

Post-traumatic Stress Disorder, Complex Post-traumatic Stress Disorder, and Coping Styles among Internally Displaced Ukrainians

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ABSTRACT

This study examined the relationship between coping styles and ICD-11 PTSD and Complex PTSD in a large sample of Ukrainian Internally Displaced Persons. Data were collected in 2016 using self-report measures from all Ukrainian oblasts not occupied by Russian forces. In total, 13.1% of people met diagnostic requirements for Complex PTSD, and 7.8% for PTSD. Higher levels of avoidant coping were evident in those meeting diagnostic requirements for PTSD and Complex PTSD compared to those not meeting requirements for either. Mental health interventions targeting avoidant coping might be particularly useful in reducing the burden of traumatic stress among war-affected Ukrainians.

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Introduction

On February 24, 2022, Russia launched a full-scale invasion of Ukraine. At the time of writing, the war has led to over 12 million Ukrainians being displaced internally and externally (International Organization for Migration, 2022). It is well-established that refugees and internally displaced persons (IDPs) are more likely to be exposed to trauma that is continuous in nature (Morina et al., 2018) and are ten times more likely to experience traumatic-stress-related mental health problems compared to the general population (Fazel et al., 2005). A systematic review of data from 40 countries showed that the prevalence of post-traumatic stress disorder (PTSD) among IDPs was 30.6%, while another revealed that rates of

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PTSD among IDPs can range from 3 to 88% (Pham et al., 2004; Rieder & Elbert, 2013). Additionally, type III traumas that are continuous in nature have been proven to have more serious negative effects on individuals and groups and are a predictor of Complex PTSD (CPTSD) in IDPs (Kira et al., 2022). A study using a sample of Palestinian adolescents found that continuous traumatic stressors (Type III) related to collective identity was the strongest contributing factor predicting the severity of physical and mental health symptoms (Kira et al., 2015).

The Russian invasion of Ukraine in 2022 followed the 2014 invasion of the south and east of Ukraine which resulted in 1.8 million people becoming internally displaced. In 2016, The Internally Displaced Persons Mental Health Survey (IDPMHS) was conducted to assess the mental health impact of the invasion on Ukrainian IDPs. More than one-in-five people (22%) exceeded clinical thresholds for major depression, nearly one-in-five (18%) exceeded clinical thresholds for generalized anxiety (Roberts et al., 2019), more than one-in-four (27.4%) met diagnostic requirements for DSM-5 PTSD (Shevlin et al., 2018), and more than half (55%) exceeded clinical thresholds for somatization (Cheung et al., 2019). Furthermore, 14.3% of men and 1.7% of women reported potentially hazardous drinking (Ramachandran et al., 2019). Recently, Shevlin et al. (2022) called for a greater focus on the potential development of CPTSD in Ukraine because of the 2022 Russian invasion. In the eleventh version of the International Classification of Diseases (ICD-11 & WHO, 2019/2022), CPTSD is a disorder comprised of the core symptoms of PTSD (i.e., re-experiencing in the here and now, avoidance, sense of threat) plus “Disturbances in Self-Organization” (DSO) symptoms that include affective dysregulation, negative self-concept, and interpersonal problems. While PTSD and CPTSD can follow any type of trauma, CPTSD is more likely to follow trauma exposure that is prolonged and difficult to escape from (Hyland et al., 2021; Karatzias et al., 2019), therefore it may be particularly relevant to the context of the ongoing war in Ukraine.

