronic and uncontrollable stress have an increased risk of developing serious mental health problems like burnout, depression, and anxiety (Hapke et al., 2013; Mohr et al., 2014; Schneiderman et al., 2005). However, the literature suggests that resilience can moderate the impact of stress on mental health outcomes (Pinquart, 2009; Wingo et al., 2010). More specifically, higher levels of resilience possessed by an individual seem to weaken the impact of stress on mental health problems. In a study that used a sample of 200 postdoctoral research fellows, a highly stressed population, the authors were able to show that resilience moderated the association of stress with trait anxiety and symptoms of depression (Gloria & Steinhardt, 2016). In a U.S. sample, lower resilience scores were associated with greater worry about the effects of COVID-19, higher severity of insomnia, and increased depression during the first weeks of the nationwide lockdown efforts due to the COVID-19 pandemic (Killgore et al., 2020). In a series of experimental studies, researchers found that highly resilient individuals showed faster emotional and physiological recovery from stress (Fredrickson et al., 2003; Tugade & Fredrickson, 2004). In the study conducted by Tugade and Frederickson, higher trait resilience was associated with faster cardiovascular recovery following a laboratory stressor (Tugade

& Fredrickson, 2004). Therefore, there is empirical evidence that resilience is linked to recovery and resistance to stress.

Stress and resilience are two dynamic systems interacting with each other, whereby severe and uncontrollable stress may damage the system and increase vulnerability to mental health conditions. In contrast, a moderate amount of stress may be beneficial for the individual by increasing the system's potential to adequately respond to future stressors (Oken et al., 2015). The idea that a moderate amount of stress could lead to a learning effect of the system to cope with future stressors is known as the "steeling" effect in resilience research. A good example of a steeling effect in human beings is the resistance to infections that comes about through exposure to the disease organism, which leads to natural immunity. There is evidence, that this may be applied to psychosocial stressors and psychopathological outcomes as well. (Rutter, 2012). For example, in clinical treatments such as allergy therapy and exposure therapy, moderate levels of stress exposure are used to strengthen the resilience aspect of the system (Oken et al., 2015). Nonetheless, the exact mechanisms are not completely understood yet and it has not been finally clarified, which level of stress exposure increases vulnerability to mental health problems through a sensitization effect, and which level of stress exposure decreases vulnerability to mental health problems through a steeling effect.

2.4.2 Resilience in asylum seekers and refugees

Past research on mental health among forced migrants predominantly focused on factors such as traumatic experiences before and during flight and resettlement in unfamiliar environments that make this group more vulnerable to developing psychological distress and PTSD. However, the observed variability in mental health outcomes in forced migrants have generated a research interest in the exploration of adaptive processes, that protect these individuals against developing psychological disorders and help them maintain personal and social interactions (Agaibi & Wilson, 2005; Arnetz et al., 2013). Thus, resilience as a protective factor is progressively considered more in the literature on mental health in asylum seekers and refugees.

As stated in the last chapter, higher levels of resilience are, most of the time, associated with fewer mental health problems (Gloria & Steinhardt, 2016; Killgore et al., 2020; Wingo et al., 2010). However, studies showing this relationship were almost exclusively conducted in Western countries with samples of Western participants. This

makes it difficult to generalize the findings to a non-Western population. People from Afghanistan or Syria may cope very differently with mental health difficulties than the Western population. For instance, in a sample of forced migrants from Syria, Hassan et al. (2016) showed that individuals used more passive coping strategies such as withdrawal and social isolation during times of mental health problems, rather than actively engaging with them. In addition, forced migrants with mental disorders from Syria rather sought help from family members than from professionals such as psychotherapists. Therefore, it seems important to extract potential resilience-enhancing and reducing factors within the group of forced migrants. Knowledge about these factors could be central in the work of mental health professionals with asylum seekers and refugees from different cultures. The literature suggests that one of the key resilience-enhancing factors in forced migrants from the Middle East may be religion. A review of qualitative studies found that the pursuit of a religious belief and a connection to god often emerged as a source of resilience (Sleijpen et al., 2016). In another qualitative study with female Syrian refugees currently located in Turkey and Syria, the participants described that their faith helped them to stay positive, accept the situation, and removed responsibility from them (El-Khani et al., 2017). The participants attributed a stable level of mental health to the influence of Islam. In addition to religion, younger age, social support in the host country, and enhanced socioeconomic status were shown to be associated with increased resilience in forced migrants (Mels et al., 2010; Siriwardhana & Stewart, 2013). On the other hand, older age, continuing adversity in the host country, and prolonged displacement were linked to decreased resilience, which was in turn linked to mental health problems (Siriwardhana & Stewart, 2013). Although an increase in research interest can be witnessed, the literature on resilience in forced migrants is still sparse and lacks several important approaches. First, there is a lack of studies, which employ a specific scale for resilience (Arnetz et al., 2013). Instead, most studies are qualitative or explore similar, but not identical, constructs such as a sense of control over things happening in life, social support, optimism, and absence of mental illness (Aroian & Norris, 2000; Hooberman et al., 2010; Sundquist et al., 2000). Furthermore, adult resilience has received less attention than resilience in children and adolescents, which can be explained by the origins of resilience research, which focused strongly on young ages and has its roots in developmental psychology (Siriwardhana et al., 2014). Lastly, there is a lack of longitudinal studies, which are important to increase knowledge about the

dynamic characteristic of resilience in forced migrants, especially when considering post-migration conditions and stressors, which may have a strong impact on resilience over time (Siriwardhana et al., 2014).

3 Research question and hypotheses

In the previous sections, the mental health of asylum seekers and refugees was discussed. It was shown, that there is a high prevalence of PTSD, anxiety, and depression in these groups and that culture plays a role in how psychological symptoms may be expressed and handled by the individual. In addition to traumatic experiences, post-migration stress was discussed as a factor that is positively correlated with the prevalence of anxiety, PTSD and depression. Lastly, resilience as a concept was introduced and identified as a protective factor, which moderates the impact of stress on mental health outcomes. This was mainly shown in Western studies with samples of Western participants. The research question of the present master's thesis is if a similar effect can be shown in non-Western forced migrants from Afghanistan and Syria. It reads as follows:

What is the role of resilience in the relationship between post-migration stress and mental health disorder symptoms in Afghan and Syrian asylum seekers and refugees living in Austria?

The corresponding Hypotheses are:

3.1 Hypothesis 1

1 The relationship between post-migration stress and symptoms of depression is moderated by resilience

1a Higher levels of resilience weaken the relationship between post-migration stress and symptoms of depression

3.2 Hypothesis 2

2 The relationship between post-migration stress and symptoms of anxiety is moderated by resilience

2a Higher levels of resilience weaken the relationship between post-migration stress and symptoms of anxiety

3.3 Hypothesis 3

3 The relationship between post-migration stress and symptoms of PTSD is moderated by resilience

3a Higher levels of resilience weaken the relationship between post-migration stress and symptoms of PTSD

4 Methods

4.1 Study design

The present master's thesis is part of the overarching project: "Targeting the mental health of asylum seekers in Austria" conducted by the Outpatient Unit for Research, Teaching and Practice of the University of Vienna (Faculty of Psychology). Overall, the mixed-method project includes three studies, all of which will build on each other, within the field of mental health of Syrian and Afghan asylum seekers and refugees living in Austria. The main goals of the overarching project are to explore the psychological needs of Asylum seekers and refugees from Syria and Afghanistan using different methods and to adapt and evaluate a low-threshold, culture-sensitive psychoeducation intervention program called "Tea Garden" (Mewes et al., 2021) to their needs. The present master's thesis focuses exclusively on the first study, in which participants were asked to complete a questionnaire survey on their mental health, post-migration living difficulties, knowledge about possible psychological symptoms after flight, and treatment options in Austria as well as on illness perceptions and resilience. Therefore, the present study had a quantitative-based cross-sectional design to answer the research question. The questionnaires were presented in the participants' mother tongues. Pre-recruitment, the study was approved by the ethics committee of the University of Vienna.

4.2 Participants

4.2.1 Eligibility criteria

The target groups of the present study were asylum seekers and refugees from Syria and Afghanistan. Consequently, participants needed to come from Afghanistan or Syria with a displacement experience to be eligible for the study. Additional eligibility criteria were an age between 18 and 65 years and a maximum of 36 months length of stay in Austria. On the other hand, persons with current manic or psychotic symptoms or suicidality were excluded, as they were in acute need of psychiatric intervention. In addition, those already receiving ongoing therapeutic treatment were excluded. To ensure a certain level of understanding between the study team and participant and comprehension of the task to be carried out, basal German language skills were necessary to be eligible for this study.

4.2.2 Recruitment

Potential participants were recruited between March and July 2022 by advertisement in form of a flyer. The conceptualized German flyer was translated into an Arabic and a Farsi/Dari Version by native speakers to increase comprehension of the content and response rates of potential participants (see Appendix A for the German version of the flyer). Arabic is the main language in Syria, whereas Farsi/Dari is mainly used in Afghanistan. Flyers were distributed in two ways: Online and offline. Online, the flyer was posted in specific groups on the social media platform Facebook. Before flyers were posted in Facebook groups like “Refugees welcome to Austria” and “The Syrian Community in Austria”, hosts of the groups were contacted via private message and asked for permission. In addition to posting on social media, e-mails with the flyers were sent to specific organizations and facilities for refugees and asylum seekers, such as reception centers from Caritas, diaconal institutions, and German language courses. Offline, the flyers were directly distributed to potential participants at the just mentioned organization and facilities. Especially the offline recruitment at German language courses turned out to be very successful and was therefore prioritized in the recruitment process.

If a person was interested in participating in the study, he or she was asked to send an E-mail to the project e-mail address that was exclusively created for this study. The potential participant was then asked to send a telephone number and give possible time slots to determine a telephone appointment with the research team. During the telephone appointment, the inclusion and exclusion criteria for the study were examined and it was decided, whether or not the person was eligible to participate. If the participant met the criteria, a date for testing at the Outpatient Unit for Research, Teaching and Practice was scheduled. After the phone call, the participant received an e-mail with a confirmation of the appointment. An expense allowance of 10 Euros for the completion of the questionnaire survey was used as an incentive.

4.3 Procedure

Participants were tested at the Outpatient Unit for Research Teaching and Practice of the University of Vienna. in light of the COVID-19 pandemic, all surfaces of the testing room and necessary equipment such as pencils were disinfected before testing.

After the participant arrived on the previously specified test date, the person was seated in a separate room with little background noise. All participants were then asked to provide informed consent. The informed consent form was presented in two versions: 1. A German version and 2. A Dari/Farsi Version for participants from Afghanistan or an Arabic Version for participants from Syria. Participants were asked to read the informed consent form carefully, ask questions if any arose, and then sign the German version. After informed consent was provided, the questionnaires were presented in the native language of the specific participant. During testing, the person was allowed to ask questions to the research team, which was present all the time. In addition, snacks and drinks were provided to allow for short breaks. Overall, it took participants approximately 30-60 minutes to complete the whole questionnaire survey with all instruments (See again Table 2 for all instruments presented). At the end of the testing, participants were given a 10 Euro compensation for participating in the study. Furthermore, they were asked for permission for the research team to contact them for subsequent studies of the overarching project, or other projects in the future. It was emphasized by the research team, that they were not obligated to participate in future studies and permission was given voluntarily.

4.4 Study sample

To determine the optimal sample size for this study, an a priori power analysis with G*Power was conducted. The result indicated, that 77 participants were required for a significant moderation model with a coefficient of determination of $R^2 = .13$ (medium effect), a statistical power of .8, and an alpha criterion of $\alpha = .05$.

In total, 31 individuals participated in the current study in the timeframe from March to July 2022. There were no exclusions after testing because every participant met the eligibility criteria. Table 1 provides an overview of the final sample's sociodemographic characteristics. There were 30 men and one woman, the mean age was 30. Participants were almost exclusively from Syria (30 of the 31) and arrived in Austria 3 to 36 months ago.

