



Universiteit Utrecht

Master Thesis

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*Life on the Sidetrack: On the Detrimental Effects of Extended Uncertainty About the Future on
Refugee Depression Scores.*

Word count: 5,345 words

Thesis Supervisor: Trudy Mooren

September 2024

Abstract

Background: Global conflicts and wars have resulted in the displacement of millions, forcing refugees into prolonged uncertainty. While research has consistently shown that the traumatic experiences of war have profound effects on mental health, less attention has been given to how prolonged periods of uncertainty regarding the future exacerbate these issues. This study investigates the relationship between time reflecting uncertainty during forced displacement and depression severity among refugees, while investigating the potential moderating effects of birth country, particularly for Ukrainian refugees who benefit from streamlined asylum processes under the European Union's Temporary Protection Directive. It was hypothesized that time spent in uncertain conditions would be a statistically significant positive predictor of depression severity (H_1), while birth country would be a statistically significant negative moderator of the relationship between time reflecting uncertainty and depression severity (H_2).

Method: A sample of 22 young adults who have fled their countries was recruited both online and in-person. Participants were asked to complete a questionnaire battery that included demographic questions, a question assessing the length of time spent under uncertain conditions since they had relocated in the Netherlands, and a validated scale assessing depression severity.

Results: The analyses indicated that time spent reflecting the uncertain situation was a statistically significant positive predictor of depression severity, suggesting that refugees who had spent more time under uncertain conditions were more likely to experience greater depression severity. However, birth country was not a statistically significant moderator of the relationship between prolonged periods of uncertainty and depression severity. Therefore, H_1 was supported, whereas H_2 was not.

Conclusion: The findings stress the need for host countries to reform asylum processes to reduce the psychological burden on refugees. Early intervention and mental health support are essential in addressing the heightened depression levels associated with prolonged displacement under uncertain conditions.

Life on the Sidetrack: On the Detrimental Effects of Extended Uncertainty About the Future on Refugee Depression Scores.

The world is witnessing an unprecedented scale of forced displacement driven by conflict, persecution, and violence. According to the United Nations High Commissioner for Refugees (UNHCR), over 110 million individuals globally were forcibly displaced at the end of 2022, a record high that surpasses the numbers seen even during World War II (UNHCR, 2024). This escalation can be attributed to numerous geopolitical events, including the Syrian civil war, conflicts in Sub-Saharan Africa, the Venezuelan economic collapse, and the Russian invasion of Ukraine. As global conflicts intensify, the displacement crisis places significant strain on both the countries of origin and the host nations that receive millions of asylum seekers. Refugee movements have been particularly concentrated in Europe since the outbreak of the European refugee crisis in 2015. More than 5.1 million refugees and asylum seekers have sought refuge within European Union member states (Eurostat, 2021). The crisis was exacerbated by the Russian invasion of Ukraine in February 2022, which resulted in the largest refugee movement in Europe since World War II. By May 2023, over 8.2 million Ukrainians had fled their country, with many seeking asylum across Europe (UNHCR, 2024). The United Nations Children's Fund (UNICEF, 2022) estimated that within the first month of the invasion, over half of Ukrainian children were forcibly displaced. This massive exodus is characterised not only by the physical dangers of war but also by the psychological trauma experienced by those fleeing the violence. While forced displacement is often seen as a physical act of fleeing war, violence, or persecution, it is important to recognise the psychological toll that these experiences impose. War, as Schwartz et al. (2022) describe, is “the ultimate non-normative and existential stressor,” affecting individuals’ psychological health long after they have left the conflict zone.

In recent years, a growing body of literature has focused on the mental health outcomes of refugees who have survived war. Refugees, particularly those who have witnessed or directly experienced violence, are more likely to develop mental health disorders such as depression, anxiety, and post-traumatic stress disorder (PTSD). For example, a study by Lytvynenko and König (2023) involving 600 Ukrainian refugees in Germany found that approximately two-thirds of participants

reported clinically significant levels of stress, anxiety, and depression. Such levels of mental health distress were considerably higher than the pre-war indicators and did not decrease after three months in a safe host country. Another study by Osokina et al. (2023), focusing on 3,000 Ukrainian students aged 11 to 17, compared PTSD, anxiety, and depression levels in students from the war-torn region of Donetsk and the less-affected Kirovograd region. The findings indicated that students from Donetsk, who were more likely to have experienced direct conflict, had significantly higher odds of developing PTSD, severe anxiety, and depression than their counterparts from Kirovograd.

However, the challenges refugees face do not end once they escape the war zone. For many, the asylum-seeking process itself can exacerbate psychological distress. In host countries, such as those in the European Union, asylum procedures can take years to process. Despite guidelines set by the Netherlands' Immigration and Naturalization Service (IND, 2024) indicating that asylum decisions should be made within six months of receiving an application, waiting times can extend for over two years (Van Heelsum, 2017), leading to prolonged periods of time during which refugees can face high levels of uncertainty regarding their own futures. The psychological effects of prolonged waiting times and uncertain conditions are well-documented. Phillimore and Cheung (2021) found that asylum seekers exposed to long periods of uncertainty experienced worsened physical and mental health outcomes, particularly among women and individuals from Muslim-majority countries. This is compounded by the broader societal and political context of receiving countries. The refugee crisis has fueled the rise of far-right political movements across Europe, leading to heightened xenophobia and discrimination against refugees. There is a growing influence of xenophobic rhetoric in public discourse, which often frames refugees as "dangerous barbarians", "headscarf girls", or "knife men" (Benček & Strasheim, 2016; Bennhold, 2021). This societal rejection adds an additional layer of psychological stress for asylum seekers, who are already vulnerable due to their precarious legal status.

