

Psychological Trauma: Theory, Research, Practice, and Policy

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The Effect of the Russian Invasion on Mental, Social, and Behavioral Health Among Ukrainians Living in the United States

Aigerim Alpysbekova¹, Mia M. Cisco¹, Duyen H. Vo¹, Beyhan Ertanir², Sumeyra Sahbaz¹,
Pablo Montero-Zamora¹, Tara Bautista³, Carolina Scaramutti⁴, Magdalena Bartoszak⁵,
Lea Nehme⁶, Maria Duque¹, and Seth J. Schwartz¹

¹ Department of Kinesiology and Health Education, University of Texas at Austin

² Institute for Education Sciences, Universität Basel

³ Department of Psychology, Northern Arizona University

⁴ Department of Psychiatry and Behavioral Sciences, University of Miami

⁵ Department of Psychology, Maria Grzegorzewska University

⁶ Department of Health Promotion and Disease Prevention, Florida International University

Objective: The present research examines the disparities among Ukrainians residing in the United States, comparing Ukrainians who migrated before the February 2022 Russian invasion against those who arrived afterward. We compare these two cohorts vis-a-vis anxiety, depressive symptoms, optimism, posttraumatic stress, life satisfaction, family economic stress, cultural stress (discrimination, negative context of reception, and language stress), hazardous alcohol use, and domestic violence perpetration and victimization.

Method: The present sample included 703 Ukrainians (53.63% women) residing in the United States. We conducted a series of multivariate analyses of variance using arrival cohort (pre- vs. postinvasion) and gender (male vs. female) as independent variables. **Results:** Results indicated that postinvasion participants reported greater internalizing symptoms, cultural/economic stress, and hazardous alcohol use, whereas preinvasion arrivals reported greater levels of optimism and life satisfaction. No significant interactions between cohort and gender emerged for any of the outcomes. **Conclusion:** Our findings offer valuable insights into the mental health and well-being of displaced Ukrainians within the backdrop of ongoing conflicts. These findings have significant implications for support and intervention efforts not only for Ukrainians but also for other crisis migrant groups.

Clinical Impact Statement

Our study found that Ukrainians who migrated after the invasion reported higher levels of depression, anxiety, posttraumatic stress symptoms, cultural/economic stress, and alcohol misuse, whereas those who arrived earlier reported higher levels of optimism and life satisfaction. These findings highlight the impact of ongoing wars on the mental health of displaced Ukrainians. In addressing the experiences and needs of crisis migrants globally, research, practice, and policy efforts should attend to the specific types and severity of crisis events that migrants have experienced prior to arriving in their destination countries.

Keywords: Ukrainian immigrants, Russian invasion, mental health, cultural stressors, war

Aigerim Alpysbekova  <https://orcid.org/0009-0000-0129-0968>

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Correspondence concerning this article should be addressed to Aigerim Alpysbekova, Department of Kinesiology and Health Education, University of Texas at Austin, Bellmont Hall, 2109 San Jacinto Boulevard, Austin, TX 78712, United States. Email: aigelya@utexas.edu

In the crucible of Ukraine's historical journey to independence, a series of pivotal events not only affected the country's destiny but also established a profound link between past catastrophes and the complex issues the country faces today (Fortuin, 2022; Marples, 2019). Although wars and armed conflicts have been a hallmark of Ukraine's history, Ukraine's independence has been marked by much more than battles alone.

On August 24, 1991, Ukraine declared its independence from Moscow, marking a crucial turning point in its history, liberating the country from Soviet influence and laying the groundwork for subsequent challenges (Burenko, 2022; Marples, 2019). However, the struggle for Ukraine persisted. Orange Revolution of 2004, sparked by protests against electoral fraud, brought attention to issues of corruption and led to significant political change (Kaul, 2021; Wilson, 2024). Although initially peaceful, subsequent Maidan protests in 2013 escalated into violent confrontations, resulting in a change in government (O'Loughlin et al., 2017; Wilson, 2024).

In 2013–2014, the Maidan (named after Maidan Nezalezhnosti), triggered by the government's rejection of a European Union Association Agreement, evolved into a nationwide movement demanding human rights, political regime change, and an end to corruption. Shortly thereafter, in 2014, Russia invaded and took control of Crimea in southern Ukraine (Pettersson & Wallenstein, 2015). Russia justified its actions by claiming historical links to Crimea, which was part of Russian territory prior to Ukraine's independence in 1991. Crimea was also strategically vital to Russian interests because of its access to the Black Sea (Pokotylo & Nashivochnikov, 2021; Vidmar, 2015). The Crimea takeover exacerbated Ukraine's problems and laid the groundwork for the Donbas conflict, primarily centered in eastern Ukraine's Donetsk and Luhansk regions (O'Loughlin et al., 2017; Wilson, 2016). The simultaneous Crimea and Donbas invasions resulted in significant casualties and widespread displacement of Ukrainian citizens (Pifer, 2020). These and other challenges have not only influenced the country's political landscape but also had a profound impact on the mental health and well-being of those affected by displacement (Burenko, 2022). Although Western attention intensified after the 2022 Russian invasion, it is crucial to acknowledge that Ukrainians who fled during earlier conflicts, such as the Orange Revolution, Crimea, and Donbas events, can also be considered war migrants (people who migrate due to war or conflict).

The consequences of these prior conflicts became even more pronounced in February 2022, when Russia's invasion of Ukraine triggered a rapid displacement crisis. This crisis emerged as Europe's largest refugee crisis since World War II (Duszczak & Kaczmarczyk, 2022). This sequence of conflict-related events has profoundly impacted Ukraine's sociopolitical landscape and the lives of its people. Since the Russian invasion began, 5.9 million people have been internally displaced within Ukraine, and 5.7 million Ukrainians have fled to other European countries such as Poland, Hungary, and Moldova. Poland has taken in the greatest number of Ukrainian refugees, welcoming about 60% of the total Ukrainian refugee population (United Nations High Commissioner for Refugees, 2022). In addition to migrating to other European countries, increasing numbers of Ukrainians have migrated to the United States. Approximately 280,000 Ukrainians entered the United States between February 2022 and April 2023 (de Freytas-Tamura, 2023), with an additional 167,000 authorized in August 2023 (Montoya-Galvez, 2023).

