The Effect of Post-Migration Living Difficulties on Post-Traumatic Stress Disorder and Depression in Mourning Ukrainian Refugees

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Abstract

Exposure to post-migration living difficulties (PMLD) is a frequently neglected predictor for post-traumatic stress disorder (PTSD) and depression in resettled refugees. Especially in the case of Ukrainian refugees, research on the relationship between PMLDs and mental illness is scarce. This study investigates the relationship between PMLD and PTSD and depression in Ukrainian refugees who have experienced the loss of a loved one through linear regression. Also, whether the host country to which individuals immigrate moderates this relationship by moderation regression. PMLD, PTSD and depression were assessed through standardised self-report measures (Post-Migration Living Difficulties Scale, Posttraumatic Stress Disorder Checklist, and Patient Health Questionnaire-9, respectively). The design of the study follows a quantitative cross-sectional within-subject survey conducted online, utilizing a questionnaire on Qualtrics. The analysis of data collected from 74 female and 3 male Ukrainian citizens from the age of 19 to 53 years, displaced across various countries and regions, reveals that PMLD significantly elevates scores of both, PTSD ($\beta = .131$, $p < .001$) and depression ($\beta = .200$, $p < .001$). The findings support previous research that established a connection between PMLD and PTSD in refugee populations. However, contrary to expectations, the host country did not moderate this relationship. The impact of PMLD on mental health outcomes remained consistent regardless of the specific host country. Despite limitations such as a heavy recency effect, small sample size and gender imbalance, the findings have important implications for clinical practice, psychological support programs, and policy development. Policymakers should allocate resources to policies promoting social integration, reducing isolation, and facilitating access to mental health services. These findings can guide the development of targeted interventions addressing PMLD, the importance of social integration and familial support networks, as well as the need for culturally sensitive mental health care for Ukrainians.

Keywords: Ukrainian, Refugees, Post-Migration Living Difficulties, PTSD, Depression,

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"We wanted to rebuild our lives, that was all…
We lost our home, which means the familiarity of daily life.
We lost our occupation, which means the confidence that we are of some use in this world.
We lost our language, which means the naturalness of reactions,
the simplicity of gestures,
the unaffected expression of feelings."

— Hannah Arendt, "We Refugees"

"No one leaves home unless home is the mouth of a shark."
(Warsan Shire)

The Effect of Post-Migration Living Difficulties on Post-Traumatic Stress Disorder and Depression in Mourning Ukrainian Refugees

Over the past decades, the number of international migrants has been rising. More and more individuals have been forced to leave their homes due to the imminent threat of violence and persecution (Koser, 2007). An international migrant is someone who changes their country of residence, irrespective of the reason for migration or legal status. Within the group of international migrants, refugees are individuals who are unable or unwilling to return to their country of origin owing to a well-founded fear of war, being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion (United Nations High Commissioner for Refugees (UNHCR), 1951).

Refugees are often faced with trauma before and after the change of residence (Hynie, 2018). Especially the Russian invasion of Ukraine has led to massive death, injuries, and migration of citizens to other countries (UNHCR, 2022). As of the beginning of 2023, Ukrainians are the highest group of internationally displaced individuals worldwide, with 7.1 Mio Internally Displaced Individuals (Lapshyna, 2022). By the first anniversary of the invasion, on February 21, 2023, the office of the United Nations High Commissioner for Human Rights (The Office of the High Commissioner for Human Rights (OHCHR) verified the death of 8.101 civilians due to the Russian invasion of Ukraine, and 13.479 injured (OHCHR, 2023). By November 2022, the Netherlands hosted 85.210 Ukrainian refugees expecting an upward trend in the following year (Statista, 2023).

Disasters, to the same degree as war, are a massive threat to people's safety, physical integrity, and mental well-being. The World Health Organization (WHO, 2018) conducted research investigating the experience of individuals who are forcibly displaced due to events such as armed conflicts, several types of organized violence, the fear of persecution, and due to the imminent threat of harm to the grounds of their ethnic, cultural, or religious background, sexual orientation, or political affiliation. The findings of the study indicate that these groups of individuals face significant psychological stressors and are at a higher risk of exposure to traumatic events compared to individuals who do not face such threats to their physical well-being. Consequently, individuals who are forcibly displaced due to violence in their home countries are more susceptible to developing mental disorders due to their extensive exposure to distress (Fazel et al., 2005; Bogic et al., 2015; WHO, 2018).

However, trauma exposure before migration is not the only threat to mental health (Hynie, 2018). Post-migration living difficulties (PMLD), stressors that immigrants face in the host country, are also tremendous predictors of distress in migrant communities (Chen et al., 2017; Hou et al., 2020; Li et al., 2016). Common PMLDs include delays in the refugee application process, difficulties in interacting with immigration officials, obstacles to employment, racial discrimination, and loneliness (Aragona et al., 2012). Nevertheless, research on the effects of difficulties that immigrants face in the receiving country consecutive to the resettlement has been neglected. This is partly because the nation-states have transferred the responsibility for establishing a humane legislative framework for immigration laws to the European Union, as manifested in the Dublin III Convention 2013. This transfer of responsibility has led to a diffusion of accountability and a lack of support for integrational processes (Lahav, 2010).

To prevent the long-term adverse effects of PMLD on mental health, it is crucial to investigate the psychological distress in affected individuals (North & Pfefferbaum, 2013). Individuals who migrate to another country are often subject to distressing factors such as being exposed to a lower socioeconomic status than they were in their home country, thereby being prone to difficulties finding adequate housing and employment (Porter & Haslam, 2005). Additionally, migrants frequently face interpersonal difficulties. Especially the ones leaving their home country due to violence or repression are particularly susceptible to separation and worry about loved ones (Bendjo et al., 2019; Colic-Peisker & Walker, 2003; Correa-Velez et al., 2010). Another dominant distressing factor is the experience of discrimination in the host country. According to Alemi and Stempel (2018), the experience of discrimination by the local community of the host country is a ruinous source of distress for migrants.

Resulting impairments on migrants' mental health thus are long-term as issues and factors of distress often stay unresolved due to a multitude of reasons, including a lack of knowledge about existing services, self-stigma, and distrust in the mental health services (Byrow et al., 2020). Moreover, the language barrier and lack of mental health services in languages other than the host country's dominant language also hinder the vulnerable group from accessing the help they need (Green, 2017). Notably, the stigma surrounding mental health leads to long-term stressors. According to Lindert (2009), immigrants have higher rates of mental illness than a country's home population. However, Amri (2012) concluded that immigrants seek help less

than the members of the home population due to stigma. Firstly, they tend to trust the healthcare system less, also due to lacking proficiency in the host country's language. Secondly, they often regard the experienced violence as less dramatic than members of the host community. Thereby, a stigma emerges that seeking professional help is regarded as a weakness and leads to social exclusion from the immigrant community (Fischer & Farina, 2005; Townes, Chavez-Korell, & Cunningham, 2009; Vogel, Wade, & Hackler, 2007 from Amri, 2012).

Moreover, Karamehic-Muratovic et al. (2022) did a study on generation trauma, revealing that the relationship between youth in the second generation and their first-generation refugee parents is negatively affected by unresolved trauma before the migration and ongoing integrational trauma. As Post-Traumatic-Stress-Disorder (PTSD) and depression are the most prevalent mental disorders in immigrant and refugee populations (Kirmayer et al., 2011; Fazel et al., 2005; Silove et al., 2017), this research will estimate the mental health status of Ukrainian refugees who have lost a loved one by examining their PTSD and depression scores.

Furthermore, cross-cultural reviews have disclosed that the factors mentioned earlier increase PTSD and depression levels supplementary to exposure to pre-migration trauma (Li et al., 2016; Porter & Haslam, 2005). The joint hazards of the impact of psychological stressors, such as the exposure to political, economic, and social stressors in the home country, inhuman treatment during expulsion, as well as post-migration living difficulties in the host country, led to an elevated sensitivity and vulnerability to psychiatric disorders such as PTSD and depression in resettled migrants compared to the population of the host country (Lau & Thomas, 2008; Mangrio & Forss, 2017; Giacco et al., 2018).

