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Abstract

There is a growing number of refugees and displaced persons worldwide, with many suffering the psychological consequences of traumatic and stressful events occurring both in their country of origin, during the migratory journey and after arriving in a new country. Despite this, there is limited evidence on how to best help refugees and migrants with the mental health problems that they sometimes experience. Internet-based interventions show promise in the treatment of many common mental disorders and can be adapted into different languages to meet the needs of diverse groups.

The overarching aim of the present thesis was to investigate the usefulness of internet-based cognitive behavioural therapy (ICBT) for migrants and refugees in Sweden suffering from depression and anxiety.

Study I describes the stages of development of a self-help material for common mental health problems in Arabic, which included 9 modules on common problems such as anxiety, depression and insomnia. It was found that the material overall was acceptable, based on a number of pilot users as well as two focus groups. The cultural adaptation of the program consisted of minor changes in the case materials to make it recognizable for users of different cultural origins.

The material from Study I was then further developed for Study II into a more comprehensive treatment program which was evaluated using a randomized controlled trial design. A total of 59 participants were randomized to either guided ICBT or a waitlist control condition. Overall, the guided ICBT lead to moderate to large significant reductions in symptoms of depression, insomnia, and stress, as well as moderate, non-significant, improvements in quality of life and anxiety. However, the study had relatively low adherence and high attrition rate, possibly indicating a need for further adaptation.

In Study III, we conducted interviews and did a qualitative analysis of the participants' experience of the treatment program from Study II to get a more comprehensive understanding of the way internet-based treatment is perceived among this group. Ten individuals were interviewed with the resulting analysis revealing five overarching themes describing the importance of the contact with the

therapist, positive learning experiences from the treatment, difficulties encountered with the treatment format, changing attitudes towards mental health treatment, and difficulties navigating the Swedish healthcare system.

Finally, Study IV describes the development and pilot testing of an intervention aimed at Dari and Farsi-speaking youth in Sweden. Fifteen participants were included in the study with only three completing the post-treatment evaluation. Interviews were also conducted with four of the participants of the study as well as three non-participants to better understand barriers and facilitating factors for engagement with the treatment. Overall, the study revealed low feasibility of the intervention in its current form, with the most salient barriers to participation being interference of mental health symptoms such as low concentration making it difficult to read the texts and a need for more support and contact with a therapist or support person.

In conclusion, the thesis shows that ICBT can be effective in reducing symptoms of common mental health problems such as depression, insomnia and stress among migrants and refugees in Sweden, and that relatively minor adaptations can be sufficient to make the treatment material relevant and recognizable for participants. However, in the case of refugee youth from Afghanistan, it was found that the structure of the delivery format constituted a major barrier. Future studies should investigate if a blended treatment format with regular phone/video calls with a therapist can increase acceptance of the intervention.

Keywords: cognitive behavioural therapy; ICBT; cultural adaptation; refugee; migrant; depression; anxiety

List of publications

I. Nygren, T[1]., Berg, M., Sarkohi, A., & Andersson, G. (2018). Development of an Internet-Based Cognitive Behavioral Therapy Self-Help Program for Arabic-Speaking Immigrants: Mixed-Methods Study. *JMIR Research Protocols, 7*, e11872.

II. Lindegaard, T., Seaton, F., Halaj, A., Berg, M., Kashoush, F., Barchini, R., Ludvigsson, M., Sarkohi, A., & Andersson, G. (2021). Internet-based cognitive behavioural therapy for depression and anxiety among Arabic-speaking individuals in Sweden: A pilot randomized controlled trial. *Cognitive Behaviour Therapy, 50,* 47-66.

III. Lindegaard, T., Kashoush, F., Holm, S., Halaj, A., Berg, M., & Andersson, G. (2021). Experiences of Internet-based cognitive behavioural therapy for depression and anxiety among Arabic-speaking individuals in Sweden: A qualitative study. *BMC Psychiatry*, *21*, 288.

IV. Lindegaard, T., Wastesson, E., Youstina, D., Andersson, G., Richards, D., & Shahnavaz, S. Acceptability and feasibility of an adapted Internet-based CBT intervention for farsi/dari speaking adolescents and young adults: a pilot study. (*Submitted for publication*)

[1] I have changed my surname from Nygren to Lindegaard during the thesis

Contents

1. Introduction

The world is changing. From the increased pressure on the planets life-supporting systems due to global warming, to the upheaval and turmoil following armed conflicts such as in Syria and Afghanistan, the global human society is undergoing a rapidly increasing change. Some of the consequences of these events can also be observed here in Sweden, such as the increased number of refugees and asylum-seekers that peaked around the year 2015. However, despite the relatively large number of refugees and migrants that have come to Sweden and other European countries in the last few years, there is a lack of knowledge on how to best address the mental health needs found in this group.

The four studies included in this thesis aim to start addressing this question and more specifically the role that internet-based interventions can play in refugee and immigrant mental health. These studies involve both qualitative and quantitative evaluations of interventions aimed at reducing mental health problems among both adults and adolescents with refugee or immigrant backgrounds.

Hopefully, the thesis as a whole will give the reader a more in-depth understanding of the challenges and opportunities associated with internet-based treatment of common mental health problems among immigrants and refugees. In addition, my hope is that both the encouraging findings as well as the many difficulties and mistakes made along the way can be of use for other researchers taking this important field forward, and in the end for those that these interventions aim to help.

2. A global refugee crisis

According to the United Nations High Commissioner for Refugees there were around 82 million forcibly displaced persons worldwide at the end of 2020, with about 26 million of these being refugees and around 4 million being asylum-seekers (UNHCR, 2021a). Refugee in this context means that a person has fled his or her home country whereas an internally displaced person has fled his or her home for reasons of safety but *within* the country of origin. An asylum-seeker is someone who has fled their home country and applied for asylum in a different country. Overall, this means that about 1 in every 95 people on earth has fled their home for reasons such as persecution, violence or human rights violations (UNHCR, 2021a). Moreover, the global level of forced displacement has continued increasing despite the COVID-19 pandemic (UNHCR, 2021b) and despite demands for a global ceasefire to increase the world's ability to deal with the pandemic effectively (United Nations, 2020).

Today, about 70% of the world's refugees and asylum-seekers originate from five countries; Syria, Venezuela, Afghanistan, South Sudan and Myanmar (UNHCR, 2021a). Of these, a majority are hosted by developing countries and only a minority has made their way to European countries such as Sweden. Despite this, the last decade has still seen the largest movement of people in Europe since World War II with millions of people applying for asylum, and with a majority arriving from Syria, Afghanistan and Iraq (Abbott, 2016).

With regards to Sweden specifically, in the beginning of the new millennium there were about 30 000 people applying for asylum in Sweden each year (Statistics Sweden, 2021). This figure has then increased throughout the last two decades reaching a peak in 2015 with about 160 000 asylum seekers. The number of asylum seekers has since decreased, mainly due to political reasons which has made it harder to apply for asylum in Sweden. In addition, the ongoing COVID-19 pandemic has also made international travel more difficult due to various restrictions imposed because of the virus. Today, there are about 2 million people living in Sweden that were born in another

country, corresponding to roughly 20% of the total Swedish population.

3. Mental health among migrants and refugees

When it comes to discussing the mental health of refugees and migrants, it is important to distinguish between these two groups as they, for natural reasons, show somewhat distinct patterns. For clarification, a migrant means a person who has moved to a different country than their country of origin but who has not been forced to flee in the same way as a refugee (UNHCR, 2016).

3.1 Mental health of migrants

Regarding the mental health of migrants, research studies overall show considerable variation in their findings in regards to mental health outcomes (WHO, 2018). For example, in one recent review of immigrant mental health it was found that immigrants displayed increased risk of mental health problems such as depression and anxiety disorders in 13 of the 21 studies included in the review, while 5 studies showed the opposite trend with migrants having better mental health than the native population (Bas-Sarmiento et al., 2017). There could be several explanations for these conflicting findings where one could relate to the prevalence of mental health problems in the native population, which can differ depending on the country that is being investigated (WHO, 2018). Another explanation is that it is not the experience of migration itself that promotes psychopathology, but rather how the specific conditions of the migration process and the reception in the host country interacts with the vulnerability of each individual migrant (Bas-Sarmiento et al., 2017). However, the overall evidence still points to an increased risk of common mental health problems such as depression and anxiety among migrants (Bas-Sarmiento et al., 2017), something which has also been shown in studies in a Swedish context specifically (Gilliver et al., 2014). Risk factors for mental health problems among migrants include being of female gender, lack of social support and economic adversity (Bas-Sarmiento el al., 2017).

3.2 Mental health among refugees

With regards to the mental health of refugees, it is important to stress the fact that refugees are people forced to flee their home due to circumstances such as armed conflict and persecution, which constitute significant risk factors for adverse mental health outcomes. Research studies on the mental health of refugees also show considerably variation in their results (WHO, 2018) but a clearer pattern can be discerned with studies generally finding elevated levels of psychological disorders such as depression, anxiety, post-traumatic stress as well as psychotic disorders compared to non-refugee populations (Alpak et al., 2015; Blackmore et al., 2020; Charlson et al., 2019; Fazel et al., 2005; Tinghög et al., 2017). For example, a recent study in a Swedish context investigating levels of depression, anxiety and post-traumatic stress disorder (PTSD) among 1215 Syrians between 18-64 years of age resettled in Sweden found that around 40% of respondents could be classified as suffering from depression, 32% of anxiety and 30% of PTSD (Tinghög et al., 2017). A majority of participants met criteria for at least one disorder (Tinghög et al., 2017). The results were largely in line with findings of larger studies of refugees in other countries (Blackmore et al., 2020; Fazel et al., 2005) and also with a previous study in Sweden of PTSD among Iraqi asylum seekers that found a prevalence of PTSD around 38% (Söndergaard et al., 2003). In comparison, the 12-month prevalence (the percentage of people fulfilling criteria for the disorder at some time during a year) of PTSD is reported to be around 3.5% in the United States (Kessler et al., 2005) and around 1% in Europe (Darves-Bornoz et al., (2008), while the prevalence of depression in the Swedish general population was found to be around 5% (Johansson et al., 2013). Thus, existing research indicates that refugees as a group show highly elevated levels of mental health problems compared to native populations.