The challenges and uncertain conditions refugees face in host countries go beyond xenophobia. For many, their status as asylum seekers subjects them to financial uncertainty, poor living conditions, and lack of access to essential services. In many European countries, refugees are forced to live in refugee shelters or camps for extended periods, which further isolates them from

society and aggravates mental health issues (Blackmore et al., 2020). Refugees often live with the constant threat of deportation and struggle with the uncertainty surrounding their legal status. Asylum seekers who have been displaced for extended periods have been found to experience high rates of depression and PTSD. Blackmore et al. (2020) conducted a study among more than 5,000 refugees across 15 countries and reported that over 30% of participants showed symptoms of PTSD and depression-prevalence rates significantly higher than those of the general European population, where PTSD prevalence is estimated at 1% and depression at around 10% (Ayuso-Mateos et al., 2001; Darves-Bornoz et al., 2008). Beyond the personal consequences for refugees, there are broader societal implications. The interaction of different cultural backgrounds, combined with the rise of right-wing populism, creates a dangerous environment where refugees are treated as “others” and blamed for a wide range of societal problems. These hostile attitudes can prevent successful integration, fostering divisions that affect not only refugees but also the communities they settle in (Esses et al., 2017). This makes the mental health of refugees a critical issue not only for humanitarian reasons but also for the stability and wellbeing of the broader population.

Therefore, this study aims to investigate the effects of uncertainty, as reflected in time spent reflecting uncertainty about the future, on the mental health of refugees. Specifically, this research focuses on depression severity among refugees, as measured by the Beck Depression Inventory-II (BDI-II; Beck et al., 1996). Given the existing body of literature on the negative effects of prolonged periods of waiting times and uncertainty (Ahmad et al., 2021), this study hypothesises that time spent in uncertain conditions will be a statistically significant positive predictor of depression severity (H_1). It is expected that the longer a refugee has been living in uncertain conditions with or without a clear legal status, the higher their depression scores will be (H_1). In addition to exploring the direct effects of prolonged uncertainty on depression, this study also investigates whether refugee origin serves as a moderating factor in this relationship. Ukrainian refugees, who fled their home country due to the 2022 Russian invasion, were granted special status under the European Union’s Temporary Protection Directive (IND, 2024). This status allows them expedited access to shelter, medical care, education for children, and the ability to work, removing many bureaucratic hurdles faced by refugees from other regions. Given these favourable conditions, it is hypothesised that

Ukrainian refugees will report lower depression severity compared to refugees from other countries who do not have the same privileges (H₂). In conclusion, the findings of this study will contribute to the growing body of research on the mental health of refugees, particularly with regard to the impact of prolonged periods of living under uncertain conditions. The study will also shed light on how different asylum policies affect mental health outcomes, providing evidence for policymakers to create more effective and compassionate refugee support systems. In an era where displacement is a global crisis, addressing the mental health needs of refugees is not only a moral imperative but also essential for fostering social harmony and resilience in host countries.

Methods

Design

Cross-sectional data was gathered utilising an electronic survey as part of the Clinical Psychology master program at the University of Utrecht. At the start of the survey, participants were presented with an informed consent form that included detailed information about the study's purpose, its expected duration, and their rights as participants. Specifically, they were informed that they could withdraw from the study at any time, for any reason, without consequence. Participants also received the contact details of the lead researcher and were briefed on how their data would be processed and protected, as well as their right to withdraw consent for the usage of their data at any stage. The informed consent form was available in English, Dutch, German, Arabic, and Farsi. The questionnaire began with general demographic questions, including gender, age, country of origin, and the length of time since participants had spent living under uncertain conditions regarding their future. Afterwards, the BDI-II (Beck et al., 1996) was presented.

Data Collection

The survey was created on Qualtrics, the survey platform used at the University of Utrecht. In order to create more awareness for the study, flyers were created and distributed at refugee reception centres and advertisements were placed on various social media platforms. Participants

were approached both in person at refugee reception centres in the Netherlands, as well as online via a shareable link to the survey.

Participants

To be eligible for inclusion in the study, respondents had to be young adults between the ages of 18 and 25, who had fled their home countries and were proficient in at least one of the languages in which the survey was offered. In total, 50 participants responded to the questionnaire. However, only individuals who provided information on their time spent in uncertainty and completed the Beck Depression Inventory-II (BDI-II; Beck et al., 1996) were included in the analyses. Due to the BDI-II being positioned at the end of the survey, the attrition rate was relatively high. Of the 50 respondents, only 22 participants completed the entire survey, leading to an attrition rate of 50.9%. A descriptive analysis showed an almost equal representation of men (54.5%) and women (45.5%). The mean age of participants was 21 years ($M = 21.41$, $SD = 2.04$). Regarding country of birth, 40.9% of the respondents were from Ukraine. The remaining individuals originated from a diverse range of countries, including Syria, Afghanistan, Venezuela, Ethiopia, and Saudi Arabia (see Table 1 for demographic characteristics of the sample).

Table 1

Descriptive Statistics

Characteristics	Category	Frequency	Percentage %
Gender	Male	12	54.5
	Female	10	45.5
Country of Origin	Ukraine	9	40.9
	Syria	4	18.2
	Afghanistan	2	9.1
	Ethiopia	1	4.5
	Georgia	1	4.5
	Greece	1	4.5
	Iraq	1	4.5

Libya	1	4.5
Serbia	1	4.5
Venezuela	1	4.5

Procedure

The questionnaire was created by researchers at the University of Utrecht. At the start of the survey, participants were informed about the purpose and length of the study and their right to stop participation at any point for any reason. Additionally, participants received the contact information of the researcher in charge and were informed about the procedures regarding data processing and data protection, as well as their right to withdraw consent to the usage of their data. The questionnaire itself consisted of general questions, such as gender, age, country of origin, and the time passed since the participant had left their home country.

Measures

Time spent reflecting uncertainty about the future: For the purposes of this study, time spent under uncertain conditions was defined as the duration that had elapsed since participants had arrived in the Netherlands, irrespective of their current asylum and legal status. Participants were asked to indicate how long they had been displaced. Those who had been displaced for up to six months were categorised into the "short-term" group, as six months is the typical time frame within which the Dutch government aims to process a standard refugee claim. Participants who had been displaced for more than six months but less than one year were classified into the "middle-term" group. Finally, participants who had been displaced for over one year were placed into the "long-term" group.