A meta-analysis by Blackmore et al. (2020) examined over 5.000 refugees and asylum seekers from war zones who resettled in 15 countries from high-income to low-income. Results yielded that 31.46% of the sample suffered from PTSD and 31.5% from depression. High mental illness rates are partially explained by the combined burden of traumatic events in the home country, during the migration, and post-migration (Giacco et al., 2018). Meta-analysis yield that 30.8% of refugees report depression and 30.6% PTSD. Even though the two conditions are often treated dichotomously as distinct or related only in factor analysis (Afzali et al., 2017; Blanchard et al., 1998; Grant et al., 2008; Kassam-Adams et al., 2010), they co-occur (Momartin et al., 2004; Nickerson et al., 2017). Hence, Galatzer-Levy and Bryant (2013) concluded that

psychiatric disorders, including PTSD, emerge in various ways, indicating heterogeneity and comorbidity.

The well-being and prevalence of PTSD depend on many factors, such as the country of origin and the country of refuge, the timing of trauma exposure/ loss of a loved one, and immigration-related risk factors. Therefore, it is crucial to examine each Ukrainian population independently to ensure the validity of the results (Giacco et al., 2018).

The Russian invasion of Ukraine was one year ago, so research on the Ukrainian population is scarce. However, earlier studies with middle eastern refugee samples concluded that early interventions are crucial to prevent long-term negative effects. Therefore, more research must be performed on each population differently (Slewa-Younan, 2014). Hence, prior research was mainly conducted on middle eastern refugees in developed countries. As mentioned before, the combined burden of PMLD and the experience of traumatic events before the resettlement often lead to long-term mental disability. Accordingly, it is crucial to research the stressors and improve conditions for the affected groups earlier in the migration period to prevent these stressors from manifesting themselves in long-term mental illness or even generation trauma (Karamehic-Muratovic et al., 2022).

Moreover, the Ukrainian case must be investigated distinct from the experience of middle eastern refugees, not because of the nature of the conflict that led to the trauma, but in terms of the PMLD. The response to Ukrainian refugees in the receiving countries was rather positive and filled with solidarity. For the first time, EU member states willingly accepted refugees and granted housing, health care, and integration into the labour market (Åslund, 2022). Additionally, a study by Carment et al. (2021) yielded that Ukrainians had a large dispersion across many developed countries, allowing various integrational benefits for Ukrainians when they immigrate to another country with a large diaspora. Large diaspora groups give immigrants easier access to social networks, including the job market, health services, social inclusion, and even job or family visas (Beine et al., 2011; Kapur, 2001).

The Present study

The current study aims to measure the effect of PMLD on PTSD and depression scores in Ukrainian citizens experiencing grief over losing a loved one. Similar research has been carried out in the past about other internally and externally displaced people and immigrant and refugee groups over the globe. All studies so far yield that people who have experienced war and

violence in their home country and have lost a loved one anticipate higher rates of PTSD and depression (Lenferik et al., 2022)**.**

The previous findings point out gaps in Literature on Ukrainian refugees and immigrants. Due to the rising number of Ukrainian refugees and people mourning the death of a loved one, this study will focus on Ukrainian immigrants and refugees. Since most literature investigates the effect of stressors during the migration process and trauma exposure before the migration, this study investigates the effect of post-migration living difficulties for that particular population. As most refugees worldwide suffer from PTSD and depression, this study will investigate the effect that PMLDs have on PTSD and depression, especially when considering that the sample will consist of individuals who are mourning the loss of a loved one.

Considering the large scope of research regarding the effect of traumatic events in the home countries and during the desertion from the home countries to the host countries, it is crucial to agree on a clear focal point and state precisely defined objectives. Therefore, this research investigates the relationship between PMLD and PTSD, and depression. Additionally, the most severe post-migration stressors will be analysed. Investigating which PMLD poses the most imminent threat to participants' mental health provides policymakers and service providers insight. Based on this insight, services can be improved for refugees to address their mental health needs and reduce psychiatric symptoms in the long run. The concrete objective of this research thereby is to examine which effect PMLDs pose on PTSD and depression and whether groups of host countries, that are similar in their immigration laws and discrimination level, moderate this relationship.

Given the broad scope of the available research on the effect of PMLD on PTSD and depression scores in the refugee population and the lack of research on Ukrainians, this paper aims to answer the following research question (RQ): "What is the effect of Post-Migration Living Difficulties on PTSD and Depression scores in mourning Ukrainian refugees?" and two more sub-questions. The following hypotheses will be tested to understand better the effect of Post-Migration Living Difficulties on Post-Traumatic Stress Disorder and depression in mourning Ukrainians. Thus, Figure 1 visualizes the variables and their expected relationship. Post-migration Living Difficulties are the independent variable, whilst PTSD and depression are the dependent variables. The host country is the moderator of the relationship between PMLD and PTSD and between PMLD and depression.

H_1: "The more Post-Migration Living Difficulties mourning Ukrainian refugees experience, the higher the scores for Post-Traumatic Stress Disorder".

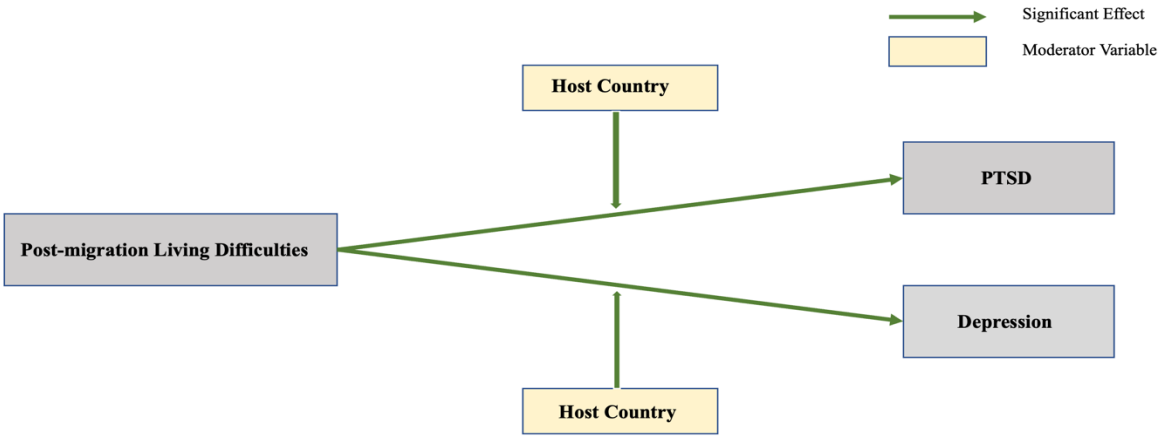
H_2: "The more Post-Migration Living Difficulties mourning Ukrainian refugees experience, the higher the Depression scores".

H_3: "The variable host country moderates the relationship between Post-Migration Living Difficulties and Post-Traumatic Stress Disorder".

H_4: "The variable host country moderates the relationship between Post-Migration Living Difficulties and Depression".

Figure 1

Expected Relationship between the Variables



Method

Design

The study was part of a bigger project named "First Aid for Grief in Ukrainian Refugees", whose design followed a quantitative cross-sectional within-subject survey. Quantitative exploratory research, chosen for its suitability, utilises statistical procedures to test objective theories by examining measurable variables and collecting numerical data. This method was selected for this research due to the need for a large sample size and a wide range of responses to ensure validity and reliability. Key qualities of quantitative exploratory research include its structured nature and a clear research question before data collection (Sukamolson, 2007).

The study was administered online, and a questionnaire was created on Qualtrics, an online panel (Miller et al., 2020) that enables users to create and disseminate online surveys for

academic research (Ginn, 2018). It was chosen to conduct an online survey-based design because it allowed researchers to collect data from many respondents within a short time (Lefever et al., 2007, and reach more participants.

Participants

The sample consisted of (a) Ukrainian citizens (b) those who had lost a loved one and (c) those who were above 18. For the current study, we took a sub-sample of refugees and migrants from the larger sample.

Initially, 752 individuals filled out the survey. After clearing nonresponses, missing consent, and non-refugee participants, 77 individuals were selected for the sample.

The age of participants ranged from 18 to 53 years, with an average of 34 years, (*SD* = 7.1). Of the total, 3.9% were male, and 96.1% were female. The largest proportion of participants migrated to Germany (20.7%), Poland (13.8%), and the Netherlands (12.1%) (Appendix I).

Regarding the type of loss, most individuals (51.9%) lost a relative due to physical illness, and the majority (32.5%) lost a parent. The median of the day was 11 months ago.

