



A cross-sectional study of refugees in Norway and Serbia: Levels of mental distress and social-demographic risk factors

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This cross-sectional study has assessed and compared symptoms of anxiety, depression, and posttraumatic stress disorder (PTSD) among one refugee group during flight (in Serbia) and another refugee group after flight (in Norway). Results indicate high levels of mental distress in both samples of refugees (Serbia: $N = 100$, Norway: $N = 78$). Participants in Serbia reported higher levels of symptoms than the participants in Norway. Moreover, the study found that *female gender, low education, refused asylum, high age, and concerns about family* correlated with mental distress among the participants.

1. Introduction

1.1. Background

The civil war in Syria and ongoing wars in Afghanistan, Iraq, and Somalia have forced many people to flee their homes for protection. In 2015, Europe experienced a large influx of refugees from Africa and Asia. The majority of refugees from the Middle East and Central Asia reached Northern Europe via what is known as the Balkan route. Serbia is at the center of this route, because the geographical location of the country makes it a locus of transit for refugees (Jankovic et al., 2015). Some of the refugees fleeing through Serbia find their way to Norway. Norway is a destination country where refugees submit their application for protection (Utlendingsdirektoratet. *Asylsøknader etter statsborger-skap og måned 2021*). In March 2016 the EU and Turkey signed an agreement to reduce the number of refugees to Europe, which calls for the return of refugees who cross from Turkey to the Greek Islands, back to Turkey. It also tasks Turkey with taking measures that prevent the opening of new sea or land routes from Turkey to the EU (European Commission 2016). The EU-Turkey deal was accompanied by border closures along the Balkan route. This has led to a large decrease in refugees from Africa and Asia to Europe. However, the closure of the Balkan route did not entirely prevent refugees from crossing the border to

Europe (Eleni et al., 2018), it only made it more difficult to do so. Consequently, the flight has become increasingly more dangerous (Arsenijević et al., 2017), and the stay in transit countries, like Serbia, severely prolonged (Jović, 2018). Despite a decrease in refugees to Europe, migration caused by war and conflict continues to rise on a global basis. The United Nations High Commissioner for Refugees (UNHCR) estimated that there were 89.3 million forced migrants at the end of 2021. 53.2 million people are internally displaced, and 36.1 million have been forced to emigrate (The UN Refugee Agency 2021). Many of the refugees who come to Europe have experienced potentially traumatic events, both prior to and during flight, and many develop psychological and somatic health problems (Kien et al., 2018; Maldari et al., 2019; Rometsch-Ogioun El Sount et al., 2019). Additionally, daily stressors after resettlement seem to have an impact on depressive symptoms, above and beyond war-related traumatic events (Keles et al., 2016).

The overall objective of this study was to investigate the burden of mental health problems amongst refugees during flight in Serbia, and in reception centers in Norway.

1.2. Serbia – during flight

Refugees enter Serbia primarily from Macedonia or Bulgaria. In

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2015, as many as 577,995 refugees expressed their intention to seek asylum in Serbia. In our research, most participants stated that this was not their actual goal. To enter Serbia, refugees had to claim this as their intention. The majority were from Syria, Afghanistan, and Iraq (Belgrade Center for Human Rights 2015), and were just passing through the country. From 2015 to 2020, the number of refugees coming to Serbia was reduced to 2830 people, mainly from Afghanistan, Syria, and Pakistan (Belgrade Center for Human Rights 2020), and in 2021 only 600 applied for asylum. Most of the refugees entering Serbia intend to continue their journey through Hungary, Croatia, Romania, or Bosnia-Herzegovina to Northern Europe. In April 2015 the average stay in Serbia was 2–3 days (Belgrade Center for Human Rights 2015). The EU-Turkey deal, and the closure of the Balkan-route, led to a considerable extension of refugees' stay in Serbia. Today, refugees from Africa and Asia are stranded in Serbia for several months (Eleni et al., 2018). The time in Serbia often consists of multiple attempts to cross the northern or western border using insecure channels, which are mostly organized by smugglers (Belgrade Center for Human Rights and Macedonian Young Lawyers Association 2017). Many experience inhumane and degrading treatment from border guards during each of these attempts. Non-European refugees in Serbia have described severe beatings, use of attack dogs, pepper spray, the pouring of water on their bodies, making them stand in the cold, and theft of money and mobile phones by border guards (Belgrade Center for Human Rights and Macedonian Young Lawyers Association 2017; Humantarian Center for Integration and Tolerance, 2017; Varvin et al., 2022).

Refugees in Serbia are housed in asylum centres and transit centres. The centres offer a shelter, limited non-food items and meals, while non-governmental organizations (NGOs) provide medical and psychosocial services (Jović, 2018). Overcrowding, lack of privacy, and poor hygiene have been addressed as issues in some of the centres (Belgrade Center for Human Rights and International Rescue Committee 2018). Jović (Jović, 2018) discusses sexual abuse as a common aspect of life in transit countries.

1.3. Norway – after flight

Some of the refugees who are in transit in Serbia express the desire to seek asylum in Norway (Jankovic et al., 2015). Norway, like other Northern European countries, is a destination country. There were 31, 150 applications for asylum registered in 2015. This represents a noteworthy increase from previous years. The largest groups came from Syria, Afghanistan, Eritrea, and Iraq (Utlendingsdirektoratet. Asylsøknader etter statsborgerskap og måned 2015). The EU-Turkey deal and closed borders throughout Europe have most likely contributed to a decrease in refugee arrivals to Norway (Østby, 2016). In 2021 the number of individual asylum applications was reduced to 1653 mainly from Syria, Afghanistan, Eritrea and Turkey (Utlendingsdirektoratet. Asylsøknader etter statsborgerskap og måned 2021).

Asylum reception centres in Norway can be organized as centralized institutions or decentralized apartments. In rural areas, former health institutions, hotels, or military bases, which for various reasons are no longer in use, are repurposed as centralized centres. The living standard in these centres is described as basic, with low maintenance and with very little private space (Hauge et al., 2017). Centres in the current study have the capacity to host around 100 refugees each.

Refugees living in reception centres are in different stages regarding their asylum process. Some are waiting for the outcome of their application; others have been granted residence and are waiting to be settled in a municipality. A third group have received a final, negative answer on their asylum application, and are waiting to be returned to their home country; or they have lodged a complaint and are waiting for the final outcome of their case.

1.4. Previous research

Previous studies have found variations in the prevalence of mental distress among refugees. A review among resettled refugees by Bogic et al. (Bogic et al., 2012) found prevalence rates of depression to range from 2.3 to 80%, PTSD to range from 4.4 to 86% and unspecified anxiety disorder to range between 20.2 to 88%. The difference in prevalence rates was related to country of origin, country of resettlement and methodological limitations. A newer systematic review by Blackmore et al. (Blackmore et al., 2020) found higher prevalence rates than the above-mentioned reviews. This review provided results from 5143 adult refugees and asylum seekers from twenty-six studies across 15 countries using clinical interviews. The prevalence of PTSD was 31.46% (95% CL 24.43 – 38.5), the prevalence of depression was 31.5% (95% CI 22.64 – 40.38), the prevalence of anxiety disorders was 11% (95% CI 6.75 – 15.43). Previous studies have found both pre-migration war exposure and post-migration stressors to predict levels of psychiatric symptomatology. Post-migration, or exile related stressors, such as social isolation, poverty, unemployment/prohibition to work, discrimination, and uncertainties surrounding refugee status, are important explanatory factors for mental distress (Hou et al., 2020; Miller and Rasmussen, 2010).