All of these historical challenges have collectively contributed to negative mental health and behavioral consequences, forming a web of trauma that continues to shape the nation's psyche and societal dynamics. In the present study, we examined the multifaceted impact of war and crisis migration on the mental health of Ukrainian migrants in the United States. To better understand the unique challenges that Ukrainian migrants have endured, we further explored the different experiences of those who left Ukraine before versus following the 2022 Russian invasion. We also aimed to understand the potentially gendered effects of conflict exposure on alcohol use, relational conflict, internalizing symptoms, optimism, life satisfaction, and financially and culturally stressful experiences among Ukrainian war migrants. Furthermore, we consider the broader context of crisis migration, characterized by the confluence of premigration trauma and postmigration cultural stress, and where cultural stress (discrimination, negative context of reception, and language stress) often compounds the challenges faced by displaced individuals and families (Montero-Zamora et al., 2023; Schwartz et al., in press). Indeed, prior work (Salas-Wright et al., in press) has found that, among crisis migrants, those who experience greater premigration trauma often also report greater amounts of discrimination, negative context of reception, and language stress. These cultural stressors are therefore essential to examine as potential outcomes of premigration crisis exposure, including war trauma. Moreover, crisis migration often involves severe downward economic mobility because of the unplanned and chaotic nature of the relocation and because migrants' degrees and certifications may not be recognized in the destination country or region without additional training (see Vos et al., 2021, for a review). As a result, family economic stressors—such as food insecurity and not being able to meet household expenses—may be common among crisis migrant populations.

Effects of War and Conflict on Mental Health

As highlighted by the World Health Organization (2022), experiencing war and conflict can exert profound negative effects on mental health. Charlson et al. (2019) reported that in postconflict settings, approximately one in five individuals experiences depression, anxiety disorders, and posttraumatic stress disorder (PTSD). These World Health Organization estimates include a point prevalence of about 5.1% for severe mental disorders and 17% for mild mental disorders. Rozanov et al. (2019) highlighted that prevalent mental health issues resulting from armed conflicts include depressive symptoms, anxiety, and PTSD. Both war exposure and daily stressors were found to predict depression levels, with perceived safety mediating the relationship between war exposure and functional impairment. According to Bonanno et al. (2011), PTSD symptoms tend to worsen over time, indicating a worsening of preexisting symptoms rather than a sudden onset. It is possible that the 2022 invasion triggered PTSD symptoms in older people who survived the Soviet occupation and later conflicts with Russia after 1991 and in people who had fled Ukraine after the Crimea and Donbas conflicts. According to Ogle et al. (2013), older individuals who have experienced trauma may be more vulnerable to recurring PTSD symptoms when exposed to new stressors, potentially retriggering their trauma. According to the World Health Organization (2022), approximately 22% of individuals exposed to armed conflict may develop severe mental health issues, alongside relational difficulties and excessive alcohol use. Indeed, research has consistently shown

that conflict-affected populations, including crisis migrants who have encountered traumatic events such as torture, rape, and violence, often experience high rates of psychological disorders such as PTSD and depression, with lingering effects lasting for years (Mahmood et al., 2022). Rasmussen et al. (2020), studying a sample of 1,820 Mexican and U.S. participants, found a significant relationship between the diversity of reported potentially traumatic events and severity of PTSD symptoms. Their findings emphasized that the varied nature of traumatic experiences plays a more crucial role in predicting PTSD severity than the mere count of such events, across different experiential categories of exposure. As a result, it may be important to index trauma in terms of the number of different types of traumatic events that individuals have experienced.

Furthermore, in addition to exhibiting high levels of mental health problems, individuals exposed to war and violence may experience issues with alcohol consumption, relationship conflicts, and other negative outcomes (Ertl et al., 2016). For example, in northern Uganda, Mootz et al. (2018) found connections among male partners' exposure to armed conflict, alcohol consumption, and incidents of intimate partner violence. The same study found that nearly one third (30.7%) of women reported that their male partners consumed alcohol daily—suggesting that the effects of war exposure on health outcomes may include alcohol misuse.

War has traditionally been viewed as a male-dominated phenomenon in terms of diplomacy, combat, and traumatic experiences. However, in recent years, we have witnessed a shift toward examining war through both women's and men's perspectives, leading to questions about gender differences in the physical and emotional sequelae of war (Thébaud, 2015). Miller and Rasmussen (2010) found that, for women, war exposure and daily stressors were equally robust predictors of PTSD, whereas among men, only daily stressors played a predictive role vis-a-vis PTSD. Theisen-Womersley (2021) found that gender differences in PTSD prevalence may be due to variations in how trauma emerges. According to their findings, women with PTSD were more likely to experience flashbacks, hypervigilance, and extreme psychological distress in response to trauma reminders, whereas men with PTSD were more likely to describe feelings of separation or alienation from others. The question of whether women have more, or different, PTSD symptoms is still being debated (Tekin et al., 2016).

In the present study, we aimed to investigate the potentially gendered impact of conflict in Ukraine on mental health, alcohol use, relational conflict, well-being, and culturally and economically stressful experiences among Ukrainians in the United States. Additionally, given that other conflicts between Ukraine and Russia occurred prior to the 2022 invasion, we also examined the extent to which individuals who migrated prior to the invasion would experience lower levels of symptomatology compared to those who arrived after the invasion began.

Crisis Migration

Crisis migration is characterized by complex and widespread migration patterns resulting from natural or human disasters. It is marked by a devastating event or series of events, after which thousands or millions of people are displaced to both nearby and distant countries (International Organization for Migration, 2023). Examples include Ukrainians fleeing armed conflict, Venezuelans fleeing their country's collapse, Afghanis escaping the Taliban

retakeover of their country, and Central Americans fleeing gang violence and civil war (Ertanir et al., 2023). The crisis migration context includes at least two primary components: trauma experienced before enduring the disaster and cultural and economic stress experienced following migration. War-affected migrant communities are often exposed to multiple traumatic events before forced displacement and potentially during and after resettlement (Wieling, 2018). Both sets of stressors are likely to compromise individuals' mental health and well-being (Vos et al., 2021). Another key feature of crisis migration involves economic stress, which refers to difficulties in meeting one's daily expenses. In most crisis situations, individuals and families must flee without warning and with little or no time to prepare. As a result, crisis migrants often can bring with them only what they can carry, and they generally arrive to their destination country with few supplies, many needs, and a wide range of unknowns (Salas-Wright et al., 2021). Accordingly, groups labeled as crisis migrants would be expected to score high on measures of economic insufficiency.

In the context of Ukraine and its conflict-ridden history since its independence from the Soviet Union, a key question persists regarding precisely which Ukrainians in the United States are crisis migrants and which are not. For example, are individuals who left Ukraine following the invasions of Crimea or the Donbas region also considered crisis migrants even though the international community did not provide them with much assistance and relief? Alternatively, one could argue that only individuals who left Ukraine after the Russian invasion began are crisis migrants because whole cities have been destroyed. It might be reasonable to expect that, if both groups of Ukrainians are crisis migrants, their mental health and well-being profiles should be similar. On the other hand, if only individuals leaving Ukraine after the invasion began can be considered as crisis migrants, then one might expect this most recent group to score considerably higher on measures of mental health problems and lower on measures of well-being. Individuals arriving before the 2022 invasion have been in the United States for longer periods of time, and their trauma may be expected to be less acute for this reason—but the emergence of delayed onset PTSD may contraindicate this explanation associated with the passage of time.