Table 1

Demographic Statistics of Respondents

Demographics	Characteristics	*N*	%
Gender	Male	3	3.9
	Female	74	96.1
Age	19-25	5	6.5
	26-31	29	37.7
	32-38	27	35.1
	39-45	9	11.7
	48-53	7	9.1
Host Country	Slavic	17	21.8
	Western Europe	50	64.1
	Asia/ Latin America	4	5.1
Kinship	Partner	14	18.2
	Child	5	6.5
	Parent	25	32.5
	Sibling	6	7.8

Demographics	Characteristics	*N*	%
	Grandparent	13	16.9
	Grandchild	0	0
	Friend(s)	11	14.3
	Other	3	3.9
Cause of Death	Physical Illness	40	51.9
	Accident	5	6.5
	Suicide	3	3.9
	Murder/ Manslaughter not related.	2	2.6
	Murder/ Manslaughter related.	2	2.6
	Disappearance	4	5.2
	Other	3	3.9
Date of Death	Median	11 months ago	

Note. Partner (husband, wife, boyfriend, girlfriend), Physical illness (e.g., old age, cancer, cardiovascular disease, died at birth), Accident (e.g., accident, traffic accident, drowning, poisoning), Murder/ Manslaughter related or not related to the Russian war.

Procedure

Ethical approval was already granted by the BMS Ethics Committee from the University of Twente (request number 221111) for the larger-scale study. The data collection took place from February until May.

The survey consisted of 8 questionnaires, yet for the present research the focus was on 3: the Post-migration Living Difficulties Checklist (PMLD), the Post-Traumatic Stress Disorder Checklist (PCL-5), and the Patient-Health Questionnaire-9 (PHQ-9). The larger-scale study was distributed through multiple channels to increase the response rate (Berndt, 2020), and predominantly adopted a non-probabilistic sampling approach (Magnani et al., 2005). As the population was elusive, different platforms were employed to reach out to respondents. Firstly, snowball sampling (Berndt, 2020) was used because it enables access to hard-to-recruit populations. Next, flyers and QR codes were distributed via social media. This method was advantageous in reaching further away respondents who might cluster in specific social media communities, such as Facebook groups or self-help forums (Leighton et al., 2021).

For the current project, the researcher used the method of snowball sampling, contacting Ukrainian friends and hanging a QR code at the entrance of a law firm. Additionally, lawyers that worked with asylum seekers were consulted and distributed the questionnaire to their clients.

The study took approximately 25 to 30 minutes for the respondents to complete. Information regarding the study was presented on the website (https://rouwbehandeling.nl/ukr-вимірювання-горя/).

Materials

The initial survey was distributed online and developed on Qualtrics. Respondents were requested to provide informed consent before taking part in the survey and were then required to complete sociodemographic questions encompassing of the variables age, gender, cause of death of the loved one, date of the loss of the loved one, and kinship with the deceased loved one.

Post-Migration Living Difficulties (PMLD). The first measure was the PMLD checklist to gain insight into the prevalence of post-migration stressors in the sample. The questionnaire measures life events posterior to the migration in the host country, and each item is treated as a separate stressor (Silove et al., 1998; Steel et al., 1999). The Scale consisted of 23 items answered on a five-point Likert scale, ranging from (1) “no problem at all” to (5) “a serious problem”.

Respondents had to pinpoint to what extent each living difficulty, such as discrimination, isolation, and lacking a work permit, was experienced as a problem in the last six months after migrating. Higher scores indicate higher malaise in the host country (Lenferik et al., 2021).

Each item was concerned with one stressor (Aragona et al., 2013). Prior research by Momartin et al. (2006) found that the number of serious (4) and very serious (5) problems had to be considered in the statistical analysis. Steel and Silove (1998) found the questionnaire reliable with clinical samples of Tamil refugees in Australia.

Post-Traumatic Stress Disorder (PCL-5). Additionally, the PCL-5, a self-report questionnaire of 20 items, was used to measure the prevalence of PTSD in the sample (Cohen et al., 2014). The scale consisted of 18 items that were rated on a four-point Likert scale, from (0) “Not at all likely” to (4) “Extremely likely”. However, the current study only used items 2, 3, 6, 7, 17, and 18 to measure PTSD symptomatology according to the ICD-11. Participants received a list of problems people sometimes had in response to a traumatic event. Then, they had to indicate how much they were bothered by each problem (for example “Repeated, disturbing

dreams of the death of a loved one" and "being "superalert" or watchful or on guard"), in the past month. Subsequently, the scores on each item were added to each other, resulting in a score ranging between 0 and 80; higher scores indicated PTSD symptomatology (Cohen et al., 2014).

Validation studies suggested a cut-off score of 28 to 37 (Ashbaugh et al., 2016; Blevins et al., 2015; Sveen et al., 2016). Hence, the ideal cut-off score depended on the population, the context in which it was administered, and the administration environment's gold-standard instrument (Ibrahim et al., 2018). According to Cohen et al. (2014), the PCL-5 was the instrument with the highest internal consistency in testing for PTSD.

Patient Health Questionnaire-9 (PHQ-9). Lastly, depression scores and prevalence were measured with the PHQ-9 according to the DSM-5 criteria (American Psychiatric Association, 2013). The PHQ-9 is the most widely used screening tool for depression in people from various cultural backgrounds (Alzahrani et al., 2020; Dadfar et al., 2018; Kroenke et al., 2001). The questionnaire consisted of 9 items, and respondents had to indicate how often over the past 2 weeks they have been bothered by any of the problems in the list, for instance, if they had the pleasure of doing things or had trouble falling asleep. Answers were provided on a four-point Likert scale, ranging from (0) "not at all", (1) "several days", (2) "more than half of the days", and (3) "nearly every day". Like previous studies (Kroenke et al., 2001; Li et al., 2016), symptoms were considered absent when rated 0. Hence, total scores ranged from 0 to 27, where higher scores indicated higher depression levels. A total score below 10 was used to determine probable depression caseness (Kroenke et al., 2001).

Data analysis

The dataset was split into two because participants were acquired through different channels. Both datasets were exported from Qualtrics into R-Studio and adjusted and cleaned.

Variables. The variables to be interrogated in the following data analysis were PMDL as the independent (criterion) variable, PTSD (first predictor), and depression (second predictor) as the dependent variables. Furthermore, a moderation analysis was conducted using host countries as a moderating variable to examine how they influence the relationship between PMLD and PTSD/ depression.

Variation in scores. Frequency tables illustrating the answers to the Likert-Scales were designed to obtain results about the variation in item scores. This was necessary to assess the proportion of answers to the scale and draw conclusions about how the participants responded to

each item in the questionnaire. The dataset was then used to calculate the proportion of answers to evaluate to what extent the participants agreed or disagreed with the statements proposed in the questionnaire. Thereby, the distribution and balance of the scores were evaluated. Next, frequency tables were constructed to analyse the variation of responses on each item, to check for the variation in item scores.

Internal Consistency. The analysis of Cronbach´s alpha checks for the scale's overall reliability and internal consistency. P-values between .70 - .90 are perceived as good, and values above .09 as excellent (Gliem, 2003).

Regression Analysis. Regression analysis was conducted to examine the effect of the independent variable using linear regression. The four assumptions, linearity, normality of the residuals, homoscedasticity, and Independence, were checked to ensure the validity of the linear regression. Furthermore, the relationship between PMLD and PTSD, and between PMLD and depression were explored through a summary of their parametric values with a linear regression model and examining the coefficient for the predictor variable, p-values, and determining statistical significance. Moreover, a moderation analysis was performed to check for a probable moderation effect of the variable host countries. Host countries were categorized into three country categories: Slavic, Western and Asia/Latin America. A between-group comparison was performed to assess the significance of the host country´s impact.

Results

Scale and their correlations

All the variables ranged from ".850" to ".870" internal reliability indicating good reliability (Gliem, 2003). Variables scored from .442 to .610 correlation between the variables which was perceived as weak to moderate (Porter & Haslam, 2005). All the constructs correlated positively with one another and were significant. Furthermore, the PMLD is not measured through Cronbach´s alpha, as it is a Checklist where items are not expected to correlate with one another (Steel et al., 2006).