Depression scores: Depression levels were measured using the revised Beck Depression Inventory (BDI-II; Beck et al., 1996), a well-established tool widely employed in both clinical and research contexts to assess the severity of depressive symptoms. Originally developed by Beck et al. (1961), the BDI has become one of the most commonly used instruments for diagnosing and tracking depression over time. The BDI-II, in particular, is designed as a 21-item self-report questionnaire that evaluates a range of depressive symptoms, including general sadness, feelings of guilt, reduced interest in pleasurable activities, disruptions in sleep, and diminished sexual drive.

Each item is rated on a 4-point scale, from 0 to 3, with higher scores indicating more severe symptoms (e.g., 0: "I do not feel sad"; 1: "I feel sad"; 2: "I am sad all the time and can't snap out of it"; 3: "I am so sad and unhappy that I can't stand it"). The total score is derived by summing the individual item scores, yielding a possible range from 0 to 63.

In this study, the standardised BDI-II cut-off scores were utilised to categorise participants' depressive symptoms. Participants scoring between 0 and 13 were classified as having minimal depression, those scoring between 14 and 19 as having mild depression, those scoring between 20 and 28 as having moderate depression, and those with scores of 29 and above as having severe depression. Also, the translated version of BDI-II in Arabic, Dutch, German, and Persian were used to ensure accessibility for participants from diverse linguistic backgrounds.

The psychometric properties of the BDI-II are well-documented, with robust internal consistency reported across 25 studies, ranging from 0.76 to 0.95 in psychiatric populations and from 0.73 to 0.92 in non-psychiatric populations, with mean coefficient alphas of 0.86 and 0.81, respectively (Beck et al., 1988). Moreover, the BDI-II has demonstrated strong convergent validity with other depression measures, including the Hamilton Depression Rating Scale, with a correlation coefficient of 0.71. Additionally, the inventory has shown high test-retest reliability, with a coefficient of 0.93, indicating that it is not unduly affected by daily mood fluctuations (Beck et al., 1996).

Statistical Analyses

All statistical analyses were conducted using SPSS, version 25.0. Descriptive statistics were first computed to summarise the characteristics of the sample, including categories regarding time spent reflecting uncertainty and depression severity. Descriptive analyses included means, standard deviations, and frequency distributions for the variables of interest. Also, prior to conducting inferential analyses, the assumptions for linear regression analyses were assessed. The study examined the relationship between one discrete variable (short-term, middle-term, and long-term uncertainty groups/ Ukrainian - Non-Ukrainian) and one continuous variable (depression score based on the depression items). In order to evaluate the relationship between time spent under uncertain conditions and depression severity (H_1), a preliminary Spearman's correlation analysis was conducted, followed by a simple linear regression analysis. Afterwards, the moderating effect of birth

country on the relationship between time spent under uncertain conditions and depression severity was examined (H₂). Initially, a hierarchical linear regression was conducted to assess the potential confounding effect of birth country on the relationship between time spent under uncertain conditions and depression scores. In the first step of the model, birth country was entered as a predictor, followed by time spent under uncertain conditions in the second step. Subsequently, a moderation analysis using the PROCESS macro (version 3.5.3) was performed to determine if birth country is a statistically significant negative moderator of the relationship between time spent under uncertain conditions and depression severity. In all instances, statistical significance was set at $\alpha = .05$.

Results

Descriptives

A descriptive analysis was performed on the variables of interest, namely time spent in uncertainty and depression. Regarding time of uncertainty, 50% of participants were classified in the long-term group, having arrived in the Netherlands more than one year ago. A total of 18.2% of respondents were placed in the middle-term group, indicating they had been in the Netherlands for more than six months but less than one year. Meanwhile, 31.8% of participants were categorised in the short-term group, having been displaced in the Netherlands for a period of up to six months. Concerning depression severity, a mean score of 17.59 (SD = 12.77) was identified, suggesting mild depression severity. Almost half of the respondents (45.5%) experienced minimal depression, while 22.7% of them displayed severe depression (see Table 2 for frequency analysis).

Table 2

Frequency Analysis on Uncertainty Time Groups and BDI-II Depression Severity (N = 22)

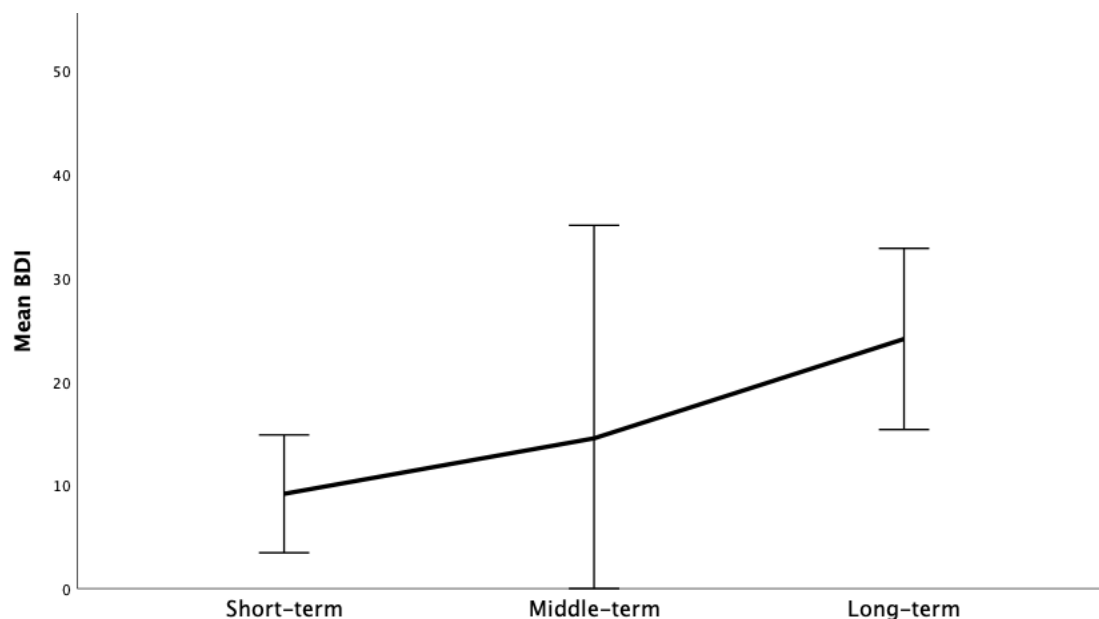
Category	Frequency	Percentage %
Uncertainty time group		
Short-term	7	31.8
Middle-term	4	18.2