Table 1*Sociodemographic characteristics of the sample ^a*

Variable		<i>n</i>	%
Country of origin	Syria	30	96.8
	Afghanistan	1	3.2
Age (in years)			
Mean	30.32		
<i>SD</i>	7.41		
Range	19-48		
Gender	Male	30	96.8
	Female	1	3.2
Religion	Islam	30	96.8
	Other	1	3.2
Marital status	Single	12	38.7
	Married	19	61.3
In Austria since ^b			
Mean	11.77		
<i>SD</i>	8.59		
Range	3-36		
Duration of flight ^b			
Mean	8.77		
<i>SD</i>	16.03		
Range	1-72		

Note. *SD* = Standard Deviation^a *n* = 31^b stated in months.

4.5 Measures

In the following five sections, the relevant instruments for the present master's thesis that were used in the questionnaire survey are described (see also Appendix B for the untranslated instruments). Within the scope of the overarching project, the participants were asked to complete additional questionnaires, which were not important for the present study and are therefore not reported. Table 2 gives an overview for a better understanding of which instruments were used in the present

study. Sociodemographic data were assessed at the beginning of the questionnaire survey and will not be discussed further in this section.

Table 2

Overview of instruments used in the questionnaire survey

Instruments	Overarching project	Present study
GHQ-28	X	
IPQ-R	X	
IASMHS	X	
GHSQ	X	
Treatment options Austria (own questionnaire)	X	
PHQ-9	X	X
GAD-7	X	X
PHQ-15	X	
PCL-5	X	X
PSS	X	
CD-RISC	X	X
PMLD	X	X
Case vignette for PTSD/depression	X	

Note. X = used in the study. GHQ-28 = General Health Questionnaire, IPQ-R = Revised Illness Perception Questionnaire, IASMHS = Inventory of Attitudes Towards Seeking Mental Health Services, GHSQ = General Health Seeking Questionnaire, PHQ-9 = Patient Health Questionnaire, GAD-7 = Generalized Anxiety Disorder-Scale, PHQ-15 = Patient Health Questionnaire Somatic Symptom Severity Scale, PCL-5 = PTSD Checklist for DSM-5, PSS = Perceived Stress Scale, CD-RISC = Connor-Davidson Resilience Scale, PMLD = Post Migration Living Difficulties Scale.

All instruments of the present study were presented in Dari/Farsi or Arabic to accommodate to the participants from Afghanistan and Syria. For some instruments (specifically IPQ-R, GHSQ, IASMHS), translations had to be made by professional

native speakers, who were paid by the research team. For the other instruments, there were already translated and validated versions, which were obtained via the authors of the original studies.

4.5.1 Resilience

For the operationalization of resilience, the Connor-Davidson Resilience Scale (CD-RISC) was used (Connor & Davidson, 2003). The CD-RISC consists of 25 items (e.g. “I am able to adapt when changes occur”, or “I have at least one close and secure relationship that helps me when I am stressed”) which are evaluated on a 5-point Likert scale ranging from 0 – *not true at all* to 4 – *all the time*. The possible score range is between 0 and 100, with higher scores reflecting higher resilience. It has been demonstrated, that the CD-RISC corresponds to five factors after factor analysis: 1. Personal competence, 2. Positive acceptance of change and secure relationship, 3. Spirituality, 4. Control, and 5. Trust in one’s instincts and the strengthening effects of stress (Connor & Davidson, 2003). However, the authors emphasize using the sum of the total of all items for a score of resilience. They do not recommend and support other methods of scoring such as the subscales defined by factor analysis, or any other derived subscales (Davidson, 2018). For the overall scale, Connor and Davidson (2003) report a high internal consistency ($\alpha = .89$). It has been evaluated with healthy participants, psychiatric patients, asylum seekers, community samples, and people exposed to trauma, abuse and natural disasters (Connor & Davidson, 2003; Karairmak, 2010). In the original validation study, several mean scores for different populations were reported: A US sample (general population) showed a mean score of $M = 80.7$. On the other hand, a sample of psychiatric outpatients showed a mean score of $M = 68.0$. The lowest scores reported were that of two PTSD samples with mean scores of $M = 47.8$ and $M = 52.8$.

4.5.2 Post-migration stress

The Post Migration Living Difficulties Scale (PMLD) (Silove et al., 1998) was used for measuring the subjective perception of post-migration stress. In the present version, The PMLD consists of 27 items (e.g. “In the last 12 months how much of a problem was following: experience of discrimination“, “separation from family“, or “no work permit“). Items are rated on a 5-point Likert scale from 0 – *not a problem* to 4 – *very serious problem*. In the past, The PMLD has been successfully used to measure

current stressors and life experiences of forced migrants other than war (Nickerson et al., 2011; Schick et al., 2018). Unfortunately, there is a lack of description of the reliability of the scale and other psychometric properties in the original study and subsequent literature. This is due to item content variation across studies and variation in the number of items in the PMLD. In the original study, the PMLD consisted of 23 items. Other studies used a short version with only seven items (Schweitzer et al., 2011). The version in this study consists of 27 items.

4.5.3 Symptoms of depression

To assess symptoms of depression, the Patient Health Questionnaire (PHQ-9) was used (Kroenke et al., 2001). The PHQ-9 was developed as a self-administered, diagnostic tool for assessing and keeping track of depression severity. It consists of 9 items (e.g. “Over the last two weeks, how often have you been bothered by any of the following problems: Feeling bad about yourself — or that you are a failure or have let yourself or your family down?”, or “poor appetite or overeating”) and is evaluated on a 4-point scale from 0 – *not at all* to 3 – *nearly every day*. With each question, the PHQ-9 covers one of the nine DSM-IV criteria for the diagnosis of “Major Depression”. The PHQ-9 can be scored and interpreted in two ways: categorial and as a total sum. Usually, the total sum is used to describe varying levels of depression. For a cutoff score of ≥ 10 , the authors report a sensitivity of 88% and a specificity of 88% for major depression. In the present study, the dimensional score of the PHQ-9, which is obtained with the total sum method, is used. The Internal consistency of the scale proved to be really good with a Cronbach’s alpha of $\alpha = .89$ (Kroenke et al., 2001).

4.5.4 Symptoms of anxiety

The Generalized Anxiety Disorder-Scale (GAD-7) (Spitzer et al., 2006) was used to screen for symptoms of anxiety disorders. Contrary to its name, the GAD-7 is not only sensitive to generalized anxiety disorder (GAD), but also to other anxiety syndromes such as phobia and panic disorder. Therefore, in its function, it can be classified as one of the general anxiety inventories. The 7-item self-report measure (e.g. “Over the last two weeks, how often have you been bothered by any of the following problems: Feeling afraid as if something awful might happen?”, or “trouble relaxing”) can be answered using a 4-point Likert scale varying from 0 – *not at all* to 3 – *nearly every day*. The total score of the scale ranges from 0-21, with higher scores

reflecting more anxiety symptoms. The authors report high internal consistency for the scale ($\alpha = .92$) (Spitzer et al., 2006). Furthermore, the authors showed that a cut-off value of ≥ 10 on the total GAD-7 scale indicated an optimal sensitivity-specificity relationship. In the present study, a dimensional score is used for the GAD-7 to interpret the results.

4.5.5 Symptoms of PTSD

Symptoms of PTSD were assessed with the PTSD Checklist for DSM-5 (PCL-5) (Weathers et al., 2013). The PCL-5 comprises 20 items (e.g. “In the past month, how much were you bothered by repeated, disturbing dreams of the stressful experience?”) with response categories varying from 0 – *not at all* to 4 – *extremely*. It assesses the 20 DSM-5 symptoms of PTSD in the past month. A total score can be obtained (between 0 and 80) by summing the scores for each of the 20 items. In addition, it is possible to determine the severity of symptoms in each of the four clusters of the DSM-5 by summing the scores for the items within the clusters: “Intrusion” (items 1-5), “Avoidance” (items 6-7), “Negative alterations in cognitions and mood” (items 8-14), and “Alterations in arousal and reactivity” (items 15-20). The authors report high internal consistency for the overall scale ($\alpha = .94$) as well as good test-retest reliability ($r = .82$).

4.6 Statistical analysis

All statistical analyses were conducted using SPSS Version 26. A descriptive statistical analysis was carried out to report the sample's means, standard deviations, ranges, and internal consistencies on the instruments important for the present study. For all three hypotheses, moderation analyses were performed using the PROCESS macro Version 4.0 by Andrew F. Hayes (2022). Regarding the first hypothesis, post-migration stress functioned as the independent variable, symptoms of depression functioned as the dependent variable and the resilience score served as the moderator variable. Regarding the second hypothesis, post-migration stress functioned as the independent variable, symptoms of anxiety functioned as the dependent variable and the resilience score functioned as the moderator variable. Lastly, post-migration stress constituted the independent variable, PTSD symptoms served as the dependent variable and the resilience score functioned as the moderator variable in the testing of the third hypothesis. In addition to the moderation analysis for each hypothesis, it was

checked, if both, resilience and post-migration stress would add statistically significantly to the predictions of the dependent variable.

All participants were included in the statistical analyses ($n = 31$). Before the moderation analyses were conducted with PROCESS, it was determined whether or not the variables fulfilled the statistical requirements. Because directional hypotheses were formulated before testing, one-sided significance testing was implemented with

a significance level of $\alpha = .05$. This means that p-values of .05 or lower were deemed significant.

5 Results

5.1 Descriptive analysis

Table 3 shows the means, standard deviations, ranges, and internal consistencies of the different instruments used in the present study. As a measure of internal consistency, Cronbach's alpha was calculated.

Table 3

Descriptive statistics of the used instruments in the present study

Scale	<i>M</i>	<i>SD</i>	Range	Cronbach's α
CD-RISC	73.39	13.98	28-95	.91
PMLD	51.81	23.08	5-96	.94
PHQ-9	6.45	4.89	0-17	.80
GAD-7	4.48	4.36	0-13	.83
PCL-5	24.0	13.23	4-57	.89

Note. *M* = Mean, *SD* = Standard Deviation, *n* = 31.

In line with Blanz (2015), Cronbach's alpha values of $\alpha \geq .70$ are classified as "acceptable", values of $\alpha \geq .80$ are classified as "high" and values of $\alpha \geq .90$ as "excellent". Therefore, all scales proved to have either high or excellent internal consistencies.

5.2 Testing of the moderation model assumptions

All hypotheses of the present master thesis were tested via moderation analyses. In general, the assumptions of the moderation model are similar to that of the multiple linear regression. However, the PROCESS macro Version 4.0 by Andrew F. Hayes uses Bootstrapping, which is a robust method and does not make any assumptions regarding the distribution properties. Hayes (2022) emphasizes that it is not necessary to rigidly hold onto the assumptions while using Bootstrapping:

„[...] I do not believe you should lose too much sleep over the potential that you have violated one or more of those assumptions“ (p. 71). Nevertheless, it seems important to check for assumption violations, because it can have some adverse effects on

inference, especially when assumptions are strongly violated. Due to the reason that there is no option for assumption testing in PROCESS, it was done “manually” in SPSS.

With the help of box plots, outliers can be detected. In the present study, only one outlier was identified in the CD-RISC scale (see Appendix C) and kept in the analysis due to the small overall sample size and the legitimacy of the value. Linearity of the relationship between predictor, moderator, and outcome variable was tested by visual inspection of the scatterplots after LOESS smoothing (see Appendix D) and confirmed for all important constellations of independent variable, moderator, and dependent variable. To diminish multicollinearity and facilitate interpretation of the b-coefficients, it was decided to mean center the independent variable and the moderator variable. An interaction term was calculated with the centered variables and entered into the linear model to check for multicollinearity, multivariate normality, independence of residuals, and homoscedasticity. The Variance Inflation Factor (VIF) turned out to be close to 1 for all variables added, which indicates that there was no multicollinearity. Histograms (see Appendix E) showed roughly normally distributed residuals for all three models (three hypotheses). The data also met the assumption of independent residuals (Durbin-Watson values = 2.12, 1.77, and 2.20). The S*RESID vs. Z*PRED scatterplots showed no signs of some kind of shape, therefore homoscedasticity was assumed.