3.2.1 Predictors of mental health outcomes among refugees

As alluded to earlier, several different factors seem to affect the mental health outcomes of refugees, including the many potentially traumatic events (PTEs) experienced either in one's home country, during migration or after the migration. Research on Syrian refugees residing in Sweden show that PTEs are common among this group (Tinghög et al., 2017). For example, in the study by Tinghög and colleagues (2017) it was found that 85% of respondents had experienced war at close quarters, 79% had experienced another life-threatening situation, 68% had experienced separation from a family member or close friend, 33% had been the victim of violence, and 31% had been subjected to torture. On average, participants had experienced 4.2 PTEs (Tinghög et al., 2017). Unsurprisingly, research has shown that the number of PTEs, and especially being subjected to torture is related to later mental health problems such as depression, anxiety and PTSD among refugees (Steel et al., 2009; Tinghög et al., 2017).

In addition, research has also documented that various PTEs experienced after the migration contribute to negative mental health outcomes, including stressors such as uncertainty if one will be granted asylum, unstable housing, financial difficulties or being subjected to discrimination (Li et al., 2016; Porter & Haslam, 2005). However, as described by Li and colleagues (2016), most research to date has focused on *which* factors most strongly predict psychopathology, and not so much on *how* these factors affect mental health.

Finally it should also be noted that there is evidence emerging that post-migration stressors might affect treatment outcomes, although studies to date have shown somewhat mixed results (Djelantik et al., 2020; Drožđek et al., 2013). For example, whereas one study found that asylum seekers who had received a negative decision with regards to their asylum application were more likely to not complete treatment, and that total number of post-migration stressors predicted smaller symptom reduction (Djelantik et al., 2020), another study

found that group therapy was equally effective for asylum seekers and those already having a legal status (Drožđek et al., 2013). Thus, at the present moment it is unclear what role postmigration stressors have in moderating treatment effect, and this is an important area for further research.

3.3 Children and adolescents

Over half of the world's forcibly displaced persons today are children or young adults (UNHCR, 2021a), here defined as those under 25 years of age. A recent systematic review of the literature which included 22 studies of 3003 refugee children and young people under the age of 25 found prevalence rates of PTSD ranging from 19 to 54%, rates of depression ranging from 3 to 30% and elevated levels of other forms of behavioural and emotional problems (Bronstein & Montgomery, 2011). However, the small number of studies and inconsistencies in the methods used make it difficult to know the cause of the large differences in prevalence rates found in different studies (Bronstein & Montgomery, 2011).

Moreover, it was also found that number of PTEs both occurring before, during and after migration was significantly related to levels of distress (Bronstein & Montgomery, 2011). For example, with regards to PTEs before and during migration, it was found that separation from parents, personal injury and violent death of a family member was related to higher PTSD score (Bronstein & Montgomery, 2011).

Regarding postmigratory stressors, uncertainty of being granted an asylum, failed asylum claims, lack of personal or structural support, financial problems and restrictions in living arrangements were all associated with higher levels of depression (Bronstein & Montgomery, 2011). Similar risk factors have also been found in other reviews (Fazel et al., 2012), as well as in more recent studies on Syrian refugee youth (Gormez et al., 2018). With regards to protective factors, it has been shown that stable settlement and social support from friends and family seem to buffer against negative mental health outcomes (Fazel et al., 2012).

4. Culture and mental health

When studying the mental health of any group of individuals, it is of importance to acknowledge and consider the ways that cultural factors may shape and influence both the expression and experience of mental health problems.

4.1 Culture from a psychological perspective

While culture is a complex term that can refer to many different things, in psychology, culture has traditionally been defined as a collection of values, beliefs and practices shared by a group of people (López & Guarnaccia, 2000). However, this definition has been criticised for situating culture as a stable construct within the individual, and recent years have seen a movement towards a heavier emphasis on the dynamic interplay between the individual and his or her social context in the definition of culture (Kirmayer & Ryder, 2016; López & Guarnaccia, 2000). Earlier ways of viewing culture have also tended to conceptualize cultural practices as a *result* of values and beliefs, whereas more recent developments informed by anthropology and evolutionary psychology also emphasize the role social and physical conditions have in shaping cultural practices, which in turn affect cultural values and beliefs (Kirmayer & Ryder, 2016; López & Guarnaccia, 2000). In addition, it important to note that substantial intracultural differences can occur, for example influenced by phenomenon such as gender or social class (López & Guarnaccia, 2000).

4.2 Mental health from a cultural psychology perspective

4.2.1 Expressions and perception of mental health problems

There is today ample evidence that there are cultural differences both regarding the expression and prevalence of mental health problems across cultures (Haroz et al., 2017; Kirmayer & Ryder, 2016). One example of the former include differences in the voice-hearing experiences among persons with auditory hallucinations in the US, India, and Ghana (Luhrmann et al., 2015) where participants from the U.S were more likely to experience the voices as intrusive and harsh, while participants in Ghana and India were more likely to say that they liked the voices and that they more often described a rich relationship with their voices (Luhrmann et al., 2015). Another important concept in this context is *cultural idioms of distress* which refer to common ways of expressing and experiencing distress such as mental health problems among a group of people (Hassan et al., 2015). For example, a recent review of mental health problems among Syrians affected by armed conflict found that many Arabic and Syrian idioms of distress do not clearly separate between mental symptoms and physical symptoms, which could be related to cultural views of body and mind as being interlinked (Hassan et al., 2015). This could also be a part of the explanation why some studies find higher levels of *somatization* (i.e. experiencing and communicating psychological distress through bodily symptoms) of mental health problems among refugees and asylum-seekers (Due et al., 2020; Satinsky et al., 2019).

With regards to differences in prevalence of different types of mental disorders, studies have for example found anxiety disorders to be more prevalent in Latin America compared to South-East Asia (Kirmayer & Ryder, 2016). However, it is unclear whether these differences in prevalence reflect an actual underlying difference or if it is more an expression of cross-cultural measurement limitations (Kirmayer & Ryder, 2016).

Finally, with regards to possible explanations for the differences in cultural expressions and perceptions of mental illness, different theories have been put forward such as having to do with differences in individualism and collectivism between cultures (Luhrmann et al., 2015) or other cultural characteristics such as relational mobility affecting the adaptiveness of different symptom expressions (Sato et al., 2014). Given that previous research has established that cultural norms can influence cognitive processes such as attention and causal attributions (Lehman et al., 2004), it is highly likely that similar processes also can affect the expressions of certain mental health symptoms (Kirmayer, 2006), although more research is needed to elucidate how these processes work in more detail.

4.2.2 Explanatory models of mental health problems

In cultural psychology, explanatory models of mental health problems refer to how people make sense and explain the causes and outcomes of different symptoms, how they believe their symptoms affect them and their environment and what they see as appropriate treatment for their ailments (Hassan et al., 2015).

Throughout the world, there are many different explanatory models for mental health problems that differ in many ways from the bio-psycho-social model favoured in the West (Abdullah & Brown, 2011). One way to categorize different forms of illness explanations is *internalizing* versus *externalizing* explanations (Young, 1983). In this context, internalizing explanations focus more on pathophysiological processes inside the body, whereas externalizing explanations, more common in traditional beliefs and practices among indigenous people, understands illness as caused by intentional factors outside the body such as evil eye or punishment for misdeed in a previous lifetime. For example, among people in the upper Amazon area, it is common to conceptualize many forms of diseases and suffering as inflicted by other persons, often a *brujo*, an evil sorcerer through the injection of a magical dart, a *virote* which has to be extracted by a shaman in order for the sickness to heal (Beyer, 2009). Across many cultures, various types of religious and supernatural explanations for mental health problems are common, such as attributing symptoms to possession by

djinn (evil spirits) among people in North Africa and the Middle East (Hassan et al., 2015; Johnsdotter et al., 2011; Lim et al., 2018).

One consequence of these different ways of explaining mental health problems and symptoms is that they can be more or less stigmatizing for the individual, where for example explanations that view the symptoms as a form of punishment from a higher power can lead to higher stigma than a biological explanatory model (Abdullah & Brown, 2011). Different explanatory models also make the individual more or less inclined towards different forms of treatment as exemplified by a study by Johnsdotter and colleagues (2011) which found that some Somalis subscribing to supernatural and religious ways of understanding mental health problems were less inclined to seek help within the Swedish healthcare system, often seeing it as a last resort, and instead preferring traditional healers within their community.

However, it is also important to note that different explanatory models can co-exist within cultures and that culture, as mentioned above, is not a static phenomena (Kirmayer & Ryder, 2016). For example, Hassan and colleagues (2015) noted that explanatory models for mental health problems among displaced Syrians are undergoing rapid change as a result of shared experiences of war, conflict and loss which in turn leads to a lessened stigma, and that bio-psycho-social explanations of mental health problems occur concurrently with more traditional explanations.

5. Psychological treatments of mental health problems among migrants and refugees

In light of the elevated levels of psychological distress found in particular among refugees and sometimes also among various migrant groups, it is important to be able to provide evidence-based interventions that match the need of these populations. In general, a stepped-care model is recommended following a pyramidical structure where basic needs of physical safety and community and family support constitute the bottom of the pyramid (Kronick, 2018). At the top of the pyramid are the persons requiring more focused mental healthcare in the form of psychotherapy or pharmacotherapy (Kronick, 2018), where the former will be the focus here.

5.1 Evidence-based psychological treatment of mental health problems among migrants and refugees

5.1.1 Cognitive behaviour therapy

Cognitive behaviour therapy (CBT) is to date the most widely studied form of psychotherapy overall (Fordham et al., 2021) and there is more evidence supporting it than any other kind of talk therapy (David et al., 2018). CBT can be said to be an umbrella term for a number of different treatments for different kinds of psychopathology (David et al., 2018) with the common aspect being that these treatments incorporate both behavioural and cognitive interventions (Brewin, 1996). Behavioural interventions in this context refer to techniques that aim to change the behaviour of the client, indirectly often leading to changes on the emotional and cognitive level, while cognitive interventions refer to techniques that aim to change maladaptive cognitive processes such as beliefs and appraisals. These interventions are based on the assumption that the

way we behave and think to large extent is something we have learned and that maladaptive patterns of thoughts and behaviours can be changed through new learning experiences (Brewin, 1996).