As noted above, the impact of both war-related trauma and migration-related stress can lead to elevated mental health problems that may persist over time. Indeed, Qureshi et al. (2010) emphasized that crisis migration increases vulnerability to mental health problems, particularly due to the accumulation of stressors and limited coping resources. Crisis migrants may also experience a sense of guilt and remorse for leaving their friends and family members behind in their country of origin (von Kellenbach & Buschmeier, 2021). In the postmigration context, individuals and families also face other stressors, including language stress, discrimination, a hostile context of reception, and relational conflict (Sangalang et al., 2019). Thus, the mental health risks involved in migration and adaptation among crisis migrants include not only premigration stress but also posttraumatic stress, depressive symptoms, and anxiety (Hasanović et al., 2020). It is also essential to assess aspects of well-being such as optimism and life satisfaction, given that many migrants report high levels of well-being even in the face of premigration trauma and postmigration cultural stressors (Close et al., 2016; Cobb et al., 2019). Assessing well-being is also important because it is conceptually separate from mental health symptoms (Keyes, 2005), such that people may be optimistic or

satisfied with their lives even in the presence of mild levels of depression or anxiety.

The Present Study

The present study was designed to explore distinctions among Ukrainian migrants in the United States based on whether they arrived before or after the 2022 Russian invasion. We investigated a range of psychosocial, economic, and cultural factors encompassing anxiety, depressive symptoms, PTSD, life satisfaction, optimism, economic and cultural stress, alcohol use, and relational conflict. In recognition of established gender disparities in experiences and responses to wars and armed conflicts, we also included gender as an independent variable alongside the migration cohort.

Research Questions and Hypotheses

The present study aimed to (a) examine differences in levels of psychosocial, economic, and cultural factors between Ukrainian migrants who arrived in the United States before versus after the onset of the 2022 war and (b) determine whether these disparities were consistent for both men and women. We hypothesized that Ukrainian adults who migrated to the United States following the onset of the 2022 Russian invasion would report higher levels of anxiety, depressive symptoms, PTSD symptoms, hazardous alcohol use, and relational conflict compared to Ukrainians who arrived before the invasion. Additionally, we expected that economic stress would be higher among recent Ukrainian crisis migrants who settled in the United States in 2022–2023 compared to their counterparts

who migrated earlier. Regarding the second research question, we hypothesized that men would report higher scores on alcohol misuse, whereas women would score higher on depressive symptoms, anxiety, and PTSD. Given a dearth of relevant prior literature, we did not advance specific hypotheses for relational conflict, optimism, life satisfaction, and cultural and economic stress.

Method

Sample

The study included 703 Ukrainian migrants (53.6% women; see Table 1 for detailed demographic information). We used previous research on migration and mental health to determine the sample size for our study. For example, Scaramutti et al. (in press) recruited and surveyed a total of 647 Venezuelan migrants in Colombia and the United States.

In terms of age, 40.1% were between the ages of 18 and 30, and 41.1% were between the ages of 31 and 40. Participants originated from all around Ukraine, including the regions of Kyivska, Volynska, Vinnytska, and others. In terms of marital status, 54.2% were married, 12.8% were divorced, and 18.6% were single. The majority of respondents were parents. Graduate degrees and high school graduation were the most common levels of education completed. Three fourths of participants were employed, and English fluency was high. The majority of the sample was living in Texas, California, Illinois, New York, or Florida. The vast majority reported wanting to remain in the United States. Among postinvasion arrivals, 81% arrived in the United States in 2022; among preinvasion arrivals, 84% arrived between 2014 and 2021, and 96% arrived between 2010 and 2021.

Table 1
Demographic Characteristics

Demographics (703 participants)	%	Demographics (703 participants)	%
Gender		Education level	
Women	53.6%	Graduate degree	14%
Men	46.7%	Associate's/undergraduate	55.9%
		Some college education	17.2%
		High school	12.3%
Age distribution		Employment status	
18–30 years	40.1%	Employed	76.4%
31–40 years	41.1%	Unemployed	15.2%
41–50 years	11.2%	Students	5.3%
51–60 years	3.3%	Never employed	2.4%
Over 60 years	2%		
Geographic distribution (participants from 27 regions)		Language proficiency (mean score, range = 1–5)	
Top three regions		Speaking Ukrainian	3.80
Kyivska oblast	11%	Speaking English	3.14
Volyn'ska oblast	7%	Speaking Russian	3.09
Vinnyts'ka oblast	6.9%		
Marital status		Geographic location in the United States (top states)	
Married	54.2%	Texas	14.7%
Divorced	12.8%	California	14.1%
Single	18.6%	Illinois	10.6%
In a relationship	12.1%	New York	10.4%
Widowed	2.3%	Florida	8.7%
Parental status		Intention to stay in the United States	
Have children	64%	Strong desire to stay	87.9%
Have one child	62% (of parents)	Do not wish to stay	8.6%
Live with children	95% (of parents)	Unsure about the future	3.7%

The disparity in sample sizes between groups (e.g., 477 in the preinvasion cohort vs. 217 in the postinvasion cohort) is primarily attributed to our data collection methodology. Initially, the screening survey did not include a question about year of arrival in the United States. After realizing that most participants had arrived before the invasion, we realized that we needed more postinvasion arrivals, and we amended the survey to exclude those who arrived before the invasion. We were only able to recruit 217 postinvasion participants with our available funding.

Procedure

The study received approval from the institutional review board (STUDY00004306) at the authors' home institution in the United States. The first author contacted potential participants through various channels, including phone, email, and social media platforms such as Telegram, Facebook, Instagram, WhatsApp, and LinkedIn. Individuals who wanted to participate expressed their willingness through email. We provided them with a Qualtrics link to a screening document to determine their eligibility for the study. The measures were translated into Russian and Ukrainian (as most Ukrainians speak both languages) and then back translated by bilingual students. One native Russian speaker (the first author) and one native Ukrainian speaker checked the final versions and edited them as necessary. The research team implemented outreach strategies, such as radio ads in Miami, Florida, through the first author's network of friends to recruit from the wider Ukrainian adult population in the United States. The ads described the study purpose, indicated what participants would be asked to do, and told them how much they would be paid for taking part.

Participants were required to provide consent and complete the screener before advancing to the main survey. Each survey respondent was allocated a unique Qualtrics ID ranging from 1 to 1,000. This ID was linked to the person's survey results to protect participants' identifying information. Participants eligible for the screening phase had to meet the following criteria: (a) Ukrainian ethnicity, (b) born in Ukraine, (c) 18 years of age or older, and (d) residing in the United States. We employed snowball sampling, where the recruitment process began with a small group of participants (seeds) referred by local organizations. These participants were then asked to refer to other eligible individuals, and additional referrals were obtained until we reached our final sample size.