Research on mental health in different phases of migration is limited. To our knowledge there are only two studies from the US that have compared levels of mental distress during and after flight. Muecke et al. (Muecke et al., 1992) conducted a cross-sectional study of Cambodian refugee adolescents. They studied two samples of adolescents, one group during flight in a refugee camp in Thailand ($N = 71$) and another group after resettlement in the US ($N = 48$). The authors found higher symptom levels among the sample of refugees that had been resettled in the US. McKelvey & Webb (McKelvey and Webb, 1996; McKelvey and Webb, 1997) found similar results in their longitudinal study of Vietnamese Amerasians ($N = 101$). The authors found significantly lower levels of symptoms of anxiety and depression among the refugees in the transit center in Vietnam, than among the individuals in the refugee camp in the Philippines. After resettlement in the United States, those of the participants that the authors could follow up on (25 participants) showed higher symptoms of depression than they had in either Vietnam or the Philippines. In addition to the above studies, it has been argued that symptoms of mental distress may be more prevalent after flight, because refugees are in state of alertness during flight, with focus and attention directed towards external threats and dangers. Post flight, when the external conditions are safer, attention can be directed toward their own body and reactions, and painful memories are allowed to resurface (Nasjonalt kunnskapssenter om vold og traumatisk stress 2022).

1.5. Our research project

This article is part of a larger research project, where both qualitative and quantitative data were collected. The present study is so far the only quantitative work in this project and is based on the survey data from the project. However, the qualitative data has been valuable as it provides contextual background. Key findings from this qualitative research were that refugees in both Serbia and Norway had difficulties with unresolved grief, fear, loneliness, frustration, humiliation, and consequences of violence against them (Varvin et al., 2022; Sagbakken et al., 2020; Sagbakken et al., 2022). Many participants told stories of dangerous situations in their home country that they had fled from. Refugees from the Serbian sample described violence from officials while trying to cross the border to Western Europe. Many felt lonely and isolated during flight (Varvin et al., 2022). In Norway, refugees were met with an incomprehensible bureaucratic system. Inactivity during long waiting periods in reception centers, followed by uncertainty surrounding their application for asylum, led to a feeling of powerlessness (Sagbakken et al., 2020; Sagbakken et al., 2022). Many participants in Norway had

unmet psychosocial needs and received little support or help for their mental health issues (Varvin et al., 2022).

Previous research on mental health in different phases of migration is limited. In this quantitative part of the research project, we therefore wanted to include an assessment of mental distress both in the sample of refugees in Serbia and in the other sample of refugees that had resettled in Norway. In addition, we wanted to compare and discuss the levels of mental distress in both samples of refugees. As previously mentioned, the closure of the Balkan route has led to a prolonged and increasingly dangerous flight to Europe for non-European refugees. Qualitative interviews with participants from the Serbian sample reveal physical violence and degrading treatment, from border guards, in their multiple attempts to cross the border out of Serbia, to continue their flight to Northern Europe. Refugees from the Serbian sample have described severe beating, being attacked by border guard dogs, sprayed with pepper spray and being abused with electric shock (Jovic et al., 2023). We find it important to document levels of mental distress among refugees who were victims of this kind of treatment. Comparing levels of symptoms for participants during flight with the symptoms among refugees that have reached their destination in Norway, helps us to gain insight into the mental impact of the context surrounding today's non-European refugees. Since previous research has found lower levels of mental distress during flight than after flight, we wanted to see if the situation was different for irregular refugees, who are not part of the UN quota refugee system, in flight today. The circumstances for the refugees in the two quantitative studies on mental health among refugees in different stages of migration (Muecke et al., 1992; McKelvey and Webb, 1996; McKelvey and Webb, 1997) is very different from the context for irregular non-European refugees today. We therefore find it important to gain knowledge of mental consequences of the restrictive border policies in Europe today.

Knowledge of the mental burden refugees experience in different phases of migration is important in order to implement psychiatric treatment and other measures, both during flight and after arrival in the host country. At present, psychiatric treatment and other interventions are most often provided too late with increased risk for chronic post-traumatic conditions (Opaas and Varvin, 2015). This knowledge can inform development of national and international measures and interventions targeting refugees, and thus reduce social inequalities in health, especially for individuals and groups at high risk for mental distress and disorder (Varvin et al., 2021).

1.6. Aim of the study

The aim of this study was to assess and compare symptoms of anxiety, depression, and posttraumatic stress disorder (PTSD) among one refugee group during flight (in Serbia) and another refugee group after flight (in Norway), and to identify sociodemographic characteristics associated with a high level of symptoms.

Based on the qualitative data from the research project we hypothesized that we would find high levels of distress in both samples of refugees. Considering the findings from available quantitative literature on mental health in different phases of migration, we hypothesized higher levels of distress among refugees in Norway, after flight.

2. Methods

2.1. Sample

This cross-sectional study was based on two convenience samples (self-selected) of refugees; one sample from Serbia ($N = 100$), and one from Norway ($N = 78$). These two samples were selected because Serbia is a transit country and Norway is a destination country, and because refugees in Norway from the Middle East and Central Asia commonly use Serbia as a transit country. In Serbia, the composition of refugee groups varies from day to day, due to the constant flux and the varying

length of stay for individuals in the transit centres. Therefore, a random sample of participants was not possible. In Norway, random sampling was challenging, and highly demanding of resources, making it a nonviable option for this study. All the participants in the current study filled out identical questionnaires after a qualitative interview focusing on resilience and mental health.

2.1.1. The Serbian sample

The Serbian sample was recruited between January and April 2017. Interpreters and researchers approached the participants with oral information about the study. Some participants, after hearing about the study, volunteered to participate. Written consent was then obtained. Half of the participants were recruited from a transit center close to the Macedonian border. This center is an old tobacco factory and has the capacity to host 900 refugees. The other half of the participants were recruited in a park near the Central Station in Belgrade. Refugees and smugglers gather in this park to organize attempts to cross the border to Hungary, or Croatia irregularly. Data collection was conducted in the center and outside in the park. All participants from the Serbian sample were from the Middle East and Central Asia.

2.1.2. The Norwegian sample

Participants in the Norwegian sample were recruited between September 2016 and June 2018. The participants were recruited at five reception centres for families and single adults in different counties. An information meeting about the study, with the aid of translator, was held in all centres. Participants were recruited through center administration and staff, research assistants and researchers. Some participants volunteered to participate after the information meeting. Verbal information about the study stressed the fact that the research had no link to the asylum process. Most of the participants from the Middle East and Central Asia in the Norwegian sample had fled through Serbia.

2.2. Instruments

All questionnaires were translated and back-translated into Dari, Arabic, and Somali. Interpreters assisted illiterate participants fill out the questionnaires.

2.2.1. Outcome measures on mental health

The Harvard Trauma Questionnaire (HTQ) Part IV and Hopkins Symptom Checklist-25 (HSCL-25) were used to assess symptoms of PTSD, depression, and anxiety. Both instruments are cross-culturally validated and are widely used in studies among refugees (Mollica et al., 1992; Silove et al., 2007; Thapa and Hauff, 2005).

HTQ was developed by Mollica et al. (Mollica) to measure potentially traumatic events and their consequences. HTQ Part IV assesses symptoms of PTSD and consists of 41 items. The items are derived from the three symptom clusters, re-experiencing, arousal, and avoidance, which comprise the criteria for PTSD, according to DSM-V. The symptoms range from 1 (not at all) to 4 (always). In the present study, a mean score above 2.5 was used to indicate a possible diagnosis of PTSD (Mollica).

HSCL-25 was adopted by Mollica, Wyshak & Lavelle (Mollica et al., 1987) for use among refugees from Southeast Asia to measure symptoms of anxiety and depression. The first 10 statements map out symptoms of anxiety, and the last 15 statements assess symptoms of depression. The items regarding depression are consistent with the DSM-IV diagnosis for major depressive disorder. The symptoms range from 1 (not at all) to 4 (always), and a mean score above 1.75 on both categories of items was used to indicate a possible diagnosis of anxiety or depression (Mollica). The error terms for the outcome measures were all normally distributed.

