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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.

Keywords

Refugee, transit, mental health, border control, risk factors

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 centre of this route, because the geographical location of the country makes it a locus of transit for refugees [1]. Some of the refugees fleeing through Serbia find their way to Norway. Norway is a destination country where refugees submit their application for protection [2]. 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 [3]. 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 [4], it only made it more difficult to do so. Consequently, the flight has become increasingly more dangerous [5], and the stay in transit countries, like Serbia, severely prolonged [6]. 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 [7]. 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 [8-10]. Additionally, daily stressors after resettlement seem to have an impact on depressive symptoms, above and beyond war-related traumatic events [11].

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 ï during flight

Refugees enter Serbia primarily from Macedonia or Bulgaria. In 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 [12], and were just passing through the country. From 2015 to 2020, the number of refugees coming to Serbia was reduced to 2,830 people, mainly from Afghanistan, Syria, and Pakistan [13], 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-Hercegovina to Northern Europe. In April 2015 the average stay in Serbia was 2-3 days [14]. 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 [4]. 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 [15]. 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 [15-17].

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 [6]. Overcrowding, lack of privacy, and poor hygiene have been addressed as issues in some of the centres [18]. JoviĹ [6] discusses sexual abuse as a common aspect of life in transit countries.

1.3 Norway ï after flight

Some of the refugees who are in transit in Serbia express the desire to seek asylum in Norway [1]. 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 [19]. The EU-Turkey deal and closed borders throughout Europe have most likely contributed to a decrease in refugee arrivals to Norway [20]. In 2021 the number of individual asylum applications was reduced to 1,653 mainly from Syria, Afghanistan, Eritrea and Turkey [2].

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 [21]. 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*. [22] 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 and country of resettlement and methodological limitations. A newer systematic review by Blackmore *et al. [23]* found higher prevalence rates than the above-mentioned reviews. This review provided results from 5,143 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 ï 38.5), the prevalence of depression was 31.5 % (95% CI 22.64 ï 40.38), the prevalence of anxiety disorders was 11 % (95% CI 6.75 ï 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 [24, 25].

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 af-

ter flight. Muecke *et al*. [26] 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 [27, 28] 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 centre 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 [29].

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 [17, 30, 31]. 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 [17]. 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 [30, 31]. Many participants in Norway had unmet psychosocial needs and received little support or help for their mental health issues [17].

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 re-

settled 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 [32]. 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 todayôs 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 unregular 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 [26, 27, 28] is very different from the context for unregular 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 posttraumatic conditions [33]. 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 [34].

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 centre close to the Macedonian border. This centre 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 centre 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 dif-

ferent counties. An information meeting about the study, with the aid of translator, was held in all centres. Participants were recruited through centre 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 [35-37].

HTQ was developed by Mollica *et al*. [38] 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 [38].

HSCL-25 was adopted by Mollica, Wyshak & Lavelle [39] 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 [38]. 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 ±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 Leveneôs test to checks for equal variance. Bivariate intercorrelations for all variables were examined with Pearsonôs 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. [40]. The interaction effect was tested on all covariates, both using ANOVA and linear regression. Statistical significance level was set to $p_j<_j 0.05$.

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.

5. Results

Conflict of interest statement

We declare that we have no conflict of interest