Interested participants selected their preferred language (English, Russian, or Ukrainian) and were invited to complete a 30-min online survey in Qualtrics. Eligible participants completed an informed consent form before proceeding to the main survey. Recruitment and data collection occurred between June and August 2023. To prioritize participants' emotional well-being, they were provided with a mental health crisis line number before initiating the main survey, ensuring immediate access to support if needed. On average, the survey took approximately 39 min to complete. Each participant received a \$20 gift card and was asked to refer up to three additional participants.

Data Validation and Quality Control Measures

To ensure data accuracy and integrity, we used several strategies during the survey process. IP addresses and location questions were utilized to verify respondents' claimed locations by cross-referencing

them with IP addresses. CAPTCHA is implemented to distinguish between human respondents and automated bots, preventing the inclusion of bot-generated responses. Additionally, measures like preventing multiple submissions, bot detection, security scan monitoring, and RelevantID were used to enhance security, detect fraudulent activity, and contribute to the data trustworthiness.

Measures

Internalizing Symptoms: Anxiety

We used the General Anxiety Disorder–7 scale (Spitzer et al., 2006) to assess anxiety symptoms. This scale consists of seven items designed to measure how often individuals have experienced symptoms of anxiety, such as feeling nervous, anxious, or on edge and not being able to stop or control worrying during the 2 weeks before assessment. Responses are provided on a scale ranging from 0 (*rarely*) to 3 (*all the time*), such that the range of possible scores is from 0 to 21. Total scores of 10 or above are considered suggestive of a probable anxiety diagnosis. A sample item is "Worrying too much about different things." Cronbach's α in the present sample was .91.

Depressive Symptoms

To assess depressive symptoms, we used the 10-item Boston Form of the Center for Epidemiologic Studies Depression scale (Grzywacz et al., 2006; Kohout et al., 1993). This scale is designed to measure how often individuals experience symptoms of depression, such as sadness and lack of energy, during the week before assessment. Responses are provided on a scale ranging from 0 (*rarely*) to 3 (*all the time*), such that the range of possible scores is from 0 to 30. Total scores of 10 or above are considered suggestive of a probable anxiety disorder diagnosis. An example item is "I felt like everything I did was an effort during the past week." The scale was internally consistent with a Cronbach's α of .89 in the present study.

Traumatic Exposure

The Harvard Trauma Questionnaire, developed by Arnetz et al. (2014), is a widely used tool for assessing trauma exposure, especially among individuals who have experienced conflict or violence. Respondents indicate "yes" or "no" for each item. Sample items include "Witnessed physical harm of others" and "Witnessed execution of civilians." We used McDonald's ω as an index of reliability for yes/no variables, and the value was .93 in the present sample.

Posttraumatic Stress Symptoms

In evaluating the presence and severity of PTSD symptoms, we utilized the 17-item Davidson Trauma Scale (Davidson et al., 1997). The scale delves into an individual's history of trauma, assessing both the frequency and severity of symptoms over time. Respondents rate each item on a 5-point scale ranging from 0 (*never*) to 4 (*5 or more times*), such that the range of possible scores is from 0 to 68. Example items include "You have had some images, memories, or painful thoughts about the traumatic event" and "You have been unable to recall important parts of the traumatic event." Total scores of 40 or above are considered suggestive of a probable

PTSD diagnosis. We asked participants to focus on traumatic events occurring in Ukraine before migration. Cronbach's α was .96.

Well-Being Measures: Satisfaction With Life

To evaluate life satisfaction, we employed the five-item Satisfaction With Life Scale (Diener et al., 1985). This scale is specifically designed to gauge individuals' contentment with their lives holistically and the conditions in which they find themselves. The response options ranged from 1 (*strongly disagree*) to 7 (*strongly agree*), such that possible scores range from 5 to 35. Items included "In most ways, my life is close to my ideal" and "The conditions of my life are excellent." Cronbach's α was .89 in the present study.

Optimism

To assess the participants' levels of optimism, we employed the 10-item Revised Life Orientation Test (Scheier et al., 1994). The Revised Life Orientation Test is designed to measure individuals' degree of optimism or pessimism regarding the future. Respondents use a 5-point rating scale (0 = *strongly disagree*; 4 = *strongly agree*), such that possible scores range from 0 to 40. The scale includes items such as "In uncertain times, I usually expect the best" and "I'm always optimistic about my future." Cronbach's α in the present sample was .66.

Behavior-Related Measures: Alcohol Misuse

To assess alcohol misuse, we used the 10-item Alcohol Use Disorders Identification Test (Saunders et al., 1993). Response options ranged from *never* to *4 times a week*. Three items assess quantity and frequency of alcohol use (e.g., "How many drinks containing alcohol do you have on a typical day when you are drinking?"), three items evaluate frequency of alcohol-dependent behaviors (e.g., "How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?"), and four items gauge alcohol-related problems (e.g., "Have you or someone else been injured as a result of your drinking?"). Cronbach's α was .93.

Response scales for the Alcohol Use Disorders Identification Test vary across items. For the first eight items, responses are recorded on a 0–4 scale, with specific scale labels differing across items. The last two items, which ask about someone being injured as a result of one's drinking and about a health professional advising one to cut down on drinking, use response scales of 0 (*never*), 2 (*yes, but not in the past year*), or 4 (*yes, in the past year*).

Relational Conflict

To assess conflict dynamics within relationships, we employed the 19-item revised Conflict Tactics Scales–2 (CTS2; Straus & Douglas, 2004). This scale is specifically designed to gauge the extent of psychological and physical interactions between partners in dating, cohabiting, or marital relationships. Each question within the CTS2 is worded to capture both perpetration and victimization. Subscales include Reasoning, Verbal Aggression, Minor Violence, and Severe Violence. Sample items from the CTS2 include "Discussed an issue calmly" (reasoning), "Insulted or swore at him/her" (verbal aggression), "Threw an object toward him/her" (minor violence), and

"Pushed, grabbed, or shoved him/her" (severe violence). Response choices ranged from 0 (*never*) to 4 (*frequently*), with a *not applicable* option provided as well. Cronbach's α s were .56 for reasoning, .91 for verbal aggression, .92 for minor violence, and .92 for severe violence.

Cultural/Economic Stressors: Discrimination

We used the seven-item Perceived Discrimination Scale to assess perceived discrimination (Phinney et al., 1998). This scale assesses the degree to which individuals feel that they have been treated unfairly or negatively based on their nationality or ethnicity. Items specifically inquire about being viewed with suspicion because of one's background. One of the sample questions was: "Do people you do not know treat you unfairly or negatively because you are Ukrainian?" Response options ranged from not at all to nearly every day. The response scale ranged from 0 (*not at all*) to 4 (*almost always*), such that total scores range from 0 to 28. Cronbach's α was .82 in the present sample.