5.3 Hypothesis 1: Symptoms of depression

To test hypothesis 1, a moderation analysis was conducted to see whether higher levels of resilience weaken the relationship between post-migration stress and symptoms of depression in the present sample. The predictors did not add statistically significantly to the prediction of symptoms of depression, $F(3, 27) = 2.09$, $p = .125$, $R^2 = .12$. However, the interaction between post-migration stress and resilience was found to be significant ($b = -0.01$; $p = .020$), as can be seen in Table 4.

Table 4*b* coefficients, standard errors, *t*-values, and *p*-values for the analysis of hypothesis 1

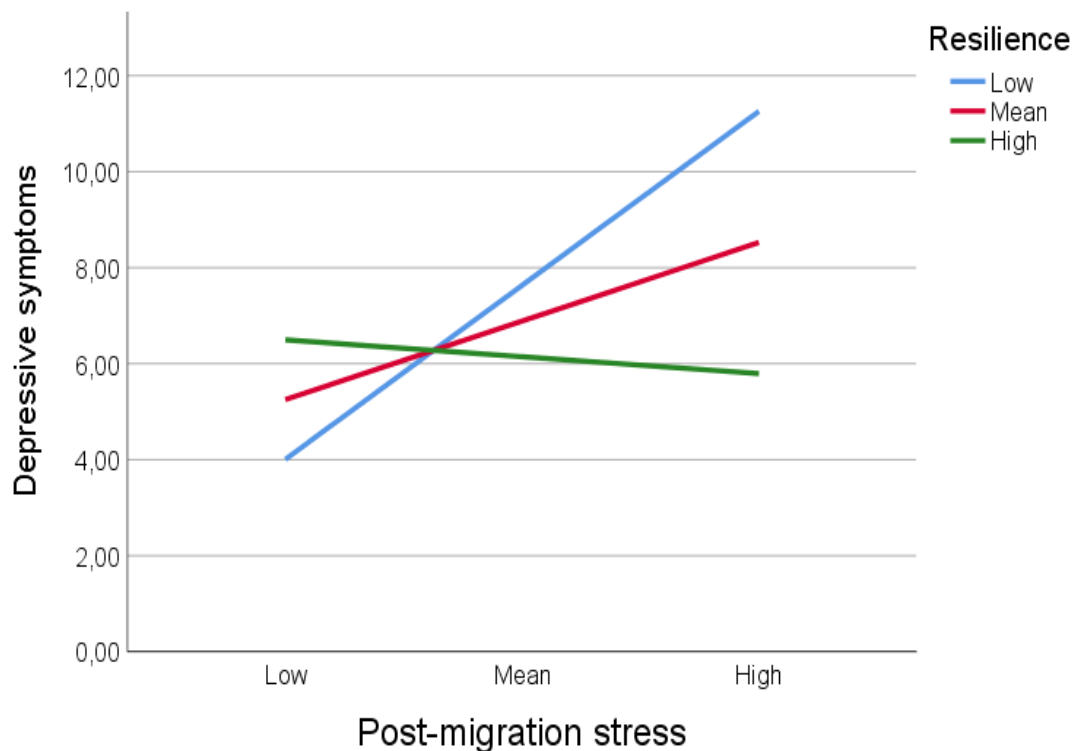
	<i>b</i>	<i>SE B</i>	<i>t</i>	<i>p</i>
Constant	6.89 [4.86, 8.92]	0.988	6.97	$p < .001^*$
PMLD	0.07 [-0.03, 0.17]	0.050	1.42	$p = .167$
CD-RISC	-0.05 [-0.17, 0.07]	0.058	-0.91	$p = .368$
PMLD*CD-RISC	-0.01 [-0.011, -0.001]	0.003	-2.48	$p = .020^*$

Note. * = significant, [...] = confidence interval; both predictors have been mean centered. Outcome: PHQ-9, $n = 31$.

The negative *b*-coefficient for the interaction predictor indicates that the relationship between post-migration stress and symptoms of depression becomes less positive with increasing resilience. The relationship between post-migration stress and symptoms of depression was positive, but non-significant, for participants with low resilience (1 SD below mean), $b = 0.16$, 95%CI [-0.002, 0.316], $t = 2.03$, $p = .053$, and positive but weaker for participants with average resilience, $b = 0.07$, 95%CI [-0.032, 0.173], $t = 1.42$, $p = .167$. For participants with high resilience (1 SD above mean), the former positive relationship between post-migration stress and symptoms of depression turned into a negative, but still non-significant, relationship, $b = -0.02$, 95%CI [-0.092, 0.061], $t = -0.41$, $p = .687$. The interaction is also visualized in Figure 1. The Johnson-Neyman Output suggests that the overall model might only be fitting if resilience is very low ($M - 15.24$). Due to the significant interaction effect and the nature of the interaction, the presented results support the first hypothesis. Increasing values for resilience weaken the positive relationship between post-migration stress and symptoms of depression until the relationship turns negative for high resilience values.

Figure 1

Interaction graph for hypothesis 1; Outcome symptoms of depression



Note. Low = 1 SD below Mean, High = 1 SD above Mean. Calculated with the conditional effects of the focal predictor at values of the moderator (Simple Slopes).

5.4 Hypothesis 2: Symptoms of anxiety

To test hypothesis 2, another moderation analysis was conducted to see whether higher levels of resilience weaken the relationship between post-migration stress and anxiety symptoms in the present sample. The predictors did not add statistically significantly to the prediction of anxiety symptoms, $F(3, 27) = 2.05$, $p = .131$, $R^2 = .10$. In addition, the interaction between post-migration stress and resilience was found to be non-significant ($b = -0.005$; $p = .055$), as can be seen in Table 5. Since the reported p-level almost reached significance, a trend that resilience affects the relationship between post-migration stress and anxiety symptoms can cautiously be assumed.

Table 5*b* coefficients, standard errors, *t*-values, and *p*-values for the analysis of hypothesis 2

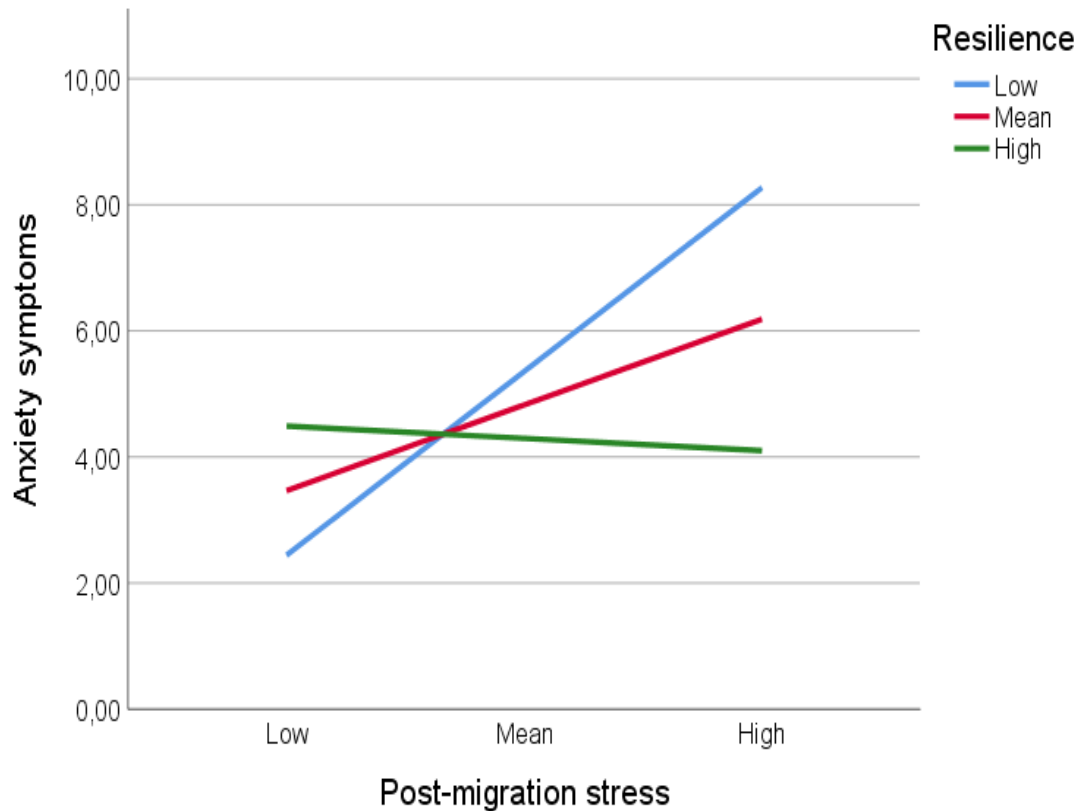
	<i>b</i>	<i>SE B</i>	<i>t</i>	<i>p</i>
Constant	4.83 [2.83, 6.82]	0.974	4.95	$p < .001^*$
PMLD	0.06 [-0.02, 0.14]	0.039	1.50	$p = .147$
CD-RISC	-0.04 [-0.26, 0.18]	0.107	-0.36	$p = .725$
PMLD*CD-RISC	-0.005 [-0.010, 0.0001]	0.002	-2.00	$p = .055$

Note. * = significant, [...] = confidence interval; both predictors have been mean centered. Outcome: GAD-7, $n = 31$.

The negative *b*-coefficient for the interaction predictor indicates that the relationship between post-migration stress and anxiety symptoms becomes less positive with increasing resilience. When Resilience was low (1 SD below mean), there was a significant positive relationship between post-migration stress and anxiety symptoms, $b = 0.13$, 95%CI [0.007, 0.246], $t = 2.17$, $p = .039$. At mean resilience, there was a positive, but weaker and non-significant, relationship between post-migration stress and anxiety symptoms, $b = 0.06$, 95%CI [-0.022, 0.140], $t = 1.50$, $p = .147$. When resilience was high (1SD above mean), the former positive relationship between post-migration stress and anxiety symptoms turned into a negative, non-significant, relationship, $b = -0.01$, 95% CI [-0.100, 0.083], $t = -0.19$, $p = .851$. The interaction is also visualized in Figure 2. It is notable, that the graph looks quite similar to the graph of the first hypothesis, and a similar pattern is observable. Increasing levels of resilience seem to be associated with a weaker positive relationship between post-migration stress and anxiety symptoms until the relationship turns negative for high resilience values.

Figure 2

Interaction graph for hypothesis 2; Outcome anxiety symptoms



Note. Low = 1 SD below Mean, High = 1 SD above Mean. Calculated with the conditional effects of the focal predictor at values of the moderator (Simple Slopes).

5.5 Hypothesis 3: Symptoms of PTSD

Lastly, a third moderation analysis was conducted to see whether higher levels of resilience weaken the relationship between post-migration stress and symptoms of PTSD. The variables did not add statistically significantly to the prediction of PTSD symptoms, $F(3, 27) = 0.61$, $p = .612$, $R^2 = .12$. The interaction between post-migration stress and resilience was found to be non-significant ($b = -0.01$; $p = .475$), as can be seen in Table 6. The negative b-coefficient for the interaction predictor indicates that the relationship between post-migration stress and PTSD symptoms becomes less positive with increasing resilience.