Table 2

Means, Standard Deviations, Cronbach´s Alpha, Pearson´s Correlation Coefficient, and Inter-Correlations among Variables (N = 77)

Variables	*M*	*SD*	α	*r*	1	2
1. PMLD	60.710	19.166				

Variables	*M*	*SD*	α	*r*	1	2
2. PTSD	14.753	5.692	.850	.442	.442	
3. Depression	21.494	6.293	.870	.610	.610	.499

Note. Correlation is significant at the .001 level (2-tailed)

Assumptions to perform a Linear Regression Analysis

Normality assumptions were assessed using the Shapiro-Wilk test for three variables: PMLD, PTSD and depression. The PMLD data did not follow a normal distribution $W(75) = .965$, $p = .033$, but the skewness and kurtosis values were between -1 and 1, indicating approximate normality. Similarly, the PTSD results showed a significant departure from normality $W(75) = .956$, $p = .009$, yet skewness and kurtosis values fell within the acceptable range. The depression data did not show significant deviation from normality either $W(75) = .980$, $p = .269$, and both skewness and kurtosis were within the desired range. Consequently, it was concluded that depression followed an approximately normal distribution. To assess linearity, scatterplots with linear regression lines were examined. Both relationships showed a linear pattern, indicating that the assumption of linearity was met.

Figure 2

Linearity between PMLD and PTSD

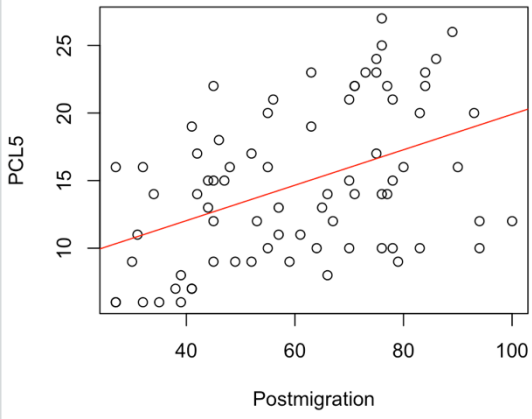
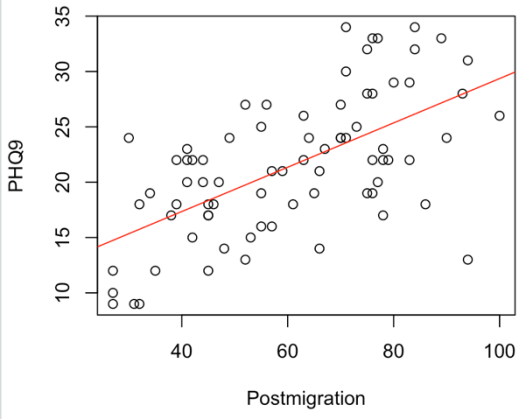


Figure 3

Linearity between PMLD and Depression



Homoscedasticity was tested using the Breusch-Pagan test. For the relationship between PMLD and PTSD, homoscedasticity was confirmed ($p < .05$). Similarly, the relationship between PMLD and depression was homoscedastic ($p < .05$). Furthermore, Independence was assessed using the Durbin-Watson test. The results indicated no evidence of autocorrelation for

both the relationship between PMLD and PTSD and between PMLD and depression ($p > .05$). Therefore, variables were considered independent of each other.

Linear Regression Analysis

Simple linear regression was used to test if PMLD significantly predicted PTSD scores. The overall regression was statistically significant ($R^2 = .195$, $F(1, 75) = 18.18$, $p < .001$). It was found that PMLD significantly predicted PTSD ($\beta = .131$, $p < .001$).

Secondary, simple linear Regression analysis was calculated for depression based on post-migration living difficulties. The overall regression was statistically significant ($R^2 = .372$, $F(1, 75) = 44.43$, $p < .001$). It was found that PMLD significantly predicted PTSD ($\beta = .200$, $p < .001$).

Moderation Analysis

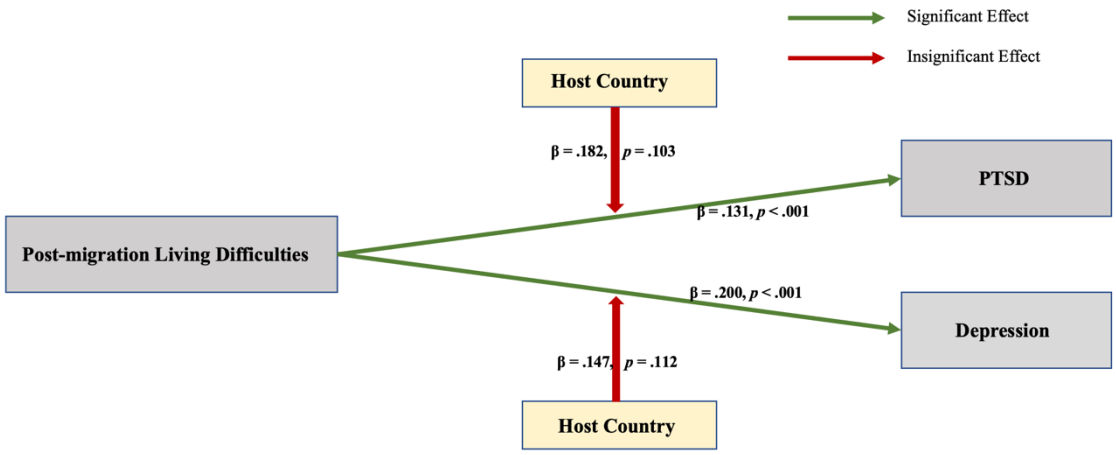
A moderation analysis was conducted to examine the interactive effects of post-migration stressors and the host country on PTSD scores. The countries were grouped into Slavic, Western Europe, and Asia/ Latin America. The reasons for this grouping were that most Slavic countries are former UdSSR countries, like Ukraine. Therefore, both the home population and the Ukrainian refugees can communicate in Russian, thus they share the same ethnic background, making it easier to integrate into the home population (Pavlenko, 2008). Western European Countries were chosen as a second group, because Western European countries all share the same immigration regulation, the Dublin Convention, hence having the same barriers and facilitators (Lehman& Dimitriadi, 2023). Additionally, most Western countries have a large Ukrainian Diaspora (Fedyuk& Kindler, 2016). Lastly, the final group was Asian and Latin American countries. This was chosen as a group because the countries in the sample share a collectivistic culture. Hence coping and emotional socialization are similar in these cultures (Morelen, 2013).

The results indicated that the main effect of PMLD was not significant ($\beta = .182$, $t = 1.654$, $p = .103$), as well as between PMLD and Western Europe ($\beta = .144$, $t = 1.449$, $p = .152$). The model explained 20.86% of the variance in PTSD ($R^2 = .209$, $F(2, 65) = 3.426$, $p = .008$). The adjusted R-squared ($R^2 = .147$) indicated that 14.77% of the variance was accounted for by the predictors after adjusting for the number of predictors. The residual standard errors ($MSE = 5.095$) reflected the average deviation between observed and predicted values.

A second moderation analysis was conducted. Results indicated that the main effect of post-migration was not significant (β = .147, t = 1.614, p = .112), as well as the main effects of Slavic (β = -4.154, t = -0.579, p = .565) and Western Europe (β = -2.066, t = -0.304, p = .762). The model explained 40.73% of the variance in the depression scores (R^2 = 0.407, $F(5, 65)$ = 8.932, p < .001). The adjusted R-squared (R^2 = .362) indicated that 36.17% of the variance was accounted for by the predictors after adjusting for the number of predictors. The residual standard error (MSE = 5.156) reflects the average deviation between observed and predicted values. All relevant values to describe the relationship, significant and insignificant, with their responding variable are visualised below (Figure 4).

Figure 4

Final Relationship between the Variables



Discussion

The objective of the research was to investigate the research question "What is the effect of Post-Migration Living Difficulties on PTSD and Depression scores in mourning Ukrainian refugees?" and thereby examine which effect PMLDs pose on PTSD and depression and whether groups of host countries, that are similar in their immigration laws and discrimination level, moderate this relationship. Through comprehensive analysis of the data, it was determined that post-migration living difficulties significantly elevate PTSD and depression scores among Ukrainian citizens displaced across various countries and regions. Notably, the host country where individuals reside does not moderate this relationship.

The first hypothesis suggested that an increase in post-migration living difficulties experienced by grieving Ukrainians would correspond to higher scores for PTSD, was met. These findings are consistent with prior studies, such as Lenferik et al. (2021) longitudinal study with Middle Eastern refugees in Australia, which identified a connection between post-migration living difficulties and PTSD. In this study, the outcomes might be explained by the separation from, and worry about significant others, as most participants left behind loved ones in the warzone (Buchcik et al., 2023). In our case, this effect might be even stronger because all participants had already lost a loved one before, with most deaths being very recent. Hence Makwana (2019) revealed that disasters such as the death of a loved one and displacement negatively affect individuals' mental health.