Perceived Context of Reception

We used the six-item Perceived Context of Reception Scale (Schwartz et al., 2014) to evaluate individuals' perceptions of the opportunities that they were provided in the United States and how welcome they perceive the context. This scale utilizes a 5-point Likert scale ranging from 0 (*strongly disagree*) to 4 (*strongly agree*), such that total scores range from 0 to 24. Sample items include "I don't have the same chances in life here as people from other countries." Cronbach's α was .88 in the present sample.

Language Stress

To gauge stress related to language proficiency and difficulties, we utilized the seven-item Language Stress subscale from the Hispanic Stress Inventory (Cervantes et al., 2016). Respondents were asked to indicate their agreement level on a 4-point Likert scale, with options ranging from 0 (*strongly disagree*) to 3 (*strongly agree*), such that total scores range from 0 to 28. Sample items include "I don't speak English or don't speak it well." Cronbach's α was .84 in the present sample.

Family Economic Stress

To gauge economic stress, we employed the 13-item Family Economic Strain Scale (Hilton & Devall, 1997). Response options ranged from 1 (*never*) to 5 (*almost always*), such that total scores range from 13 to 65. Sample items include "How hard is it now to live on your present income?" Cronbach's α was .91.

Guilt Measure: Guilt

We developed a nine-item scale to assess the extent to which individuals felt guilty for leaving family and friends behind in Ukraine. The Guilt scale was created as a self-rating tool to measure real-time feelings of shame, guilt, and experiences of rejection by one's society of origin. The scale's development was informed by conversations with Ukrainians who recently arrived in the United States, during which some individuals expressed feelings of guilt and a desire to support Ukraine from afar. A 5-point Likert scale was used, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), such

that total scores range from 9 to 45. Sample items included “I feel bad about leaving my country in this difficult war time.” Cronbach’s α was .87 in the present sample.

Our scale development process was informed by insights gathered from conversations with recently arrived Ukrainian migrants in the United States. We conducted online and in-person (based on participants’ preferences) personal interviews with eight Ukrainian participants. During these interviews, participants shared their personal experiences and emotions related to leaving Ukraine, including their motivations for migration and reactions from their community. During these interviews, participants emphasized the complexity of guilt among migrants. Some individuals expressed a great desire to help Ukraine from afar, whereas others described receiving criticism and negative feedback from their community for leaving. Additionally, participants reported encountering negative comments on social media from those who remained in Ukraine, further intensifying feelings of guilt and rejection. Based on these insights, we crafted a scale with items reflecting the diverse range of emotions experienced by migrants.

Data Analysis Plan

We conducted a series of multivariate analyses of variance (MANOVAs), with year of arrival (before vs. after the Russian invasion) and gender (male vs. female) as the independent variables. Because MANOVAs require dependent variables to be conceptually similar (Tabachnick & Fidell, 2007), we conducted separate MANOVAs for each set of variables—internalizing symptoms, cultural/economic stressors, well-being, guilt (analyzed as a single dependent variable), and relationship conflict. We also used chi-square tests to compare the percentage of participants meeting probable diagnostic criteria across the preinvasion and postinvasion arrival groups. Descriptive information for all variables is provided in Table 1. Because we utilized six different MANOVAs, we applied a Bonferroni correction to the Type I error risk for the multivariate analyses. Specifically, our α level was adjusted to .0083 (.05/6) for all multivariate and univariate analyses. Similarly, because we used three different chi-square tests to compare probable diagnoses across arrival cohorts, our α level was .017 (.05/3). Findings not meeting these criteria are not flagged as significant and are not noted in the Discussion section.

Results

Internalizing Symptoms

An Arrival Group (before vs. after the invasion) $\times$ Gender MANOVA on internalizing symptoms produced a significant multivariate main effect of arrival group, Wilks’ $\lambda = .90$, $F(3, 686) = 26.03$, $p < .001$, $\eta^2 = .10$. Neither the main effect of gender, Wilks’ $\lambda = .996$, $F(3, 686) = 0.82$, $p = .49$, $\eta^2 = .004$, nor the Arrival Group $\times$ Gender interaction, Wilks’ $\lambda = .99$, $F(3, 686) = 2.12$, $p = .10$, $\eta^2 = .01$, were statistically significant. Follow-up univariate analysis indicated significant univariate effects of the arrival group on all three internalizing outcomes: depressive symptoms, $F(1, 688) = 70.68$, $p < .001$, $\eta^2 = .09$, anxiety, $F(1, 688) = 41.37$, $p < .001$, $\eta^2 = .06$, and posttraumatic stress, $F(1, 688) = 30.46$, $p < .001$, $\eta^2 = .04$. For all three internalizing indicators, individuals migrating after the invasion

reported significantly greater symptomatology compared to those who migrated before the invasion.

In terms of the proportions of each arrival cohort meeting probable diagnostic criteria, we conducted three chi-square tests of independence—one for depression, one for anxiety, and one for PTSD. For depression, 73.4% of participants arriving before the invasion, compared to 87.4% of those arriving after the invasion, met criteria for a probable depression diagnosis. These two percentages were significantly different, $\chi^2(1) = 16.95$, $p < .001$, $\phi = .16$. For anxiety, 34.4% of participants arriving before the invasion, compared to 62.8% of those arriving after the invasion, met criteria for a probable depression diagnosis. These two percentages were significantly different, $\chi^2(1) = 18.74$, $p < .001$, $\phi = .27$. For PTSD, 20.3% of participants arriving before the invasion, compared to 42.8% of those arriving after the invasion, met criteria for a probable depression diagnosis. These two percentages were significantly different, $\chi^2(1) = 37.64$, $p < .001$, $\phi = .23$.

Cultural and Economic Stress

An Arrival Group $\times$ Gender MANOVA on cultural and economic stressors produced a significant multivariate main effect of the arrival group, Wilks’ $\lambda = .87$, $F(4, 685) = 25.85$, $p < .001$, $\eta^2 = .13$. Neither the main effect of gender, Wilks’ $\lambda = .998$, $F(4, 685) = 0.33$, $p = .86$, $\eta^2 = .002$, nor the Arrival Group $\times$ Gender interaction, Wilks’ $\lambda = .99$, $F(4, 685) = 1.31$, $p = .26$, $\eta^2 = .01$, were statistically significant. Follow-up univariate analyses indicated significant univariate effects of arrival group on all four stressors: discrimination, $F(1, 688) = 31.33$, $p < .001$, $\eta^2 = .04$, negative context of reception, $F(1, 688) = 7.90$, $p = .005$, $\eta^2 = .01$, language stress, $F(1, 688) = 82.14$, $p < .001$, $\eta^2 = .11$, and family economic stress, $F(1, 688) = 55.34$, $p < .001$, $\eta^2 = .07$. Individuals migrating after the invasion reported significantly higher levels of all four stressors compared to those who migrated earlier.