In the IDPMHS project, ICD-11 PTSD and CPTSD symptoms were assessed using the *International Trauma Questionnaire* (ITQ) (Cloitre et al., 2018), which is a reliable and valid self-report measure of these constructs (Redican et al., 2021). As the IDPMHS study was conducted before the finalization of the ICD-11 model of CPTSD, rates of ICD-11 CPTSD were not calculated or reported. The authors did, however, report that 21.0% of Ukrainian IDPs screened positive for a possible diagnosis of ICD-11 PTSD or CPTSD. With the diagnostic profile of CPTSD now finalized, it is possible to determine the rates of ICD-11 PTSD and CPTSD in this cohort. Rates of ICD-11 PTSD and CPTSD have been calculated in several other samples of refugees and asylum seekers including treatment-seeking Syrian

refugees in Lebanon (where rates of PTSD and CPTSD were 25.2 and 36.1%, respectively) (Vallières et al., 2018), West Papuan refugees (6 and 3%, respectively) (Silove et al., 2017), and treatment-seeking refugees resettled in Switzerland (19.7 and 32.8%, respectively) (Nickerson et al., 2016). These findings were also recently replicated in a non-treatment IDP community sample of Syrian IDPs (13.9 and 33.1%) (Kira et al., 2022). Thus, it is possible that a sizeable proportion of the 21% of Ukrainians that screened positive for ICD-11 PTSD or CPTSD may have the latter. Determining the differential rates of PTSD and CPTSD is important because CPTSD is associated with higher levels of impairments and comorbidity (e.g., Hyland et al., 2021; Karatzias et al., 2019), and likely requires greater clinical resources to achieve treatment gains (Karatzias & Cloitre, 2019).

Many studies have identified factors associated with ICD-11 PTSD and CPTSD, however, one potentially important variable that has yet to be investigated is coping styles. Coping can be described as the cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands and conflicts among them (Folkman & Lazarus, 1980). A systematic review of 50 studies assessing coping strategies in conflict-affected adults in low- and middle-income countries revealed that the most commonly reported coping strategies used by conflict-affected residents, refugees, and IDPs were support-seeking, positive cognitive restructuring, and problem-focused domains (Seguin & Roberts, 2017). Problem-focused coping has been suggested to be more effective than emotion-focused and avoidant coping in managing traumatic stress (Gorst-Unsworth & Goldenberg, 1998). Emotion-focused and avoidant coping strategies are typically perceived as somewhat maladaptive or ineffective psychological strategies when it comes to enduring and overcoming trauma (Folkman and Moskowitz, 2004). Among IDPs suffering from conflict-related PTSD, avoidant coping styles have been reported to be associated with greater symptom severity (Saxon et al., 2017). Additionally, a study with Bosnian refugees in Denmark found that both problem-focused coping and avoidant coping strategies were positively related to PTSD severity (Elklit et al., 2012), while another study from Australia found an initial positive correlation between avoidant coping strategies and PTSD scores in resettled refugee youths, but it became non-significant after controlling for potential confounders (McGregor et al., 2015).

Understanding what coping strategies are most commonly used by Ukrainian IDPs that screened positive for ICD-11 PTSD and CPTSD may be useful in informing mental health responses to the current conflict. This is the primary purpose of the current study. Here, we re-analyzed data from the 2016 IDPMHS project to investigate three objectives. The first

was to determine what proportions of Ukrainian IDPs met the diagnostic criteria for ICD-11 PTSD *and* CPTSD. The second was to assess the reliability and validity of the measure of coping styles used in the IDPMHS project. The IDPMHS study authors selected 14 items from the standard 28-item Brief Cope measure (Carver, 1997) to assess coping, and it is, therefore, necessary to determine the optimal latent structure of these items and their internal consistency. The third objective was to assess how different measured coping styles were related to ICD-11 PTSD and CPTSD, and if these relationships were moderated by sex.