With regards to the efficacy of CBT for refugee and immigrant populations, a recent review and meta-analysis of psychosocial interventions aimed at refugees and asylum-seekers compared to control conditions found 26 eligible studies, with 15 of these being some form of CBT (Turrini et al., 2019). Of these 15 studies, 7 studied Narrative Exposure Therapy (NET) which is a form of trauma-focused CBT, six studied what was described as standard CBT, and one studied Teaching Recovery Techniques which is a form of CBT. Overall, the meta-analysis found significant treatment effects in the moderate to large range for symptoms of PTSD standardized mean difference (SMD) = -0.71, 95% confidence interval (CI) [−1.01, −0.41], depression SMD = -1.02, 95% CI [−1.52, −0.51] and anxiety SMD = -1.05, 95% CI [−1.55, −0.56] that were maintained at follow-up. However, subgroup analysis revealed that higher quality studies only were effective in regard to reducing symptoms of PTSD and not depression and anxiety. Sub-group analyses also showed that interventions based on NET failed to show significant effects on PTSD and anxiety outcomes (Turrini et al., 2019), which is surprising given that previous meta-analysis have found positive effects of NET for PTSD among refugees and asylum-seekers (Nosè et al., 2017). One explanation for this could be that the meta-analysis of Turrini and colleagues (2019) also included studies done in low-income countries, and also that some of the studies of NET had a psychological placebo as control which likely diminished the relative effect compared to studies that had for example a waiting list control condition (Turrini et al., 2019).

However, overall these studies lend tentative support to the use of CBT in the treatment of symptoms of PTSD, anxiety and depression among refugees and asylum-seekers although more high-quality studies are needed for more confident treatment recommendations.

5.1.2 Other forms of psychotherapy

Apart from CBT there are today a number of empirically grounded psychotherapies for a range of different conditions based on varying

underlying theoretical orientations. The review and meta-analysis of psychosocial interventions aimed at refugees mentioned above found a total of 11 studies studying interventions other than CBT including four studies of Eye Movement Desensitization and Reprocessing therapy (EMDR), and one study of each of the following; music therapy, Common Elements Treatment Approach, writing for recovery, interpersonal psychotherapy, Culture-Sensitive Oriented Peer group, Family-Group intervention, and need-satisfaction intervention (Turrini et al., 2019).

As mentioned above, the meta-analyses showed an overall significant effect compared to control conditions although sub-group analysis revealed that EMDR failed to show significant treatment effects for PTSD (Turrini et al., 2019). This is surprising given EMDR is normally recommended as a first-line treatment for PTSD alongside with trauma-focused CBT (Tol et al., 2014). Since the other forms of psychotherapy included in the review only numbered to one study of each intervention it was not possible to perform sub-group analysis of these interventions (Turrini et al., 2019). However, overall existing evidence suggests that non-CBT forms of psychotherapy may be efficacious in the treatment of common mental health problems such as anxiety, depression and PTSD although more research is needed to further strengthen these preliminary conclusions (Turrini et al., 2019).

5.1.3 Children and young adults

As with adults, existing research to date on psychosocial interventions for common mental health problems among children and young adults have focused primarily on CBT and have shown CBT to be effective in the treatment of anxiety, depression and PTSD (James et al., 2013; Oud et al., 2019; Ramirez de Arellano et al., 2014).

However, when it comes to refugee and migrant children and adolescents, research is sparse. A recent review and meta-analysis of interventions aimed at refugee and internally displaced youth populations identified 23 studies including 8 randomized controlled trials (Nocon et al., 2017). A moderate to large within-group pre-post effect of standardized mean change (SMC) = 0.78, 95% CI [0.53, 1.03] was found for symptoms of PTSD, based on 20 studies, and a small

within-group effect of SMC = 0.35, 95% CI [0.04, 0.67] for depression, based on 19 studies. However, due to the high heterogeneity among studies the results could not be interpreted in a meaningful way. The only effect size that could be interpreted was a sub-group analysis of CBT interventions for depression outcomes where a SMC of 0.30, 95% CI [0.18, 0.43] was found based on ten studies (Nocon et al., 2017). Similarly, another recent review of psychosocial interventions aimed at children in humanitarian settings exposed to PTEs found very low quality evidence that psychological interventions can reduce symptoms of PTSD (Purgato et al., 2018).

Overall, the effects of the treatments found in these reviews are lower than those found for non-refugee youth and indicate that more research is needed in order to establish concrete recommendations for effective treatment of mental health problems in this group.

5.2 Barriers to accessing healthcare

5.2.1 Mental healthcare utilization

Another important consideration apart from establishing the efficacy and effectiveness of treatments is the study of healthcare utilization and access among populations with elevated risk for mental health problems such as refugees and asylum-seekers. A recent review of mental healthcare and psychosocial service (MHPSS) utilization and access among refugees and asylum-seekers in Europe reviewed 27 studies of various aspects of this phenomenon using both quantitative and qualitative methodologies (Satinsky et al., 2019). Among the studies that investigated MHPSS utilization, 10 of 15 studies found low rates of utilization, despite high levels of psychological distress (Satinsky et al., 2019). For example, a study from Sweden of 43 403 refugees from Iraq, Iran, Eritrea, Ethiopia, Somalia and Afghanistan showed that psychotropic drugs such as antidepressants were used less frequently among the refugees than the general population, even though the refugee group displayed higher levels of mental health symptoms than native Swedes (Brendler-Lindqvist et al., 2014). However, some indications were found that MHPSS utilization

increased with longer duration of residence (Satinsky et al., 2019). One study also reported that MHPSS utilization increased among those with higher educational achievement and higher mental health needs (Bozorgmehr et al., 2015).

Another notable finding was that a study investigating both MHPSS and physical health care utilization found an increased physical health care utilization and overall higher yearly healthcare costs among the refugees and asylum-seekers (Maier et al., 2010). Two studies included in the review indicated that asylum-seekers tend to seek help for physical pain rather than mental problems (Satinsky et al., 2019). Similarly, another review of access to primary healthcare among refugees and asylum-seekers also found high levels of somatization in some of the included studies (Due et al., 2020). This can in turn lead to misdiagnosis of problems and that mental health problems are not adequately detected by the healthcare professionals.

With regards to children and young adults, similar results as described above were also found with especially unaccompanied minors having lower MHPSS utilization both compared to accompanied minors and the general population (Satinsky et al., 2019). Overall, existing evidence points to reduced levels of MHPSS utilization among refugees and asylum-seekers compared to the general population even though the overall healthcare service use seems to be higher or at least comparable to the general population (Due et al., 2020; Satinsky et al., 2019), indicating that barriers to utilization exist that needs to be addressed in order to increase access.

5.2.2 Barriers to access and utilization

With regards to barriers and facilitators to accessing MHPSS, these can include both structural as well as sociocultural barriers such as not being able to take time off work, lack of mobility, lack of services in one´s native language, concerns that one will be misunderstood by professionals due to cultural or linguistic reasons as well as stigmatization of mental health problems (Byrow et al., 2019; Kirmayer et al., 2011).

In the above-mentioned review by Satinsky and colleagues (2019) it was found based on 12 studies investigating barriers and facilitators

that acceptability, language, awareness, and help-seeking were the most salient factors across studies affecting access to care. Regarding acceptability, it was reported that many participants preferred seeing healthcare staff with similar ethnic origin as themselves in order to build trust. Some participants also mentioned preferring traditional healers instead of turning to the healthcare system. In some studies, participants also stated online services as an acceptable alternative. Another common concern expressed across several studies was lack of interpreters or linguistically appropriate services and that this stood in the way of accessing MHPSS. Further, lack of awareness of existing services was also mentioned as a concern across a majority of studies with participants expressing uncertainty regarding where to seek help for their problems and also a lack of awareness that problems such as anxiety could be treated. Finally, fear of stigmatization and negative attitudes towards treatment and help-seeking was also a recurring theme across studies. This also included differences in the understanding of mental health problems that made participants more inclined towards seeking out traditional healers, as mentioned earlier (Satinsky, et al., 2019).

The themes identified by Satinsky and colleagues (2019) are also echoed by more recent qualitative studies on Syrian refugees which have identified barriers such as lack of awareness of mental health services, lack of language-appropriate services, stigma surrounding mental health problems, and religious or supernatural explanatory models for mental health problems making the individual more inclined to seek out traditional healers (see for example Al Laham et al., 2020; Kiselev et al., 2020). In summary, existing research points to several important barriers that can at least partly explain the low rates of MHPSS utilization found among non-native populations and particularly refugees and asylum-seekers.

6. Cultural adaptation of treatments

To date, psychological treatments have mostly been studied among cultural majority groups in North America and western Europe and there is comparatively less knowledge about how these treatments work in other part of the world and among cultural minority groups in North America and Europe (Bernal et al., 2009). According to Bernal and colleagues (2009), there are different opinions on how and whether psychological treatments need to be adapted for other cultural groups, where the most extreme positions would be either that no adaptation is needed or, in the other end of the spectrum, that a completely new treatment would have to be developed. However, a middle position between these two extreme poles is to *culturally adapt* aspects of existing treatments in order to make them more relevant and accessible for cultural groups other than those that the treatment was first developed for (Bernal et al., 2009). It is this type of cultural adaptation of existing treatments which will be the focus here.

6.1 Definition of cultural adaptation

As alluded to above, cultural adaptation in its broadest sense can be defined as the adaptation or modification of a previously developed treatment to make it more aligned with the norms and values of a specific cultural group (Bernal et al., 2009; Chu & Leino, 2017). This adaptation process can for example include aspects such as modifications of the language in which the treatment is delivered, the metaphors used in the treatment, the cultural values and beliefs communicated through the treatment, the conceptualization of why different problems occur, as well as common expressions of the problem in question (Bernal et al., 2009; Chu & Leino, 2017). However, as we will see below, different models of cultural adaptation have emphasised different aspects as especially important in the adaptation process.