Long-term	11	50.0
BDI-II depression severity		
Minimal depression (≤ 13)	10	45.5
Mild depression (14-19)	4	18.2
Moderate depression (20-28)	3	13.6
Severe depression (≥ 29)	5	22.7

Overall, depression scores demonstrated an upward trend with increasing time spent reflecting the uncertainty of the future, with the mean BDI-II score rising from 9.14 ($SD = 6.15$) in the short-term group to 14.50 ($SD = 12.92$) in the middle-term group and to 24.09 ($SD = 13.01$) in the long-term group (see Figure 1 for mean differences).

Figure 1

Mean Differences in BDI-II Scores Among Uncertainty Time Groups (N = 22)



Note. Error bars represent 95% CIs.

Assumption Testing

Prior to conducting the inferential analyses, the assumptions required for linear regression analyses were assessed. A visual inspection of histograms and normal P-P plots, as well as non-

statistically significant Shapiro-Wilk tests [short-term: $W(7) = .95, p = .70$; medium-term: $W(4) = .88, p = .32$; long-term: $W(11) = .96, p = .80$], indicated approximately normally distributed data, while Durbin-Watson's statistic values close to 2 suggested independence of errors. Also, a scatterplot of standardised residuals against standardised predicted values displayed a linear relationship between the predictor and outcome variables, as well as no signs of heteroscedasticity. In addition, no standardised residuals greater than ± 3 standard deviations were observed and Cook's distance values less than 1 suggested an absence of influential cases in the models. Finally, regarding the moderation analysis, heteroscedasticity-consistent standard errors were obtained to account for potential violations of the assumption of homoscedasticity (Field, 2018).

Hypothesis Testing

H₁: A Spearman's correlation analysis was initially conducted to evaluate if there was a statistically significant relationship between uncertainty time and depression severity ($N = 22$). Results indicated a statistically significant positive strong relationship [$r(20) = .56, p = .007$], indicating that refugees with longer uncertainty times reported greater depression severity. Afterwards, a simple linear regression analysis was performed to assess if uncertainty time was a statistically significant predictor of depression severity ($N = 22$). The analysis demonstrated a statistically significant model, $F(1, 20) = 8.11, p = .010$, which accounted for 25.3% of the variance in depression severity ($R^2 = .29; R^2_{adj.} = .25$). Time spent reflecting uncertainty of the future was a statistically significant positive predictor of depression severity, suggesting that refugees with longer times of uncertainty were more likely to report greater depression severity (see Table 3 for regression coefficients).

Table 3

Simple Linear Regression with BDI as the Outcome Variable and Uncertainty Time as the Predictor Variable ($N = 22$)

Variable	B (95% CI)	SE_B	β	t	p
Constant	1.09 (-11.95, 14.13)	6.25		.17	.86
Uncertainty time	7.56 (2.03, 13.10)	2.66	.54	2.85	.010

Simple Linear Regression with BDI as the Outcome Variable and Uncertainty Time as the Predictor Variable (N = 22)

Note. *B* = unstandardized regression coefficient; *CI* = confidence interval; *SE_B* = standard error of unstandardized regression coefficient; β = standardized regression coefficient.

H₂: A hierarchical linear regression analysis was first conducted to investigate if uncertainty time was a statistically significant positive predictor of depression severity, while accounting for the potential confounding effect of birth country (N = 22). Birth country was entered in the first step of the model and uncertainty time was entered in step 2. The analysis indicated a statistically significant model on step 1 [$F(1, 21) = 11.41, p = .003$] and a statistically significant model on step 2 [$F(2, 19) = 5.42, p = .014$]. The percentage of variance in depression severity accounted for by step 1 was 33.1% ($R^2 = .36, R^2_{adj.} = .33$) and decreased to 29.6% on step 2 ($R^2 = .36, R^2_{adj.} = .30$). The 3.5% decrease in variance in step 2 was non-statistically significant, $F_{change}(1, 19) = .005, p = .94$. Birth country was a statistically significant positive predictor of depression severity on step 1 ($p = .003$), indicating that refugees from Ukraine were more likely to display greater depression severity than those from other countries. However, birth country did not emerge as a statistically significant predictor at step 2 ($p = .15$). Finally, time spent under uncertain conditions was a non-statistically significant predictor of depression severity ($p = .94$) (see Table 4 for regression coefficients).

Table 4

Hierarchical Linear Regression with BDI-scores as the Outcome Variable and Birth Country and Uncertainty Time as the Predictor Variables (N = 22)

Variable	B(95% CI)	SEB	β	t	p
Step 1					
(Constant)	23.85(17.81, 29.89)	2.90		8.24	< .001
Birth country	-15.29(-24.73, -5.85)	4.53	-.60	-3.38	.003
Step 2					
(Constant)	25.09(-10.85, 61.03)	17.17		1.46	.16
Birth country	-16.00(-38.42, 6.42)	10.71	-.63	-1.49	.15

Uncertainty time	-.44(-12.88, 12.00)	5.94	-.031	-.074	.94
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Note. ^a 0 = Non-Ukrainian; 1 = Ukrainian. *B* = unstandardized regression coefficient; *CI* = confidence interval; *SEB* = standard error of unstandardized regression coefficient; β = standardized regression coefficient.