Methods

Participants

IDPMHS data were collected from March to May 2016, and the survey covered all oblasts of Ukraine and 74 settlements (mainly urban), excluding occupied territories. Time location sampling was chosen as a probabilistic method to recruit hard-to-reach and migrant populations. In total, 121 unique locations were used for recruitment during the survey: 33.0% from collective centers, 31.0% from NGOs that work with IDPs, 6.0% from state institutions, 24.0% were recruited with the help of another person (informant), and 6.0% were reached by other means. A weighting variable was calculated to correct the regional structure of the sample in accordance with official statistics and was applied for all analyses. The sample ($N=2198$) includes male and female IDPs (91.8% had official IDP status with the UNHCR) who lived both in institutional and non-institutional settings on the territories controlled by the Ukrainian government. A person in this study was considered an IDP if they answered “yes” to the screening question that they had been forced to flee their home because of conflict and were currently living away from their home. Exclusion criteria included people deemed under the influence of alcohol or drugs, and those with severe intellectual or mental impairment at the time of the survey. Data collectors were trained in the identification of these predetermined exclusion criteria that related to criteria of understanding, expression, communication, and behavior.

The mean time since displacement was 17.49 months ($SD=4.49$). The sample included 1496 (68.1%) females, and the mean age was 45 years ($SD=16.99$). The majority of participants reported being married or cohabiting (52.7%), 20.2% were single, 14.3% were divorced, and 12.8% were widowed. Most participants had completed higher education (35.9%) or secondary technical education (29.5%) with the remaining having lower levels of educational attainment. Participants who were working were in regular paid work (22.4%), irregular paid work (9.9%), or self-employed (2.8%);

28.9% were retired due to old age or invalidity, and 17.9% were unemployed and seeking work. The remaining participants (18.1%) were doing voluntary work, students, homemakers, or on maternity leave. The questionnaires were completed through face-to-face interviews in either Ukrainian or Russian by trained enumerators from the Kyiv International Institute of Sociology (KIIS) in a private space chosen by the respondent. Before administering the questionnaire, each respondent listened to the explanations about the aim of the survey and terms of participation. In addition, the participant received an information sheet and consent form and then gave either written or verbal consent. Ethical approval was provided by the KIIS Institutional Review Board. All team leaders of regional groups of interviewers were instructed and trained before the survey, and the team leaders provided the training to their teams of experienced data collectors. The response rate of IDPs was around 90% in the whole sample.

Measures

ICD-11 PTSD and CPTSD

Participants completed the pre-finalized version of the ITQ (Cloitre et al., 2018). This version of the ITQ contained the final set of 12 items measuring PTSD and DSO symptoms as well as an additional set of test items. Before completing the ITQ, participants were screened for lifetime trauma exposure using the Life Events Checklist for DSM-5 (Weathers et al., 2013). If reporting multiple traumatic life events, participants were asked to select the event they found most distressing and complete the ITQ with that event in mind. The ITQ includes six items that measure the three PTSD symptom clusters of reexperiencing in the here and now, avoidance of traumatic reminders, and sense of current threat. A further six items are used to measure the three DSO symptom clusters of affective dysregulation, negative self-concept, and disturbed relationships. Three items measure functional impairment in different domains of life associated with the PTSD and DSO symptoms, respectively. Respondents were asked to indicate how bothered they were by the PTSD symptoms over the past month, and how they typically feel, think about themselves, and relate to others for the DSO symptoms. All items, including indicators of functional impairment, are answered on a five-point Likert scale anchored by “Not at all” (0) and “Extremely” (4). As per the scale instructions, a symptom is considered “present” based on responses on the Likert scale of ≥ 2 (“Moderately”). “The diagnostic criteria for ICD-11 PTSD requires trauma exposure, one symptom to be present from each of the three PTSD clusters, plus evidence of functional impairment associated with these symptoms. The diagnostic criteria for ICD-11 CPTSD requires trauma exposure, one

symptom to be present from each of the three PTSD clusters, and one symptom to be present from each of the three DSO clusters, plus evidence of functional impairment associated with the PTSD and DSO symptoms.” As per ICD-11 diagnostic rules, a person may only be diagnosed with PTSD or CPTSD. Thus, if a person meets the criteria for CPTSD, they do not also receive a diagnosis of PTSD. The internal reliability of the total scale scores in this sample was excellent ($\alpha = 0.89$).