Table 6*b* coefficients, standard errors, *t*-values, and *p*-values for the analysis of hypothesis 3

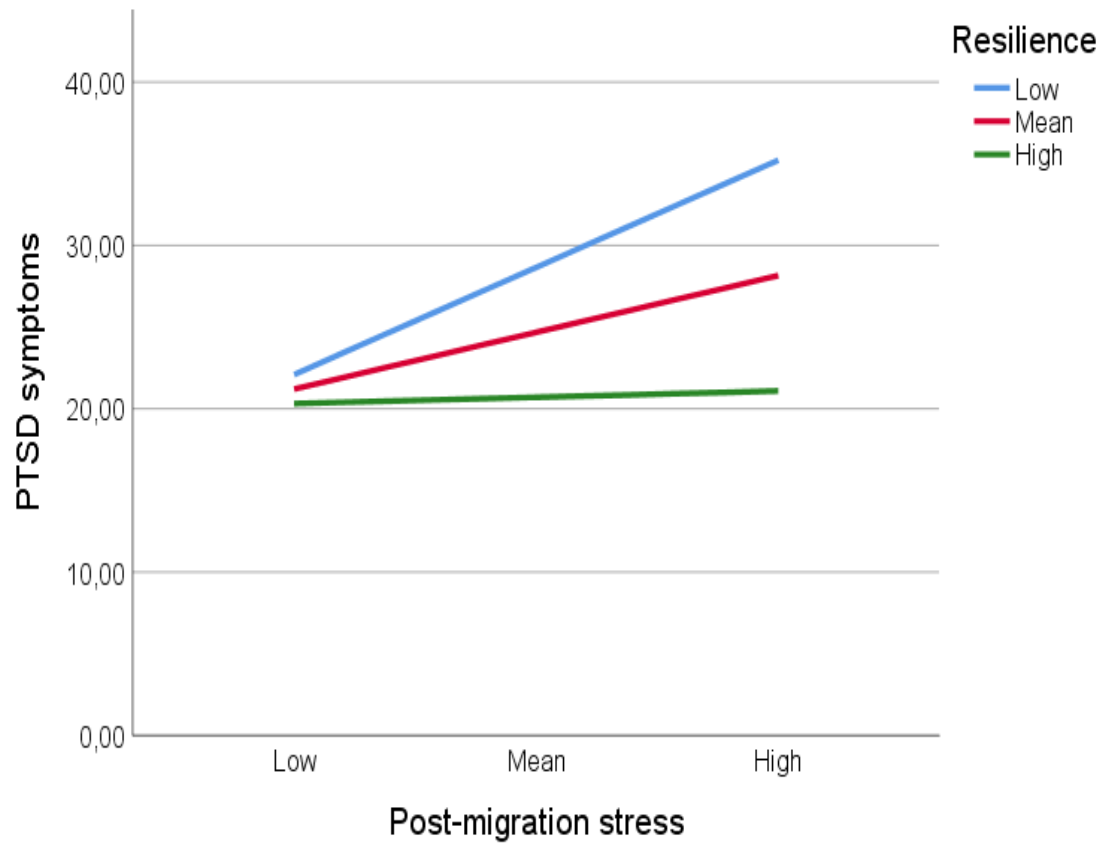
	<i>b</i>	<i>SE B</i>	<i>t</i>	<i>p</i>
Constant	24.68 [19.27, 30.08]	2.634	9.37	$p < .001^*$
PMLD	0.15 [-0.24, 0.54]	0.188	0.80	$p = .431$
CD-RISC	-0.28 [-0.26, 0.18]	0.232	-1.23	$p = .230$
PMLD*CD-RISC	-0.01 [-0.04, 0.02]	0.013	-0.73	$p = .475$

Note. * = significant, [...] = confidence interval; both predictors have been mean centered. Outcome: PCL-5, $n = 31$.

At low resilience (1 SD below mean), the relationship between post-migration stress and PTSD symptoms was positive, but non-significant, $b = 0.29$, 95%CI [-0.460, 1.029], $t = 0.78$, $p = .440$. At mean resilience, the relationship was still positive and non-significant, but weaker, $b = 0.15$, 95%CI [-0.236, 0.537], $t = 0.80$, $p = .431$. When resilience was high (1 SD above mean), the positive relationship between post-migration stress and PTSD symptoms became even more weak, $b = 0.017$, 95%CI [-0.159, 0.191], $t = 0.20$, $p = .847$. The interaction is also visualized in Figure 3. Contrary to the pattern of the previous two graphs, it is visible that for hypothesis 3, the positive relationship between post-migration stress and PTSD symptoms does not turn into a negative one for high resilience values. For hypotheses 1 and 2, this was the case, as high resilience levels led to a negative relationship between post-migration stress symptoms of depression and anxiety, respectively. Due to the non-significant interaction effect, the presented results in this section do not support the third hypothesis.

Figure 3

Interaction graph for hypothesis 3; Outcome PTSD symptoms



Note. Low = 1 SD below Mean, High = 1 SD above Mean. Calculated with the conditional effects of the focal predictor at values of the moderator (Simple Slopes).

6 Discussion

Asylum seekers and refugees are highly vulnerable groups and at particular risk of developing mental health problems. The literature suggests, that there is a high prevalence of PTSD, depression and anxiety in these groups (Blackmore et al., 2020; Peconga & Høgh Thøgersen, 2020). This does not seem surprising, considering the stressful conditions they face before, during, and even after flight, and the negative impact of chronic stress on physical and psychological health. While the relationship between trauma/chronic stress and PTSD, anxiety, and depression in asylum seekers and refugees is well researched, the effect of individual resilience on this relationship has been widely neglected. In addition, there is a heavy focus on the impact of pre- and peri-migration stressors, while the impact of post-migration stressors is less considered.

Therefore, the present master's thesis aimed to examine resilience as a protective factor in asylum seekers and refugees from Syria and Afghanistan and its impact on the relationship between post-migration stress and PTSD, depression, and anxiety symptoms. Forced migrants from Syria and Afghanistan were chosen as the target group because they represent the largest group of forced migrants in Austria. It was assumed, that higher levels of resilience would weaken the relationship between post-migration stress and PTSD, depression, and anxiety symptoms. To achieve the study objective, a questionnaire survey in the participants' mother tongue was implemented.

Altogether, the results of the present study only supported the first hypothesis that higher levels of resilience weaken the relationship between post-migration stress and symptoms of depression. However, the p-level for the analysis of the second hypothesis ($p = .055$) almost reached significance. Therefore, a trend that resilience also weakens the relationship between post-migration stress and anxiety symptoms can cautiously be assumed. In contrast, the p-level for the analysis of the third hypothesis was far away from significance. Accordingly, the present study does not provide evidence for the hypothesis that resilience moderates the relationship between post-migration stress and PTSD symptoms. Even though only the first hypothesis could be confirmed, the present study provides important evidence for the "buffering" effect of resilience. It seems like the "buffering" effect of resilience is not only present in Western samples, which has been shown in previous research (Fredrickson et al.,

2003; Gloria & Steinhardt, 2016; Wingo et al., 2010), but can also be partially transferred to a sample of non-Western forced migrants from Syria and Afghanistan.

6.1 Summary and interpretation of the demographic and descriptive analysis

The present sample consisted of $n = 31$ participants from Syria and Afghanistan. In Austria, where the study took place, forced migrants from Syria and Afghanistan made up approximately 62.5% of all applications for asylum in 2021 (Federal Ministry of Interior, 2022). In total numbers, 25.020 applications out of 39.930 came from Syrian and Afghan applicants. Out of these 25.020 applications, 16.280 (65%) came from Syrian applicants and 8740 (35%) came from Afghan applicants. Similar ratios of Syrian to Afghan forced migrants applying for asylum in Austria have been reported in the previous few years. In the present study, 30 of the 31 participants (96.8%) were Syrian. Accordingly, there is a higher ratio of Syrian participants to Afghan participants in the present sample than what could have been expected before the study.

6.1.1 Gender

Regarding gender differences, it shows that only 14,6% of all asylum applications in Austria are made by females (excluding minor applicants) (Federal Ministry of Interior, 2022). This gender disbalance can be also seen in the sample of the present study. As with the ratio of Syrian to Afghan participants, the present sample overwhelmingly consists of males ($n = 30$, 96,8%) in comparison to females.

The literature on mental health in forced migrants suggests that there are gender differences in the refugee experience. Gender roles and power differentials generally influence the lived experiences of the individual, including forced migrants. For example, women seem to have an increased risk of experiencing potentially traumatic events during flight (Young & Chan, 2015). Especially sexual violence, rape, forced nakedness, and molestation are common traumatic experiences, which are more often described by female forced migrants (Araujo et al., 2019). Overall, mental health disorders are more prevalent in refugee women than refugee men (Hollander et al., 2011). On the other hand, it is more socially acceptable for women to seek emotional support from family, friends, or psychotherapists when distressed (Renner & Salem, 2009). Traditional gender roles may impact the tendency of men to deal with mental distress themselves and to not seek help. They might be more worried about looking weak or embarrassing their parents and family when they openly talk about

mental health issues. Studies about the stigmatization of mental illness in the Middle East suggest that these ideas are important barriers to the treatment of mental health problems in these regions (Al-Krenawi, 2005; Coker, 2005). Because the present sample almost exclusively consisted of males, it seems difficult to generalize the findings to both sexes. It is important to remember that there is no such thing as a “common” refugee experience. Gender identity is one of many factors, which influence the experience of migration and resettlement and add to a “unique” pathway of loss and recovery.

6.1.2 Length of stay

One of the eligibility criteria in the present study was a maximum of 36 months length of stay in Austria. In the present sample, the mean length of stay was $M = 11.8$ months with a range of 3-36 months. An important topic that needs to be addressed when designing health care programs for forced migrants is the stability or change of mental health outcomes over time. Up until now, the research literature on the relationship between the length of stay in the host country and psychological distress has demonstrated contradictory evidence. In a rather recent meta-analysis, it was shown that a long time between the date of study and the time of arrival in the host country was related to better mental health outcomes for forced migrants compared to a control group (Porter & Haslam, 2005). In addition, Steel et al. (2002) observed that trauma-related symptoms decreased over time in Vietnamese forced migrants resettled in Australia. In contrast, other studies showed increasing mental illness and distress over time. Kirmayer et al. (2011) showed that the prevalence of mental illness increased with time after arrival in the host country. In one of the major recent mental illness prevalence reviews in refugees and asylum seekers, Blackmore et al. (2020) noted that prevalence rates did not differ between those displaced less than four years and those displaced longer, indicating that mental illness in this group may not just decrease over time. Many of the participants in the present study just arrived in Austria. The lowest reported duration was three months, and the modal values were five and six months. In the present study, no significant relationships between length of stay in Austria and anxiety, PTSD, and depression symptoms were found ($p = .963$, $p = .304$, $p = .655$, respectively). However, the relationships were positive between the length of stay and symptoms of depression and anxiety and negative for the relationship between the length of stay and PTSD symptoms. When looking at these results, it has

to be remembered that one exclusion factor for the present study was ongoing therapeutic treatment. Ongoing therapeutic treatment arguably decreases psychological distress in forced migrants, especially if treatment is planned and implemented in the long term (Lambert & Alhassoon, 2015; Wright et al., 2020). Unfortunately, the waiting list for psychotherapy is long. According to the German Association of Psychosocial Centres for Refugees and Victims of Torture (BafF), the waiting time for a place in a psychological treatment program is approximately 7 months on average for forced migrants in Germany (BAfF, 2020). The fact that people with therapeutic treatment were excluded from the study may have led to the persistence of mental health disorder symptoms in the present sample.

6.1.3 Resilience, post-migration stress, depression, anxiety, and PTSD

The descriptive analysis of the instruments used in the present study showed several things. First, the mean score of $M = 73.39$ ($SD = 13.98$) on the resilience scale (CD-RISC) was higher than expected. Although the documented mean score in the present sample is lower than the reported mean in the general US population

($M = 80.7$, $SD = 12.8$) (Connor & Davidson, 2003), it is higher than the mean score found in several other forced migrant samples. For example, Ziaian et al. (2012) studied 170 asylum seekers and refugees from Iran, Iraq, Afghanistan, Sudan, and Liberia resettled in Australia and found a mean CD-RISC score of $M = 62.2$. In addition, Faiq and Cinkara (2018) reported a mean CD-RISC score of $M = 63.7$ for their sample of internally displaced persons in Iraq. According to a one sample t-test, the mean CD-RISC scores reported in the previous two studies differ significantly from the score found in the present sample ($p < .001$). There are several important factors, such as the quality of life in the host country, length of stay of the participants, and quality of the translation of the CD-RISC into a Dari/Farsi and Arabic version, which might have led to increased resilience scores on the CD-RISC in the present sample.