Subsequently, a moderation analysis was conducted to investigate if birth country was a statistically significant moderator of the relationship between periods of uncertainty and depression severity. The PROCESS tool, v. 3.5.3 (Hayes, 2018), model 1, was employed to perform the analysis. Results indicated that birth country was a non-statistically significant moderator, $b = -4.23$, 95% CI (-38.64, 30.18), $t = -.26$, $p = .80$.

Overall, results showed that refugees who had undergone longer periods of uncertainty were more likely to experience greater depression severity, supporting the first hypothesis. Nevertheless, birth country was not a statistically significant moderator of depression severity and thus, the second hypothesis was not supported.

Discussion

Results indicated that time spent in uncertain conditions during forced displacement was a statistically significant positive predictor of depressive symptoms (H_1). Participants demonstrated significantly higher scores on the Beck Depression Inventory-II (BDI-II; Beck et al., 1996) the more time they had spent reflecting the uncertainty of their future. This finding aligns with prior research, which has consistently shown that extended periods of uncertainty exacerbate negative mental and physical health outcomes among refugees. For instance, Phillimore and Cheung (2021) demonstrated that extended asylum waiting times were associated with poorer health outcomes, especially for women. Similarly, Steel et al. (2009) reported that while depression rates tend to decrease post-conflict or post-resettlement in a safe third country, refugees in temporary or camp settings continue to experience heightened levels of depression compared to those resettled in high-income countries. However, birth country did not have a statistically significant moderating effect on the relationship between uncertainty time and depression severity (H_2), despite Ukrainian refugees benefiting from more favourable conditions in Dutch society. Ukrainian participants were distributed across all three uncertainty-time groups, potentially introducing confounding effects due

to the recency and ongoing nature of their traumatisation. The war in Ukraine continues, and many Ukrainian refugees may still be grappling with recent or ongoing traumatic events, including uncertainty about the safety of their families and the future trajectory of the war, complicating any reduction in depressive symptoms. As prior research suggests, the sequential nature of trauma in refugees - whereby trauma continues both during and after migration - often impedes recovery even when resettlement in a safe country occurs (Böttche et al., 2016).

The findings of this study highlight the pressing need to reform asylum processes in host countries, particularly regarding the timeframes within which asylum applications are processed. Prolonged feelings of uncertainty during asylum procedures delay refugees' ability to rebuild their lives and exacerbate the mental health challenges they face, often leaving them in a state of limbo and heightened psychological distress (Ahmad et al., 2021). Indicatively, Laban et al. (2004) found that refugees who experienced longer waiting periods during asylum procedures reported significantly higher levels of depression, anxiety, and PTSD compared to those whose applications were processed more swiftly. The sense of uncertainty about their future, combined with the inability to plan ahead or integrate into society, serves as a chronic stressor that undermines refugees' psychological well-being (Grace et al., 2018). Streamlining asylum procedures would not only reduce the psychological burden on displaced individuals but could also lead to long-term reductions in healthcare costs for host countries. Prolonged periods of uncertainty contribute to the development of chronic mental health disorders, including depression and PTSD, which require extensive treatment over time and increase healthcare utilization and costs (Patel & Kleinman, 2003). Early intervention through faster asylum decisions would allow refugees to begin their recovery and integration process sooner, reducing the need for long-term mental health treatment. Moreover, facilitating quicker resolution of asylum cases can enhance refugees' ability to access employment, education, and social services, which are crucial for both their mental health recovery and successful integration into host societies (Jakobsen et al., 2014). By ensuring that asylum seekers are not left in prolonged states of uncertainty, host countries can also mitigate the social isolation and marginalisation that many refugees face. Isolated and marginalised individuals often exhibit

higher levels of psychological distress (Carswell, et al., 2011), and inclusion through work and education is a protective factor that helps counteract these effects.

In addition to reforming asylum processes, there is a need for targeted mental health interventions that address the specific psychological challenges faced by refugees, particularly those who have endured extended periods of displacement and uncertainty. Many refugees experience a combination of pre-migration trauma (e.g., exposure to violence and conflict) and post-migration stressors (e.g., living in uncertain legal and socio-economic conditions) that contribute to the development of complex mental health issues. Evidence suggests that trauma-focused therapies, such as Cognitive Behavioral Therapy (CBT) and Narrative Exposure Therapy (NET), are effective in reducing symptoms of depression, anxiety, and PTSD among refugee populations (Neuner et al., 2010; Tol et al., 2011; Tribe et al., 2019). Such interventions help individuals process traumatic memories and build coping mechanisms to deal with current stressors, including uncertainty around asylum decisions.

The current study showed that longer times of uncertainty during forced displacement are significantly associated with higher levels of depression among refugees. Although Ukrainian refugees benefitted from more favourable treatment, no moderating effect of their nationality was found on depression scores, likely due to the ongoing traumatic circumstances of the war. These findings highlight the urgent need for host countries to streamline asylum processes and provide early mental health interventions to support refugees. Addressing these challenges is crucial not only for the well-being of displaced individuals but also for fostering more inclusive and cohesive host societies. Future research should continue to explore potential factors that affect refugee mental health, with an emphasis on informing policies and interventions that can better support this vulnerable population.

Strengths and Limitations

A significant strength of this study lies in its inclusion of Ukrainian refugees, a relatively new demographic of displaced individuals who have encountered unique settlement conditions and a more welcoming response from host communities, compared to other refugee groups. With limited research currently available on the mental health of Ukrainian refugees, this study offers important

contributions to understanding their psychological well-being, as well as a comparative perspective in understanding mental health outcomes among different refugee groups. Also, the use of the validated BDI-II instrument, a widely accepted tool for assessing depression severity, provides strong psychometric support for the findings (Beck et al., 1996). In addition, the study's diverse sample - despite its small size - adds some generalisability to the findings, as participants represented a range of countries beyond Ukraine, including Syria, Afghanistan, and Venezuela.