Coping styles

In the IDPMHS project, 14 items were used to measure coping, and these were taken from the Brief COPE (Carver, 1997). The Brief COPE includes 28 items measuring 14 facets of coping (active coping, use of informational support, positive reframing, planning, emotional support, venting, humor, acceptance, religion, self-blame, self-distraction, denial, substance use, behavioral disengagement). The scale is intended to reflect three higher-order dimensions of problem-focused coping, emotion-focused coping, and avoidant-focused coping. The 14 items selected for use in the IDPMHS project are listed in Table 2 and were selected by the study developers as those deemed to be most applicable to the study population and setting per consultation with Ukrainian collaborators, and they were piloted before use. Response to all items was recorded on a four-point scale from 1 (“I haven’t been doing this at all”) to 4 (“I’ve been doing this a lot”).

Analytic plan

To address the first study objective, prevalence rates of ICD-11 PTSD and CPTSD were calculated. To assess the second objective, two analytic strategies were used. First, exploratory factor analysis (EFA) with weighted least squares mean- and variance-adjusted (WLSMV) estimation and geomin rotation was used to determine the latent structure of the 14 items of the adapted Brief COPE. This analysis was carried out in Mplus version 8.2 (Muthén & Muthén, 2018). The WLSMV estimator is appropriate for ordered categorical indicators, and it has been shown to perform equally well or better than other estimation methods with ordered categorical and skewed data (Flora & Curran, 2004; Liang & Yang, 2014). The fit of the competing models was assessed using the chi-square (χ^2) test, the Comparative Fit Index (CFI: Bentler, 1990), the Tucker Lewis Index (TLI: Tucker & Lewis, 1973), the root mean square error of approximation (RMSEA; Steiger, 1980), and the standardized root mean squared residual (SRMR; Hu & Bentler, 1999). As per standard guidelines (Hu & Bentler, 1999), good model fit is indicated by a non-significant χ^2 result, CFI and TLI values >0.90 , and RMSEA and SRMR values <0.08 . In EFA, models

with increasing numbers of extracted factors fit sample data more closely. Thus, to compare the fit of the different models, changes (Δ) in the CFI, TLI, and RMSEA were assessed. Δ CFI and Δ TLI $\geq .010$, and Δ RMSEA $\geq .015$ were taken to indicate significant improvement in model fit (Chen, 2007; Cheung & Rensvold, 2002; Putnick & Bornstein, 2016). In addition to statistical comparisons, the optimal model solution was informed by inspection of the model parameters to ensure a meaningful interpretation of the factors could be achieved. Upon selection of the optimal latent structure, the internal reliability of the scale was assessed using composite reliability analysis (Raykov, 1997). Composite reliability is superior to Cronbach's alpha as it does not assume tau equivalence, and estimates are based on the results of the factor analysis. Composite reliability values range for 0–1 where higher scores reflect greater reliability, values $>.60$ are recommended for acceptable reliability (Raykov, 1997).

The third objective was assessed using two-way between group analysis of variance (ANOVA) tests. The independent variables were diagnostic status (0 = No diagnosis, 1 = ICD-11 PTSD, 2 = ICD-11 CPTSD) and sex (0 = males, 1 = females), and the dependent variable(s) were the different coping styles identified by the EFA results. Effect sizes are reported as partial eta squared values (η^2) where values $<.06$ indicate a small effect, values from .06 to .13 indicate a medium effect, and value of .14 or above indicate a large effect (Cohen, 1988). Missingness ranged from 1.8 to 24.4%. Missing data was handled using the pairwise deletion methods for EFA and listwise deletion methods for ANOVA.

Results

The prevalence rate of ICD-11 PTSD was 13.1% (95% CI = 11.7%, 14.6%). Of this percentage 2.3% were male and 10.8% were female. The rate of ICD-11 CPTSD was 7.8% (95% CI = 6.7%, 9.0%). Of this percentage 1.8% were males and 6.0% were female.