For the PMLD, the mean score of the present sample was $M = 51.81$ ($SD = 23.08$). Unfortunately, there are no other studies that used a 27-item PMLD scale and reported a mean value. For instance, other studies have used a 7-item scale (Schweitzer et al., 2011), or a 23-item scale (Silove et al., 1998). Therefore, it is difficult to compare the mean value in the present sample to other samples.

The results for the descriptive analysis of the PHQ-9, the GAD-7, and the PCL-5 showed that there is a high prevalence of mental health disorder symptoms.

The mean score for the PHQ-9 in the present sample was $M = 6.45$ ($SD = 4.89$). Kocalevent et al. (2013) reported an overall lower mean score of $M = 2.91$, ($SD = 3.52$) in a random sample of $n = 5018$ adults from Germany. In general, the total sum of the responses on the PHQ-9 is used to suggest varying levels of depression. In that matter, total scores of 5, 10, and 15 represent cutoff points for mild, moderate, and severe levels of depression severity. Kocalevent et al. (2013) documented a prevalence rate of 5.6% (total score ≥ 10) for moderate to high severity of depression in their sample, which is in line with the results of previous prevalence studies on any depressive disorder in the general population (Martin et al., 2006; Wittchen et al., 2011). In the present sample, 22.6 % of the participants had a total score of 10 or higher on the PHQ-9, indicating a high prevalence of moderate to severe levels of depression. This is in line with other research on the mental health of asylum seekers and refugees (Blackmore et al., 2020).

For the GAD-7, the mean score in the present study was $M = 4.48$ ($SD = 4.36$). Löwe et al. (2008) documented a lower mean of $M = 2.95$ ($SD = 3.41$) in a representative sample with $n = 5020$ German subjects. In general, scores of 5, 10, and 15 represent cutoff points for mild, moderate, and severe anxiety in the GAD-7. Löwe et al. (2008) reported that approximately 5% of the subjects had GAD-7 scores of 10 or higher, indicating moderate levels of anxiety. In the present sample, 16.1% of the subjects had GAD-7 scores of 10 or higher. Surprisingly, 30% of subjects in the present sample did not show any symptoms of anxiety and had a score of 0.

Regarding PTSD symptoms, the subjects in the present study had a mean score of $M = 24.0$ ($SD = 13.23$) on the PCL-5. Krüger-Gottschalk et al. (2017) studied a clinical sample of trauma-exposed individuals ($n = 352$) and found a higher mean sum score of $M = 39.09$ ($SD = 19.99$) on the PCL-5. In a sample of treatment-seeking military service members, Wortmann et al. (2016) reported a baseline score of $M = 42.41$ ($SD = 15.06$) on the PCL-5. Furthermore, 63% of the individuals met the recommended cutoff score of 33, which is indicative of probable PTSD across samples. In the present sample, 22.6 % of the subjects met the recommended cutoff score of 33. This means that there is undoubtedly a higher prevalence of PTSD in the present sample than in the general population, as suggested by prevalence studies of PTSD in the general population (Maercker et al., 2008; Perrin et al., 2014). In contrast, it is slightly lower than what Wortmann et al. (2016) and Krüger-Gottschalk et al. (2017) reported for their samples of individuals who were exposed to potentially traumatic

events. It is possible that the “honeymoon” period, which is a phase of euphoria that often occurs initially following arrival in the host country and affects disorder symptoms of forced migrants, may be responsible for the differences. All samples were exposed to potentially traumatic events, but only the sample in the present study could have experienced such a “honeymoon” phase.

6.2 Summary and interpretation of the inferential analysis

6.2.1 Hypotheses 1 and 2: Symptoms of depression and anxiety

In the present study, higher levels of resilience significantly weakened the relationship between post-migration stress and symptoms of depression. For anxiety symptoms, a similar impact of resilience was observable, but the moderation analysis did not reach statistical significance ($p = .055$). When comparing the interaction graph for symptoms of depression as the outcome with the interaction graph for anxiety symptoms as the outcome, it is noticeable that both graphs look quite similar. Increasing values for resilience weaken the positive relationship between post-migration stress and depression/anxiety symptoms until the relationship turns negative for high resilience values (1 *SD* above mean). This means that for the participants with high resilience, higher exposure to post-migration stress was associated with fewer symptoms of anxiety and depression. The idea that more stress would lead to fewer symptoms seems surprising considering the findings of previous literature, which strongly suggest a positive association between stress and mental health disorder symptoms across a variety of samples (Bergdahl & Bergdahl, 2002; Lavallée & Flint, 1996; Marin et al., 2011; Schwartz et al., 2021). Even though there are studies that suggest that resilience can moderate (more specifically, weaken) the impact of stress on psychological distress and mental health disorder symptoms (Pinquart, 2009; Wingo et al., 2010), to my knowledge there is no study that showed that high resilience levels led to a negative relationship between stress and disorder symptoms. When looking at the results, it has to be remembered that most of the studies that measured resilience as a construct are from Western researchers, which predominantly tested resilience within Western populations. It is possible that certain resilience-enhancing factors may work differently in non-Western refugees and asylum seekers. The CD-RISC scale captures important aspects of resilience but not the global construct of resilience across domains, neglecting the adaptive dynamic process operating at

multiple levels (Rutter, 2013). Cross-cultural literature suggests that resilience depends on relational, community, cultural, and contextual factors (Ungar et al., 2008). This might limit the validity of the CD-RISC, as it was developed with the lens of Western culture, disregarding other aspects central to resilience. For example, the role of religion could have been underestimated in the present study. In a review of qualitative studies, it was shown that in people from the Middle East, the pursuit of religious belief and a connection to god often emerged as a source of resilience (Sleijpen et al., 2016). In forced migrants from the Middle East, faith and the pursuit of religious practices are often described as the most important coping mechanisms, which help them to stay positive, accept the situation, and remove responsibility from them (El-Khani et al., 2017). In the present study, religious belief was assessed via single items at the beginning of the questionnaire. A simple correlation analysis showed that the item “My faith gives me strength in difficult situations/ I trust that my god will guide me” and an item, which assessed the level of belief and performance of religious duties were strongly correlated with the CD-RISC score ($r = .62$, $r = .59$ respectively, $p < .001$). Thus, participants with high resilience believed more and carried out more religious activities. It is possible that strong religious beliefs may be responsible for the negative relationship between post-migration stress and anxiety/depression symptoms found in highly resilient individuals. Religious involvement may prevent adverse effects of post-migration stress on self-identity. Religious spaces might be identified as being “different” from the material world and therefore offer a respite from adversities of daily life. If there is a belief in the afterlife, more severe problems in the present may be seen as bearable or even inevitable as a part of the present life in comparison to the “happy” afterlife following death.

6.2.2 Hypothesis 3: Symptoms of PTSD

The third hypothesis that resilience moderates the relationship between post-migration stress and PTSD symptoms could not be confirmed. When comparing all three interaction graphs for the three hypotheses, it is visible that the interaction graph for PTSD symptoms shows no negative relationship between post-migration stress and PTSD symptoms for high resilience values. This means that even for participants with high resilience, the relationship stayed positive, although it was weaker than for participants with average or low resilience. In contrast, for symptoms of depression and anxiety, negative relationships between post-migration stress and symptoms were

found for participants with high resilience. It seems like PTSD symptoms are different from depression and anxiety symptoms when it comes to the influence of post-migration stress and resilience. As Schick et al. (2018) showed in their longitudinal study, a reduction in post-migration stressors predicted a significant decrease in depression and anxiety symptoms, but not in PTSD symptoms in a sample of refugees from different countries. Apparently, the variance in PTSD rates appears to be better explained by trauma-related factors, whereas depressive and anxiety disorders are more impacted by post-migration stress (Li et al., 2016; Miller & Rasmussen, 2010). In addition, Arnetz et al. (2013) examined a sample of Iraqi and Arab immigrants in the U.S and found that resilience was a significant inverse predictor of psychological distress, but not of PTSD symptoms in both groups. Apparently, there is a less positive impact of resilience on PTSD symptoms than there is of resilience on anxiety and depressive symptoms. In a recent study conducted during the start of the COVID-19 pandemic, individual resilience was associated with low levels of depression and anxiety symptoms, but not PTSD (Liu et al., 2020). The authors argued that for those experiencing symptoms of PTSD, the perceived skill to tolerate aversive emotional and physical states might be more protective than the individual qualities that build resilience. Therefore, resilience that is associated with “bouncing back from adversity” may not be sufficient for protecting against PTSD symptoms. This could have been the case for the present sample as well, as forced migrants are exposed to tremendous traumatic events. Resilience may not be enough to buffer the effect of post-migration stress on PTSD symptoms.

6.3 Limitations and future research

When discussing the results of the present master’s thesis, some limitations should be considered that could potentially influence the analyses and distort the interpretation.

First, the present study was not designed to answer the research question of the master’s thesis, but to answer the research questions of the overarching project. The master’s thesis research question and hypotheses were proposed after the study was designed and not before. Usually, in a scientific work, this should have been the other way around. Resilience, post-migration stress and disorder symptoms are just a few out of many variables that were assessed using a whole test battery.

Second, the sample size was relatively small, which negatively impacts the validity of the results. An a priori power analysis with G*Power indicated that 77 participants were required for the detection of a significant moderation model with a medium effect and acceptable statistical power (.8). The fact that only 31 participants were recruited decreases the statistical power of the study and increases the likelihood of a Type II error skewing the results. This makes it difficult to generalize the findings of the present study and further research with bigger sample sizes is necessary to ensure potential generalization.

A third limitation, which also decreases generalization, is the homogeneity of the sample. Overall, 30 of the 31 participants were male. In addition, participants were almost exclusively from Syria ($n = 30$) and all participants arrived in Austria less than three years ago. As a result, the findings can only be generalized to this specific population. For example, it seems inappropriate to generalize the findings of the present study to female forced migrants from Syrian and Afghanistan. As previously stated, the literature on mental health in forced migrants suggests that there are gender differences in the refugee experience (Araujo et al., 2019; Young & Chan, 2015). This is why it is necessary to put the results in the right context and understand that they are mostly applicable to male forced migrants from Syria, who arrived in a Western host country less than three years ago.

Fourth, the present study had a cross-sectional design. This means that it is not possible to make any inferences about the causal and temporal relationships among the variables. In the present thesis, it is assumed that resilience causally influences the relationship between post-migration stress and disorder symptoms. Even though it does not seem plausible, it could also be that post-migration stress causally influences the relationship between resilience and disorder symptoms. Future research should implement more longitudinal studies on the effect of resilience to account for this problem. Longitudinal studies on resilience in forced migrants would be better to analyze changes in resilience over time and allow for an insight into the cause-and-effect relationship.

Fifth, there are problems with the instruments used in the present study. Because all instruments are self-report measures, the data obtained may be biased by the participant. One important problem might be socially desirable responses. Even though socially desirable responses are always a problem with self-report measures, it is especially concerning in the present study. Mental health related topics, especially

mental illnesses, are highly stigmatized in many countries of the Middle East (Mohammadzadeh et al., 2020). In addition, many forced migrants do not have a lot of trust in institutions governed by the state due to their bad past experiences (Majumder et al., 2015). They might have also problems with trusting University related institutions such as the one that conducted the present study. Therefore, it is possible that the participants responded socially desirable to protect themselves from stigmatization or expected exploitation. In addition, the instruments used were developed in Western countries and cultural differences could have biased the results. However, the scales were tried to be selected based on their cross-cultural validity.