2.2.2. Socio-demographic data

Socio-demographic characteristics, including age, gender, marital status, children, educational level, country of origin, religion, asylum status, waiting time, and family concerns, were collected through a questionnaire

designed for the present study. The variable *family concerns* consist of the following three questions; (1) Do you still have close family in your home country? (2) Do you have close family that are missing? (3) Do you have close family in danger? Respondents answering yes to one or more of these three questions were coded as experiencing concerns about family. *Family concerns*, *children*, *living alone* and *refused asylum* were employed as dummy variables, taking the value 1 if yes and 0 if no. The variable *age* was measured by number of years, and the variable *waiting time* was measured by number of months living in the current country. *Marital status* was given the value 1 if the participants were married and 0 otherwise. *Gender* was coded 0 for male and 1 for female. *Educational level* was divided into three categories: primary school or no education, high school, and university. Primary school or no education was used as the omitted category. The main exposure variable *during flight/after flight* was used as a dummy, receiving the value 0 for participants during flight (Serbian sample) and the value 1 for participants after flight (Norwegian sample).

2.3. Statistical analysis

The questionnaires from both countries (Norway and Serbia) were entered and analysed using SPSS version 24. If less than 10% of the items on a scale (HSCL or HTQ) were answered, participants were excluded from analyses on the given scale. This applied to 13 participants (7.3%) on the HTQ, and seven participants (3.9%) on the HSCL. An independent sample *t*-test and a Chi-square test were used to examine patterns of missing data. Participants with completely missing data on HTQ reported a significantly longer waiting time ($p < 0.02$). Having no education, or only having primary school education was also more often reported among participants with completely missing data on HTQ than among participants with complete data ($p < 0.04$). Descriptive statistics were calculated for all variables in both samples. Numerical variables were summarized as frequency and mean \pm SD and categorical variables were summarized by frequency and percentage. Independent sample *t*-tests and Fisher exact tests were used to test descriptive differences between the two samples. Fisher exact tests were performed to test differences between prevalence rates (categorical variable with cut off at 1.75 on HSCL and 2.5 at HTQ), while *t*-tests were used to test differences between mean values (numerical variable). We use the Levene's test to checks for equal variance. Bivariate intercorrelations for all variables were examined with Pearson's Correlations. Linear regression analyses were conducted for both samples separately and combined. We take into account heteroskedastic variance by using robust standard errors. The relationship between mental health and socio-demographic variables was explored by using a nine-step approach to building a regression model, developed by Veierød et al. (2012). The interaction effect was tested on all covariates, both using ANOVA and linear regression. Statistical significance level was set to $p < 0.05$.

2.4. Ethical issues

The collection and analyses of data from Norway and Serbia was approved by the Norwegian South-East Regional Committee for Medical and Health Research Ethics (2016/ 651). All refugees in reception centers in Norway have the right to mental health professionals. Refugees at reception centers can be referred to mental health care professionals through their general practitioner with help from social workers at the centers. All participants with severe mental distress during data collection received immediate help from mental health professionals.

In Serbia, some non-governmental organizations (NGOs) offer mental health services to refugees. Data collection was done in collaboration with the NGO International Aid Network (IAN). Refugees who asked for help could receive this from IAN. Interviews in Serbia were conducted with approval by the Commissariat for refugees and migration. Reception centers in Serbia were, and still are, under jurisdiction of Commissariat for refugees. All participants received information about

the purpose and aim of the research by the interviewer and gave consent to participate. Most of the minors were interviewed in the park. Those who were in the centers had guardians, and both guardians and minor refugees were informed about the research and gave consent.

None of the participants received any reward for taking part in the study, neither in Serbia nor in Norway. Interviews were anonymous, participants did not provide names. The data in this study were stored securely. Research with refugees involves several ethical issues. Many of the refugees in the current sample have been facing violence. For the refugees and their safety, it is crucial that the information they provide for research is not misused, and that the research team proceed sensitively to prevent further harm.

3. Results

3.1. Descriptive statistics

Demographic characteristics for both samples are presented in table 1. The samples from Norway and Serbia differed significantly ($p < 0.05$) on all socio-demographic variables, except for *marital status*, *living alone*, and *family concerns*. Refugees in Norway were older, with higher education and more often with children. More female participants were recruited in Norway (35%) compared to Serbia (10%) ($p < 0.001$). In Serbia, participants were recruited from a park and a reception center for both adults and minors. One-fourth (28%) of the sample in Serbia were minors, several of whom were unaccompanied and from Afghanistan. A large majority of the participants in Serbia (94.8%) had not applied for asylum, while all participants in Norway had applied (47.2% application pending, 23.6% granted asylum and 29.2% refused asylum). Most participants in Norway were in an asylum process, and the *waiting time* in the current country was therefore significantly different from Serbia ($p < 0.001$).

The results in table 2 reveal that 74% of the refugees in Serbia reported symptoms of anxiety, 90% had symptoms of depression and 54% reported symptoms of PTSD. In Norway the levels were lower than in Serbia, with 54% of the refugees in Norway reporting symptoms of anxiety, 69% of depression, and 26% of PTSD. Prevalence rates of mental health problems were significantly higher in Serbia than in Norway (Anxiety, $p < 0.01$, Depression, $p < 0.001$, and PTSD, $p < 0.001$). An independent sample *t*-test was used to test differences in scores on the three symptom-clusters of PTSD (re-experiencing, arousal and avoidance) between the two country-groups. Significant group differences were found in all three clusters (re-experiencing, $p < 0.001$, arousal, $p < 0.02$, and avoidance, $p < 0.001$). The mean score for all three clusters was higher in Serbia than in Norway.

3.2. Sociodemographic factors associated with mental distress

As shown in table 1, the two samples differ significantly on most of the sociodemographic variables. Therefore, we also ran separate analyses for the two countries to expand the understanding of the relationships among the variables (table 3). Table 3 presents results from the last stage in the regression procedure used in the current study. Only covariates with $P < 0.05$ were presented (Mollica et al., 1987). Since there were only ten women in the Serbian sample, *gender* was excluded in these analyses. This section presents results separately for Serbia and Norway.

High age (depression: $\beta = 0.39$, $p < 0.001$, anxiety: $\beta = 0.39$, $p < 0.001$ and PTSD: $\beta = 0.37$, $p < 0.001$) and *family concerns* (depression: $\beta = 0.21$, $p < 0.05$, anxiety: $\beta = 0.29$, $p < 0.01$ and PTSD: $\beta = 0.36$, $p < 0.001$) were significantly correlated with all outcome variables of poor mental health in the Serbian sample. Moreover, there was a significant negative correlation between *High school level education* and symptoms of depression ($\beta = -0.23$, $p < 0.02$).

In the Norwegian sample, *refused asylum* seemed to be the most important factor in relation to all outcome variables for poor mental

Table 1
Sample characteristics.