Initial exploration of the coping data revealed that participants endorsed the full range of responses on the 14 items, providing suitable variability to proceed with EFA. Correlations ranged between 0.08 and 0.69. The EFA fit statistics are reported in Table 1.

The one- and two-factor models provided a poor fit to the sample data. The three-factor solution provided an adequate fit based on the CFI, RMSEA, and SRMR results. However, the four-factor model provided a substantially closer fit, as the Δ CFI and Δ TLI values were $>.010$, and the Δ RMSEA was $>.015$. The five-factor model also provided a close fit to the data but relative to the four-factor model, the Δ CFI and Δ TLI values were not $>.010$, and the Δ RMSEA was not $>.015$. Thus, from a statistical

Table 1. Exploratory factor analysis model fit statistics for the adapted Brief COPE.

	χ^2	<i>df</i>	<i>p</i>	CFI	TLI	RMSEA (90% CI)	SRMR	Δ CFI	Δ TLI	Δ RMSEA
One-factor model	2438.69	77	<.001	.740	.692	.119 (.115–.123)	.145	–	–	–
Two-factor model	1471.46	64	<.001	.845	.779	.101 (.096–.105)	.099	.105	.087	.018
Three-factor model	769.25	52	<.001	.921	.862	.080 (.075–.085)	.065	.076	.083	.021
Four-factor model	131.80	41	<.001	.990	.978	.032 (.026–.038)	.028	.069	.116	.048
Five-factor model	71.88	31	<.001	.995	.987	.025 (.017–.032)	.019	.005	.009	.007

Estimator: WLSMV; χ^2 : Chi-square Goodness of Fit statistic; *df*: degrees of freedom; *p*: statistical significance; CFI: Comparative Fit Index; TLI: Tucker Lewis Index; RMSEA (90% CI): root-mean-square error of approximation with 90% confidence intervals; SRMR: standardized root-mean square residual; selected model in bold (*N* = 2166).

Table 2. Factor loadings and factor correlations for the four-factor model.

	Problem-focused	Emotion-focused	Avoidant	Stoic
Factor loadings				
1. Doing something to think about it less.	0.576*	0.265*	0.053*	–0.001
2. Taking action to make situation better.	0.781*	–0.054*	–0.035*	0.334*
3. Refusing to believe that it has happened.	0.320*	0.158*	0.354*	–0.060*
4. Use of alcohol or drugs to cope.	0.184*	–0.114*	0.585*	0.136*
5. Getting emotional support from others.	0.017	0.850*	–0.035	0.020
6. Giving up trying to cope and deal with it.	0.014	0.193*	0.628*	–0.209*
7. Expressing negative feelings.	0.023	0.003	0.630*	0.013
8. Getting help and advice from other people.	0.023	0.848*	–0.013	0.087*
9. Looking for something good in what is happening.	0.038*	0.231*	0.027	0.676*
10. Thinking hard about what steps to take.	0.467*	0.045	–0.003	0.445*
11. Using humor.	0.215*	0.011	–0.001	0.894*
12. Learning to live with it/getting used to it.	0.063*	0.213*	0.054*	0.427*
13. Comfort in religion or spiritual beliefs.	0.068	0.177*	0.204*	0.009
14. Blaming myself for things that happened.	0.031	–0.044	0.750*	0.044
Factor correlations				
Problem-focused coping	1			
Emotion-focused coping	0.358*	1		
Avoidant coping	0.005	0.120*	1	
Stoic coping	0.161*	0.337*	0.158*	1

Note: *Statistically significant (*p* < .05) loadings and correlations; items assigned to factors are in bold.

perspective, the four-factor model was deemed the optimal fitting solution. The four factors extracted each had eigenvalues >1.00 (i.e., 4.20, 2.38, 1.45, and 1.16), and were conceptually distinguishable and interpretable. Factor loadings are shown in Table 2.