6.2 Existing models for cultural adaptation

There are today several different models and frameworks on how to culturally adapt existing treatments. One of the first frameworks to be developed was the *ecological validity model* (Bernal et al., 1995). The ecological validity model consists of eight dimensions to take into consideration when either developing new interventions for cultural minority groups or when adapting existing treatments including language, therapeutic relationships, metaphors, intervention content, illness concepts, goals, delivery methods and context. However, the authors also underlined that cultural adaptation involves balancing taking cultural aspects into consideration without resorting to cultural stereotypes which might do more harm than good (Bernal et al., 1995).

Other authors have made distinctions between *surface* and *deep structure* adaptations (Resnicow et al., 2000), where surface adaptations refer to making the treatment material and presentation recognizable and fitting within the culture of the recipient. In contrast, deep structure adaptations refer to attuning the intervention with how the recipients understand the cause and course of the problems involved and how cultural, historical, psychological, and social factors influence health behaviours. In this framework, surface adaptations are thought to lead to higher face validity and acceptability of the intervention for the target group, while deep structure adaptations are thought to be more central to the impact of the intervention (Resnicow et al., 2000). Further, other researchers have for example argued for the use of the principles of functional equivalence, conceptual equivalence and linguistic equivalence (Helms, 2015; Lonner, 1985) to guide development of culturally adapted interventions (Salamanca-Sanabria et al., 2019) or have emphasised the role of cultural concepts of distress as central to the deep structure adaptations mentioned above (Heim & Kohrt, 2019).

Attempts have also been made to organize the various frameworks of cultural adaptation into a single coherent framework. One such example is the data-driven framework by Chu and Leino (2017) which provides a taxonomic structure organizing various forms of adaptation as either modifying *peripheral* or *core* aspects of a treatment. In their framework, peripheral treatment components are aspects of the

treatment that makes it easily understandable and accessible, such as the mode of delivery or the examples used in the treatment. Core components are those components that are thought to constitute the main active ingredients in the treatment, such as the specific change techniques used to alter dysfunctional cognitions or behaviour. In their review of existing cultural adaptations studies, they found that all studies included some adaptation of peripheral treatment components, while 11% had modified a core component and 60% had added a core component that was not in the original treatment (Chu & Leino, 2017). However, the framework by Chu and Leino (2017) has been criticised for not providing any guidance on how and why adaptions lead to increased efficacy or acceptance of a treatment and also that the distinction between peripheral and core treatment components is overly simplistic and not so straight-forward in practice as suggested (Heim & Kohrt, 2019).

To summarize, while numerous suggestions have been put forward in the literature on which aspects to focus on in the cultural adaptation process, there is today no consensus or single framework detailing the how's and why's of the cultural adaptation process.

6.3 Does cultural adaptation make a difference?

6.3.1 Effect on outcomes

With regards to the effects of cultural adaptations on various treatment outcomes such as treatment efficacy and adherence there are conflicting finding which I will cover in this section.

First, recent meta-analyses on the effect of culturally adapted interventions compared to either unadapted interventions or control conditions have generally showed effects in favour of the adapted interventions (Benish et al., 2011; Griner & Smith, 2006; Hall et al., 2016; Smith et al., 2011). For example, compared to any control condition, Griner and Smith (2006) found an overall between-group effect of Cohen's d = 0.45 across 76 studies for adapted treatments, while Hall and colleagues (2016) found a between-group effect of g = 0.67 based on 78 studies. Further, when compared specifically to

unadapted versions of the same interventions, Hall and colleagues (2016) found a between-group effect of g = 0.52 in favour of the adapted interventions based on 10 studies. Similarly, Benish and colleagues (2011) found an overall between-group effect of Cohen's d = 0.32 when comparing culturally adapted interventions to other *bona fide* interventions in an analysis that included 21 studies. However, the conclusions drawn by Benish and colleagues (2011) have been criticised in that the interventions that were compared also differed substantially in length and delivery format (Huey et al., 2014). In contrast to the findings by Benish and colleagues (2011) and Hall and colleagues (2016), Huey and colleagues (2014) describe an unpublished meta-analysis made by their research team based on 10 studies which did not find any difference between adapted and unadapted treatments, where the only difference between the two treatments was the presence of cultural adaptation or not. Also, studies investigating the effects of integrating religion in psychotherapy, which could be considered a form of cultural adaptation, have not been shown to increase effects compared to regular psychotherapy (Paukert et al., 2011).

With regards to outcomes other than treatment efficacy, there is more limited research. However, the above-mentioned meta-analysis by Benish and colleagues (2011) did not find evidence for higher treatment retention among culturally adapted treatments compared to the bona fide comparison treatments.

In addition, another interesting strand of research which bears upon this question is the investigation of client ethnicity as a moderator of psychotherapy outcome. In summary of several different meta-analysis, Huey and colleagues (2014) concluded that most studies did not find any differences in response between majority and minority populations and that, among the studies that did find a difference, it was equally common that the difference was in favour of the minority group as the majority group. In a similar vein, recent meta-analyses of psychological interventions conducted in low- and middle-income countries have found that these interventions are equally effective as interventions conducted in high-income countries (Cuijpers et al., 2018; Singla et al., 2017). The meta-analysis by Cuijpers and colleagues (2018) also investigated the relationship

between adaptation to the local situation and the effect of the intervention, finding no association between the two.

In conclusion, existing research paints a somewhat disparate picture of the evidence for cultural adaptation. On the one hand, it seems like psychological interventions already are effective among diverse cultural groups. However, some meta-analyses do find an added effect of adapting interventions compared to unadapted versions of the same intervention, while other meta-analyses do not.

6.3.2 What aspects should be adapted?

As mentioned earlier, there is today no scientific consensus regarding which aspects of a treatment are most important to culturally adapt (Heim & Kohrt, 2019). Although several of the above-mentioned meta-analyses have investigated different aspects of the cultural adaptation as potential moderators of treatment outcome, few of these have produced consistent results across different meta-analyses. For example, while Griner and Smith (2006) found that matching a client with a therapist who spoke their native language produced increased effects, this finding could not be replicated in the later meta-analysis by Hall and colleagues (2016).

However, some indications of which aspects of adaptations might be of importance can still be found based on the existing studies. Available evidence suggests that targeting a single cultural group leads to more effective interventions than targeting a mixed group (Griner & Smith, 2006; Smith et al., 2011). Secondly, there is also evidence suggesting that cultural adaptations might be more important for older and less accultured clients (Griner & Smith, 2006; Smith et al., 2011). Third, some evidence suggest that more explicit cultural adaptations might have an increased risk of having detrimental effects, whereas more implicit cultural adaptations are more likely to produce positive effects (Huey et al., 2014). One explanation for this could be that explicit mentioning of race, ethnicity or cultural values can produce iatrogenic effects, for example by eliciting stigma (Huey et al., 2014). Fourth, matching therapeutic goals as well as metaphors and symbols with the clients' cultural worldview was related to better outcomes in one meta-analysis (Smith et al., 2011). Finally, there is

some evidence to support that adaptation of a treatment in accordance with the *illness myth,* i.e. the way that clients understand and makes sense of their symptoms, can make cultural adaptations more effective (Benish et al., 2011).

7. The role of Internet-based treatments in migrant and refugee mental health

Psychological treatments can be delivered through different formats, including via the internet (Andersson, Titov, et al., 2019). Since the publication of the first trial of internet-delivered therapy in the mid 1990s, there has been a rapid growth of studies investigating various forms of internet-delivered treatments, a majority of which have investigated various forms of internet-delivered CBT (ICBT) (Andersson et al., 2019).

7.1 Treatment approach

Although there are many ways of delivering internet-based interventions, they all require some sort of treatment platform through which the treatment is delivered (Andersson et al., 2019). One example of such a platform is the Iterapi-platform used for the studies in this thesis (for details see Vlaescu et al., 2016). In the Iterapi-platform, each study has its own website with a unique URL address where the participants log in to access the treatment material (Vlaescu et al., 2016). This material is usually delivered in the form of text, video, and/or audio files, together with homework assignments that the participants complete, often on a weekly basis (Andersson et al., 2019). The treatment platform also allows for interaction between the participants and a clinician or an automated support function, for example providing feedback on homework assignments or answering questions that the participants may have regarding the treatment material. Overall, research has shown that *guided* ICBT, which includes support from a clinician, is more effective than *self-guided* ICBT (Andersson et al., 2019), although with some exceptions (Dear et al., 2015; Titov et al., 2015).

As mentioned earlier, most studies to date have investigated various forms of ICBT, although a growing number of studies have also investigated other forms of internet-delivered psychotherapy such as interpersonal therapy (Käll et al., 2021) or psychodynamic therapy

(Lindegaard, Berg, et al., 2020; Lindegaard, Hesslow, et al., 2020). The programs based on CBT often include similar components as evidence-based standard CBT treatments for specific disorders, such as exposure techniques in the case of anxiety disorders or cognitive restructuring and behavioural activation in the case of depressive disorders (Andersson et al., 2019). Regarding the role of the therapist, there is some data indicating that the therapist's behaviour can influence the outcome (Holländare et al., 2016; Paxling et al., 2013; Schneider et al., 2016), where for example therapist responses that were more affirming was associated with better outcomes in one study (Holländare et al., 2016).