	NORWAY (N = 78)		SERBIA (N = 100)		P-value
	n	% or mean (SD)	n	% or mean (SD)	
Age	75	29.9 (8.1)	99	22.9 (8.14)	.00
Gender					.00
Female	28	35.9%	10	10%	
Male	50	64.1%	90	90%	
Marital Status					.07
Married	30	40.5%	26	26.3%	
Single/other	44	59.5%	73	73.7%	
Children					.00
Yes	34	46.6%	22	22%	
No	39	53.4%	78	78%	
Educational Level					.04
Illiterate	3	4%	9	9%	
Primary School	24	32%	44	44%	
High School	22	29.3%	34	34%	
University	26	34.7%	13	13%	
Country of Origin					
Syria	27	35.5%	13	13%	
Afghanistan	11	14.5%	67	67%	
Turkey	3	3.9%			
Eritrea	4	5.3%			
Iran	9	11.8%	3	3%	
Tunisia	2	2.6%			
Ethiopia	2	2.6%			
Palestine	2	2.6%			
Iraq	9	11.8	15	15%	
Congo	2	2.6%			
Rwanda	1	1.3%			
Egypt	1	1.3%			
Kuwait	1	1.3%			
Zimbabwe	1	1.3%			
Lebanon			2	2%	
Religion					
Islam	35	67.3%	100	100%	
Christianity	8	15.4%			
Non-religious	9	17.3%			
Asylum Status					
Not Applied			91	94.8%	
Applied/ Waiting	34	47.2%	4	4.2%	
Residence	17	23.6%	1	1%	
Rejected	21	29.2			
Living Conditions					
Unknown/ Recruited from the streets			42	42.9%	
Reception center	68	89.5%	55	56.1%	
Apartments/other	8	10.5%	1	1%	
Waiting Time	68	23.2 (30)	99	3.9 (2.2)	.00
Living Alone					.67
Yes	43	58.9%	37	37%	
No	30	41.1%	63	63%	
Family Concerns					.053
Yes	42	64.6%	48	48%	
No	23	35.4%	52	52%	

health (depression: $\beta = 0.42, p < 0.001$, anxiety: $\beta = 0.42, p < 0.001$ and PTSD: $\beta = 0.37, p < 0.001$). *Female gender* was positively correlated with symptoms of depression ($\beta = 0.40, p < 0.001$) and anxiety ($\beta = 0.52, p < 0.001$). *Education* at university and high school level were negatively correlated with symptoms of anxiety (high school: $\beta = -0.23, p < 0.04$ and university: $\beta = -0.23, p < 0.04$). *Waiting time* was no longer significant when the variable *refused asylum* was adjusted for in the Norwegian sample.

The results from the total sample are as follows: *Norway (after flight)* (depression: $\beta = -0.38, p < 0.001$, anxiety: $\beta = -0.29, p < 0.001$ and PTSD: $\beta = -0.34, p < 0.001$) and *gender* (depression: $\beta = 0.28, p < 0.001$, anxiety: $\beta = 0.27, p < 0.001$ and PTSD: $\beta = 0.22, p < 0.01$) were significantly associated with all three outcome variables. The exposure *family concerns* was significantly associated with symptoms of depression ($\beta = 0.19, p < 0.01$) and PTSD ($\beta = 0.20, p < 0.02$). *Waiting time*

Table 2
Mental health outcomes.

	NORWAY (N = 78)		SERBIA (N = 100)		P-value
	n	% or mean (SD)	n	% or mean (SD)	
Anxiety					
Mean Score	72	2.05 (0.79)	99	2.18 (0.64)	.28
>1,75	72	54%	99	74%	.01
Depression					
Mean Score	72	2.28 (0.77)	99	2.52 (0.60)	.03
>1,75	72	69%	99	90%	.00
PTSD					
Mean Score	66	2.15 (0.66)	99	2.51 (0.57)	.00
>2,5	66	26%	99	54%	.00
Re-experiencing	66	2.17 (0.73)	99	2.69 (0.72)	.00
Arousal	66	2.18 (0.76)	99	2.44 (0.68)	.02
Avoidance	66	2.08 (0.68)	99	2.53 (0.67)	.00

An independent sample *t*-test was used to test differences in mean scores. The *P*-value for the Levene's test was less than 0.05. Thus, we report the statistics for the row "equal variances not assumed" Fisher exact test was used to test differences between prevalence rates. *T*-values for anxiety, depression and PTSD were -1096, -2167 and -3621, respectively. Degrees of freedom for anxiety, depression and PTSD were 131,81, 128,71 and 125,36. Six participant were missing on HSCL, while 12 participant were missing on HTQ.

appears to be significantly correlated with symptoms of depression ($\beta = 0.26, p < 0.001$) and anxiety ($\beta = 0.29, p < 0.001$). The effect on the outcome variables disappears when the covariate *refused asylum* is adjusted for in the Norwegian sample. The results from the total sample showed that the variable *during flight/after flight* was the most important factor associated with mental distress. Interaction effects between the two countries were tested for all covariates. No significant interactions were found.

4. Discussion

4.1. High symptoms of mental distress in both countries

The main finding of the current study was severe symptoms of mental distress among refugees in both countries. High levels of symptoms of anxiety (74% and 54%), depression (90% and 69%) and PTSD (54% and 26%) were found among participants in Serbia and Norway. This is in line with what we hypothesized.

Previous studies on mental health among refugees have found a variety of prevalence rates of mental distress (Bogic et al., 2012; Fazel et al., 2012). A more recent review conducted by Blackmore et al. (Blackmore et al., 2020) found prevalence rates of both PTSD and depression of 31.5% and a prevalence rate of anxiety of 11%. Results from the current study are considerably higher. Blackmore et al. (Blackmore et al., 2020) only included studies with results from clinical interviews using a validated diagnostic measure. Prevalence rates from the current study are based on interpreter assisted interviews using self-report data obtained by questionnaire. Fazel et al. (Fazel et al., 2012) and Bogic et al. (Bogic et al., 2012) found lower prevalence rates of mental distress among resettled refugees in rigorously conducted studies of high methodological quality. High prevalence rates in the current study could reflect methodological limitations as results are obtained from convenience samples and with relatively few respondents. External validity is limited in this study due to a small sample size and a non-random sample. It is furthermore possible that the more frustrated and troubled refugees volunteered as they wanted to share their experiences. We know, however, that many severely traumatized people may withdraw and avoid contact (Opaas and Varvin, 2015). Self-selection is seldom representative. However, the review by Blackmore et al. (Blackmore et al., 2020) included studies containing both asylum seekers and refugees. The authors found significantly higher prevalence of mental distress among asylum seekers. The review also excluded studies with samples that included asylum seekers whose

Table 3

Results from the last stage in the linear regression procedure. Relations between sociodemographic risk factors for poor mental health were explored. Non-significant results are denoted NS.

Self-reported symptoms	NORWAY (N = 65)			SERBIA (N = 99)			NORWAY AND SERBIA (N = 164)		
	Depression Std. β s	Anxiety Std. β s	PTSD Std. β s	Depression Std. β s	Anxiety Std. β s	PTSD Std. β s	Depression Std. β s	Anxiety Std. β s	PTSD Std. β s
Norway: After Flight (Ref: Serbia: During Flight)	–	–	–	–	–	–	–0.384***	–0.292**	–0.342***
Age (years)	NS	NS	NS	.397***	.395***	.374***	NS	NS	NS
Gender (ref: Male)	.398***	.516***	NS	–	–	–	.279**	.265**	.223**
Married (Ref: Single/other)	NS	NS	NS	NS	NS	NS	NS	NS	NS
Children (ref: No Children)	NS	NS	NS	NS	NS	NS	NS	NS	NS
Educational level (ref: no edu/primary school)	NS	NS	NS	NS	NS	NS	NS	NS	NS
High School	NS	–0.229*	NS	–0.225*	NS	NS	NS	NS	NS
University	NS	–0.227*	NS	NS	NS	NS	NS	NS	NS
Waiting Time (months)	NS	NS	NS	NS	NS	NS	.259**	.291***	NS
Living Alone (Ref: Living with Family)	.208*	NS	NS	NS	NS	NS	NS	NS	NS
Family Concerns (Ref: No Family Concerns)	NS	NS	NS	.209*	.294**	.363**	.194*	NS	.196*
Refused Asylum (Ref: Waiting/Residence)	.425***	.418***	.368**	–	–	–	–	–	–
R2 Adjusted	31.0%	38.3%	12.2%	13.9%	12.6%	13.9%	15.8%	14.7%	10.0%

* Denoted a statistically significant two-tailed p-value <.05.