Moreover, the second hypothesis was also met. It proposed that an increase in post-migration living difficulties experienced by grieving Ukrainians would be associated with higher depression scores. Once again, these findings align with previous research conducted by Li et al. (2016), which demonstrated the significant impact of post-migration living difficulties on immigrant populations displaced by war. Clayton (1990) revealed that bereavement heavily predicts depression. As all participants lost a loved one, the high rates of depression might be explained by their mourning. Other findings suggest that individuals who experience the loss of a loved one, particularly in the context of war, tend to exhibit elevated levels of depression. This is attributed to inflated feelings of helplessness and anxiety (Costello, 1978; Miller 2018).

Additionally, Giacco et al. (2018) argued that both the country of origin and the host country exert a significant influence on mental health, suggesting a moderation effect on the relationship between post-migration living difficulties and PTSD. Nevertheless, this study did not discover evidence of moderation effects of the host country variable on the linear relationship between post-migration living difficulties and PTSD.

Prior research by Chen et al., (2017) clustered the PMLD items into 7 complaint groups and found that issues relating to family separation and worry about family members in the home countries were the single most significant predictor of PTSD and depression in refugees. Hence with a higher effect on depression than PTSD. This finding might explain the absence of an effect from the host country on the relationships between PMLD and both PTSD and depression. Challenges related to separation from loved ones, feelings of loneliness, and isolation were

perceived as more severe than issues associated with the asylum procedure or discrimination in the host country (Löbel, 2020).

When analysing solely the effect of items related to family issues on both PTSD and depression, it was found that these issues had a stronger influence on depression than on PTSD (Lenferik et al., 2021). This disparity may arise from the profound sense of helplessness experienced due to separation from family members (Miller et al., 2018). Feelings of helplessness are known to be major contributors to depression in general, and the loss of a loved one can further intensify this effect (Costello, 1978). Conversely, the experience of trauma serves as a primary determinant of PTSD (Miller and Rasmussen, 2010).

An additional unexpected result emerged from the mean scores of PMLD, PTSD and depression, indicating a minimal score for PTSD, and a high depression score within the sample. This outcome may be attributed to a notable recency effect. The data collection took place around the anniversary of the Russian invasion, with the displacement being even more recent. As outlined by Glenberg et al. (1983), a recency effect significantly impacts the assessment and interpretation of mental health symptoms, potentially leading to an overemphasis on acute grief reactions. Consequently, distinguishing between normal grief and symptoms of depression or PTSD becomes challenging.

A further explanation for this effect might be the low exposure to PMLD of the sample. As mentioned earlier, Ukrainian refugees were welcomed with more solidarity and had easier access to the job market, facilities, and housing (Åslund, 2022; Bajaj & Stanford, 2022). Additionally, Ukrainians had a large pre-existing diaspora in most of the countries they migrated to. A large part of refugees had relatives living close by in most Western countries (Fedyuk & Kindler, 2016). Moreover, in many Slavic countries, both the home population and the Ukrainians spoke Russian as a secondary language and were able to communicate with less difficulty (Pavlenko, 2008). Hence high scores for depression might stem from family issues leading to the heightened prevalence in the population.

Limitations and Strengths

For investigating the effect of PMLD on PTSD and depression, the following limitations and strengths of the study should be considered.

Despite the strengths, several limitations must be acknowledged. Future research should address these limitations to provide a more comprehensive understanding of the complex psychological dynamics faced by this vulnerable population.

One significant limitation is the relatively small sample size. Which may limit the generalizability of the findings to the broader population of Ukrainian refugees who have experienced similar circumstances. Furthermore, the study predominantly included female participants, with only three male participants. This gender imbalance may be attributed to various factors such as males' involvement in military service or women´s comparatively higher interest in psychology and potentially lower stigma regarding mental illness (Thikeo et al., 2015). The small number of male participants limits the generalizability of the findings to both male and female Ukrainian refugees. Thus, according to a prior study by Buchcik et al. (2023) with Ukrainian refugees, female participants are more likely to be stressed, depressed or experience symptoms of anxiety. Future research with larger sample sizes and a more balanced gender representation would enhance the study´s external validity and ensure a comprehensive understanding of the effects of PMLD on mental health outcomes in Ukrainian refugees.

The recency effect presents an additional limitation in the present study. Specifically, considering that the war in Ukraine commenced only a year ago, and the migration of the participants occurred even more recently. The immediate nature of these events has the potential to influence the measured psychological outcomes. Horesh et al. (2011) revealed that the onset of PTSD is often delayed, triggered by stressful events spanning an individual´s lifespan, particularly in the case of war. Additionally, the recent loss of a loved one may elicit grief and depressive symptoms (Glenberg et al., 1983). Therefore, conducting longitudinal research is vital for comprehending the long-term effects of PMLD on PTSD and depression in this population.

Additionally, it is crucial to note that the participants in this study had experienced the loss of a loved one, which may serve as a moderator or confounder in the relationship between PMLD and mental health outcomes (Lacour et al., 2020). Future studies should consider incorporating measures that specifically account for the influence of bereavement on PTSD and depression in this context.

Henceforth strengths of the study are discussed. This study represents one of the early investigations conducted with this specific population, taking into account the recent onset of the ongoing war in Ukraine. By doing so, the study aims to capture the immediate psychological

consequences of the conflict and subsequent migration, providing insight on a relatively unexplored area of research (Lunov et al., 2022).

Another strength of this study lies in the abundance of data collection. Participants were recruited over a variety of channels and countries across the world. The comprehensive data collection process enhances the reliability and validity of the findings (Wass et al., 2001), providing a robust basis for understanding the relationship between PMLD, PTSD, and depression in Ukrainian refugees in various life circumstances across the globe.

Furthermore, the scales that were used also posed high validity and reliability estimates. Hence the PMLD scale showed good psychometric properties in previous studies (Lies et al., 2021; Steel & Silove, 1998). In a study by Hall et al., (2019), the PCL5 scale also demonstrated good psychometric properties among other samples. This study found an α of .850 which is regarded as a good value (Gliem, 2003). Additionally, the PHQ9 scale also has good psychometric values with a sensitivity of 88% and a specificity of 88% for major depression (Kroenke et al., 2001). In this study, there was an α value of .870.

Implications

The present study holds significant implications for clinical practice, psychological support programs, gender considerations, long-term support, integrated treatment approaches, and policy development in the context of Ukrainian refugees who have experienced PMLD after migrating to another country and losing a loved one. Hence, psychological support programs should be developed and implemented to address the challenges faced by Ukrainian refugees. Given that isolation and family issues emerged as the most severe stressors associated with depression, programs should empathize with community engagement, social integration, and strengthening familial support networks. Addressing these stressors may alleviate the negative psychological effects of PMLD. Considering the observed gender imbalance in the study sample, gender-specific approaches are warranted in mental health interventions for Ukrainian refugees.

To also consider specific cultural needs, incorporating cultural and linguistic competencies within collaborative care models is recommended. These models involve multidisciplinary teams consisting of mental health professionals, primary care physicians, and social workers. Integrating mental health services in primary care reduces barriers and improves accessibility for Ukrainian refugees (Handtke et al., 2019). Böge et al., (2020) suggest prioritizing cultural and linguistic competence by providing language interpreters, employing

professionals with a deep understanding of Ukrainian culture, and tailoring interventions to align with cultural values. This approach acknowledges the needs of Ukrainian refugees, promoting inclusive and personalized mental health care and improving treatment outcomes. (Daniel et al., 2023).

Furthermore, given the recency effect of the war and migration, it is crucial to recognize that the psychological impact of PMLD may extend beyond the immediate aftermath. Longitudinal studies are needed to assess the long-term effects of PMLD on PTSD and depression in Ukrainian refugees. Such studies can provide insight into the trajectory of mental health outcomes over time, thereby informing the development of sustainable interventions and support systems.

Lastly, the findings of this study have important policy implications. Policymakers involved in refugee resettlement and support programs should recognize the impact of PMLD on mental health outcomes in Ukrainian refugees. Allocating resources for psychological support services targeted specifically at this population is crucial. Policies that promote social integration, reduce isolation, and facilitate access to mental health services can positively impact the well-being of Ukrainian refugees affected by PMLD.