6.4 Conclusion

In this master's thesis, the influence of resilience on the relationships between post-migration stress and symptoms of PTSD, depression, and anxiety in asylum seekers and refugees from Afghanistan and Syria were investigated. The statistical analyses showed that resilience significantly weakened the association between post-migration stress and symptoms of depression. In contrast, no significant effect of resilience on the relationships between post-migration stress and symptoms of anxiety and PTSD could be found. Despite the non-significance, a buffering effect of resilience on the relationships was detectable when looking at the interaction graphs. It is possible that an existing effect could not be detected due to the small sample size. Nonetheless, the present study highlights the potential role resilience plays in coping with post-migration stress among forced migrants resettling in a Western country. The results call for future research to enhance our knowledge of resilience in forced migrants and potential interventions to promote mental health resilience.

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Appendix

Appendix A



Personen mit Fluchterfahrung aus Afghanistan oder Syrien für eine Studie zur seelischen Gesundheit gesucht



10€

Aufwands-
entschädigung

» Worum geht es?

Eine **Flucht** aus dem Heimatland in ein neues Land ist eine **sehr große Belastung**. Mit unserer Studie wollen wir die seelische Gesundheit von Menschen mit Fluchterfahrung untersuchen.

» Wie kann ich teilnehmen?

Sie füllen einfach einen **kurzen Fragebogen** von uns aus, fertig!

» Wenn Sie mitmachen, erhalten Sie von uns **10€**.

» Dauer: **30-60 Minuten**

» Wir suchen **afghanische und syrische Teilnehmer und Teilnehmerinnen**, die

- **18–65 Jahre alt sind**
- Seit **maximal 36 Monaten** in Österreich leben
- **Einfaches Deutsch sprechen und verstehen (A1 Niveau)**

Bei Interesse senden Sie bitte eine E-Mail an:
asyl.flpa@univie.ac.at oder +4314277 47708

Studienleitung:

Dr. Dr. Ricarda Nater-Mewes
Univ.-Prof. Dr. Urs Nater

Appendix B

Connor-Davidson Resilience Scale (CD-RISC)

For each item, please mark an “x” in the box below that best indicates how much you agree with the following statements as they apply to you over the last **month**. If a particular situation has not occurred recently, answer according to how you think you would have felt.

		not true at all (0)	Rarely true (1)	Some times true (2)	Often true (3)	true nearly all the time (4)
1.	I am able to adapt when changes occur.	☐	☐	☐	☐	☐
2.	I have at least one close and secure relationship that helps me when I am stressed.	☐	☐	☐	☐	☐
3.	When there are no clear solutions to my problems, sometimes fate or God can help.	☐	☐	☐	☐	☐
4.	I can deal with whatever comes my way.	☐	☐	☐	☐	☐
5.	Past successes give me confidence in dealing with new challenges and difficulties.	☐	☐	☐	☐	☐
6.	I try to see the humorous side of things when I am faced with problems.	☐	☐	☐	☐	☐
7.	Having to cope with stress can make me stronger.	☐	☐	☐	☐	☐
8.	I tend to bounce back after illness, injury, or other hardships.	☐	☐	☐	☐	☐
9.	Good or bad, I believe that most things happen for a reason.	☐	☐	☐	☐	☐
10.	I give my best effort no matter what the outcome may be.	☐	☐	☐	☐	☐
11.	I believe I can achieve my goals, even if there are obstacles.	☐	☐	☐	☐	☐
12.	Even when things look hopeless, I don't give up.	☐	☐	☐	☐	☐
13.	During times of stress/crisis, I know where to turn for help.	☐	☐	☐	☐	☐
14.	Under pressure, I stay focused and think clearly.	☐	☐	☐	☐	☐
15.	I prefer to take the lead in solving problems rather than letting others make all the decisions.	☐	☐	☐	☐	☐
16.	I am not easily discouraged by failure.	☐	☐	☐	☐	☐
17.	I think of myself as a strong person when dealing with life's challenges and difficulties.	☐	☐	☐	☐	☐

18.	I can make unpopular or difficult decisions that affect other people, if it is necessary.	☐	☐	☐	☐	☐
19.	I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	☐	☐	☐	☐	☐
20.	In dealing with life's problems, sometimes you have to act on a hunch without knowing why.	☐	☐	☐	☐	☐
21.	I have a strong sense of purpose in life.	☐	☐	☐	☐	☐
22.	I feel in control of my life.	☐	☐	☐	☐	☐
23.	I like challenges.	☐	☐	☐	☐	☐
24.	I work to attain my goals no matter what roadblocks I encounter along the way.	☐	☐	☐	☐	☐
25.	I take pride in my achievements.	☐	☐	☐	☐	☐

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Post-Migration Living Difficulties Scale (PMLD)

Wir möchten Sie nach Schwierigkeiten fragen, die Sie in den letzten 12 Monaten (bzw. seit Ihrer Ankunft in Österreich, wenn weniger als 12 Monate in Österreich) erlebt haben könnten. Bitte beantworten Sie die Fragen mithilfe der folgenden fünf Antwortmöglichkeiten.

		Kein Problem	Ein kleines Problem	Einigermaßen großes Problem	Ziemlich großes Problem	Schwerwiegendes Problem
1.	Sorgen, bei Gesundheits-problemen keine Behandlung zu erhalten	☐	☐	☐	☐	☐
2.	Schlechter Zugang zu medizinischer Notfallversorgung	☐	☐	☐	☐	☐
3.	Schlechter Zugang zu langfristiger medizinischer Versorgung (Hausarzt, medizinische Grundversorgung)	☐	☐	☐	☐	☐
4.	Schlechter Zugang zu Beratungsangeboten (wenn Sie Beratung möchten, wäre es ein Problem für Sie?)	☐	☐	☐	☐	☐
5.	Wenig staatliche Unterstützung durch Sozialhilfe	☐	☐	☐	☐	☐
6.	Wenig Sozialhilfe von Wohltätigkeitsorganisationen (z.B. Rotes Kreuz, Heilsarmee)	☐	☐	☐	☐	☐

7.	Verzögerungen bei den Bearbeitungen von Asylanträgen	☐	☐	☐	☐	☐
8.	Kommunikations- oder Sprachprobleme	☐	☐	☐	☐	☐
9.	Diskriminierung	☐	☐	☐	☐	☐
10.	Keine Arbeit finden	☐	☐	☐	☐	☐
11.	Schlechte Arbeitsbedingungen	☐	☐	☐	☐	☐
12.	Armut (nicht genügend Geld haben für Grundbedürfnisse, z.B. Essen, Kleidung, Unterkunft)	☐	☐	☐	☐	☐
13.	Keine Arbeitserlaubnis	☐	☐	☐	☐	☐
14.	Trennung von der Familie	☐	☐	☐	☐	☐
15.	Sorgen über die Familie im Heimatland	☐	☐	☐	☐	☐
16.	Im Notfall nicht zur Familie ins Heimatland zurückkehren können	☐	☐	☐	☐	☐
17.	Einsamkeit und Langeweile	☐	☐	☐	☐	☐
18.	Isolation (allein sein oder sich so fühlen)	☐	☐	☐	☐	☐
19.	Heimweh	☐	☐	☐	☐	☐
20.	Aktuelle Wohnsituation	☐	☐	☐	☐	☐
21.	Schlechter Zugang zu traditionellen Lebensmitteln	☐	☐	☐	☐	☐
22.	Interview durch das Bundesamt für Migration und Flüchtlinge (BAMF)	☐	☐	☐	☐	☐

23.	Konflikte mit den zuständigen Beamten des Bundesamtes für Migration und Flüchtlinge (BAMF)	☐	☐	☐	☐	☐
24.	Angst, abgeschoben zu werden	☐	☐	☐	☐	☐
25.	Keine Privatsphäre	☐	☐	☐	☐	☐
26.	Die Religion nicht ausüben können	☐	☐	☐	☐	☐
27.	Schwierigkeiten, sich an das Wetter/Klima anzupassen	☐	☐	☐	☐	☐

Patient Health Questionnaire, Generalized Anxiety Disorder-Scale (PHQ-9, GAD-7)

Nun möchten wir wissen, wie oft Sie sich im Laufe der letzten 2 Wochen durch folgende Beschwerden beeinträchtigt fühlten.

		Überhaupt nicht	An einzelnen Tagen	An mehr als der Hälfte der Tage	Beinahe jeden Tag
1.	Wenig Interesse oder Freude an Ihren Tätigkeiten	☐	☐	☐	☐
2.	Niedergeschlagenheit, Schwermut oder Hoffnungslosigkeit	☐	☐	☐	☐
3.	Schwierigkeiten, ein- oder durchzuschlafen oder vermehrter Schlaf	☐	☐	☐	☐
4.	Müdigkeit oder Gefühl, keine Energie zu haben	☐	☐	☐	☐
5.	Verminderter Appetit oder übermäßiges Bedürfnis zu essen	☐	☐	☐	☐
6.	Schlechte Meinung von sich selbst; Gefühl, ein Versager zu sein oder die Familie enttäuscht zu haben	☐	☐	☐	☐

7.	Schwierigkeiten, sich auf etwas zu konzentrieren	☐	☐	☐	☐
8.	Waren Ihre Bewegungen oder Ihre Sprache so verlangsamt, dass es auch anderen auffallen würde? Oder waren Sie im Gegenteil zappelig, ruhelos und hatten einen stärkeren Bewegungsdrang?	☐	☐	☐	☐
9.	Gedanken, dass Sie lieber tot wären oder sich Leid zufügen möchten	☐	☐	☐	☐

		Überhaupt nicht	An einzelnen Tagen	An mehr als der Hälfte der Tage	Beinahe jeden Tag
10.	Nervosität, Ängstlichkeit oder Anspannung	☐	☐	☐	☐
11.	Nicht in der Lage sein, Sorgen zu stoppen oder zu kontrollieren	☐	☐	☐	☐
12.	Übermäßige Sorgen bezüglich verschiedener Angelegenheiten	☐	☐	☐	☐
13.	Schwierigkeiten zu entspannen	☐	☐	☐	☐
14.	Rastlosigkeit, so dass Sitzen schwer fällt	☐	☐	☐	☐
15.	Schnelle Verärgerung oder Gereiztheit	☐	☐	☐	☐
16.	Gefühl der Angst, so als würde etwas Schlimmes passieren	☐	☐	☐	☐

PTSD-Checklist für DSM-5 (PCL-5)

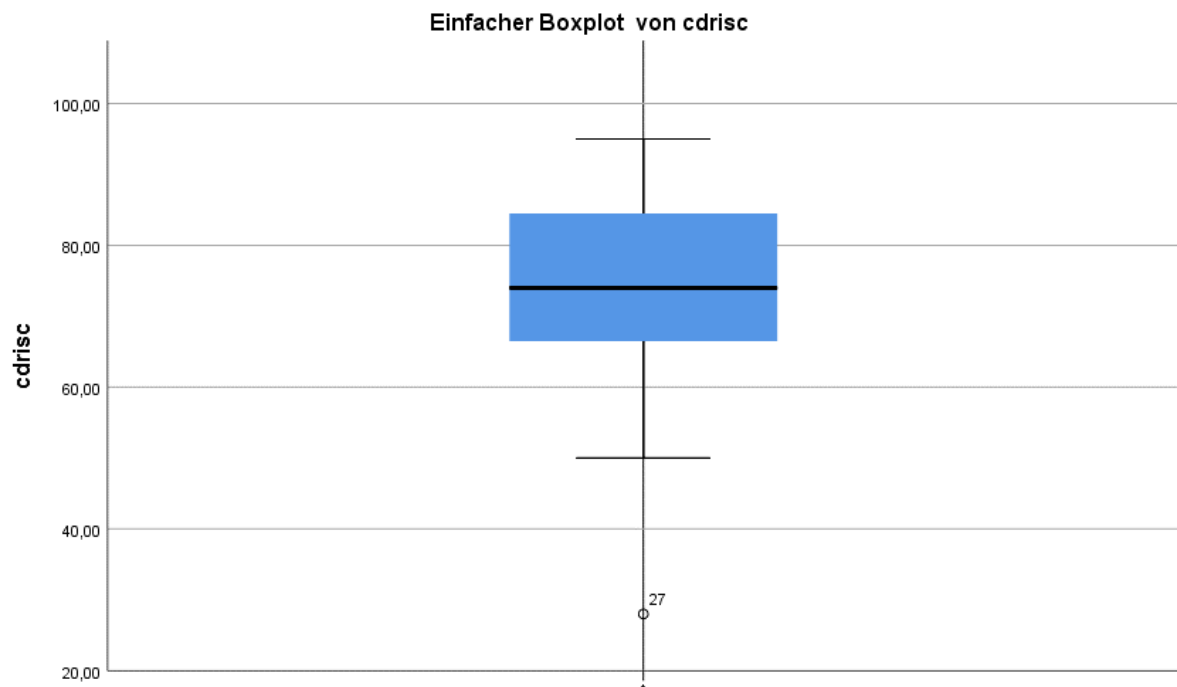
Nachfolgend sind Probleme aufgelistet, die Menschen manchmal als Reaktion auf ein sehr belastendes Erlebnis haben. Bitte lesen Sie jedes Problem sorgfältig und markieren Sie dann eine der Zahlen auf der rechten Seite, um anzugeben, wie stark Sie im letzten Monat durch dieses Problem belastet waren.