** Denoted a statistically significant two-tailed p-value <.01.

*** Denoted a statistically significant two-tailed p-value <.001.

applications had been rejected. The majority of the participants in the current study were asylum seekers, and 21 of the participants from Norway have had their asylum application rejected. Previous studies have shown that refugees awaiting decision on their asylum application report higher symptoms of mental distress than those granted asylum (Gerritsen et al., 2006; Heeren et al., 2014), and that higher symptom levels are reported among refugees who have been refused asylum than those awaiting decision (Mueller et al., 2011). The variable *refused asylum* was found to be the strongest risk factor for mental distress in the Norwegian sample of the current study. These findings are in line with results from the analysis of qualitative interviews from asylum seekers in the Norwegian sample who have received a rejection on their asylum application. They described a high degree of stress and hopelessness (Sagbakken et al., 2020; Sagbakken et al., 2022).

High symptom levels in the current study can possibly be understood in light of contextual factors in both countries. Because of the EU-Turkey deal and closed borders in the Balkans, the flight has become severely prolonged and increasingly more dangerous (Arsenijević et al., 2017; Eleftherakos et al., 2018). Non-European refugees in Serbia have described extreme violence from border guards when trying to cross the border to Hungary or Croatia irregularly (Belgrade Center for Human Rights and Macedonian Young Lawyers Association 2017; Humantarian Center for Integration and Tolerance, 2017). Qualitative interviews with participants from the Serbian sample in the current study have described violence and degrading treatment from border police while trying to cross the border (Varvin et al., 2022). The housing quality has been described as low and basic in both countries (Jankovic et al., 2015; Belgrade Center for Human Rights and International Rescue Committee 2018; Hauge et al., 2017). Qualitative studies of life in reception centres in Norway revealed a high degree of passivity, frustration, and an experience of meaninglessness. Asylum seekers described a life in which they were deprived of control over their own lives and without opportunities to plan their own activities. (Kolstad and Thorud, 2010; Andrews et al., 2014). Similar descriptions were obtained in the Norwegian sample of the current study, where life in reception centres was characterised by feelings of powerlessness, isolation, and hopelessness. High levels of mental distress in the current study are thus in accordance with descriptions from the qualitative side of this research project (Sagbakken et al., 2020; Sagbakken et al., 2022). Refugees from both country groups live in a state of limbo, caught between their previous life in the country of origin, and an insecure future that depends on the acceptance of their asylum application.

4.2. Higher symptoms during flight in Serbia than after flight in Norway

Contrary to our hypothesis, we found higher levels of symptoms of anxiety, depression, and PTSD among the sample of refugees who were mid-flight in Serbia, compared to the sample of refugees who were resettled in Norway. After controlling for sociodemographic differences in the total sample, the variable *during flight/after flight* was the most important factor across all outcome variables for mental distress and indicated a negative influence of mental distress during flight.

However, to compare symptoms of mental distress during and after flight it is crucial to have a study of longitudinal design and to be able to follow the sample over time, in this context from Serbia to Norway. Hence, our current findings must be interpreted with caution, as they only provide an indication that symptom levels of depression, anxiety, and PTSD were higher during flight in Serbia than after flight, in Norway. Further research on mental health in different stages of migration is needed, preferably with a longitudinal study design. Due to the sparsity of research on mental health in different phases of migration, we nevertheless chose to compare the level of mental distress in our two groups of refugees. We do find it important with increased knowledge on the matter and think that the present results may give an indication of levels of mental distress during and after migration in the context that surrounds today's refugees during flight. The findings from the qualitative interviews with the participants from this study also underpins the differences between the Serbian and the Norwegian sample. Refugees in Serbia told stories of unbearable events during flight that were characterized by violence and extreme insecurity (Muecke et al., 1992), while the refugees in Norway experienced hopelessness due to their situation and the consequences of violent experiences during flight and in their home country. They did however not experience violence in the present (Sagbakken et al., 2020; Sagbakken et al., 2022).

Our findings are contradictory to the results from Muecke et al. (Muecke et al., 1992), McKelvey & Webb (McKelvey and Webb, 1996; McKelvey and Webb, 1997). Muecke et al. (Muecke et al., 1992) found higher levels of mental distress among the sample of Cambodian refugee adolescents after resettlement in the US, than among the sample of adolescents during flight in a refugee camp in Thailand. Muecke et al. (Muecke et al., 1992) explained their findings among the Cambodian adolescents as attributed, in part, to the unusually hopeful circumstances that surrounded the Thailand group. The youths were actively preparing for imminent resettlement in the US. McKelvey & Webb (McKelvey and Webb, 1996; McKelvey and Webb, 1997) found similar results in their longitudinal study of Vietnamese Amerasians (N = 101). Coherent with Muecke et al. (Muecke et al., 1992), McKelvey & Webb

(McKelvey and Webb, 1997) interpret the results among the Vietnamese Amerasians participants in light of future hope and prospects for a better life. Our study demonstrates the difficulties non-European refugees have in the present situation where they have minimal hopes to reach a country where they can apply for asylum. As a consequence of the EU-Turkey deal, and the closure of the Balkan route, the flight has become increasingly dangerous and severely prolonged (Arsenijević et al., 2017; Eleftherakos et al., 2018). Both Muecke et al. (Muecke et al., 1992) and McKelvey & Webb (McKelvey and Webb, 1997) explain their findings as the results of hope and positive expectations among their participants during flight. Beiser, Turner & Ganesan (Beiser et al., 1989) found that a cognitive orientation toward the future helped to moderate refugees' depressive symptoms. The refugees in Serbia are stranded in the country, and they may have begun to lose hope of reaching (Northern) Europe. The living conditions are poor, and many are beaten, humiliated, and harassed multiple times when trying to cross the border to a country within the EU (Belgrade Center for Human Rights and Macedonian Young Lawyers Association 2017; Humanitarian Center for Integration and Tolerance, 2017; Varvin et al., 2022). Refugees in Serbia are living under "realistic expectations of ongoing threats and danger" (Stevens and al., 2013). Eleftherakos et al. (Eleftherakos et al., 2018) used the term "continuous traumatic stress" to describe the circumstances for refugees stranded in the Moria camp on Lesbos, Greece. Refugees describe the living conditions in the camp as a permanent state of emergency caused by continuous tension and fighting. These descriptions could also apply to non-European refugees in Serbia. Médecins Sans Frontières (2017) reported a considerable increase in symptoms of depression, anxiety, and PTSD among refugees stranded on Lesbos, Greece, after the EU-Turkey deal. From a more hopeful climate surrounding refugees who managed to reach the European continent in 2015, today's situation is characterized by extreme hopelessness. Contextual conditions following the EU-Turkey deal and closure of the Balkan-route could thus be a possible interpretation of present results. Differences in expressed hope/hopelessness may contribute to explain higher levels of symptoms among the sample of refugees during flight in Serbia, compared to the sample of refugees after resettlement in Norway. For future research it may be informative to include a measure of expressed hope/hopelessness to gain more knowledge about the subjective experience of refugees during flight.

4.3. Sociodemographic characteristics associated with mental distress

Female gender, low education, living alone and refused asylum were found to correlate with poor mental health in the Norwegian group. High age, low education level and concerns about family were associated with poor mental health in the Serbian group. In the total sample, the variables during flight/after flight, female gender and concerns about family were found to be significant for symptoms of poor mental health.