7.2 Evidence base

7.2.1 Quantitative studies

Regarding the evidence for ICBT in the treatment of common mental health problems such as anxiety and depression, there is now relatively strong support for the efficacy of ICBT across conditions (Andersson, Carlbring, et al., 2019; Andersson, Titov, et al., 2019). For example, recent reviews of therapist-guided ICBT for anxiety and depression (Andrews et al., 2018) and PTSD (Sijbrandij et al., 2016) have shown effects in the moderate to large range compared to control conditions, with effects ranging from g = 0.70 – 1.31 for various anxiety disorders (Andrews et al., 2018), g = 0.67 for depression (Andrews et al., 2018), and g = 0.71 for PTSD (Sijbrandij et al., 2016). Also, an updated meta-analysis comparing ICBT to standard face-to-face delivered CBT did not find any significant difference between the two treatment formats, indicating equivalent treatment effects (Carlbring et al., 2018). Moreover, studies of long-term effects of ICBT show that the effects of the treatments generally maintain or increase over time (Andersson, Titov, et al., 2019). For example, a recent meta-analysis which included 14 trials that had followed-up participants at least two years after treatment completion, with an average follow-up period of three years, found a large sustained overall effect pre-treatment to follow-up of g = 1.52 (Andersson et al., 2018).

Finally, with regards to therapy models other than CBT, there is a growing body of research indicating that internet-based interventions based on other theoretical models such as psychodynamic therapy or acceptance and commitment therapy (ACT) can produce significant treatment effects similar to those of ICBT, especially with regards to depression outcomes (Brown et al., 2016; Lindegaard, Berg, et al., 2020).

7.2.2 Qualitative studies

Apart from quantitative studies, qualitative studies can help shed light on important aspects of the user experience regarding, for example the *acceptability* of an intervention. Acceptability is a multi-faceted construct concerned with to what extent the intended users of an intervention regard it as appropriate for their needs and includes aspects such as overall emotional reaction to the intervention, barriers to engaging with the intervention as well as perceived effectiveness (Sekhon et al., 2017). A recent meta-synthesis of qualitative studies evaluating the usability and acceptability of digital health interventions, a majority of which were based on CBT principles, identified 24 eligible studies targeting either depression, anxiety or somatoform disorders (Patel et al., 2020). The authors identified three overarching themes, each containing a number of sub-themes, that were named 1) *initial motivations and approaches to digital health interventions (here referred to as ICBT for the sake of simplicity),* 2) *personalization of treatment* and 3) *the value of receiving personal support in ICBT*. The first theme and related sub-themes described how the initial motivation and approach to the ICBT program is related to how much benefit the participants seem to gain from the treatment. The second theme and related sub-themes described the differing effects of the flexible format associated with ICBT for different clients, where some clients appreciated the flexibility associated with ICBT while others expressed need for more structure and accountability to help them engage with the intervention. Finally, the last theme and related sub-themes described the importance of human support and how some participants wanted more contact and support than was offered in the intervention. Overall, the authors

concluded that the acceptability and usability of digital health interventions is dependent on factors such as initial perceptions of the intervention, motivation, as well as on the support offered in the intervention (Patel et al., 2020).

7.3 The role of ICBT in immigrant and refugee healthcare

Both researchers and also potential end users interviewed in research studies have brought forward internet-based interventions as a promising treatment option for minority groups such as immigrants and refugees suffering from common mental disorders such as anxiety and depression (Andersson, Titov, et al., 2019; Andersson & Titov, 2014; Satinsky et al., 2019). One reason for this is that internet-based interventions can increase access to care in the native language of the client, thereby making it more acceptable (Satinsky et al., 2019). This makes particular sense given that a therapist in general spends less time per patient in ICBT compared to regular CBT and that a large part of treatment is conveyed via text which can be translated into the language of the intended recipient (Andersson et al., 2019). Another possible advantage that have been suggested is that internet-based interventions can be easier to access anonymously and therefor are preferable for individuals and groups suffering high levels of mental health stigma (Choi et al., 2012). In addition, it can also be easier to culturally attune an internet-based treatment to a specific cultural group (Choi et al., 2012) since the treatment is delivered in a highly standardized fashion with little variation between clients. However, this could also constitute an obstacle to the cultural adaptation since there is less room for the clinician to adjust the adaptation based on the individual client characteristic.

At the outset of this thesis there were a handful of published trials investigating the effects of culturally adapted ICBT showing generally positive results (Choi et al., 2012; Knaevelsrud et al., 2015; Lindegaard et al., 2019; Ünlü Ince et al., 2013). It was on the basis of this promising research that the studies included in the present thesis were developed, with an overall focus in the thesis on the development and

evaluation of ICBT for common mental health problems among migrants and refugees resettled in Sweden.

8. Aims of the thesis

The overarching aim of this thesis is to investigate the efficacy and user experience of ICBT for migrants and refugees residing in Sweden suffering from mild to moderate symptoms of common mental disorders such as anxiety and depression, including both quantitative and qualitative evaluations. More specifically the aims of the thesis have included to:

- Describe the development of a self-guided ICBT program in Arabic for common problems such as anxiety, depression, and insomnia (Study I)

- Develop and evaluate – quantitatively and qualitatively – a culturally adapted ICBT program for symptoms of depression and anxiety in Arabic (Study II & III)

- Develop and pilot test a culturally adapted ICBT program aimed at Dari/Farsi speaking adolescents suffering from symptoms of depression and anxiety (Study IV)

9. Summary of the articles

9.1 Study I

9.1.1 Aims

The aim of the first study in the thesis was to describe the development of a self-guided ICBT program aimed at Arabic-speaking persons residing in Sweden suffering from common mental health problems such as depression, anxiety, stress or insomnia.

9.1.2 Development process

The program was developed by a team of four clinical psychologists, a webmaster, and a translator. The intended target group was individuals residing in Sweden who preferred treatment in Arabic and who suffered from mild to moderate symptoms of common mental disorders. It was decided that the program should be self-guided rather than therapist-guided in order to be able to reach a wider audience, and also given that research have shown self-guided ICBT programs to have small but significant treatment effects (Karyotaki et al., 2017).

Nine different modules were developed focusing on common mental health problems such as low mood, anxiety, sleep problems and traumatic memories. All modules followed a similar structure with a short introduction and psychoeducation about the problem area, followed by a CBT model of the problem detailing cognitive and behavioural factors that contribute to the maintenance of the problems. Each module contained exercises based on established CBT techniques such as exposure and behavioral activation that the participants were encouraged to practice and implement. See Table 1 for a brief description of the 9 modules.

Table 1. Description of modules

Module	Content	Change techniques
Introduction	Includes introduction to CBT and self-help via the internet	-
Depression	Common symptoms of depression and the depressive cycle from a CBT perspective	Cognitive restructuring, Behavioral Activation
Anxiety	Common symptoms of anxiety and how anxiety is maintained through avoidance behaviors	Exposure hierarchy
Insomnia	Causes of sleep problem, and how they are maintained, i.e. stimulus control	Stimulus control, Sleep restriction, Sleep hygiene
Stress	Differentiating normal stress response from chronic stress	Planning recovery time, Time management
Worry & rumination	Explaining what worry/rumination is and how it is maintained through negative beliefs about it	Worry postponement to worry time, Relaxation
Emotion regulation	The functions of emotions and how they can become problematic	Naming emotions, Acceptance, Act in opposite to emotion
Difficult memories	The role of avoidance in prolonged negative effects of stressful events	Writing about memory, Managing overwhelming emotions
Maintenance	Summary of the treatment principles	Writing summary of own learning

9.1.3 Cultural adaptation

With regards to the culture and language adaptation of the program, it consisted of an iterative process with feedback from both the translator and a number of Arabic-speaking pilot users on the content, language and overall impressions of the modules. The cultural adaptation was based on the model by Chu and Leino (2017) and mainly involved adaptations of peripheral treatment components such as language and semantics, as well as some modifications to case examples to make them understandable and recognizable for people of different backgrounds. The adaptation process was made more difficult due to the cultural diversity present between different Arabic-speaking countries (Mohit, 2001). It was also impossible to know a priori to what extent adaptation was needed given the changing discourse regarding mental health problems among refugees from the middle east region (Hassan et al., 2015), which motivated the iterative development process.

9.1.4 Participants and methods

The next stage of the development process involved pilot testing of the program. In total, 105 users gave feedback on the modules in the form of ratings on a 5-point Likert scale, regarding if they found the modules understandable, helpful and if they would make use of the information/exercises in the future. There was also an option to leave written comments with additional feedback and suggestions for improvement. The test user accessed the program through the program website where they had to create an account using an email address. No data was collected about the test users other than their ratings of the treatment modules.

In addition, two focus groups were held to better understand the experience of the content and structure of the modules, the Arabic translation, and the treatment platform. The first focus group consisted of three Arabic-speaking females with a psychology background and the second of 5 Arabic-speaking immigrants to

Sweden and one librarian born in Sweden with experience working with migrants through the Red Cross.

9.1.5 Results

Overall, the modules were rated as acceptable by the test users, with an overall mean rating of 3.56 and 84% of users saying that they would recommend the material to a friend. With regards to written comments, only 21 users used this function. Of these, 5 comments related to the usefulness of the material and 5 comments expressed difficulties associated with the material, such as applying it in practice. The remaining comments concerned issues other than feedback on the modules, such as questions regarding specific psychological or medical problems.

With regards to the two focus groups, there was an overall agreement among participants that the program and its content was acceptable and relevant in its present form. Several participants noted a need for revising some parts of the Arabic translation to make it easier to understands for people originating from the Middle East rather than North Africa. The focus group participants also gave several other suggestions for improving the program, such as adding additional content, addressing stigmatization of mental health problems, or having more interactive content.

Based on the feedback from the test users and focus groups participants, some additional revisions of the program were made, mainly focusing on adjusting the Arabic translation and on increased emphasis on the normalization of mental health problems to counteract stigmatization.

9.1.6 Methodological considerations

One limitation with the study was the fact that the focus groups were conducted at a relatively late stage of the developmental process, which made it less feasible to implement more extensive revisions in the program. Another limitation concerned the fact that no sociodemographic data or assessment of mental health symptoms was

collected from the 105 pilot users, which make it difficult to ascertain the generalizability of the findings.

9.2 Study II

9.2.1 Aims

The aim of the study was to pilot-test the efficacy of a novel guided ICBT program for Arabic-speaking adults residing in Sweden with elevated levels of symptoms of depression and anxiety. The treatment was compared to a wait-list control condition.