Well-Being

An Arrival Group $\times$ Gender MANOVA on life satisfaction and optimism produced a significant multivariate main effect of arrival group, Wilks’ $\lambda = .93$, $F(2, 687) = 26.75$, $p < .001$, $\eta^2 = .07$. Neither the main effect of gender, Wilks’ $\lambda = .999$, $F(2, 687) = 0.27$, $p = .76$, $\eta^2 = .002$, nor the Arrival Group $\times$ Gender interaction, Wilks’ $\lambda = .999$, $F(2, 687) = 0.48$, $p = .62$, $\eta^2 = .01$, were statistically significant. Follow-up univariate analyses indicated a significant univariate effect of the arrival group on optimism, $F(1, 688) = 52.24$, $p < .001$, $\eta^2 = .07$. The effect of arrival group on life satisfaction did not reach statistical significance, $F(1, 688) = 5.74$, $p < .02$, $\eta^2 = .01$. Individuals who migrated before the invasion were significantly more optimistic compared to those who migrated after the invasion.

Trauma and Alcohol Misuse

An Arrival Group $\times$ Gender MANOVA on trauma and alcohol misuse produced significant multivariate main effects of arrival group, Wilks’ $\lambda = .95$, $F(2, 687) = 19.66$, $p < .001$, $\eta^2 = .05$, as well as of gender, Wilks’ $\lambda = .92$, $F(2, 687) = 29.75$, $p < .001$, $\eta^2 = .08$. The Arrival Group $\times$ Gender interaction was not statistically significant, Wilks’ $\lambda = .996$, $F(2, 687) = 1.42$, $p = .24$, $\eta^2 = .004$. Follow-up univariate analyses indicated significant univariate

effects of both arrival groups, $F(1, 688) = 35.82, p < .001, \eta^2 = .05$, and gender, $F(1, 688) = 46.59, p < .001, \eta^2 = .06$, on hazardous drinking. Effects of arrival group, $F(1, 688) = 0.21, p = .65, \eta^2 = .000$, and gender, $F(1, 688) = 0.70, p = .40, \eta^2 = .001$, on trauma were both nonsignificant. The Arrival Group $\times$ Gender interaction was not significant for either alcohol misuse, $F(1, 688) = 1.34, p = .25, \eta^2 = .002$, or trauma, $F(1, 688) = 0.50, p = .48, \eta^2 = .001$. Men and individuals who arrived after the invasion reported significantly greater hazardous drinking compared to women and people who arrived before the invasion, respectively.

Relationship Dynamics

An Arrival Group $\times$ Gender MANOVA on the four relationship dynamic variables produced a significant multivariate main effect of arrival group, Wilks' $\lambda = .98, F(4, 595) = 2.75, p < .005, \eta^2 = .02$. Neither the main effect of gender, Wilks' $\lambda = .98, F(4, 595) = 3.83, p < .03, \eta^2 = .03$, nor the Arrival Group $\times$ Gender interaction, Wilks' $\lambda = .98, F(4, 595) = 2.73, p < .03, \eta^2 = .02$, reached statistical significance. Follow-up univariate analyses did not indicate any significant univariate effects of arrival group on verbal aggression.

Guilt

An Arrival Group $\times$ Gender univariate analysis of variance did not produce any significant main effects or interactions (see Table 2).

Discussion

The present study was designed to explore disparities in terms of mental health, well-being, alcohol consumption, cultural and economic stress, relationship dynamics, and guilt among Ukrainians who migrated to the United States before versus after the February 2022 Russian invasion. More specifically, we examined differences between the two arrival cohorts of Ukrainian migrants regarding a wide range of psychosocial, economic, and cultural factors, including anxiety, depressive symptoms, PTSD, life satisfaction, economic and cultural stress, alcohol misuse, relational conflict, and optimism. Goto et al. (2023) highlighted that Ukraine faced considerable mental health care needs and resource limitations even before the recent invasion. Psychiatric disorders, including depression, anxiety, and PTSD, were already a concern. In 2016, following the 2014 Russian invasion of Crimea, a study on over 2,000 internally displaced adults in Ukraine (Charlson et al., 2019; Roberts et al., 2019) reported prevalences of 22%, 17%, and 32% for depression, anxiety, and PTSD, respectively. Additionally, we explored the role of gender, given established gender differences in experiences and responses to wars and armed conflicts (e.g., Mesa-Vieira et al., 2022). The importance of the present study is highlighted by the devastating impact that crisis migration can exert on mental health, with implications ranging from depressive symptoms and anxiety to post-traumatic stress, alcohol use, and domestic violence perpetration and victimization.

Table 2
Descriptive Statistics and MANOVA Results for Study Variables

Variable	Arrived before invasion (<i>n</i> = 477)		Arrived after invasion (<i>n</i> = 217)		F-statistic (Arrival) (η^2)	F (Gender) (η^2)	F (Interaction) (η^2)
	Male <i>M</i> (<i>SD</i>)	Female <i>M</i> (<i>SD</i>)	Male <i>M</i> (<i>SD</i>)	Female <i>M</i> (<i>SD</i>)			
Internalizing symptoms							
Multivariate test					26.03*** (.10)	0.82 (.004)	2.12 (.01)
Depressive symptoms	22.24 (5.52)	22.75 (5.20)	26.26 (5.82)	26.35 (5.86)	70.68*** (.09)	0.45 (.001)	0.22 (.000)
Anxiety	8.51 (3.92)	9.12 (3.84)	11.32 (4.44)	10.68 (4.80)	41.37*** (.06)	0.001 (.000)	3.43 (.005)
Posttraumatic stress	28.67 (14.27)	28.67 (14.27)	36.42 (13.99)	35.70 (13.85)	30.46*** (.04)	0.59 (.001)	1.98 (.003)
Cultural/economic stress							
Multivariate test					25.85*** (.13)	0.33 (.002)	1.31 (.01)
Discrimination	13.22 (5.56)	13.68 (5.10)	16.22 (4.93)	15.56 (5.55)	31.33*** (.04)	0.05 (.000)	1.67 (.002)
NCR	11.55 (4.90)	11.86 (4.75)	12.72 (3.74)	12.81 (4.25)	7.90** (.01)	0.29 (.000)	0.09 (.000)
Language stress	7.83 (2.82)	7.70 (2.30)	9.83 (3.60)	10.03 (3.55)	82.14*** (.11)	0.03 (.000)	0.49 (.001)
Family/economic stress	30.97 (9.45)	32.17 (8.41)	37.28 (9.19)	36.84 (9.08)	55.34*** (.07)	0.27 (.000)	1.24 (.002)
Well-being							
Multivariate test					26.75*** (.07)	0.27 (.001)	0.48 (.001)
Optimism	20.34 (4.48)	20.52 (4.05)	17.78 (3.88)	18.05 (4.47)	52.24*** (.07)	0.42 (.001)	0.01 (.000)
Life satisfaction	17.48 (4.75)	17.06 (3.99)	16.31 (3.79)	16.57 (3.96)	5.74 (.01)	0.05 (.000)	0.96 (.001)
Trauma/alcohol use							
Multivariate test					19.66*** (.05)	29.75*** (.08)	1.42 (.004)
Trauma	13.75 (6.72)	13.82 (6.41)	13.62 (7.33)	14.45 (5.88)	0.21 (.000)	0.70 (.001)	0.50 (.001)
Hazardous drinking	12.91 (7.94)	9.15 (7.02)	17.66 (9.26)	12.35 (9.38)	35.82*** (.05)	46.59*** (.06)	1.34 (.002)
Relationship issues							
Multivariate test					2.75* (.02)	3.83** (.03)	2.73* (.02)
Reasoning	4.23 (1.59)	4.49 (1.68)	4.41 (1.85)	4.25 (1.84)	0.05 (.000)	0.11 (.000)	1.95 (.000)
Verbal aggression	7.45 (4.09)	8.06 (3.69)	8.96 (5.28)	8.87 (4.62)	9.09 (.02)	0.44 (.001)	0.80 (.001)
Minor violence	2.12 (1.95)	2.25 (1.84)	2.84 (2.49)	2.54 (2.20)	8.99 (.02)	0.03 (.000)	2.02 (.003)
Severe violence	2.63 (3.12)	2.73 (2.87)	4.20 (4.33)	2.74 (2.94)	7.27 (.01)	5.37* (.01)	7.14** (.01)
Guilt	20.78 (7.37)	19.88 (7.00)	20.85 (4.86)	20.39 (5.99)	0.28 (.000)	1.52 (.002)	0.16 (.000)