Female gender has been associated with poor mental health in previous studies on refugees (Bogic et al., 2012; Gerritsen et al., 2006; Porter and Haslam, 2005; Schweitzer and al., 2006). Female refugees are especially vulnerable to sexual abuse and gender-based violence during armed conflict, during flight, and in refugee camps (Hynes and Lopes, 2000; Hassan et al., 2016). Perera et al. (Perera et al., 2013) found that women in their longitudinal study of Somali and Oromo refugees, reported more premigration, transit, and resettlement stressors than did the men. High age has also shown to be significantly associated with poor mental health in previous studies (Bogic et al., 2012; Gerritsen et al., 2006; Porter and Haslam, 2005), consistent with current findings in the Serbian-group. A significant association between low education and symptoms of poor mental health was found in separate analyses in the two samples (symptoms of anxiety in the Serbian sample and symptoms of depression in the Norwegian sample). Previous refugee studies have shown conflicting results regarding the impact of education on mental health. Porter and Haslam (Porter and Haslam, 2005) found high education to be associated with poor mental health in their meta

synthesis, while Hosseini et al. (Hosseini et al., 2017) and Bogic et al. (Bogic et al., 2012) found the opposite results, where low educational level was found to be associated with symptoms of poor mental health. The variable *refused asylum* was found to be the most important factor for all outcome variables in the Norwegian sample. These findings are consistent with previous studies where refused asylum has been significantly associated with poor mental health (Hocking et al., 2015; Morgan et al., 2017). *Concerns about family* was positively associated with symptoms of depression and PTSD in the total sample, and on all outcome variables in the Serbian group. Living alone showed to be associated with higher symptoms of depression than living with family in the Norwegian group. These findings may be understood considering the importance of social and emotional support for psychological coping and well-being after flight (Schweitzer and al., 2006; LeMaster et al., 2018; Hooberman et al., 2010; Lie, 2002).

As described above, previous studies have found exposure to potentially traumatic events to be a significant risk factor for mental distress. In the qualitative data from this research project, many of the participants have told stories about losing close family members to terrorist groups, witnessing violence and other life-threatening events (Varvin et al., 2022; Sagbakken et al., 2020). This has, however, not been assessed in the current study. We did not use part 1 of HTQ that measures potentially traumatic events. The results would possibly be different if we included the above-mentioned data in the regression analysis. Future research should include potentially traumatic events as an instrument, as such variables would help to provide a more comprehensive understanding of the risk factors for mental distress among refugees. Previous studies have also found post-migration factors such as isolation, restrictive policies, and stressors related to insecure immigration status to be significantly associated with mental distress, also after exposure to traumatic events were controlled for (Hou et al., 2020; Miller and Rasmussen, 2010). We know from the qualitative data in the current study that participants experienced a life filled with daily stressors. Examples of such stressors were worrying about the status of their asylum application, or being deported, long waiting time at the reception centers, and worries about family members (Varvin et al., 2022; Sagbakken et al., 2020; Sagbakken et al., 2022). Waiting time, asylum status and concerns about family were assessed in the current study. As previously noted, *refused asylum* and *family concerns* were found to be positively correlated with mental distress. There are, however, many other social and material conditions that were not assessed in this study.

4.4. Limitations and strengths

The most prominent limitation of this study was our research design. This study had a cross-sectional design. However, in order to compare symptoms of psychological distress during and after flight we would ideally need a longitudinal design where we could observe the same participants over a period of time. In an attempt to counter balance this deficit, differences in sociodemographic characteristics were controlled for by using regression analysis. It is possible that differences in unobserved characteristics between the two samples nevertheless were present, given the significant differences in sociodemographic characteristics between the two samples, shown in Table 1. However, unregulated refugees, who are not part of the UN quota refugee system or the EU relocation system, are difficult to reach and especially difficult to follow over time. Since the refugees in the Serbian sample of this study cross the European borders illegally it is unlikely that they would be willing to participate in a longitudinal study during their attempts to reach Western Europe. To follow a group of refugees who are likely to experience degrading and inhuman treatment in their flight to Western Europe may be morally questionable.

Contextual conditions, both in transit in Serbia and at destination in Norway, are likely to affect the results in the present study. The circumstances in Norway may differ some from other high-income

destination countries, and likewise the conditions for refugees in transit in Serbia may differ from other transit countries. It would therefore be difficult to indicate levels of distress during and after flight in general. Although, non-European refugees have similar experiences with closed borders and poor living conditions in Southern European transit countries, like Greece and Italy (Eleftherakos et al., 2018; Médecins Sans Frontières, 2017; González Morales, Felipe 2021).

The use of interpreters to assist illiterate participants to fill out the questionnaires made it possible to include marginalized refugees. As mentioned, participants filled out questionnaires after a qualitative interview. Even though some were quite exhausted after interviews, the alliance established during interviewing may have furthered the quality of self-reports. Some of the authors were involved in data collection, which we believe gave a greater contextual understanding of the quantitative material. The qualitative interviews also provided an important context for the understanding and interpretation of the quantitative data.

5. Conclusion

This study shows severe levels of mental distress among participants in both samples of refugees. High symptoms of distress may be understood considering the state of limbo that the participants are living in, both in Serbia and in Norway. Symptoms of distress were found to be higher among participants during flight in Serbia, than among the participants after flight in Norway. The study found *female gender, low education, refused asylum, high age, and concerns about family* to be significantly correlated with mental distress. *Refused asylum* was found to be the strongest risk factor for mental distress in the Norwegian sample. This study indicates a high risk of developing mental illness in this group of refugees, and the need for targeted intervention should be discussed. High symptom rates among the participants in this study may be the result of stressful conditions for refugees both during flight in Serbia and after flight in reception centres in Norway. The study shows that conditions both during flight in Serbia and in reception centres in Norway are not conducive for developing positive environments for psychological coping and well-being after flight. Our findings emphasize the importance of enhanced measures for social and emotional support in the reception of refugees in both countries. Higher rates of symptoms during flight in Serbia, than after flight in Norway may be interpreted as a consequence of the increasingly long and dangerous Balkan route for non-European refugees on flight to Northern Europe. The findings in this study must, however, be interpreted with caution due to methodological limitations.

Notes

1. The terms «refugees» and «asylum seekers» differ in reference to an individual's legal status. «Refugees» have been granted asylum, while «asylum seekers» are in the process of awaiting a result on their application. This distinction does not apply to people during flight in Serbia. The term «refugees» has therefore been used to refer to both groups.
2. As mentioned above, most of the participants from the Middle East and Central Asia in the Norwegian sample had fled through Serbia. Regression analyses were therefore conducted for participants from the Middle East and Central Asia and excluded participants from African countries. This was done to only include participants from the Norwegian sample that are likely to have fled through Serbia. Results were virtually the same in analyses where African countries were excluded, as when these participants were included.
3. Since the beginning of the war in February 2022, Norway and Serbia have received many applications for asylum by Ukrainian refugees. By February 2023, 148.000 Ukrainian refugees have entered Serbia, and around 26.000 were granted some form of temporary residence. Most of the Ukrainian refugees are hosted in private

accommodations (Commissariat for refugees and migration of Serbia 2023). To our knowledge, the Ukrainian refugees are not being humiliated and degraded by border police. By the 3th of August 2023, 53.453 Ukrainian refugees have applied for asylum in Norway (Utlendingsdirektoratet 2023). The Ukrainian refugees are granted collective protection, a process that moves quickly as opposed to being processed individually. With this resident permission, the Ukraine refugees are also allowed to work short after arrival in Norway (Integrerings- og mangfoldsdirektoratet 2022).

Declaration of competing interest

The authors declare that there are no conflicts of interest related to this work.