Nonetheless, this study has certain limitations that must be considered when interpreting its findings. First, the high attrition rate significantly reduced the statistical power of the analyses. While 50 participants began the survey, only 22 completed it, resulting in an attrition rate of over 50%. The extended length of the survey and the positioning of the BDI-II at the end of the survey likely contributed to this dropout rate. Research consistently demonstrates that longer surveys lead to increased participant fatigue and higher dropout rates (Crawford et al., 2001), which could have affected the study's ability to draw conclusive results. Furthermore, with such a small sample size, particularly for the moderation and regression analyses, the statistical power was insufficient to detect more subtle effects. According to G*Power, a sample size of at least 55 participants would have been required for these analyses (Faul et al., 2007, 2009).

The sensitive nature of the research - focused on war, forced displacement, and trauma - may have contributed to difficulties in recruiting participants, particularly those who remain in a psychologically vulnerable state. Refugees who have experienced significant trauma may be hesitant to participate in studies that require them to revisit distressing memories, which could have led to lower engagement or avoidance altogether. Previous research indicates that sensitive topics, particularly those involving trauma, can result in participant withdrawal due to emotional discomfort (Newman & Kaloupek, 2004). Additionally, some participants may have perceived the study as irrelevant to their current circumstances, particularly if they prioritized immediate concerns such as legal status or family reunification over participation in research. Time constraints likely played a role as well, with many refugees facing numerous practical challenges that may have reduced their ability or willingness to engage in a lengthy survey (Heeren et al., 2014).

Another limitation involves the potential confounding effects of ongoing trauma among Ukrainian refugees. While they benefitted from fewer bureaucratic hurdles, their recency in experiencing trauma, combined with the ongoing war, may have resulted in consistently elevated feelings of uncertainty and depression scores. Nickerson et al. (2011) argue that unresolved traumatic stress often leads to heightened vulnerability to mental health disorders, complicating the potential benefits of resettlement. As a result, the presumed positive effects of swift integration and labor market access may not have been sufficient to mitigate the ongoing emotional and psychological stressors experienced by this group.

Finally, the reliance on self-report measures for assessing depression introduces the possibility of response biases. Social desirability bias or underreporting may have influenced the accuracy of the BDI-II scores (Podsakoff et al., 2003). While the BDI-II is a robust tool for assessing depression, future research could benefit from incorporating clinician-administered assessments or mixed-method approaches to validate self-reported data.

Future research should address the limitations identified in this study by increasing the sample size to ensure adequate statistical power and generalisability. The small sample size in the current study limited its ability to detect subtle but potentially significant effects, such as the moderating role of refugee origin. Larger sample sizes would not only allow for more robust statistical analyses but would also enhance the ability to generalise findings across different refugee populations. In addition, longitudinal research designs could provide insights into how depressive symptoms and other mental health challenges evolve over time. Refugees' mental health is often dynamic, changing at various stages of displacement and resettlement (Silove, 2013). A longitudinal approach would allow researchers to capture these temporal changes, identifying critical time points where interventions might be most effective. Such designs could also help in identifying the long-term mental health impacts of protracted displacement, including how symptoms such as depression, anxiety, and PTSD develop or persist as refugees transition from newly arrived asylum seekers to longer-term residents. Furthermore, the impact of other moderating variables that might influence mental health outcomes could be explored, such as gender, social support networks, and socioeconomic status. Previous research has shown that women may be particularly vulnerable to

the mental health effects of displacement, with factors such as gender-based violence, family separation, and caregiving responsibilities exacerbating the stress of forced migration (Keygnaert et al., 2012). Similarly, social support networks-both in the form of familial connections and community-based support-have been shown to mitigate the psychological impact of displacement by providing emotional and practical resources (Schweitzer et al., 2006). Investigating how these variables interact with prolonged periods of uncertainty would offer a more comprehensive understanding of mental health disparities among different refugee subgroups. Also, the potential benefits of using mixed-method approaches should be examined. Quantitative data, while useful for identifying trends and drawing general conclusions, may not capture the full complexity of refugees' mental health experiences. Including qualitative methods, such as in-depth interviews, focus groups, or ethnographic observations, would provide a richer, more detailed understanding of the lived experiences of refugees (Creswell & Plano Clark, 2017). Qualitative research could also identify gaps in current mental health interventions, revealing how refugees perceive and experience the support systems available to them. This would be particularly valuable for informing the design of culturally sensitive and context-specific interventions that address the unique needs of diverse refugee populations.

Moreover, future research should investigate the long-term effects of policies like the European Union's Temporary Protection Directive, which provided Ukrainian refugees with streamlined access to services and support. Understanding how such policies impact mental health over time, both positively and negatively, could provide valuable lessons for future refugee management strategies. For instance, while streamlined access to healthcare and employment is likely to have immediate mental health benefits by reducing uncertainty and enabling self-sufficiency, it is important to examine whether these benefits are sustained over time (Jakobsen et al., 2014). Long-term studies could explore whether the Temporary Protection Directive leads to better integration outcomes, improved mental health, and reduced social isolation, or whether additional support systems are needed to address ongoing challenges, such as cultural adaptation or trauma recovery.

Finally, future research could compare the outcomes of refugees who have benefited from the Temporary Protection Directive with those from other conflict zones who have faced more bureaucratic hurdles in accessing services. This would offer insight into the broader implications of different asylum policies and provide evidence for the effectiveness of streamlined, trauma-informed approaches to refugee management. For example, how do different policies influence refugees' access to mental health services, employment opportunities, and social integration, and how do these factors, in turn, affect long-term mental health outcomes? Research on these questions could inform international policy discussions on refugee resettlement and integration, contributing to more effective and humane approaches to managing forced migration in the future (Silove, 2013).