Conclusion

The present study investigated the relationship between PMLD and PTSD; and between PMLD and depression, in Ukrainian refugees who have lost a loved one. It also explored the potential moderating effect of host countries on these relationships. The analysis revealed a positive relationship between PMLD and PTSD and between PMLD and depression. Hence, there is no moderating effect of the host country variable. Suggesting that regardless of the specific host country, the impact of PMLD on depression and PTSD remains consistent. Notably, the additional analysis highlighted those issues related to family separation had the most negative impact on mental health, particularly predicting depression rather than PTSD.

Thus, findings underline a severe need for targeted interventions that address the stressors and enhance social support networks to mitigate the negative psychological effect of PMLD. Nevertheless, there might be other variables confounding the relationship that must be analysed in future research. Employing larger sample sizes and longitudinal designs is necessary to deepen our understanding of the long-term effects of PMLD and to identify additional factors that influence the mental health outcomes of Ukrainian refugees. By continuing to explore and

address the challenges faced by this population, we can strive to provide comprehensive and culturally sensitive mental health support that contributes to their overall well-being and successful integration into their new communities.

References

Alemi, Q., & Stempel, C. (2018). Discrimination and distress among Afghan refugees in northern California: The moderating role of pre-and post-migration factors. *PLOS ONE,* 13(5), e0196822. https://doi.org/10.1371/journal.pone.0196822

Alzahrani, A.S., Demiroz, Y.Y., Alabdulwahab, A.S., Alshareef, R.A., Badri, A.S., Alharbi, B.A., Aljaed, K.M., 2020. The diagnostic accuracy of the 9-item patient health questionnaire as a Depression screening instrument in Arabic-speaking cancer patients. *Neurol. Psychiatr. Brain Res*. 37, 110–115. https://doi.org/10.1016/j. npbr.2020.07.003.

American Psychiatric Association, 2013. Diagnostic and Statistical Manual of Mental Disorders, fifth ed. American Psychiatric Publishing, *Arlington*, VA.

Amri, S., & Bemak, F. (2013). Mental Health Help-Seeking Behaviors of Muslim Immigrants in the United States: Overcoming Social Stigma and Cultural Mistrust. *Journal of Muslim Mental Health*, *7*(1). https://doi.org/10.3998/jmmh.10381607.0007.104

Aragona, M., Pucci, D., Mazzetti, M., & Geraci, S. (2012). Post-migration living difficulties as a significant risk factor for PTSD in immigrants: a primary care study. *ITALIAN JOURNAL OF PUBLIC HEALTH*, *9*(3). https://d1wqtxts1xzle7.cloudfront.net/29608897/Aragona_et_al-IJPH4-libre.pdf?1390877294=&response-content-disposition=inline%3B+filename%3DPost_migration_living_difficulties_as_a.pdf&Expires=1678192102&Signature=WlmnQEhnEDYAJ05Y4MYB8uLGFJphvDedJRgyItZkiXAPfrVEDGq1z6~0ylZ0u5HzP8OMT3R8OTBGb3dXEmtxDAtVPvmP82VV2~twZCvc0yzM3iW0LlA7GrHxR-lLgMKwCxN7T8F24r9ZUbUib2zTZ~BMICm~L9XeFv013Stwc2lY0I32EkFUshE2hj~rsnZypy-Qf6yQTHFKY1MbM248Db-Vm5AHVadVQ0ebUP3KQbut869TTiXQrVwxGzGdxvZrPN6qVH91nMKTNUPVLd~B-6WeJLEtRDGup8ic1gl-AdMzqqOFpjWiz1KSpIc1drx1rzOFJHAZ-8jzGT3f2~hpMg__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA

Ashbaugh, A. R., Houle-Johnson, S., Herbert, C., El-Hage, W., & Brunet, A. (2016). Psychometric Validation of the English and French Versions of the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5). *PLOS ONE*, *11*(10), e0161645. https://doi.org/10.1371/journal.pone.0161645

Åslund, A. (2022). *EconStor: A New Perspective on the Ukrainian Refugee Crisis*. https://www.econstor.eu/handle/10419/263858

Austin, Z., & Wright, D. (2014). Qualitative Research: Getting Started. *The Canadian Journal of Hospital Pharmacy*, *67*(6). https://doi.org/10.4212/cjhp.v67i6.1406

Bajaj, S. S., & Stanford, F. C. (2022). The Ukrainian refugee crisis and the pathology of racism. *BMJ*, o661. https://doi.org/10.1136/bmj.o661

Beine, M., Docquier, F., & Özden, A. (2011). Diasporas. *Journal of Development Economics*, *95*(1), 30–41. https://doi.org/10.1016/j.jdeveco.2009.11.004

Bendjo, S., Karnilowicz, W., Gill, P.R., 2019. "You cannot forgive and you cannot forget": the Serbian refugee settlement experience in Australia. J. *Community Appl. Soc. Psychol*. 29 (5), 371–384. https://doi.org/10.1002/casp.2406.

Berndt, A. (2020). Sampling Methods. *Journal of Human Lactation*, *36*(2), 224–226. https://doi.org/10.1177/0890334420906850

Blackmore, R., Boyle, J. A., Fazel, M., Ranasinha, S., Gray, K. M., Fitzgerald, G., Misso, M., & Gibson-Helm, M. (2020). The prevalence of mental illness in refugees and asylum seekers: A systematic review and meta-analysis. *PLOS Medicine*, *17*(9), e1003337. https://doi.org/10.1371/journal.pmed.1003337

Blevins, C. A., Weathers, F. W., Davis, M. T., Witte, T. K., & Domino, J. L. (2015). The Posttraumatic Stress Disorder Checklist for *DSM-5* (PCL-5): Development and Initial Psychometric Evaluation. *Journal of Traumatic Stress*, *28*(6), 489–498. https://doi.org/10.1002/jts.22059

Böge, K., Karnouk, C., Hahn, E., Schneider, F., Habel, U., Banaschewski, T., Meyer-Lindenberg, A., Salize, H. J., Kamp-Becker, I., Padberg, F., Hasan, A., Falkai, P., Rapp, M. A., Plener, P. L., Stamm, T., Elnahrawy, N., Lieb, K., Heinz, A., & Bajbouj, M. (2020). Mental health in refugees and asylum seekers (MEHIRA): study design and methodology of a prospective multicentre randomized controlled trail investigating the effects of a stepped and collaborative care model. *European Archives of Psychiatry and Clinical Neuroscience*, *270*(1), 95–106. https://doi.org/10.1007/s00406-019-00991-5

Bogic, M., Njoku, A., & Priebe, S. (2015). Long-term mental health of war-refugees: a systematic literature review. *BMC International Health and Human Rights*, *15*(1). https://doi.org/10.1186/s12914-015-0064-9

Boutemen, L., & Miller, A. N. (2023). Readability of publicly available mental health information: A systematic review. *Patient Education and Counseling*, 107682. https://doi.org/10.1016/j.pec.2023.107682

Buchcik, J., Kovach, V., & Adedeji, A. (2023). Mental health outcomes and quality of life of Ukrainian refugees in Germany. *Health and Quality of Life Outcomes*, *21*(1). https://doi.org/10.1186/s12955-023-02101-5

Byrow, Y., Pajak, R., Specker, P., Nickerson, A., 2020. Perceptions of mental health and perceived barriers to mental health help-seeking amongst refugees: a systematic review. *Clin. Psychol. Rev*. 75 https://doi.org/10.1016/j.cpr.2019.101812.

Carment, D., Nikolko, M., & MacIsaac, S. (2021). Mobilizing diaspora during crisis: Ukrainian diaspora in Canada and the intergenerational sweet spot. *Diaspora Studies*, *14*(1), 22–44. https://doi.org/10.1080/09739572.2020.1827667

Chen, W., Hall, B., Ling, L., Renzaho, A., 2017. Pre-migration and post-migration factors associated with mental health in humanitarian migrants in Australia and the moderation effect of post-migration stressors: findings from the first wave data of the BNLA cohort study. *Lancet Psychiatr*. 4 (3), 218–229. https://doi.org/10.1016/ S2215-0366(17)30032-9.

Clayton, P. J. (1990). Bereavement and Depression. *The Journal of Clinical Psychiatry*, 51(Suppl), 34–40

Cohen, J. M., Kanuri, N., Kieschnick, D., Blasey, C. M., Taylor, C. B., Kuhn, E., Ruzek, J., & Newman, M. G. (2014). Preliminary Evaluation of the Psychometric Properties of the PTSD Checklist for DSM – 5. *Conference: 48th Annual Convention of the Association of Behavior and Cognitive Therapies*. https://doi.org/10.13140/2.1.4448.5444

Colic-Peisker, V., Walker, I., 2003. Human capital, acculturation and social identity: Bosnian refugees in Australia. *J. Community Appl. Soc. Psychol*. 13 (5), 337–360. https://doi.org/10.1002/casp.743.