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References

- Andrews, T., Solstad, M., Anvik, C.H., 2014. Mens De Venter : Hverdagsliv i Asylmottak. Nordlandsforskning.
- Arsenijević, J., et al., 2017. A crisis of protection and safe passage: violence experienced by migrants/refugees travelling along the Western Balkan corridor to Northern Europe. *Confl Health*, 11 (1), 6. <https://doi.org/10.1186/s13031-017-0107-z>. -6.
- Beiser, M., Turner, R.J., Ganesan, S., 1989. Catastrophic stress and factors affecting its consequences among Southeast Asian refugees. *Soc. Sci. Med.* 28 (3), 183–195. [https://doi.org/10.1016/0277-9536\(89\)90261-X](https://doi.org/10.1016/0277-9536(89)90261-X).
- Belgrade Center for Human Rights & International Rescue Committee, 2018. Access to Asylum and Reception Conditions in the Republic of Serbia. Belgrade Center for Human Rights & International Rescue Committee, Belgrade. www.bgcenter.org.rs. Access date: 2022, 2601.
- Belgrade Center for Human Rights & Macedonian Young Lawyers Association, A DANGEROUS 'GAME'. The pushback of migrants, including refugees, at Europe's borders. 2017.
- Belgrade Center for Human Rights, 2015a. Right to Asylum in the Republic of Serbia. Belgrade Center for Human Rights, Belgrade b. www.bgcenter.org.rs. Access date: 2022, 2601.
- Belgrade Center for Human Rights, 2015b. Human Rights in Serbia, 2015. BCHR. www.bgcenter.org.rs. Access date: 2022, 2601.
- Belgrade Center for Human Rights, 2020. Right to Asylum in the Republic of Serbia. Belgrade Center for Human Rights, Belgrade. <http://azil.rs/en/wp-content/uploads/2021/02/Right-to-Asylum-in-Serbia-2020.pdf>. Access date: 2022, 2601.
- Blackmore, R., et al., 2020. The prevalence of mental illness in refugees and asylum seekers: a systematic review and meta-analysis. *PLoS Med.* 17 (9), e1003337 <https://doi.org/10.1371/journal.pmed.1003337>. -e1003337.
- Bogic, M., et al., 2012. Factors associated with mental disorders in long-settled war refugees: refugees from the former Yugoslavia in Germany, Italy and the UK. *Br. J. Psychiatry* 200 (3), 216–223. ISSN: 0007-1250, EISSN: 1472-1465, CODEN: BJPYAJ.
- Commissariat for refugees and migration of Serbia. Commissariat for refugees and migration of Serbia. [cited 27.07.2023]. Available from: <https://kirs.gov.rs/cir>.
- Eleftherakos, C., et al., 2018. I prefer dying fast than dying slowly", how institutional abuse worsens the mental health of stranded Syrian, Afghan and Congolese migrants on Lesbos island following the implementation of EU-Turkey deal. *Confl. Health* 12 (1), 38. <https://doi.org/10.1186/s13031-018-0172-y>. -38.
- Eleni, T., et al., 2018. 2018 CSOs Report on Irregular Migration For South-Eastern Europe.
- European Commission. Factsheet on the EU-Turkey statement. 2016 20.01.2022; Available from: https://ec.europa.eu/commission/presscorner/detail/en/ME_MQ_16_963.
- Fazel, M.D., et al., 2012. Mental health of displaced and refugee children resettled in high-income countries: risk and protective factors. *Lancet* 379 (9812), 266–282. [https://doi.org/10.1016/S0140-6736\(11\)60051-2](https://doi.org/10.1016/S0140-6736(11)60051-2).
- Gerritsen, A.A.M., et al., 2006. Physical and mental health of Afghan, Iranian and Somali asylum seekers and refugees living in the Netherlands. *Soc. Psychiatry Psychiatr. Epidemiol.* 41 (1), 18–26. <https://doi.org/10.1007/s00127-005-0003-5>.
- González Morales, Felipe. 2021. "Report on means to address the human rights impact of pushbacks of migrants on land and at sea - report of the special rapporteur on the human rights of migrants, Felipe González Morales." <https://undocs.org/en/A/HRC/47/30>.
- Hassan, G., et al., 2016. Mental health and psychosocial wellbeing of Syrians affected by armed conflict. *Epidemiol. Psychiatr. Sci.* 25 (2), 129–141. <https://doi.org/10.1017/S2045796016000044>.
- Hauge, Å.L., Stoa, E., Denizou, K., 2017. Framing outsiders - aspects of housing quality in centralized reception centres for asylum seekers in Norway. *Housing, Theory, Soc.* 34 (1), 1–20.
- Heeren, M., et al., 2014. Psychopathology and resident status – comparing asylum seekers, refugees, illegal migrants, labor migrants, and residents. *Compr. Psychiatry* 55 (4), 818–825. <https://doi.org/10.1016/j.comppsy.2014.02.003>.