9.2.2 Treatment and therapists

The treatment was an 8-week long guided ICBT program that was a modified version of the treatment material developed for Study I. The treatment was individually tailored meaning that the participants received a combination of treatment modules based on their clinical presentation and stated preference (Păsărelu et al., 2017). The treatment material from Study I was also modified to better match the therapist-guided format used in the present study. For example, a number of interactive worksheets and exercises were added to each module so that the therapist could track the progress of participants. In addition, a goal setting exercise was introduced in the first module which was also used to tailor the treatment to the needs of the individual participant.

The therapists in the study were two psychologists and two master's degree-level psychology students that received supervision once a week from two licensed clinical psychologists. The therapists had weekly contact with the participants providing feedback on homework assignments and answering questions within 24 hours on weekdays.

9.2.3 Participants

A total of 59 participants were recruited mainly through social media channels such as Facebook. Interested individuals were directed to the study website where they could register their interest to participate and answer a number of sociodemographic questions and screening questionnaires. Of the 103 participants who registered on the website, 78 completed the screening and were called up for a clinical interview. Of these, 59 were deemed eligible for the study and were randomized into either the ICBT group or the control group.

Inclusion criteria for the study were 1) to read and write Arabic, 2) have elevated scores of depression and/or anxiety symptoms, 3) reside in Sweden, and 4) be above 18 years of age. Exclusion criteria included having a severe mental illness, suicidal ideation, substance or alcohol abuse, and other ongoing psychological treatment.

With regards to sociodemographic characteristics of the participants, 58% were of male gender and the average age was 37.5 years. About half of the sample had completed or ongoing university or vocational education. Finally, 78% stated that they had come to Sweden as refugees.

9.2.4 Assessments

All questionnaires were administered at pre-treatment, week three of treatment as well as post-treatments. The main outcome measure for the study was the Patient Health Questionnaire-9 (PHQ-9) (Löwe et al., 2004). Secondary outcome measures included the Generalized Anxiety Disorder Questionnaire-7 (GAD-7) (Spitzer et al., 2006), the Percieved Stress Scale-14 (PSS-14) (Cohen et al., 1983), the Insomnia Severity Index (ISI) (Bastien et al., 2001), the Alcohol Use Disorders Identification Test (AUDIT) (Saunders et al., 1993), the Brunnsviken Brief Quality of Life Scale (BBQ) (Lindner et al., 2016), and the Impact of Events Scale Revised (IES-R) (Weis, 2004).

9.2.5 Data analysis

In order to examine the difference between the treatment and control group, latent growth curve models were used. This type of model can take into account differences in pre-treatment values and also allows for differences in rate of change between different individuals (Hesser, 2015). Latent growth curve models are also better suited to handle dependence among observations compared to traditional analysis models such as ANOVA or *t*-test (Hesser, 2015). The analysis made use of full information maximum likelihood estimation which is one of the recommended methods, together with Multiple Imputation, to deal with missing data (Schafer & Graham, 2002).

9.2.6 Results

Of the 59 participants who were included in the study, 23 (39%) did not complete the post-treatment assessment. The participants in the treatment group completed on average 2.23 modules with the most frequently assigned modules being the anxiety module, the emotion regulation module, and the depression module.

For the main outcome, a latent growth curve model revealed a significant effect for Group by Time, −0.42 (95% CI [−0.82, −0.02], z = −2.06, p = .039) on the PHQ-9, showing that participants in the treatment group improved on average 0.42 points on the PHQ-9 per week compared to the control group. The effect size was in the large range, Cohen's d = 0.85 [0.29, 1.41].

With regards to the secondary outcomes, latent growth curve models revealed that two of these reached statistical significance, the PSS-14 (d = 1.12) and the ISI (d = 0.68). The other three secondary outcome measures, the GAD-7 (d = 0.62), the IES-R (d = 0.24) and the BBQ (d = 0.79), did not reach statistical significance although both the GAD-7 and BBQ were both close to being significant, $p \leq .10$

Finally, regarding clinically significant change, 38% of participants in the treatment group who completed the post-treatment assessment had a clinically significant change with the corresponding number in the control group being 7%. The difference between the two groups

was close to being statistically significant $\chi 2$ (1) = 1.84, p = 0.066, odds ratio = 8.75, 95% CI [0.86–88.69].

9.2.7 Methodological considerations

Strengths of the present study included the randomized design and the intention to treat (ITT) analysis using maximum likelihood estimation to account for missing data (Hesser, 2015) which strengthens the conclusion that the intervention lead to significant reductions in symptoms of depression, stress and insomnia. However, several limitations of the study should also be noted, such as the use of a wait-list control condition which makes it difficult to distinguish active treatment effects from more general effects of taking part of an intervention. Another limitation was the fact that no structured diagnostic procedure was used, instead the study relied on self-report measures of psychological symptoms. Finally, the high dropout rate and the low adherence constituted a major problem for the study which gives indications of problems with acceptability of the treatment program among the target users.

9.3 Study III

9.3.1 Aims

The aim of the study was to investigate the experiences of participating in an ICBT program for depression and anxiety among Arabic-speaking individuals in Sweden using a qualitative design. Originally, the aim also included a quantitative long-term (10 months) follow-up of the participants in Study II, however, due to a low response rate we only presented descriptive data for the follow-up assessment.

9.3.2 Participants

At the 10-month follow-up following treatment termination, all participants from Study II were contacted asking if they wanted to

participate in an interview regarding their experiences of the treatment. Participants were also sent a link to the quantitative follow-up assessment. Of the 59 participants in Study II, 17 completed the quantitative follow-up assessment and 10 consented to participate in the qualitative interview. Of the 10 participants who completed the interview, 6 (60%) were female and the average age was 33.5 years.

9.3.3 Data collection and analysis

Participants were interviewed via telephone by one of the study authors. All interviews were conducted in Arabic, lasting between 13 to 23 minutes. The interview consisted of six main questions regarding different aspects of the participants experience of the treatment. One question also concerned the participants view of seeking help for mental health problems given the stigma related to mental health problems sometimes ascribed to Arabic culture (Al Laham et al., 2020; Byrow et al., 2019). In order to analyze the interview data, thematic analysis was used (Braun & Clarke, 2006). The analysis followed the six steps described by Braun and Clarke (2006).

With regards to the quantitative outcome measures, the same measures as were described in Study II were used in this study as well.

9.3.4 Results

The qualitative analysis resulted in five themes. The first theme, *the importance of being seen*, described how some participants felt seen and understood by their therapist while others expressed a wish for more contact, and that lack of a sense of connection with the therapist led to decreased motivation. The second theme, *new ways of knowing and doing*, described how some participants expressed that they had learned new ways of understanding and dealing with their problems and that this also led to feeling better. Further, the third theme, *treatment format not for everyone*, showed that the treatment format was perceived differently by different participants. Where some perceived the treatment as flexible and easy to understand, others found it difficult to perform the homework assignments or felt that difficulties in their life interfered with engagement with the

treatment. In the fourth theme, *changing attitudes towards mental health and help-seeking,* several participants described experiencing stigma surrounding mental health problems in Arabic culture and that treatment via the internet could be easier to access due to this factor. Finally, the fifth theme, *the healthcare system as a complex puzzle*, revealed that many participants had negative experiences of the Swedish healthcare system, finding it difficult to navigate and also experiencing communication difficulties with healthcare professionals, sometimes even when using an interpreter.

9.3.5 Methodological considerations

It is important to note that the sample in the study was a convenience sample and that the analysis might not capture the views of the participants from Study II as a whole. Some indication of this was also found since the respondents of the follow-up questionnaire differed significantly from the rest of the participants in terms of employment and alcohol use at pre-treatment. Also, due to the high attrition rate, it was not possible to evaluate the long-term effects of the treatment with regards to quantitative outcomes.

9.4 Study IV

9.4.1 Aims

The aim of the final study was to investigate the acceptability and feasibility of a novel ICBT program for Dari and Farsi speaking youth residing in Sweden suffering from mild to moderate levels of mental health problems. The study was an uncontrolled pilot study using a mixed-method design.

9.4.2 Treatment and therapists

The treatment was an adapted version of the ICBT program developed for Study II. The adaptations included translating the treatment material into Dari/Farsi while also adapting the language to

a youth population. In addition, an extra module was added focusing on complicated grief since previous studies have shown that many refugee youth have experienced the death of a loved one, and that this can be associated with PTSD-like symptomatology (Gormez et al., 2018). Also, additional minor adaptations to make the content and examples more relevant to the target population were made. The adaptations were conceptualized according to the principles of functional equivalence, conceptual equivalence and linguistic equivalence (Salamanca-Sanabria et al., 2020).

Similarly to in Study II, the treatment was individually tailored based on the symptom presentation and preference of the participants. Participants had contact with a Farsi-speaking clinical psychologist on a weekly basis.

9.4.3 Participants

Participants were recruited though social media channels, non-governmental organizations, as well as though school counselors and nurses working with newly arrived immigrant youth. Interested individuals were directed to the study homepage where they registered for the study and completed the screening assessment. Those who fulfilled inclusion criteria where telephoned for a clinical interview before a final decision on inclusion was made. Twenty-four participants registered on the website with 21 of these completing the screening assessment. Fifteen of these 21 participants were eligible for the study and included. Further, all 15 participants were called up after the post-treatment assessment and were asked to be interviewed regarding their experiences of the treatment program. In total, 4 participants agreed to be interviewed. In addition, three persons of a non-clinical reference sample was also interviewed to increase the sample size of the interviewees.

Inclusion criteria for the study included being between 15-26 years of age, speak and read Farsi or Dari, have elevated symptoms of depression and/or anxiety and reside in Sweden. Exclusion criteria included having suicidal ideation, severe mental illness, substance or alcohol abuse and other treatment that could interfere with the study.

The included participants were mostly male (93%) with an average age of 21.3 years. All but one originated in Afghanistan and most (93%) had arrived unaccompanied. The average duration of residence in Sweden was 5.3 years.