Correa-Velez, I., Gifford, S.M., Barnett, A.G., 2010. Longing to belong social inclusion and wellbeing among youth with refugee backgrounds in the first three years in Melbourne, Australia. *Soc. Sci. Med.* 71 (8), 1399–1408. https://doi.org/10.1016/j. socscimed.2010.07.018.

Costello, C. G. (1978). A critical review of Seligman's laboratory experiments on learned helplessness and Depression in humans. *Journal of Abnormal Psychology*, *87*(1), 21–31. https://doi.org/10.1037/0021-843x.87.1.21

Dadfar, M., Kalibatseva, Z., Lester, D., 2018. Reliability and validity of the Farsi version of the patient health questionnaire-9 (phq-9) with Iranian psychiatric outpatients. Trends *Psychiatr. Psychother.* 40 (2), 144–151. https://doi.org/10.1590/2237- 6089-2017-0116.

Daniel, K. E., Blackstone, S. R., Tan, J. S., Merkel, R. L., Hauck, F. R., & Allen, C. W. (2023). Integrated model of primary and mental healthcare for the refugee population served by an academic medical centre. *Family Medicine and Community Health*, *11*(2), e002038. https://doi.org/10.1136/fmch-2022-002038

Fazel, M., Wheeler, J., & Danesh, J. (2005). Prevalence of serious mental disorder in 7000 refugees resettled in western countries: a systematic review. *The Lancet*, *365*(9467), 1309–1314. https://doi.org/10.1016/s0140-6736(05)61027-6

Fedyuk, O., & Kindler, M. (2016). Migration of Ukrainians to the European Union: Background and Key Issues. In *IMISCOE research series* (pp. 1–14). Springer International Publishing. https://doi.org/10.1007/978-3-319-41776-9_1

Giacco, D., Laxhman, N., Priebe, S., 2018. Prevalence of and risk factors for mental disorders in refugees. *Semin. Cell Dev. Biol.* 77, 144–152. https://doi.org/10.1016/j. semcdb.2017.11.030.

Ginn, J. (2018). qualtRics: retrieve survey data using the Qualtrics API. *Journal of Open Source Software*. https://doi.org/10.21105/joss.00690

Glenberg, A. M., Bradley, M. M., Kraus, T., & Renzaglia, G. A. (1983). Studies of the long-term recency effect: Support for a contextually guided retrieval hypothesis. *Journal of Experimental Psychology: Learning, Memory and Cognition*, *9*(2), 231–255. https://doi.org/10.1037/0278-7393.9.2.231

Gliem, J. A. (2003). *Calculating, Interpreting, And Reporting Cronbach's Alpha Reliability Coefficient For Likert-Type Scales*. https://hdl.handle.net/1805/344

Green, M. (2017). Language Barriers and Health of Syrian Refugees in Germany. *American Journal of Public Health*, *107*(4), 486–486. https://doi.org/10.2105/ajph.2016.303676

Hall, B. J., Yip, P. S. F., Garabiles, M. R., Lao, C. K., Chan, E. D., & Marx, B. P. (2019). Psychometric validation of the PTSD Checklist-5 among female Filipino migrant

workers. *European Journal of Psychotraumatology*, *10*(1). https://doi.org/10.1080/20008198.2019.1571378

Handtke, O., Schilgen, B., & Mösko, M. (2019). Culturally competent healthcare – A scoping review of strategies implemented in healthcare organizations and a model of culturally competent healthcare provision. *PLOS ONE*, *14*(7), e0219971. https://doi.org/10.1371/journal.pone.0219971

Hou, W., Liu, H., Liang, L., Ho, J., Kim, H., Seong, E., Hall, B., 2020. Everyday life experiences and mental health among conflict-affected forced migrants: a meta- analysis. *J. Affect. Disord*. 264, 50–68. https://doi.org/10.1016/j.jad.2019.11.165.

Hynie, M. (2018). The Social Determinants of Refugee Mental Health in the Post-Migration Context: A Critical Review. *The Canadian Journal of Psychiatry*, *63*(5), 297–303. https://doi.org/10.1177/0706743717746666

Ibrahim, H. H., Ertl, V., Catani, C., Ismail, A. A., & Neuner, F. (2018). The validity of Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5) as screening instrument with Kurdish and Arab displaced populations living in the Kurdistan region of Iraq. BMC Psychiatry, 18(1). https://doi.org/10.1186/s12888-018-1839-z

Jackson, R. L., Drummond, D. K., & Camara, S. K. (2007). What Is Qualitative Research? *Qualitative Research Reports in Communication*, *8*(1), 21–28. https://doi.org/10.1080/17459430701617879

Kapur, D. (2001). Diasporas and Technology Transfer. *Journal of Human Development*, *2*(2), 265–286. https://doi.org/10.1080/14649880120067284

Karamehic-Muratovic, A., Sichling, F., & Doherty, C. (2022). Perceptions of Parents' Mental Health and Perceived Stigma by Refugee Youth in the U.S. Context. *Community Mental Health Journal*, *58*(8), 1457–1467. https://doi.org/10.1007/s10597-022-00958-2

Kirmayer, L. J., Narasiah, L., Munoz, M., Rashid, M., Ryder, A. G., Guzder, J., Hassan, G., Rousseau, C., & Pottie, K. (2010). Common mental health problems in immigrants and refugees: general approach in primary care. *Canadian Medical Association Journal*, *183*(12), E959–E967. https://doi.org/10.1503/cmaj.090292

Koser, K. (2016). International Migration: A Very Short Introduction (2nd edn). In *Oxford University Press eBooks*. https://doi.org/10.1093/actrade/9780198753773.001.0001

Kroenke, K., Spitzer, R.L., Williams, J.B.W., 2001. The PHQ9 validity of a brief Depression severity measure. J. Gen. *Intern. Med*. 16, 606–613. https://doi.org/ 10.1046/j.1525-1497.2001.016009606.x.

Lacour, O., Morina, N., Spaaij, J., Nickerson, A., Schnyder, U., Von Känel, R., Bryant, R. A., & Schick, M. (2020). Prolonged Grief Disorder Among Refugees in Psychological Treatment—Association With Self-Efficacy and Emotion Regulation. *Frontiers in Psychiatry*, *11*. https://doi.org/10.3389/fpsyt.2020.00526

Lahav, G. (1998). Immigration and the state: The devolution and privatisation of immigration control in the EU. *Journal of Ethnic and Migration Studies*, *24*(4), 675–694. https://doi.org/10.1080/1369183x.1998.9976660

Lapshyna, I. (2022, July 8). *Ukraine – Emigration and Displacement in Past and Present*. bpb.de. https://www.bpb.de/themen/migration-integration/laenderprofile/english-version-country-profiles/510002/ukraine-emigration-and-displacement-in-past-and-present/

Laua, W., & Thomas, T. (2008). Research into the psychological well-being of young refugees. *International Psychiatry*, 5(3), 60–62. 10.1192/S1749367600002071

Lefever, S., Dal, M., & Matthíasdóttir, Á. (2007). Online data collection in academic research: advantages and limitations. *British Journal of Educational Technology*, *38*(4), 574–582. https://doi.org/10.1111/j.1467-8535.2006.00638.x

Lehman, J., & Dimitriadi, A. (2023). Temporary Protection: The Ukrainian Field Trial. *EU Responses to the Large-Scale Refugee Displacement*, 270.

Leighton, K., Kardong-Edgren, S., Schneidereith, T., & Foisy-Doll, C. (2021). Using Social Media and Snowball Sampling as an Alternative Recruitment Strategy for Research. *Clinical Simulation in Nursing*, *55*, 37–42. https://doi.org/10.1016/j.ecns.2021.03.006

Lenferink, L. I. M., Liddell, B. J., Byrow, Y., O'Donnell, M., Bryant, R. A., Mau, V., McMahon, T., Benson, G., & Nickerson, A. (2021). Course and predictors of posttraumatic stress and Depression longitudinal symptom profiles in refugees: A latent transition model. *Journal of Psychiatric Research*, *146*, 1–10. https://doi.org/10.1016/j.jpsychires.2021.12.009

Li, S.S.Y., Liddell, B.J., Nickerson, A., 2016. The relationship between post-migration stress and psychological disorders in refugees and asylum seekers. *Curr. Psychiatr. Rep*. 18 (9) https://doi.org/10.1007/s11920-016-0723-0.