- Hocking, D.C., Kennedy, G.A., Sundram, S., 2015. Mental disorders in asylum seekers: the role of the refugee determination process and employment. *J. Nerv. Ment. Dis.* 203 (1), 28–32. <https://doi.org/10.1097/NMD.0000000000000230>.
- Hooberman, J., et al., 2010. Resilience in trauma-exposed refugees: the moderating effect of coping style on resilience variables. *Am. J. Orthopsychiatry* 80 (4), 557–563. <https://doi.org/10.1111/j.1939-0025.2010.01060.x>.
- Hosseini, A., et al., 2017. Migration experience, resilience and depression: a study of Iranian immigrants living in Australia. *Int. J. Cult. Ment. Health* 10 (1), 108–120.
- Hou, W.K., et al., 2020. Everyday life experiences and mental health among conflict-affected forced migrants: a meta-analysis. *J. Affect. Disord.* 264, 50–68. <https://doi.org/10.1016/j.jad.2019.11.165>.
- Humanitarian Center for Integration and Tolerance. 2017. Forcible irregular returns to the republic of Serbia from neighbouring countries. 2017 [20.01.2022]; Available from: <http://hcrit.rs/wp-content/uploads/2017/05/HCIT-report-on-expulsions-to-Serbia-ENG-version.pdf>.
- Hynes, M., Lopes, B.C., 2000. Sexual violence against refugee women. *J. Womens Health Gend. Based. Med.* 9 (8), 819–823. <https://doi.org/10.1016/j.rhm.2016.05.003>.
- Integrerings- og mangfoldsdirektoratet. Om arbeid, opplæring og introduksjonsprogram. 2022 [18.06.2022]; Available from: <https://www.imdi.no/ukraina/om-opplarin-g-og-introduksjonsprogram/>.
- Jankovic, J.A., Trivunic, B., Durasinovic, V., 2015. The Demographic picture, the Assessment of the Legal Status and Needs As Well As Examination the Traumatic Experiences of Refugees Who are in Transit Through Serbia. IAN.
- Jović, V., 2018. Working with traumatized refugees on the Balkan route. *Int. J. Appl. Psychoanalytic Stud.* 15 (3), 187–201. <https://doi.org/10.1002/aps.1586>.
- Jovic, V., Trivunic, B., Vladislavjevic, L., Varvin, S., Sagbakken, M., 2023. Going to the "Game": torture at Border Crossings. Unpublished results. In Review.
- Keles, S., et al., 2016. Depression among unaccompanied minor refugees: the relative contribution of general and acculturation-specific daily hassles. *Ethn. Health* 21 (3), 300–317. <https://doi.org/10.1080/13557858.2015.1065310>.
- Kien, C., et al., 2018. Prevalence of mental disorders in young refugees and asylum seekers in European Countries: a systematic review. *Eur. Child Adolesc. Psychiatry* 28 (10), 1295–1310. <https://doi.org/10.1007/s00787-018-1215-z>.
- Kolstad, A., Thorud, S., 2010. Maktesløs i ventetida : asylsøkeres hverdagsliv og mentale helse. *Tidsskrift Psykisk Helsearbeid (trykt utg.)* 7 (2010), 153–162. nr 2.
- LeMaster, J.W., et al., 2018. Acculturation and post-migration psychological symptoms among iraqi refugees: a path analysis. *Am. J. Orthopsychiatry* 88 (1), 38–47. <https://doi.org/10.1037/ort0000240>.
- Lie, B., 2002. A 3-year follow-up study of psychosocial functioning and general symptoms in settled refugees. *Acta Psychiatr. Scand.* 106 (6), 415–425. <https://doi.org/10.1034/j.1600-0447.2002.01436.x>.
- Maldari, N., Eلسley, N., Rahim, R., Abdul, 2019. The health status of newly arrived Syrian refugees at the Refugee Health Service, South Australia, 2016. *Aust. J. Gen. Pract.* 48 (7), 480–486. <https://doi.org/10.31128/AJGP-09-18-4696>.
- McKelvey, R.S., Webb, J.A., 1996. Premigration expectations and postmigratory mental health symptoms in Vietnamese Amerasians. *J. Am. Acad. Child Adolesc. Psychiatry* 35 (2), 240–245.
- McKelvey, R.S., Webb, J.A., 1997. A prospective study of psychological distress related to refugee camp experience. *Austr. New Zealand J. Psychiatry* 31, 549–554.
- Médecins Sans Frontières. One year on from the EU-Turkey deal: challenging the EU's alternative facts. 2017 [20.02.2022]; Available from: <https://reliefweb.int/report/greece/one-year-eu-turkey-deal-challenging-eus-alternative-facts>.
- Miller, K.E., Rasmussen, A., 2010. War exposure, daily stressors, and mental health in conflict and post-conflict settings: bridging the divide between trauma-focused and psychosocial frameworks. *Soc. Sci. Med.* 70 (1), 7–16. <https://doi.org/10.1016/j.socscimed.2009.09.02>.
- Mollica, F.R., Wyshak, G., Lavelle, J., 1987. The psychosocial impact of war trauma and torture on Southeast Asian refugees. *American J. Psychiatry* 144 (12), 1567–1572.
- Mollica, F.R., et al., 1992. The Harvard Trauma Questionnaire: validating a Cross-Cultural Instrument for Measuring Torture, Trauma, and Posttraumatic Stress Disorder in Indochinese Refugees. *J. Nerv. Ment. Dis.* 180 (2), 111–116. <https://doi.org/10.1177/0020764007078362>.
- Mollica, F.R., et al. Measuring trauma, measuring torture. Instructions and guidance on the utilization of the Harvard Program in Refugee Trauma's versions of the Hopkins Symptom Checklist-25 (HSCL-25) and the Harvard Trauma Questionnaire (HTQ). 2004 [20.01.2022]; Available from: <http://hpvt-cambridge.org/>.
- Morgan, G., Melliush, S., Welham, A., 2017. Exploring the relationship between postmigratory stressors and mental health for asylum seekers and refused asylum seekers in the UK. *Transcult. Psychiatry* 54 (5–6), 653–674. <https://doi.org/10.1177/1363461517737188>.
- Muecke, M.A., et al., 1992. Anxiety among Cambodian Refugee Adolescents in Transit and in Resettlement. *West J. Nurs. Res.* 14 (3), 267–291. <https://doi.org/10.1177/019394599201400302>.
- Mueller, J., et al., 2011. Mental health of failed asylum seekers as compared with pending and temporarily accepted asylum seekers. *Eur. J. Public Health* 21 (2), 184–189. <https://doi.org/10.1093/eurpub/ckq016>.
- Nasjonalt kunnskapscenter om vold og traumatisk stress. Vanlige reaksjoner på krig og flukt. 2022 [17.06.2022]; Available from: <https://www.nkvts.no/flyktning/vanlige-reaksjoner/>.
- Opaas, M., Varvin, S., 2015. Relationships of Childhood Adverse Experiences With Mental Health and Quality of Life at Treatment Start for Adult Refugees Traumatized by Pre-Flight Experiences of War and Human Rights Violations. *J. Nerv. Ment. Dis.* 203 (9), 684–695.
- Østby, L., 2016. Fra asylsøker til flyktning – før og etter kriseåret 2015. *Samfunnsspeilet* (4), 3–9.
- Perera, S., et al., 2013. A longitudinal study of demographic factors associated with stressors and symptoms in african refugees. *Am. J. Orthopsychiatry* 83 (4), 472–482. <https://doi.org/10.1111/ajop.12047>.
- Porter, M., Haslam, N., 2005. Predisplacement and Postdisplacement Factors Associated With Mental Health of Refugees and Internally Displaced Persons: a Meta-analysis. *JAMA* 294 (5), 602–612. <https://doi.org/10.1001/jama.294.5.602>.
- Rometsch-Ogioun El Sount, C., et al., 2019. Chronic pain in refugees with posttraumatic stress disorder (PTSD): a systematic review on patients' characteristics and specific interventions. *J. Psychosom. Res.* 118, 83–97. <https://doi.org/10.1016/j.jpsychores.2018.07.014>.
- Sagbakken, M., Bregård, I.M., Varvin, S., 2020. The Past, the Present, and the Future: a Qualitative Study Exploring How Refugees' Experience of Time Influences Their Mental Health and Well-Being. *Front. Sociol.* 5, 46. <https://doi.org/10.3389/fsoc.2020.00046>. -46.
- Sagbakken, M., Bregård, I.M., Varvin, S., 2022. «Imagine, 7 years without a future» - a qualitative study of rejected asylum seekers life conditions in Norway. *Front. Sociol.* 7, 813994. <https://doi.org/10.3389/fsoc.2022.813994>. -813994.
- Schweitzer, R., et al., 2006. Trauma, post-migration living difficulties, and social support as predictors of psychological adjustment in resettled Sudanese refugees. *Austr. New Zealand J. Psychiatry* 40 (2), 179–188. <https://doi.org/10.1080/j.1440-1614.2006.01766.x>.
- Silove, D., et al., 2007. Screening for Depression and PTSD in a Cambodian Population Unaffected by War: comparing the Hopkins Symptom Checklist and Harvard Trauma Questionnaire With the Structured Clinical Interview. *J. Nerv. Ment. Dis.* 195 (2), 152–157.
- Stevens, G., et al., 2013. Continuous traumatic stress: conceptual conversations in contexts of global conflict, violence and trauma. *Peace Conflict* 19 (2), 75–84. <https://doi.org/10.1037/a0032484>.
- Thapa, S.B., Hauff, E., 2005. Psychological distress among displaced persons during an armed conflict in Nepal. *Soc. Psychiatry Psychiatr. Epidemiol.* 40 (8), 672–679.
- The UN Refugee Agency. Figures at a Glance, Statistical Yearbooks. 2021. Available from: <https://www.unhcr.org/figures-at-a-glance.html>. Access date: 2022, 0607.
- Utlendingsdirektoratet. Registrerte søknader om beskyttelse fra ukrainske borgere i 2022-2023. [03.08.2023]; Available from: <https://www.udi.no/statistikk-og-analyse/statistikk/asylsokere-fra-ukraina-i-2022/#Omstatistikken>.
- Utlendingsdirektoratet. Asylsøknader etter statsborgerskap og måned (2015) 2015 [20.01.2022]; Available from: <https://www.udi.no/statistikk-og-analyse/statistikk/asylsoknader-etter-statsborgerskap-og-maned-2015/>.
- Utlendingsdirektoratet. Asylsøknader etter statsborgerskap og måned (2021) 2022 20.01.2022; Available from: <https://www.udi.no/statistikk-og-analyse/statistikk/asylsoknader-etter-statsborgerskap-og-maned-2021/>.
- Varvin, S., et al., 2021. Specialist services. In: Bhugra, D., et al. (Eds.), *Oxford Textbook of Migrant Psychiatry*. Oxford University Press, Oxford.
- Varvin, S., et al., 2022. I Have No Capacities That Can Help Me": young Asylum Seekers in Norway and Serbia – Flight as Disturbance of Developmental Processes. *Front. Psychol.* 12. <https://doi.org/10.3389/fpsyg.2021.786210>.
- Veierød, M.B., Lydersen, S., Laake, P., 2012. *Medical Statistics : in Clinical and Epidemiological Research*. Gyldendal akademisk, Oslo.