References

- Ahmad, F., Othman, N., Hynie, M., Bayoumi, A. M., Oda, A., & McKenzie, K. (2021). Depression-level symptoms among Syrian refugees: findings from a Canadian longitudinal study. *Journal of Mental Health, 30*(2), 246-254. <https://doi.org/10.1080/09638237.2020.1765998>
- Ayuso-Mateos, J. L., Vázquez-Barquero, J. L., Dowrick, C., Lehtinen, V., Dalgard, O. S., Casey, P., Wilkinson, C., Lasa, L., Page, H., Dunn, G., Wilkinson, G., & the Odin Group (2001). Depressive disorders in Europe: prevalence figures from the ODIN study. *The British Journal of Psychiatry, 179*(4), 308-316. doi:[10.1192/bjp.179.4.308](https://doi.org/10.1192/bjp.179.4.308)
- Beck, A. T., Steer, R. A., & Carbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review, 8*(1), 77-100. [https://doi.org/10.1016/0272-7358\(88\)90050-5](https://doi.org/10.1016/0272-7358(88)90050-5)
- Beck, A. T., Steer, R. A., & Brown, G. (1996). Beck Depression Inventory–II (BDI-II) [Database record]. APA PsycTests. <https://doi.org/10.1037/t00742-000>
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4*(6), 561-571. doi: [10.1001/archpsyc.1961.01710120031004](https://doi.org/10.1001/archpsyc.1961.01710120031004)
- Benček, D., & Strasheim, J. (2016). Refugees welcome? A dataset on anti-refugee violence in Germany. *Research & Politics, 3*(4). <https://doi.org/10.1177/2053168016679590>
- Bennhold, K. (2021, September 27). *Germany's far right is nowhere in the election. But it's "here to stay"*. The New York Times. <https://www.nytimes.com/2021/09/22/world/europe/germany-afd-far-right-election.html>
- Blackmore, R., Boyle, J. A., Fazel, M., Ranasinha, S., Gray, K. M., Fitzgerald, G., Misso, M., & Gibson-Helm, M. (2020). The prevalence of mental illness in refugees and asylum seekers: A systematic review and meta-analysis. *PLoS Medicine, 17*(9), e1003337. <https://doi.org/10.1371/journal.pmed.1003337>
- Böttche, M., Heeke, C., & Knaevelsrud, C. (2016). Sequential traumatization, trauma-related disorders and psychotherapeutic approaches in war-traumatized adult refugees and asylum

- seekers in Germany. *Bundesgesundheitsblatt-Gesundheitsforschung-Gesundheitsschutz*, 59, 621-626. <https://doi.org/10.1007/s00103-016-2337-4>
- Carswell, K., Blackburn, P., & Barker, C. (2011). The relationship between trauma, post-migration problems and the psychological well-being of refugees and asylum seekers. *International Journal of Social Psychiatry*, 57(2), 107-119. <https://doi.org/10.1177/0020764009105699>
- Crawford, S. D., Couper, M. P., & Lamias, M. J. (2001). Web surveys: Perceptions of burden. *Social Science Computer Review*, 19(2), 146-162. <https://doi.org/10.1177/089443930101900202>
- Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage.
- Darves-Bornoz, J. M., Alonso, J., de Girolamo, G., de Graaf, R., Haro, J. M., Kovess-Masfety, V., Lepine, J. P., Nachbaur, G., Negre-Pages, L., Vilagut, G., & Gasquet, I. (2008). Main traumatic events in Europe: PTSD in the European study of the epidemiology of mental disorders survey. *Journal of Traumatic Stress*, 21(5), 455-462. <https://doi.org/10.1002/jts.20357>
- Esses, V. M., Hamilton, L. K., & Gaucher, D. (2017). The global refugee crisis: Empirical evidence and policy implications for improving public attitudes and facilitating refugee resettlement. *Social Issues and Policy Review*, 11(1), 78-123. <https://doi.org/10.1111/sipr.12028>
- Eurostat. (2021). *Asylum applicants by type - annual aggregated data*. <https://doi.org/10.2908/TPS00191>
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149-1160. <https://doi.org/10.3758/BRM.41.4.1149>
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175-191. <https://doi.org/10.3758/BF03193146>
- Field, A. (2018). *Discovering statistics using IBM SPSS Statistics* (5th ed). Sage.
- Grace, B. L., Bais, R., & Roth, B. J. (2018). The violence of uncertainty-undermining immigrant and refugee health. *The New England Journal of Medicine*, 379(10), 904-905. <https://doi.org/10.1056/nejmp1807424>

- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford.
- Heeren, M., Mueller, J., Ehlert, U., Schnyder, U., Copiery, N., & Maier, T. (2012). Mental health of asylum seekers: a cross-sectional study of psychiatric disorders. *BMC Psychiatry*, *12*, 1-8. <https://doi.org/10.1186/1471-244X-12-114>
- Immigratie- en Naturalisatiedienst. (2024, July 18). *Temporary protection directive Ukraine*. <https://ind.nl/en/ukraine/temporary-protection-directive-ukraine>
- Jakobsen, M., Demott, M. A., & Heir, T. (2014). Prevalence of psychiatric disorders among unaccompanied asylum-seeking adolescents in Norway. *Clinical Practice & Epidemiology in Mental Health*, *10*, 53-58. doi: [10.2174/1745017901410010053](https://doi.org/10.2174/1745017901410010053)
- Keygnaert, I., Guieu, A., Ooms, G., Vettenburg, N., Temmerman, M., & Roelens, K. (2014). Sexual and reproductive health of migrants: does the EU care?. *Health Policy*, *114*(2-3), 215-225. <https://doi.org/10.1016/j.healthpol.2013.10.007>
- Laban, C. J., Gernaat, H. B., Komproe, I. H., Schreuders, B. A., & De Jong, J. T. (2004). Impact of a long asylum procedure on the prevalence of psychiatric disorders in Iraqi asylum seekers in The Netherlands. *The Journal of Nervous and Mental Disease*, *192*(12), 843-851. doi: 10.1097/01.nmd.0000146739.26187.15
- Lytvynenko, O., & König, L. M. (2023). Investigation of Ukrainian refugees' eating behavior, food intake, and psychological distress: Study protocol and baseline data. *Applied Psychology: Health and Well-Being*, *16*(3), 923-943. <https://doi.org/10.1111/aphw.12477>
- Neuner, F., Kurreck, S., Ruf, M., Odenwald, M., Elbert, T., & Schauer, M. (2010). Can asylum-seekers with posttraumatic stress disorder be successfully treated? A randomized controlled pilot study. *Cognitive Behaviour Therapy*, *39*(2), 81-91. <https://doi.org/10.1080/16506070903121042>
- Newman, E., & Kaloupek, D. G. (2004). The risks and benefits of participating in trauma-focused research studies. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, *17*(5), 383-394. <https://doi.org/10.1023/B:JOTS.0000048951.02568.3a>