9.4.4 Assessments and interview

The Hopkins Symptom Checklist-25 (Mollica et al., 1987), which measures symptoms of anxiety and depression, was used as primary outcome measure for the study. Secondary outcome measures included the PTSD Checklist for DSM-5 (Blevins et al., 2015), which measures symptoms of PTSD, the ISI (Bastien et al., 2001) which measures symptoms of insomnia, the Prolonged Grief questionnaire-13 (Pohlkamp et al., 2018), which measures symptoms of traumatic grief and finally the PSYCHLOPS (Ashworth et al., 2005), which measures patient-generated outcomes of the intervention. Also, in the post-treatment assessment, the Client Satisfaction Questionnaire-3 (Attkisson & Greenfield, 1995) was used to measure satisfaction with the intervention.

The interview conducted with the participants after the treatment as well as with the three participants from the non-clinical reference sample consisted of a number of questions regarding the acceptability and cultural appropriateness of the intervention. Acceptability was conceptualized according to the framework by Sekhon and colleagues (2017) and interview questions were included to cover each of the 7 dimensions of acceptability defined in this framework.

9.4.5 Data analysis

Due to the poor response rate, it was not possible to conduct a quantitative analysis of the treatment effects. Instead, descriptive statistics of respective outcomes were presented. With regards to the qualitative analysis, we conducted a Thematic Analysis in accordance with Braun and Clarke (2006), similarly to in study III.

9.4.6 Results

The intervention suffered from a high dropout rate with only 3 participants (20%) completing the post-treatment assessment. Moreover, the adherence to the intervention was very low with an average of 0.9 completed modules per participant. Overall, these results indicated a low feasibility and acceptability of the intervention. Due to the low response rate, it was not meaningful to conduct a quantitative analysis of the treatment effects.

With regards to the qualitative analysis, it resulted in two main themes, *barriers* and *facilitators*, each containing four themes with related subthemes. The main theme barriers included the four themes, *cultural differences*, *internal circumstances*, *external circumstances*, and *treatment*. The first theme, cultural differences, described how gender roles in Afghan culture could make some exercises in the treatment difficult to perform, as well as differences regarding views of loss and mourning and mental health stigma. However, in the latter cases, it was not clear if the participants saw this as a barrier, or if it was a more general observation regarding cultural differences. In the second theme, internal circumstances, which included two subthemes, participants described how symptoms such as low concentration and low energy made it difficult to read and engage with the texts, and also that low trust in oneself or in text-based treatment decreased motivation for the program. The third theme, external circumstances, described how external stress connected to school and work made it difficult to allocate time for the treatment. Finally, in the fourth theme, treatment, which included three subthemes, participants expressed a wish for more human contact and conversation with a therapist, that some parts of the treatment material did not feel relevant for some participants, and that several participants experienced difficulties logging in to the treatment platform.

With regards to facilitators, the first theme, *easy to understand*, described how most participants found the texts well-written and coherent and that the case examples aided in understanding the material. The second theme, *useful content*, showed that many participants found the content informative and relevant to their

situation. The third theme, *intuitive platform*, described that the Iterapi platform was easy to understand and use overall. Finally, in the fourth theme, *online format*, participants described advantages of the online format such as increased access and the possibility of being anonymous, which could be especially important for people experiencing high levels of mental health stigma.

9.4.7 Methodological considerations

One important limitation of the study was the high dropout rate which meant that we could not meaningfully analyze the effect of the intervention. However, the high dropout rate was also important information regarding the acceptability and feasibility of the intervention.

Another limitation concerned the fact that only four of the treatment participants consented to participate in the qualitative interview. It is possible that those who did not consent to be interviewed would have contributed to valuable information regarding additional barriers and facilitators to treatment engagement.

Finally, it is also hard to know to what extent the views of the the three non-clinical participants who were included in the qualitative analysis are representative and informative with regards to a more clinical sample for which the intervention is intended.

10. General discussion

10.1 Acceptability of ICBT interventions

While there is a substantial amount of data concerning the acceptability of ICBT targeted towards western majority populations (Patel et al., 2020), this thesis adds to the growing body of evidence concerning acceptability of ICBT among non-western migrant and refugee populations. All four of the studies included in the thesis can be said to provide data on the acceptability of ICBT in various ways, although the results throughout the thesis are inconclusive.

In Study I, it was shown that a self-guided ICBT treatment was viewed as acceptable by a number of test users and through focus group discussions. The test users gave an overall mean rating of the treatment modules of 3.56 (SD 1.26) on a Likert scale from 1 to 5 where 84% of participants would recommend the material to a friend. Together with the feedback from the focus groups, it was concluded that apart from minor adjustments to the Arabic translation and increased normalization of mental health problems, no major revisions were needed for the program to be acceptable among the target users. Interestingly, the cultural adaptation of the intervention was very modest, mostly consisting of changing case illustrations and examples throughout the text so that they would be easily recognizable for people of different cultural backgrounds.

In Study II, it was shown that ICBT aimed at Arabic-speaking migrants and refugees suffering from depression and anxiety produced clinically meaningful effects on most symptom measures, although the adherence and retention was relatively low compared to ICBT aimed at western majority participants (van Ballegooijen et al., 2014). This could be interpreted as problems with the acceptability of the intervention, as low acceptability can lead to users discontinuing an intervention (Sekhon et al., 2017). Similar problems with adherence and dropouts has also been found in some (for example Ünlü Ince et al., 2013), but not all studies (for example Choi et al.,

2012) investigating ICBT for non-western participants. However, apart from problems with acceptability, the problems with adherence could also be related to many of the participants experiencing a stressful living situation that interferes with their participation in the treatment (Djelantik et al., 2020). This hypothesis was at least partly supported by the findings in Study III were some participants reported that stress occurring in their daily lives negatively affected their ability to engage with the treatment. However, additional problems regarding acceptance were also identified, where some participants reported problems translating the treatment material into their own lives or felt a need for more support from their therapist. These findings also echo the results found in other qualitative studies on western study participants where similar concerns have been raised (Sekhon et al., 2017). Overall Study II & III give some indication that acceptability of ICBT could be somewhat lower among non-western migrants and refugees compared to the Swedish general population, and also that the many stressors that migrants and refugees face could constitute a barrier to engaging with ICBT programs. Interestingly, studies on traditional face-to-face psychotherapy for adult Arabic-speakers have not found similar patterns of low adherence and high attrition (Kayrouz et al., 2018), indicating that the acceptability concerns may be at least partly related to the delivery format.

Moreover, the results from Study IV confirm the concerns about acceptability found in Study II & III since this study suffered from even lower rates of adherence and higher dropout than Study II. However, as this study targets a youth population, additional barriers other than those identified in Study III could be of relevance. Some indications were also found regarding this in the qualitative interview conducted with participants and a non-clinical reference group where the two most prevalent and seemingly important barriers mentioned across the data material concerned symptom interference, such as lack of energy or concentration difficulties, making it difficult to engage with the texts, as well as a need for more human support, for example through regular conversations with a therapist.

In summary, the four studies included in this thesis give a somewhat inconclusive picture of the acceptability of ICBT for migrants and refugees residing in Sweden suffering from depression

and anxiety. Overall, the Study I – III indicate that ICBT targeting adult migrants and refugees is acceptable although that there is room for improvements of the interventions to increase engagement with the programs. For example, the results in Study III suggest that interventions targeting migrants and refugee might need to consider the high stress levels that many migrants and refugees experience, and that additional support in applying the material in the daily lives of participants might be needed for some participants. However, as mentioned above, the results of Study IV seem to show that more comprehensive adaptations with regards to the delivery format are needed in order to make ICBT an acceptable intervention for Dari and Farsi-speaking refugee youth, where a blended treatment approach could be one possibility for future investigations.

10.2 Efficacy of ICBT

Regarding the efficacy of ICBT in reducing symptoms of depression and anxiety among resettled migrant and refugee populations, the qualitative and quantitative results obtained in Study II and III indicate that ICBT is a potentially effective intervention. In Study II, we found treatment effects in the moderate to high range for all outcome measures except regarding symptoms of PTSD compared to the control group with three of these being statistically significant. The large effect on depressive symptoms is similar to what has been found in other studies of ICBT for migrant populations (e.g. Choi et al., 2012) and also similar to effects found in studies on western participants (Andrews et al., 2018). With regards to the non-significant moderate effect on reducing anxiety symptom, this effect is somewhat lower than what has been found in ICBT studies targeting western participants (Andrews et al., 2018) but similar to other studies of culturally adapted ICBT targeting anxiety as a secondary outcome (Choi et al., 2012; Knaevelsrud et al., 2015; Ünlü Ince et al., 2013). One possibility is that the somewhat lower effects on anxiety outcomes in Study II was related to the low adherence to the intervention, i.e. that participants who did less also improved less. However, module completion was not found to be associated with overall outcomes, which contradicts this hypothesis. Still, it is possible that for some

participants, increased adherence and engagement with the treatment could have led to better outcomes.

Apart from depression and anxiety, Study II also demonstrated moderate to large treatment effects for symptoms of insomnia, stress, and quality of life, with all three being statistically significant or close to significant, $p \leq .10$. Given the high prevalence of both insomnia and stress found in migrant and refugee populations (Al-Smadi et al., 2019; Porter & Haslam, 2005), these findings are encouraging and speak to the usefulness of ICBT or similar interventions in addressing these problem areas. However, the low effect on PTSD symptoms found in Study II could indicate that for many participants, a more extensive focus on PTSD would have been beneficial and that a treatment exclusively targeted towards this problem area might be preferrable. Still, this finding is somewhat surprising given that previous research indicate that non-trauma focused treatments seem to be equally effective as trauma-focused treatments in reducing PTSD symptoms in several head-to-head trials (Frost et al., 2014; Nidich et al., 2018).

In addition, the findings from Study II are also partly confirmed by the qualitative analysis in Study III where one theme concerned the helpful effects of the treatment experienced by the participants, including an increased understanding and self-awareness regarding oneself and one's symptoms. In addition, participants also described that the treatment led to doing things in a different way, as well as new ways of thinking and focusing attention, which in turn resulted in positive outcomes such as more positive feelings and increased energy levels. However, as noted in the previous section, participants also described difficulties in applying the material and a lack of expected positive effects, thereby confirming the picture from Study II that the treatment was effective for some, but not all participants. Also, the long-term effect of the treatment in Study II was not evaluated due to the high dropout rate at the 11-month follow-up.