Two items loaded positively onto factor 1: “*doing something to think about it less*” and “*taking action to make situation better.*” This was labeled “Problem-focused coping.” Two items loaded positively onto factor 2: “*getting emotional support from others*” and “*getting help and advice from other people.*” This was labeled “Emotion-focused coping.” Four items loaded positively onto factor 3: “*use of alcohol or drugs to cope,*” “*giving up trying to cope and deal with it,*” “*expressing negative feelings,*” and “*blaming myself for things that happened.*” This was labeled “Avoidant coping.” Three items loaded positively onto factor 4: “*looking for something good in what is happening,*” “*thinking hard about what steps to take,*” “*using humor,*” and “*learning to live with it/getting used to it.*” This was labeled “Stoic coping.” Two items did not clearly load onto any factor: “*refusing to believe that it has happened*” and “*comfort in religion or spiritual beliefs.*”

Thus, these items were not considered when forming sum scores of coping styles. All factors were positively and statistically significantly correlated with one another. The strongest correlations were between Problem Focused Coping and Emotion Focused Coping ($r = .36$) and between Problem Focused Coping and Stoic Coping ($r = .34$). The composite reliability estimates for each factor were all satisfactory: problem-focused coping ($CR = .64$), emotional focused coping ($CR = .84$), avoidant coping ($CR = .75$) and stoic coping ($CR = .72$). The composite reliability for the full 12 item scale was also satisfactory ($CR = .91$).

Table 3. Descriptive statistics for each of the variables.

Variable	Sex	Diagnosis	Range	<i>M</i>	<i>SD</i>	<i>N</i>
Problem-focused coping	Male	None		6.17	1.84	433
		PTSD		6.28	1.57	40
		CPTSD		6.46	1.58	28
	Female	None		6.30	1.68	795
		PTSD		6.63	1.44	174
		CPTSD		6.61	1.56	100
Total		2–8	6.34	1.68	1899	
Emotion-focused coping	Male	None		5.20	1.99	471
		PTSD		5.69	1.64	39
		CPTSD		5.71	1.68	28
	Female	None		5.84	1.90	871
		PTSD		5.81	1.64	173
		CPTSD		5.99	1.67	101
Total		2–8	5.66	1.85	2050	
Avoidant-focused coping	Male	None		5.61	2.01	417
		PTSD		8.13	2.23	31
		CPTSD		8.09	2.43	23
	Female	None		5.53	1.76	689
		PTSD		6.85	2.21	146
		CPTSD		8.93	1.96	87
Total		4–15	5.99	2.14	1675	
Stoic-focused coping	Male	None		10.26	3.30	378
		PTSD		10.24	2.78	38
		CPTSD		10.83	3.01	24
	Female	None		10.35	3.31	378
		PTSD		10.05	2.78	38
		CPTSD		11.05	2.51	96
Total		4–16	10.37	3.16	1654	

Table 4. Two-way between groups ANOVA results.

Variable	Group	<i>F</i>	<i>df</i>	<i>p</i>	η^2
Problem-focused coping	Sex	1.75	1	.186	.00
	ICD-11 diagnosis	2.04	2	.130	.00
	Interaction	0.24	2	.789	.00
Emotion-focused coping	Sex	3.89	1	.049	.02
	ICD-11 diagnosis	2.10	2	.123	.00
	Interaction	1.43	2	.240	.00
Avoidant coping	Sex	0.74	1	.389	.00
	ICD-11 diagnosis	117.49	2	<.001	.15
	Interaction	6.99	2	.001	.01
Stoic coping	Sex	0.03	1	.862	.00
	ICD-11 diagnosis	1.82	2	.162	.00
	Interaction	0.15	2	.863	.00

Note: η^2 : partial eta squared; significant effects in bold.