Note. MANOVA = multivariate analyses of variance; NCR = negative context of reception.

* $p < .05$. ** $p < .0083$. *** $p < .001$.

The present study is the first U.S.-based investigation focusing on Ukrainian migrants who arrived both before and after the Russian invasion. Consequently, findings from our study offer essential perspectives on the present mental health, well-being, and overall circumstances of Ukrainian migrants who have sought refuge in the United States. Overall, our analyses indicated arrival group differences in almost all outcome variables—Ukrainians who migrated to the United States in 2022 or 2023 reported significantly higher internalizing symptoms, increased levels of cultural and economic stress, elevated alcohol misuse, and lower well-being compared to those who migrated before 2022. These results suggest that, although both groups of Ukrainians were exposed to similar types of armed conflict, the devastation caused by the 2022 Russian invasion may have been far more severe for Ukrainian migrants compared to earlier episodes of the Russian–Ukrainian conflict. It is also possible that the recency of traumatic exposure among 2022–2023 arrivals may have contributed to their greater symptomatology—although psychiatric symptoms may sometimes be characterized by delayed onset. Further, although not all regions of Ukraine were equally exposed to the war, Karatzias et al. (2023) found that people in every part of Ukraine experienced significant stressors throughout the war, even in ostensibly “safe” locations.

Although our research design did not allow us to examine the temporal relationship between trauma exposure and PTSD symptomatology, this appears to represent a critical point for discussion. It is plausible that the 2022 invasion exerted a profound impact on the mental well-being of earlier migrants. Indeed, research has suggested that older adults who have experienced past trauma may be at increased risk for reaggravated PTSD when exposed to new stressors, leading to exacerbation of symptoms (Ogle et al., 2013). This pattern of findings highlights the importance for future research into the temporal complexities of trauma exposure and its implications for PTSD onset and progression in migrant groups.

Interestingly, Harvard Trauma Questionnaire scores were equivalent between the earlier and later arrival groups, suggesting that both groups were exposed to similar *types* of trauma. However, depressive, anxiety, and posttraumatic stress symptoms were significantly higher among the 2022–2023 arrival group. These findings largely support our hypotheses and are consistent with previous studies and reviews indicating that individuals who are forcibly displaced due to events such as armed conflicts, war, violence, and the loss of loved ones may develop more severe mental health symptoms (e.g., Mesa-Vieira et al., 2022) and postmigration stressors (e.g., Gleeson et al., 2020). Although we cannot rule out the passage of time (among preinvasion arrivals) as an explanation for these group differences, it is nonetheless possible that more severe trauma among postinvasion arrivals might explain our findings.

Additionally, we did not find significant cohort differences in relationship dynamics. Thus, our hypotheses regarding cohort differences in relationship dynamics were not supported. According to Filatova (2023), this lack of differences could be explained by the tendency for Ukrainians to avoid disclosing information about personal relationship issues. Indeed, Table 2 indicates that scores for relational conflict were low across both arrival cohorts. Given well-established associations of relational conflict with mental health symptomatology, one would expect that relational conflict would also have been elevated (especially among the 2022–2023 arrivals). The fact that such a pattern did not emerge might reflect a cultural predisposition toward underreporting relational conflict. Indeed,

such underreporting is consistent with a value system among many Ukrainians to protect the privacy and sacredness of the family unit. Another possible explanation could be related to cultural and family economic stressors experienced by Ukrainian migrants upon arrival in Western contexts. These stressors may have taxed respondents’ coping resources and may have decreased respondents’ willingness to disclose relationship problems. Moreover, the small effect sizes associated with cohort differences in relationship dynamics suggest that, although there may be some minor variations between the arrival cohorts, these differences may not be statistically or practically meaningful.

The potential underreporting of relational conflict could also be explained by preoccupation with more essential matters, such as adapting to a new country, searching for employment opportunities, or finding accommodation. Individuals—especially recent arrivals—are likely primarily preoccupied with processing recent events, potentially leading respondents to minimize whatever conflicts they may be experiencing with their partners. Still, another possibility is that family represents an essential resource in a new country and that individuals may be unwilling to report information that might be viewed as disparaging partners or other family members. Indeed, strong family relationships and coherence are a fundamental resource for coping with adversity among migrants abroad (Cobb et al., 2019).

Unexpectedly, gender differences were not observed across most outcomes, except for alcohol misuse. Specifically, Ukrainian men who migrated in 2022 or 2023 reported significantly higher rates of alcohol misuse compared to men who migrated before that year. The paucity of gender differences in our results contradicts our hypotheses and previous studies that have found significant gender differences on mental health outcomes in various refugee populations (see Gleeson et al., 2020, for a review). Ainamani et al. (2020) proposed that, despite similar exposure levels to various war-related traumatic events, female refugees with comparable trauma loads exhibit higher PTSD symptom severity and a greater likelihood of experiencing PTSD than their male counterparts. In line with this, Farhood et al. (2018) found that women were twice as likely as men to surpass the PTSD threshold (24.3% vs. 10.4%), although total scores on all trauma types were comparable between genders. Such gender differences have been observed not only among migrants with prior exposure to armed conflicts (see Mesa-Vieira et al., 2022, for a review) but also among Ukrainian refugees in Germany (Buchcik et al., 2023). However, Buchcik et al. (2023) also found no gender differences in mental health and quality of life. Thus, our failure to find gender differences in optimism and life satisfaction seems to align with this German study. One possible explanation for the divergence in results could be that, regardless of gender, Ukrainian migrants in Europe and the United States are likely received more favorably (e.g., less bureaucratic obstacles or far-reaching benefits regarding admission and social benefits) compared to non-European refugee and crisis migrant groups (De Coninck, 2023). Because women are treated as more equal to men in U.S. and Western European contexts, Ukrainian migrant women may not evidence the same differences from men that they would if they were still in Ukraine. Furthermore, the favorable reception of Ukrainian migrants in Europe and the United States, coupled with gender equality in these contexts, may influence the absence of gender differences observed in the study. As women are treated more equally to men in these destination regions, Ukrainian migrant women may not evidence the same differences from men that they would if they were still in Ukraine.