With regards to the remaining studies, Study I and IV, it is not possible to evaluate the efficacy of ICBT based on these studies. In Study I, no data regarding effects of the self-help intervention was collected and in Study IV, the number of participants who completed the post-treatment was too low to assess the effect of the intervention.

In summary, especially Study II in the thesis could be said to add to the growing literature demonstrating the efficacy of ICBT for common mental health problems among adult migrants and refugees resettled in western countries.

10.3 The need for cultural adaptation

With regards to the question of how much cultural adaptation is needed for ICBT to be an acceptable and efficacious intervention for non-western migrants and refugees residing in Sweden, the studies in this thesis do seem to indicate that relatively modest adaptations are sufficient to make the treatment culturally relevant to participants. In study I, insufficient cultural adaptation did not come up as a theme in either of the two focus groups, despite the low amount of adaptation done to the treatment material. Similarly, in Study III, as noted above, the qualitative analysis showed that many participants found the information and exercises useful, although some participants also mentioned that it was difficult to transfer the principles of the treatment into their daily lives. This could be related to issues regarding the cultural adaption, however, as similar themes have also been described in qualitative studies on western participants (Patel et al., 2020), it is hard to know whether this reflects a problem with the adaptation per se, or is a more general problem with internet-based interventions and psychotherapy in general. Moreover, as mentioned above, the results in this study also pointed to other potential barriers, not related to cultural issues, such as difficulty focusing due to high anxiety or having a stressful life situation.

These findings were also partly confirmed by the thematic analysis in Study IV were participants overall seemed to find the content relevant and culturally appropriate. As mentioned earlier, the main barriers seemed to be related to mental health symptoms such as low mood and resulting lack of concentration interfering with engaging with the treatment as well as a need for more human interaction and conversations. Thus, one part of the explanation for the relatively poor adherence in Study II and very poor adherence in Study IV could be that this was related to participant characteristics such as having a high mental health burden in combination with a stressful life

situation, rather than insufficient cultural adaptation. Although internet-based interventions have been successfully implemented in outpatient psychiatry (El Alaoui et al., 2015), most studies of ICBT to date still recruit through self-referral or exclude more severe cases (Etzelmueller et al., 2020). It is therefore possible that ICBT could be better suited for patients with a more stable life situation or a higher level of overall functioning. Along this line, a recent qualitative study on psychiatric outpatients in Sweden receiving ICBT while awaiting other treatment found that many of the patients expressed a preference for face-to-face treatment and expressed a need for additional support (Pedersen et al., 2020).

However, in Study IV, some concerns around the cultural appropriateness of the material were also raised, for example regarding the hindering role that some cultural ideas can have in applying the treatment principles, especially for girls. Thus, this might be an important area in need of further adaptation, especially for female clients in certain cultural groups. However, overall, the results from the studies in the present thesis indicate that cultural issues do not seem to constitute the most important barrier in the usefulness of ICBT for migrant and refugee populations resettled in Sweden. This conclusion is also strengthened by a study by Böttche and coworkers (Böttche et al., in press) which found that a transdiagnostic CBT intervention in its original form was culturally appropriate for Arabic-speaking refugees in Germany, with the main adaptations implemented being related to treatment delivery. In addition, a recent review of culturally adapted internet based interventions found no relationship between the extent of cultural adaptation and treatment adherence or efficacy (Spanhel et al., 2021).

10.4 Future directions

Overall, the findings presented in the thesis are of a preliminary nature in need of replication. For example, with regards to the findings in Study II that ICBT resulted in moderate to large effects on most outcomes measure, this needs to be replicated in a study with a larger sample. Future studies should also try to address some of the concerns found in Study II & III regarding difficulties translating

treatment principles into the lives of participants and the interference of daily stressors and psychological symptoms such as high anxiety with the engagement with the treatment. One possible way to develop the intervention in Study II is to adapt it more specifically for a given target group, such as Syrian refugees, rather than Arabic speakers in general, as there is evidence that this can increase the effect of the adapted intervention (Griner & Smith, 2006; Smith et al., 2011). This could in turn make it easier to further customize the content to the lived experience of participants which might help address some of the barriers mentioned above.

Also, another interesting possibility would be to test the effect of the self-help material developed for Study I in a randomized controlled trial without therapist support, as there is evidence that entirely self-guided treatment can work, although with lower effect sizes than guided treatments (Karyotaki et al., 2017). If the intervention was shown to produce clinically meaningful effects, it could then be scaled much easier compared to a guided intervention.

Finally, as mentioned above, with regards to the intervention pilot tested in Study IV, it would be interesting to investigate whether a blended delivery format, either with therapist contact face-to-face or via phone/video calls, can increase the adherence to the intervention, as suggested by the results from the qualitative analysis. Hopefully, this can also make it possible to evaluate the effect of the intervention since this was not possible in Study IV due to the high dropout rate. Other important developments of the intervention include revising the login procedure to make it easier for the participants and further investigations around if additional content need to be added to meet the needs of the target population, since this concern was brought up by two of the interview participants.

11. Conclusions

To conclude, the studies included in the present thesis give initial indications that both self-guided and therapist-guided ICBT can be acceptable interventions for symptoms of common mental health problems such as depression and anxiety among adult Arabic-speaking migrants and refugees residing in Sweden, and that therapist-guided ICBT can be efficacious in reducing symptoms of depression, insomnia, and stress in this population. Moreover, the results also indicate that ICBT aimed at Dari/Farsi-speaking adolescents and young adults may need to consider other variations in delivery format, for example a blended treatment format with increased access to therapist contact either live or via video/telephone calls, to increase acceptance of the intervention. The results from the qualitative studies have shown similar themes regarding both helpful aspects of the treatments as well as potential barriers as qualitative studies of western participants. Thus, the biggest challenges in developing effective and acceptable ICBT programs for refugee and migrant populations may have less to do with a need for substantive cultural adaptation, and more to do with finding a way to deliver the treatment that takes the stressors and symptom burden often faced by migrants and refugees into consideration.

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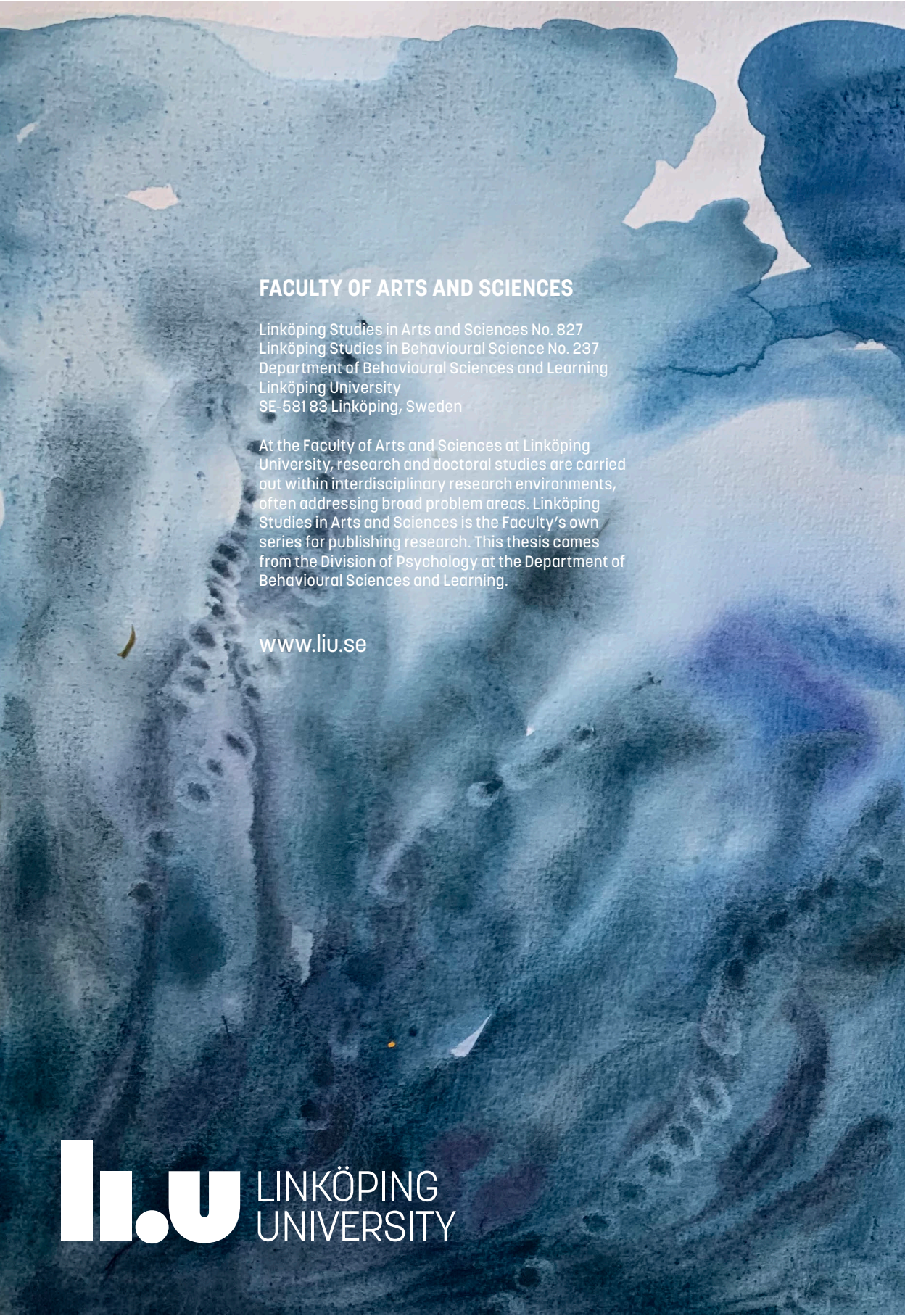

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