Im letzten Monat, wie sehr waren Sie belastet durch:		Überhaupt nicht	Ein wenig	Ziemlich	Stark	Sehr stark
1.	Wiederholte, beunruhigende und ungewollte Erinnerungen an das belastende Erlebnis?	☐	☐	☐	☐	☐
2.	Wiederholte, beunruhigende Träume von dem belastenden Erlebnis?	☐	☐	☐	☐	☐
3.	Sich plötzlich fühlen oder so verhalten, als ob das belastende Erlebnis tatsächlich wieder stattfinden würde (<i>als ob Sie tatsächlich wieder dort wären und es wiedererleben würden</i>)?	☐	☐	☐	☐	☐
4.	Sich emotional sehr belastet fühlen, wenn Sie etwas an das Erlebnis erinnert hat?	☐	☐	☐	☐	☐
5.	Starke, körperliche Reaktionen, wenn Sie etwas an das belastende Erlebnis erinnert hat (<i>z.B. Herzklopfen, Schwierigkeiten beim Atmen, schwitzen</i>)	☐	☐	☐	☐	☐
6.	Vermeidung von Erinnerungen, Gedanken oder Gefühlen im Bezug auf das belastende Erlebnis?	☐	☐	☐	☐	☐
7.	Vermeidung äußerer Auslöser für Erinnerungen an das belastende Erlebnis (<i>z.B. Personen, Plätze, Gespräche, Aktivitäten, Gegenstände oder Situationen</i>)?	☐	☐	☐	☐	☐

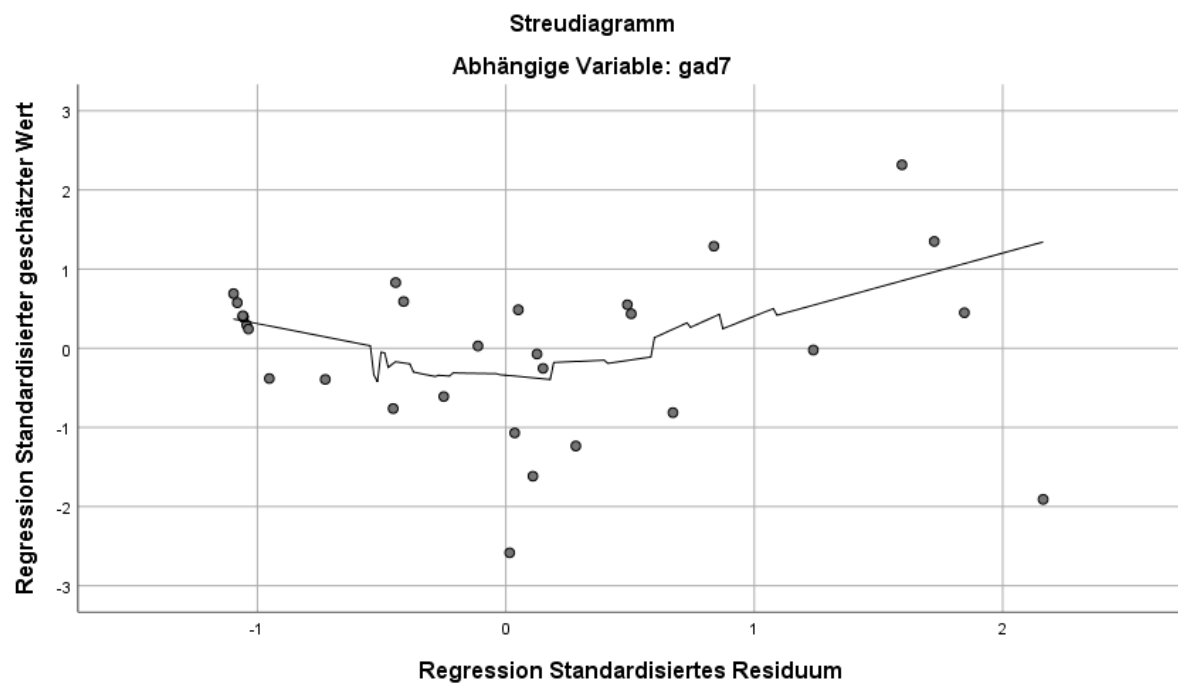
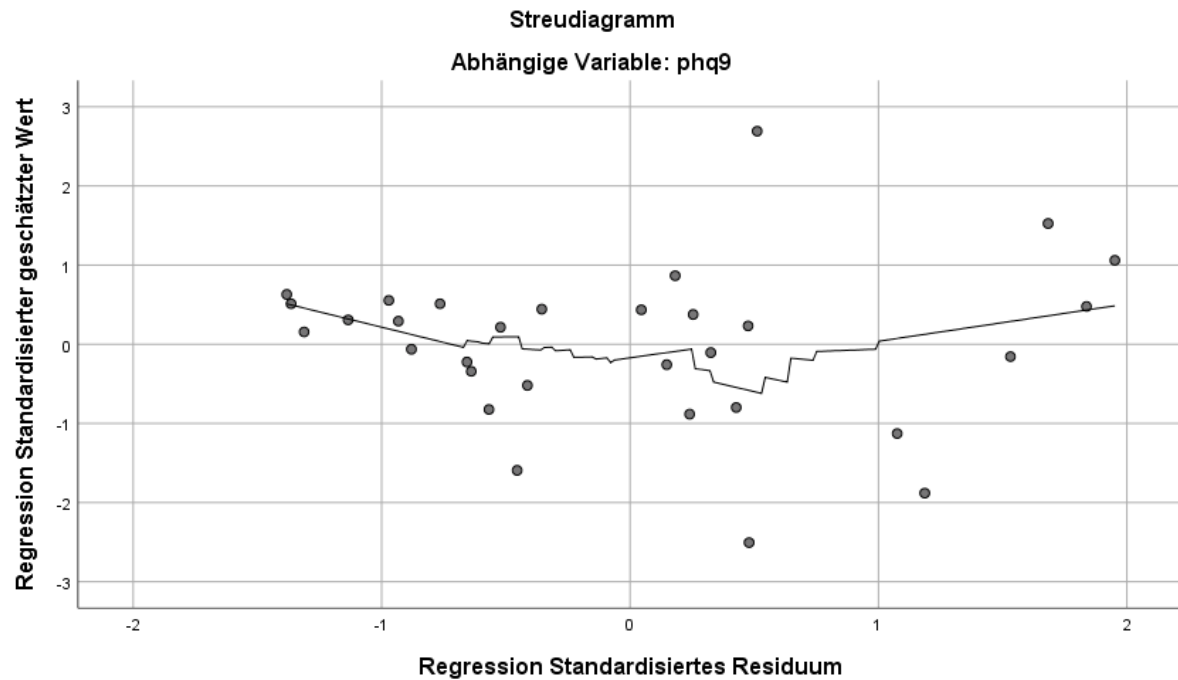
8.	Schwierigkeiten, sich an wichtige Teile des belastenden Erlebnisse zu erinnern?	☐	☐	☐	☐	☐
9.	Starke negative Überzeugungen über sich selbst, andere Menschen oder die Welt (z.B. Gedanken wie: <i>Ich bin schlecht, mit mir stimmt ernsthaft nicht, man kann niemanden vertrauen, die Welt ist absolut gefährlich</i>)?	☐	☐	☐	☐	☐
10.	Sich selbst oder jemand anderem Vorwürfe machen in Bezug auf das belastende Erlebnis oder was danach passiert ist?	☐	☐	☐	☐	☐
11.	Starke negative Gefühle, wie zum Beispiel Angst, Schrecken, Ärger, Schuld oder Scham?	☐	☐	☐	☐	☐
12.	Verlust von Interesse an Aktivitäten, die Ihnen früher Spaß gemacht haben?	☐	☐	☐	☐	☐
13.	Sich von anderen Menschen entfernt oder wie abgeschnitten fühlen?	☐	☐	☐	☐	☐
14.	Schwierigkeiten, positive Gefühle zu erleben (z.B. <i>keine Freude empfinden können oder keine liebevollen Gefühle haben können gegenüber Menschen, die Ihnen nahestehen</i>)?	☐	☐	☐	☐	☐
15.	Reizbares Verhalten, Wutausbrüche oder aggressives Verhalten?	☐	☐	☐	☐	☐
16.	Zu viele Risiken eingehen oder Dinge tun, die Ihnen Schaden zufügen könnten?	☐	☐	☐	☐	☐

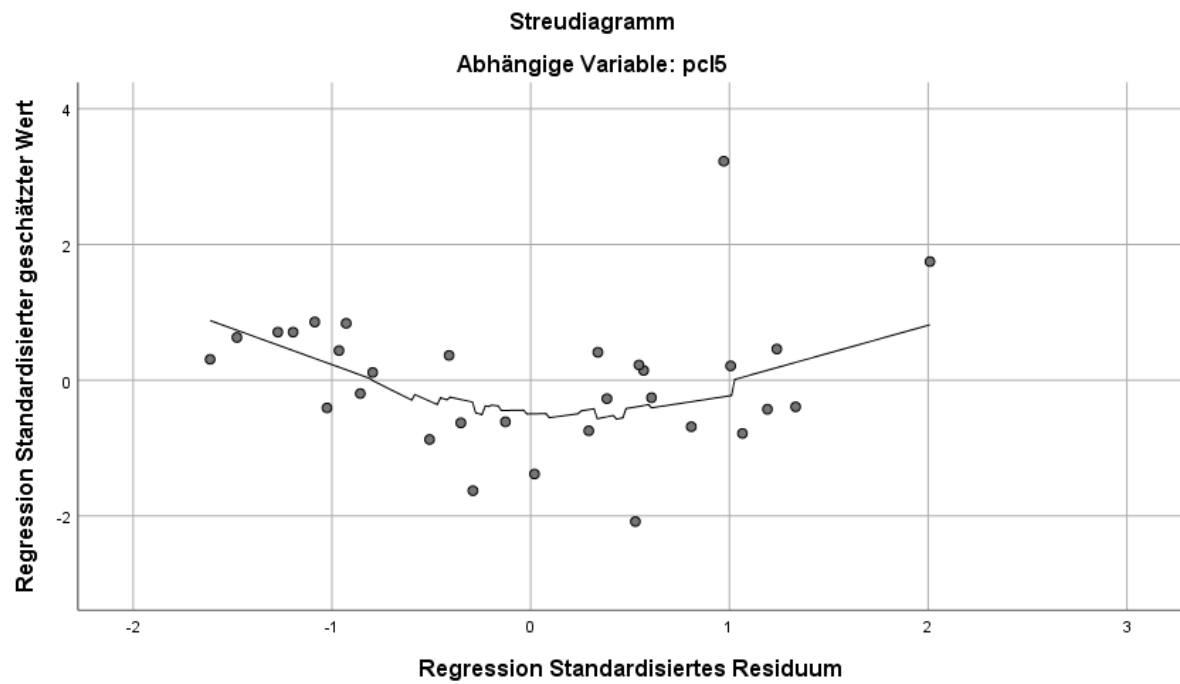
17.	In erhöhter Alarmbereitschaft, wachsam oder auf der Hut sein?	☐	☐	☐	☐	☐
18.	Sich nervös oder schreckhaft fühlen?	☐	☐	☐	☐	☐
19.	Konzentrationsschwierigkeiten?	☐	☐	☐	☐	☐
20.	Schwierigkeiten, ein- oder durchzuschlafen?	☐	☐	☐	☐	☐