The results of the two-way between groups ANOVAs are presented in [Tables 3](#) and [4](#). With respect to Problem-Focused Coping and Stoic Coping, there were no main effects for diagnostic status or sex, and there were no interaction effects. For Emotion-Focused Coping, there was no interaction effect, nor a main effect for diagnostic status, but there was a significant ($p = .049$) and small ($\eta^2 = .02$) main effect for sex with females having slightly higher levels than males. For Avoidant Coping, there was a significant ($p < .001$) and large ($\eta^2 = .15$) main effect on diagnostic status with those with CPTSD having higher levels than those with PTSD and those with no diagnosis, and those with PTSD having higher levels than those with no diagnosis. There was no main effect for sex, but there was a significant interaction effect. For males, those meeting Criteria for PTSD and CPTSD had significantly higher levels of avoidant coping than those who did not meet either disorder, but there was no significant difference for those with PTSD and CPTSD. On the other hand, females with PTSD and CPTSD had significantly higher levels of avoidant coping than those who did not meet the criteria, and females with CPTSD had significantly higher levels of avoidant coping than those with PTSD.

Discussion

The current study was conducted to determine rates of ICD-11 PTSD and CPTSD in a nationally representative sample of Ukrainian IDPs from 2016 and to understand what coping strategies differentiate these disorders for males and females. Key findings were that (1) more people met diagnostic requirements for ICD-11 PTSD (13.1%) than CPTSD (7.8%), (2) four coping styles were identified with three reflecting positive strategies (i.e., emotion-focused, problem-focused, stoic coping), and one reflecting negative strategies (i.e., avoidant coping), (3) those meeting diagnostic requirements for ICD-11 PTSD and CPTSD could be most readily distinguished from those without a traumatic stress problem in terms of having higher levels of avoidant coping, and (4) differences in levels of avoidant coping across diagnostic status were different for male and female IDPs.

Approximately one-in-five Ukrainian IDPs met the diagnostic criteria for ICD-11 PTSD or CPTSD, with more people meeting the criteria for PTSD (13.1%) rather than CPTSD (7.8%). Previous studies with refugee and asylum-seeking samples have reported higher rates of CPTSD than PTSD (Kira et al., 2022; Nickerson et al., 2016; Vallières et al., 2018). Our findings suggest that in the general population of war-affected displaced persons, PTSD is the more common response. These findings have potentially important implications for humanitarian planning and responses to the current crisis in Ukraine. It is likely that a substantial proportion of the

Ukrainian population will be experiencing trauma-related distress reaching clinical thresholds, and that the core PTSD symptoms of present-moment reliving of threatening events, avoidance of reminders of such events, and heightened arousal related to a sense of current threat and danger will be especially common. Mental health interventions that address these symptoms, and that can be delivered to many people, possibly without the role of a highly trained professional, will be especially important. Interventions that include a continuous trauma-based focus have been documented as most effective for PTSD and CPTSD symptoms (Cloitre et al., 2018). Narrative exposure therapy (NET) is emerging as the treatment of choice for traumatized refugees and IDPs (Lely et al., 2019). A recent study found that in 16 randomized controlled trials, involving 947 participants, large non-controlled effect sizes were found for PTSD symptoms, at post-treatment ($g = 1.18$, 95% confidence interval [0.87; 1.50]) and follow-up ($g = 1.37$ [0.96; 1.77]). Additionally, current, continuous, cumulative, trauma-focused cognitive behavior therapy (CCC-TF-CBT) may be particularly useful for mental health workers who work with multiple traumatized clients (Kira et al., 2013). Adaptation of such an intervention to the Ukrainian context may be beneficial.