Lies, J., Jobson, L., Mascaro, L., Whyman, T., & Drummond, S. P. (2021). Postmigration stress and sleep disturbances mediate the relationship between trauma exposure and posttraumatic stress symptoms among Syrian and Iraqi refugees. *Journal of Clinical Sleep Medicine*, *17*(3), 479–489. https://doi.org/10.5664/jcsm.8972

Lindert, J., Ehrenstein, O. S. V., Priebe, S., Mielck, A., & Brähler, E. (2009b). Depression and anxiety in labor migrants and refugees – A systematic review and meta-analysis. *Social Science &Amp; Medicine*, *69*(2), 246–257. https://doi.org/10.1016/j.socscimed.2009.04.032

Löbel, L. (2020). Family separation and refugee mental health–A network perspective. *Social Networks*, *61*, 20–33. https://doi.org/10.1016/j.socnet.2019.08.004

Lunov, V., Lytvynenko, O., Maltsev, O., & Zlatova, L. (2022). The Impact of Russian Military Aggression on the Psychological Health of Ukrainian Youth. *American Behavioral Scientist*, *67*(3), 426–448. https://doi.org/10.1177/00027642221144846

Magnani, R. J., Sabin, K., Saidel, T., & Heckathorn, D. D. (2005). Review of sampling hard-to-reach and hidden populations for HIV surveillance. *AIDS*, *19*(Supplement 2), S67–S72. https://doi.org/10.1097/01.aids.0000172879.20628.e1

Makwana, N. (2019). Disaster and its impact on mental health: A narrative review. *Journal of Family Medicine and Primary Care*, *8*(10), 3090. https://doi.org/10.4103/jfmpc.jfmpc_893_19

Mangrio, E., & Forss, K. S. (2017). Refugees' experiences of healthcare in the host country: A scoping review. *BMC Health Services Research*, 17(1), 814. https://doi.org/10.1186/s12913-017-2731-0

Miller, C. L., Guidry, J. P., Dahman, B., & Thomson, M. D. (2020). A Tale of Two Diverse Qualtrics Samples: Information for Online Survey Researchers. *Cancer Epidemiology, Biomarkers & Prevention*, *29*(4), 731–735. https://doi.org/10.1158/1055-9965.epi-19-0846

Miller, A. L., Hess, J., Bybee, D., & Goodkind, J. R. (2017). Understanding the mental health consequences of family separation for refugees: Implications for policy and

practice. *American Journal of Orthopsychiatry*, *88*(1), 26–37. https://doi.org/10.1037/ort0000272

Miller, K. G., & Rasmussen, A. (2010). War exposure, daily stressors, and mental health in conflict and post-conflict settings: Bridging the divide between trauma-focused and psychosocial frameworks. *Social Science & Medicine*, *70*(1), 7–16. https://doi.org/10.1016/j.socscimed.2009.09.029

Momartin, S., Steel, Z., Coello, M., Aroche, J., Silove, D., & Brooks, R. D. (2006). A comparison of the mental health of refugees with temporary versus permanent protection visas. *The Medical Journal of Australia*, *185*(7), 357–361. https://doi.org/10.5694/j.1326-5377.2006.tb00610.x

Morelen, D. (2013, June 1). *Emotion Socialization and Ethnicity: An Examination of Practices and Outcomes in African American, Asian American, and Latin American Families*. PubMed Central (PMC). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3670437/

Nesterko, Y., Jäckle, D., Friedrich, M., Holzapfel, L., & Glaesmer, H. (2019). Prevalence of post-traumatic stress disorder, Depression and somatization in recently arrived refugees in Germany: an epidemiological study. *Epidemiology and Psychiatric Sciences*, *29*. https://doi.org/10.1017/s2045796019000325

North, C. S., & Pfefferbaum, B. (2013). Mental Health Response to Community Disasters. *JAMA*, 310(5), 507. https://doi.org/10.1001/jama.2013.107799

OHCHR. (n.d.). *Ukraine*. Retrieved February 15, 2023, from https://www.ohchr.org/en/taxonomy/term/1136

Pavlenko, A. (2008). Russian in post-Soviet countries. *Russian Linguistics*, *32*(1), 59–80. https://doi.org/10.1007/s11185-007-9020-1

Porter, M., Haslam, N., 2005. Predisplacement and postdisplacement factors associated with mental health of refugees and internally displaced persons: a meta-analysis. *JAMA* 294 (5), 602–612. https://doi.org/10.1001/jama.294.5.602.

Shire, W. (2016, June). *Home By Warsan Shire*. Amnesty International Ireland. Retrieved June 22, 2023, from https://www.amnesty.ie/wp-content/uploads/2016/06/home-by-warsan-shire.pdf

Silove, D., Steel, Z., McGorry, P. D., & Mohan, P. (1998). Trauma exposure, postmigration stressors, and symptoms of anxiety, depression and post-traumatic stress in Tamil

asylum-seekers: comparison with refugees and immigrants. *Acta Psychiatrica Scandinavica*, *97*(3), 175–181. https://doi.org/10.1111/j.1600-0447.1998.tb09984.x

Silove, D., Ventevogel, P., & Rees, S. (2017). The contemporary refugee crisis: an overview of mental health challenges. *World Psychiatry*, *16*(2), 130–139. https://doi.org/10.1002/wps.20438

Slewa-Younan, S., Uribe Guajardo, M. G., Heriseanu, A., & Hasan, T. (2014). A Systematic Review of Post-traumatic Stress Disorder and Depression Amongst Iraqi Refugees Located in Western Countries. *Journal of Immigrant and Minority Health*, *17*(4), 1231–1239. https://doi.org/10.1007/s10903-014-0046-3

Statista. (2023, February 21). *Number of Ukrainian refugees 2023, by country*. https://www.statista.com/statistics/1312584/ukrainian-refugees-by-country/

Sukamolson, S. (2007). *Fundamentals of quantitative research*. Language Institute Chulalongkorn University. Retrieved June 4, 2023, from https://www.researchgate.net/profile/Vihan-Moodi/post/What_are_the_characteristics_of_quantitative_research/attachment/5f3091d0ed60840001c62a27/AS%3A922776944787456%401597018576221/download/SuphatSukamolson.pdf

Sveen, J., Bondjers, K., & Willebrand, M. (2016). Psychometric properties of the PTSD Checklist for DSM-5: a pilot study. *European Journal of Psychotraumatology*, *7*(1). https://doi.org/10.3402/ejpt.v7.30165

Thikeo, M., Florin, P., & Ng, C. H. (2015). Help Seeking Attitudes Among Cambodian and Laotian Refugees: Implications for Public Mental Health Approaches. *Journal of Immigrant and Minority Health*, *17*(6), 1679–1686. https://doi.org/10.1007/s10903-015-0171-7

UNHCR|Emergency Handbook. (n.d.-a). https://emergency.unhcr.org/entry/44937/migrant-Definition

United Nations High Commissioner for Refugees. (n.d.). Internally Displaced People. UNHCR. https://www.unhcr.org/internally-displaced-people.html

We Refugees Archive. (n.d.). We Refugees Archive. https://en.we-refugees-archive.org/archive/hannah-arendt-we-lost-our-home-which-means-the-familiarity-of-daily-life/

Wass, V., Van Der Vleuten, C. P. M., Shatzer, J., & Jones, R. (2001). Assessment of clinical competence. *The Lancet*, *357*(9260), 945–949. https://doi.org/10.1016/s0140-6736(00)04221-5

Appendix

Appendix 1

Table 3

Host Country Distribution

	N	%
Germany	12	20.69
Poland	8	13.79
The Netherlands	7	12.07
USA	3	5.17
Czech Republic	3	5.17
Canada	3	5.17
United Kingdom	2	3.45
Spain	2	3.45
Cyprus	2	3.45
Slovakia	2	3.45
Peru	1	1.72
Colombia	1	1.72
Belgium	1	1.72
Romania	1	1.72
Ireland	1	1.72
Switzerland	1	1.72
Italy	1	1.72
Hungary	1	1.72
Estonia	1	1.72
Thailand	1	1.72
Georgia	1	1.72
Portugal	1	1.72
France	1	1.72
Latvia	1	1.72

Note. Measured in total scores.