Appendix C

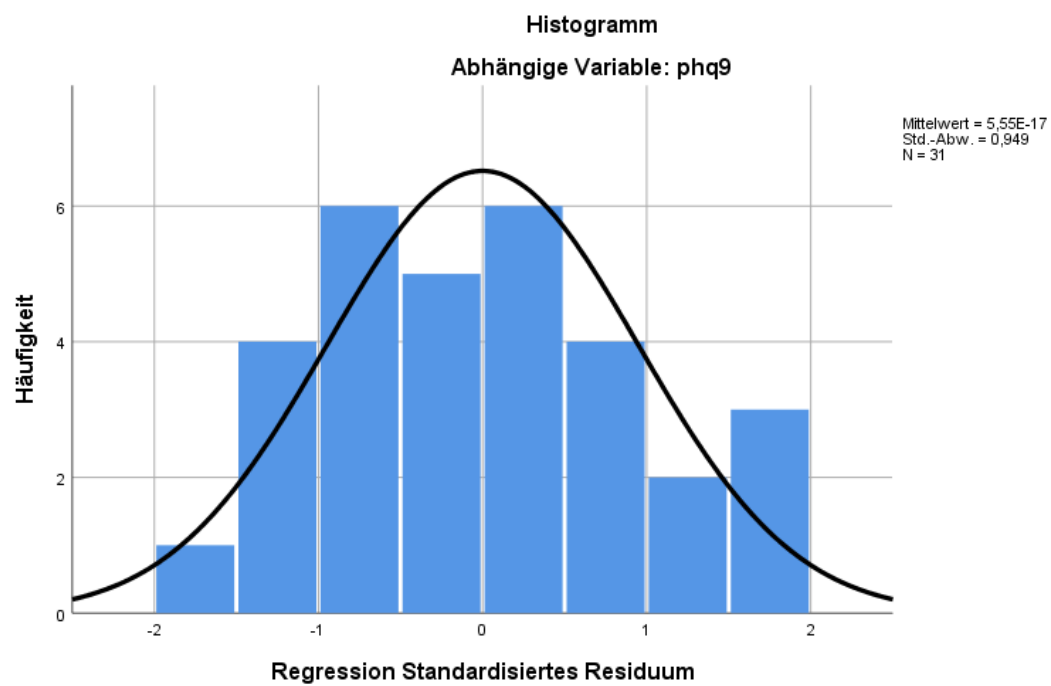


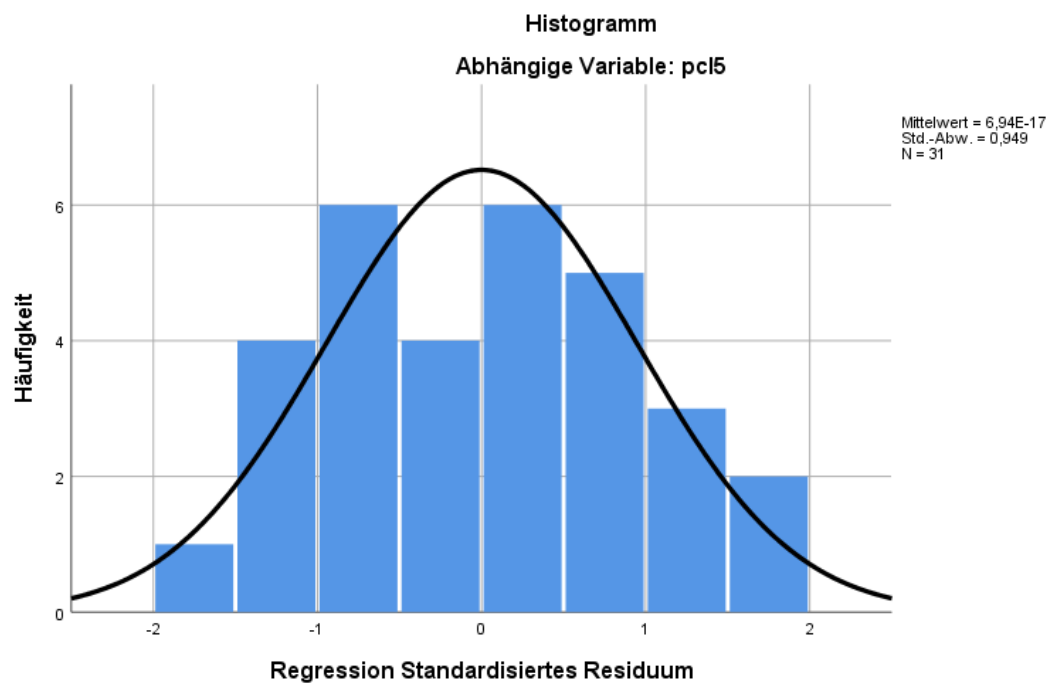
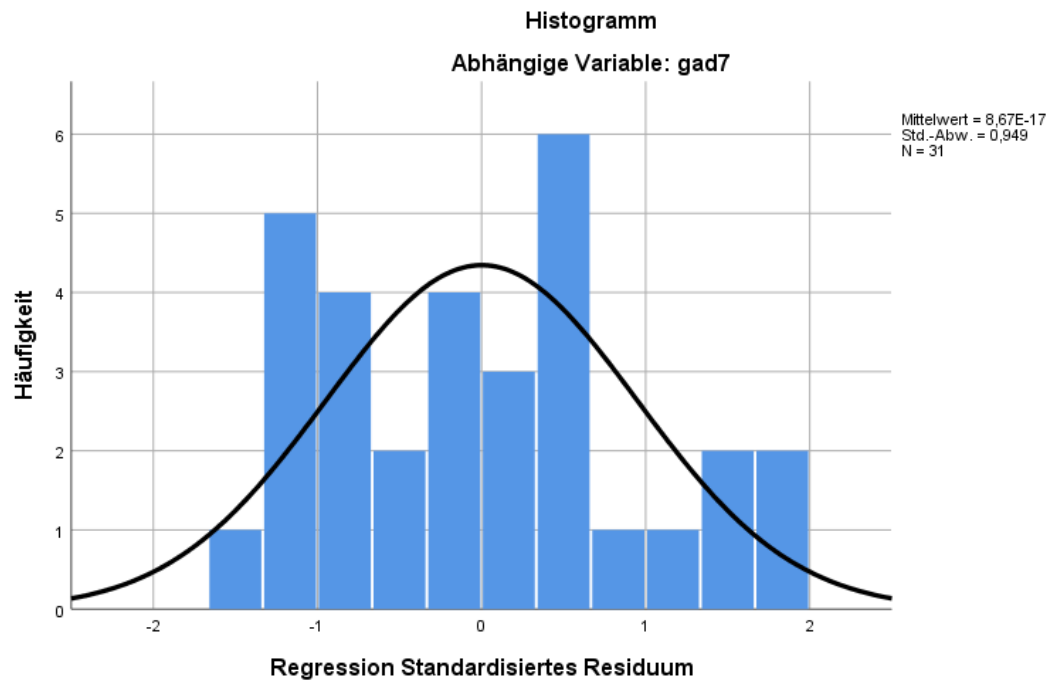
Appendix D





Appendix E





Appendix F Abstract

Abstract

In addition to exposure to chronic stress and traumatic events during flight, asylum seekers and refugees often experience severe post-migration stress during resettlement in the host country. The literature suggests that post-migration stress specifically impacts rates of mental health disorders in asylum seekers and refugees,

over and above the effect of past trauma. However, there is a lack of studies that investigate possible protective factors such as resilience in asylum seeker and refugee populations. Therefore, the present study examined the role of resilience in the relationship between post-migration stress and mental health disorder symptoms. It was hypothesized that higher levels of resilience would weaken the relationship between post-migration stress and symptoms of post-traumatic stress disorder, anxiety, and depression. Resilience, post-migration stress, and mental health disorder symptoms were assessed using a questionnaire survey. All in all, 31 asylum seekers and refugees from Syria and Afghanistan completed the questionnaire survey, which was presented in their mother tongues. Moderation analyses showed that higher resilience levels significantly weakened the relationship between post-migration stress and symptoms of depression, but that resilience did not significantly weaken the relationships between post-migration stress and post-traumatic stress disorder and anxiety symptoms. The present study highlights the potential role resilience plays in coping with post-migration stress among asylum seekers and refugees. However, further research is necessary to shed light on the specific mechanisms of resilience and how it impacts different mental health disorders in asylum seekers and refugees.

Keywords: Asylum seeker, refugee, resilience, post-migration stress, mental health, depression, anxiety, post-traumatic stress disorder, questionnaire survey

Appendix G Zusammenfassung

Zusammenfassung

Neben chronischem Stress und traumatischen Erlebnissen während der Flucht erleben Asylsuchende und Flüchtlinge auch nach der Ankunft im Zielland häufig starken Post-Migrationsstress. Die Literatur zeigt, dass Post-Migrationsstress die Prävalenz von psychischen Störungen in diesen Gruppen erhöht und nicht nur vergangene Traumata dafür verantwortlich sind. In der Forschung in diesem Bereich fehlen jedoch Studien, welche mögliche Schutzfaktoren wie Resilienz bei Asylsuchenden und Flüchtlingen untersuchen. Daher untersucht die vorliegende Studie den Einfluss von Resilienz auf den Zusammenhang zwischen Post-Migrationsstress und Symptomen der häufigsten psychischen Störungen bei

Geflüchteten und Asylsuchenden. Es wurde die Hypothese aufgestellt, dass ein höheres Maß an Resilienz die Beziehung zwischen Post-Migrationsstress und Symptomen der posttraumatischen Belastungsstörung, Angststörung und Depression schwächen würde. Insgesamt füllten 31 Asylsuchende und Flüchtlinge aus Syrien und Afghanistan einen Fragebogen aus, der ihnen in ihrer Muttersprache vorgelegt wurde. Verschiedene Moderationsanalysen zeigten, dass ein höheres Maß an Resilienz die Beziehung zwischen Post-Migrationsstress und depressiven Symptomen signifikant schwächte. Die Beziehung zwischen Post-Migrationsstress und Symptomen einer posttraumatischen Belastungsstörung und Angststörung wurden allerdings durch Resilienz nicht signifikant geschwächt. Die vorliegende Studie beleuchtet die potenziell wichtige Rolle, die Resilienz bei der Bewältigung von Post-Migrationsstress spielen könnte. Allerdings ist weitere Forschung notwendig, um die spezifischen Mechanismen der Resilienz und ihre Auswirkungen auf verschiedene psychische Störungen bei Asylsuchenden und Flüchtlingen zu beleuchten.

Schlagwörter: Asylsuchende, Flüchtlinge, Resilienz, Post-Migrationsstress, psychische Gesundheit, Depression, Angst, Posttraumatische Belastungsstörung, Fragebogenstudie