Despite relatively favorable contexts of reception for Ukrainian crisis migrants compared to refugees and crisis migrants coming from low-income countries, we still found that Ukrainians who migrated to the United States after the 2022 Russian invasion reported higher levels of cultural and economic stress compared to individuals who arrived earlier. These stressors are among the primary risk factors for psychological maladaptation among crisis migrants (Gleeson et al., 2020; Vos et al., 2021) and among other types of migrants (Schwartz et al., 2015). Financial difficulties, discrimination, housing challenges (Lecerof et al., 2016), and unemployment (Bogic et al., 2012) serve as significant predictors of postarrival adaptation (Steel et al., 2017), as well as of mental health, among refugees and crisis migrants (Gleeson et al., 2020). Silva et al. (2018) proposed that economic crises could be linked to increased utilization of prescription drugs, particularly those that treat depressive and anxiety disorders. Additionally, Bonnie Lee et al. (2017) identified low income as a risk factor for hospitalization due to depressive disorders. Our hypotheses regarding cultural and economic stress were largely confirmed; 2022–2023 arrivals reported more discrimination, language stress, and family economic stress compared to those who arrived earlier.

Interestingly, no cohort differences emerged for trauma and feelings of guilt. One possible explanation for the absence of the arrival group differences in trauma could be that not all difficult events or adversities necessarily result in trauma (Amaya-Jackson et al., 2021). Studies indicate that a significant portion of individuals exhibit high levels of resilience (Park et al., 2019). In some cases, specific protective factors such as family cohesion or social support networks (Gleeson et al., 2020) and heritage cultural maintenance (Keles et al., 2018) can prevent traumas from emerging. For example, Keles et al. (2018) found that, among a sample of unaccompanied minors in Norway, heritage culture maintenance differentiated those youth whose depressive symptoms were consistently low across two time points from youth who reported more symptoms of depression at either time point.

Furthermore, it is also possible that traumas may only manifest later and were not yet visible at the time of data collection. For example, some studies (e.g., Gleeson et al., 2020) have found that the length of stay in a country was *positively* predictive of refugees' psychological disorders. The longer refugees stayed in a country, the higher was the likelihood of experiencing mental health issues.

The absence of significant main effects or interactions for guilt can likely be attributed to the complex nature of guilt itself. This emotion is often intricately intertwined with feelings of shame and embarrassment, rendering it challenging to discuss openly with others. Furthermore, many people regard guilt as a personal issue that they believe should be managed in solitude (Winch, 2014). Individuals may be less likely to disclose their feelings of guilt to others when compared to emotions such as anger, sadness, and happiness (Zhang et al., 2023). Especially given that many Ukrainians, regardless of when they arrived, have family members still living in Ukraine, the guilt experienced for not being present to support them or continue enduring the war with them may have affected both arrival cohorts equally.

Limitations

The present findings should be interpreted in light of some important limitations. First, participants in the study were recruited through snowball sampling, which relies on referrals from existing

participants. This approach may introduce self-selection bias, as those willing to participate and refer others may have unique characteristics or experiences not representative of the entire Ukrainian population in the United States. Second, although data filtration methods were implemented to ensure data authenticity, the possibility of false positives or negatives in detecting duplicate entries, automated responses, or fraudulent submissions cannot be entirely ruled out. Third, we did not comprehensively account for cultural and regional variations within Ukraine. Participants from different regions across Ukraine may have distinct experiences and perspectives that were not captured by our survey. Fourth, the study was cross-sectional and captured data only at a single point in time. Therefore, we cannot draw conclusions regarding changes or trends over time. Fifth, self-report data, especially regarding personal histories and experiences, are susceptible to recall bias, as participants may not accurately remember or report past events. The retrospective study design, particularly concerning participants' thoughts before the invasion, could affect the accuracy of responses. Additionally, online studies may provide anonymity, which is helpful in some ways but may also be somewhat problematic because our study team never met participants in person. Sixth, the α coefficients of .66 for the Optimism subscale and .56 for the Revised Life Orientation Test and the CTS2 Reasoning subscale, respectively, fall below the widely accepted threshold of .70. These somewhat low α coefficients suggest some inconsistency in responses. The CTS2 Reasoning subscale encompasses several diverse strategies for talking about problems, perhaps leading to variability in responses. Furthermore, cultural differences in the perception and expression of optimism and conflict resolution strategies could affect the consistency of responses among participants. Seventh, there is a lack of validation for the measures used in Ukraine, as well as the absence of validation in Russian or Ukrainian languages. This limitation is consistent with the broader challenge of limited validation for mental health and substance use measures in Eastern Europe and Central Asia.

Conclusions

In conclusion, despite these limitations, the present study sheds light on the psychosocial, economic, and cultural experiences of Ukrainian migrants who have sought safety in the United States, comparing those who arrived before and after the 2022 Russian invasion. Postinvasion arrivals indicate significantly higher levels of internalizing symptoms, cultural and economic stress, and alcohol misuse. However, preinvasion arrivals also exhibited elevated mental health symptomatology, particularly in anxiety among women. Surprisingly, gender differences were primarily observed in alcohol misuse, with male postinvasion arrivals reporting higher rates. The relatively positive reception of Ukrainians in the United States, who were mostly White and of European descent, may explain the lack of significant gender differences in other mental health outcomes.

Perhaps the most important take-home point from the present study is that Ukrainians arriving in the United States in 2022 and 2023 tended to report symptoms consistent with crisis migration—even though the two cohorts experienced many of the same types of traumatic events. This underscores the importance of considering migrants' unique premigration, during, and postmigration experiences, along with their reported symptoms, in research, practice, and policy efforts targeting crisis migrants globally. Our findings

also highlight that even within a predominantly White migrant group from Europe, elevated cultural stress and mental health symptoms are prevalent. This suggests a need for further exploration of crisis migrant trajectories, particularly in light of widespread media coverage. We anticipate our study will spur additional research addressing the needs of Ukrainians and other crisis migrant populations.

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