Results of the EFA demonstrated that a four-factor model of the adapted Brief COPE fit the sample data well. One of the aims of this study was to identify the latent structure of this adapted measure to compare coping styles among individuals who met the diagnostic criteria for either ICD-11 PTSD or CPTSD. Three of the four coping strategies identified were consistent with the intended higher-order structure of the Brief COPE and these were problem-focused coping, emotion-focused coping, and avoidant-focused coping. Notably, we also found evidence of a fourth factor which reflected a tendency to look for the good in the situation, to use humor, to adapt and live with new circumstances, and to take steps to improve the situation. We labeled this positive coping style stoic coping. Inspection of the descriptive statistics for the different coping styles showed that, on average, Ukrainian IDPs had high levels of positive coping styles and low levels of negative coping styles. This is consistent with previous research in Ukrainian samples that have revealed high levels of positive coping in the face of adversity (Bohucharova, 2017). These findings speak to the high levels of resilience of the Ukrainian population in the face of extreme hardship.

Consistent with previous research demonstrate that avoidant coping is associated with greater traumatic symptom severity in displaced populations (Finklestein et al., 2012; Huijts et al., 2012; Matheson et al., 2008), our findings showed that males and females meeting the criteria for ICD-11 PTSD and CPTSD had significantly higher levels of avoidant coping.

In fact, it was only avoidant coping that differentiated those with PTSD and CPTSD from those not meeting criteria for either disorder. Avoidant coping strategies are maladaptive as they are efforts to escape reality and ignore the problem through emotional suppression. From a clinical perspective, reducing engagement in avoidant coping strategies, such as self-blame or the use of drugs and alcohol to suppress negative emotions, is likely to be more successful in managing and alleviating traumatic distress than attempting to develop positive coping skills. Interventions based on acceptance and commitment therapy, such as the World Health Organization's Self-Help Plus (Acarturk et al., 2022), could be particularly helpful in relation to reducing engagement in negative coping strategies. These types of interventions can be trained in peer non-specialist facilitators in large groups and adapted to the Ukrainian context. Self Help Plus has been proven to be effective in reducing mental health problems among Syrian refugees (Acarturk et al., 2022).

Our findings indicated that the relationship between avoidant coping and ICD-11 PTSD and CPTSD was different for men and women. For men, avoidant coping was higher in those with PTSD and CPTSD compared to those not meeting the criteria for either disorder, but levels of avoidant coping were not different between those meeting criteria for PTSD and CPTSD. For women, however, levels of avoidant coping increased significantly from those not meeting criteria for a trauma disorder, to those with PTSD, to those with CPTSD. Thus, greater use of avoidant coping styles may be helpful in differentiating women with CPTSD from those with PTSD. Moreover, clinical strategies that target and address avoidant coping styles may be especially beneficial for women with CPTSD.

Several limitations should be noted. The study design used a time-location sampling method which may have omitted those not in identified locations (e.g. locations providing support to IDPs or known residential and social locations of IDPs). This may have potentially excluded those that are less vulnerable (as they are not seeking support) or those that are most vulnerable and not able to access support. However, this potential for sampling bias was minimized by including as wide a range of potential locations as possible. While the coping assessment has been used previously in conflict-affected populations, limitations of its use include relatively value-laden assumptions regarding coping behaviors. Those under the influence of alcohol at the time of the interviews were also excluded from the original study (after attempts to re-visit), and those with severe alcohol use disorders may be less likely to frequent locations from which participants were recruited. Both could result in fewer people with problematic drinking participating in the study. However, the number of participants in the sample will mitigate some of these limitations.

Despite these limitations, the current study provides important new information that may be relevant to the mental health response to the ongoing war in Ukraine. Findings indicate that of the approximately one-in-five Ukrainian IDPs that meet the criteria for a trauma-related disorder, more satisfied the requirements for PTSD than CPTSD. Furthermore, engagement in avoidant coping strategies—although generally low in this sample—was importantly related to ICD-11 PTSD and CPTSD for male and female Ukrainian IDPs. Interventions that address these coping methods might be useful in reducing the burden of traumatic stress among war-affected Ukrainians.

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