- Nickerson, A., Bryant, R. A., Silove, D., & Steel, Z. (2011). A critical review of psychological treatments of posttraumatic stress disorder in refugees. *Clinical Psychology Review, 31*(3), 399-417. <https://doi.org/10.1016/j.cpr.2010.10.004>
- Osokina, O., Silwal, S., Bohdanova, T., Hodes, M., Sourander, A., & Skokauskas, N. (2023). Impact of the Russian invasion on mental health of adolescents in Ukraine. *Journal of the American Academy of Child & Adolescent Psychiatry, 62*(3), 335-343. <https://doi.org/10.1016/j.jaac.2022.07.845>
- Patel, V., & Kleinman, A. (2003). Poverty and common mental disorders in developing countries. *Bulletin of the World Health Organization, 81*(8), 609-615. <https://link.gale.com/apps/doc/A108789128/AONE?u=anon~d611c540&sid=googleScholar&xid=5a37bfba>
- Phillimore, J., & Cheung, S. Y. (2021). The violence of uncertainty: Empirical evidence on how asylum waiting time undermines refugee health. *Social Science & Medicine, 282*, 114154. <https://doi.org/10.1016/j.socscimed.2021.114154>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Schwartz, L., Nakonechna, M., Campbell, G., Brunner, D., Stadler, C., Schmid, M., Fegert, J. M., & Bürgin, D. (2022). Addressing the mental health needs and burdens of children fleeing war: a field update from ongoing mental health and psychosocial support efforts at the Ukrainian border. *European Journal of Psychotraumatology, 13*(2), 2101759. <https://doi.org/10.1080/20008198.2022.2101759>
- Schweitzer, R., Melville, F., Steel, Z., & Lacherez, P. (2006). Trauma, post-migration living difficulties, and social support as predictors of psychological adjustment in resettled Sudanese refugees. *Australian & New Zealand Journal of Psychiatry, 40*(2), 179-187. <https://doi.org/10.1080/j.1440-1614.2006.01766.x>
- Silove, D. (2013). The ADAPT model: a conceptual framework for mental health and psychosocial programming in post conflict settings. *Intervention, 11*(3), 237-248. <https://doi.org/10.1097/WTF.0000000000000005>

- Steel, Z., Chey, T., Silove, D., Marnane, C., Bryant, R. A., & Van Ommeren, M. (2009). Association of torture and other potentially traumatic events with mental health outcomes among populations exposed to mass conflict and displacement: a systematic review and meta-analysis. *JAMA*, 302(5), 537-549. doi: [10.1001/jama.2009.1132](https://doi.org/10.1001/jama.2009.1132)
- Tol, W. A., Barbui, C., Galappatti, A., Silove, D., Betancourt, T. S., Souza, R., Golaz, A., & Van Ommeren, M. (2011). Mental health and psychosocial support in humanitarian settings: linking practice and research. *The Lancet*, 378(9802), 1581-1591. [https://doi.org/10.1016/S0140-6736\(11\)61094-5](https://doi.org/10.1016/S0140-6736(11)61094-5)
- Tribe, R. H., Sendt, K. V., & Tracy, D. K. (2019). A systematic review of psychosocial interventions for adult refugees and asylum seekers. *Journal of Mental Health*, 28(6), 662-676. <https://doi.org/10.1080/09638237.2017.1322182>
- UNHCR - The UN Refugee Agency. (2024, June 13). *Figures at a glance*. <https://www.unhcr.org/about-unhcr/who-we-are/figures-glance>
- UNICEF. (2022, March 24). *More than half of Ukraine's children displaced after one month of war*. <https://www.unicef.org/press-releases/more-half-ukraines-children-displaced-after-one-month-war>
- Van Heelsum, A. (2017). Aspirations and frustrations: Experiences of recent refugees in the Netherlands. *Ethnic and Racial Studies*, 40(13), 2137-2150. <https://doi.org/10.1080/01419870.2017.1343486>

Appendix Information regarding your Thesis: Publication Form / Scroll Form

Please, enter your information, copy-paste it and send it by email to your supervisor accompanied by the final version of your thesis.

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Thesis

Title thesis:	Life on the Sidetrack: On the Detrimental Effects of Extended Uncertainty About the Future on Refugee Depression Scores.
Language of thesis:	English

Abstract:	<p>Global conflicts and wars have resulted in the displacement of millions, forcing refugees into prolonged uncertainty. While research has consistently shown that the traumatic experiences of war have profound effects on mental health, less attention has been given to how prolonged periods of living under uncertain conditions and reflecting the uncertainty of the future exacerbate these issues. This study investigates the relationship between time spent in uncertain conditions during forced displacement and depression severity among refugees, while investigating the potential moderating effects of birth country, particularly for Ukrainian refugees who benefit from streamlined asylum processes under the European Union's Temporary Protection Directive. It was hypothesized that uncertainty time would be a statistically significant positive predictor of depression severity (H_1), while birth country would be a statistically significant negative moderator of the relationship between uncertainty time and depression severity (H_2).</p>
Keywords: (separated by ;)	Refugees; mental health; depression; uncertainty
Make publicly accessible:	Yes
Or make accessible after date:	---

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