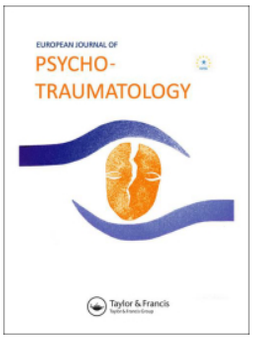

European Journal of Psychotraumatology

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/zept20

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**To cite this article:** Maša Vukčević Marković, Aleksandra Bobić & Marko Živanović (2023) The effects of traumatic experiences during transit and pushback on the mental health of refugees, asylum seekers, and migrants, European Journal of Psychotraumatology, 14:1, 2163064, DOI: 10.1080/20008066.2022.2163064

**To link to this article:** https://doi.org/10.1080/20008066.2022.2163064

EUROPEAN JOURNAL OF PSYCHOTRAUMATOLOGY
2023, VOL. 14, 2163064
https://doi.org/10.1080/20008066.2022.2163064

EUROPEAN JOURNAL OF PSYCHO-TRAUMATOLOGY
THE OFFICIAL JOURNAL OF THE EUROPEAN SOCIETY FOR TRAUMATIC STRESS STUDIES

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BASIC RESEARCH ARTICLE



# The effects of traumatic experiences during transit and pushback on the mental health of refugees, asylum seekers, and migrants

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## ABSTRACT

**Background:** There are 26 million people recognised as refugees worldwide. Many of them spent a prolonged period of time in transit – time after they leave their country of origin and before they reach the receiving country. Transit brings numerous protection and mental health risks refugees are exposed to.

**Objective:** The aim of this study was to assess the stressful and traumatic experiences refugees are exposed to during transit, with a special focus on the experience of pushback – the denial of access to the territory to foreign nationals and forcible return to countries of origin or neighbouring countries without an assessment of their rights to international protection, as well as the impact of these experiences on refugees' mental health and well-being.

**Method:** 201 refugees currently residing in Serbia completed the Stressful and Traumatic Experiences in Transit questionnaire – short version (SET-SF), questionnaire for assessing stressful and traumatic experiences during pushback (SET-SF PB), Refugee Health Screener (RHS-15), and Well-being index (WHO-5).

**Results:** The results showed that refugees experience a large number of stressful and traumatic events ($M = 10.27$, $SD = 4.85$). In addition, half of the participants experience severe symptoms of depression (50.7%), while about a third of the participants experience severe symptoms of anxiety (37.8%) and post-traumatic stress disorder (PTSD) (32.3%). Refugees who experienced pushback showed overall higher levels of depression, anxiety, and PTSD. Traumatic experiences during transit and pushback were positively related to the severity of depression, anxiety, and PTSD. In addition, traumatic experiences during pushback showed an incremental contribution in predicting refugees' mental health difficulties over and above traumatic experiences in transit.

**Conclusions:** This study provides valuable insights into the multiple risks refugees are exposed to and emphasise the need for the provision of adequate protection and support.

## Los efectos de las experiencias traumáticas durante el tránsito y el retroceso (el proceso de rechazo) en la salud mental de los refugiados, solicitantes de asilo y migrantes

**Antecedentes:** Hay 26 millones de personas reconocidas como refugiados alrededor del mundo. Muchos de ellos pasaron un período de tiempo prolongado en tránsito: el tiempo después de que salen de su país de origen y antes de llegar al país receptor. El tránsito conlleva numerosos riesgos de protección y salud mental a los que están expuestos los refugiados.

**Objetivo:** El objetivo de este estudio fue evaluar las experiencias estresantes y traumáticas a las que están expuestos los refugiados durante el tránsito, con un enfoque especial en la experiencia de retroceso: la negación del acceso al territorio a los ciudadanos extranjeros y el retorno forzoso a los países de origen o países vecinos sin una evaluación de sus derechos a la protección internacional, así como el impacto de estas experiencias en la salud mental y el bienestar de los refugiados.

**Método:** 201 refugiados que actualmente residen en Serbia completaron el Cuestionario de Experiencias Estresantes y Traumáticas en Tránsito: versión corta (SET-SF por sus siglas en ingles), Cuestionario para Evaluar Experiencias Estresantes y Traumáticas durante el Retroceso (SET-SF PB), Un Tamizaje de Salud del Refugiado (RHS-15), y el índice de Bienestar (OMS-5).

**Resultados:** Los resultados mostraron que los refugiados experimentan una gran cantidad de eventos estresantes y traumáticos ($M = 10,27$, $SD = 4,85$). Además, la mitad de los participantes experimenta síntomas graves de depresión (50,7 %), mientras que alrededor de un tercio de los participantes experimenta síntomas graves de ansiedad (37,8 %) y de trastorno de estrés postraumático (TEPT) (32,3 %). Los refugiados que experimentaron retroceso mostraron, en

## ARTICLE HISTORY
Received 22 December 2021
Revised 8 December 2022
Accepted 12 December 2022

## KEYWORDS
Refugees; transit; pushback; depression; anxiety; PTSD

## PALABRAS CLAVE
Refugiados; tránsito; rechazo; depresión; ansiedad; TEPT

## 关键词
难民，过境，驳回，抑郁，焦虑，PTSD

## HIGHLIGHTS

- There is a high prevalence of traumatic experiences refugees face during transit and pushback, a high prevalence of mental health problems, and impaired psychological well-being in refugees.
- Traumatic experiences contribute to mental health problems.
- Urgent measures are needed.

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general, niveles más altos de depresión, ansiedad y TEPT. Las experiencias traumáticas durante el tránsito y el retroceso se relacionaron positivamente con la gravedad de la depresión, la ansiedad y el TEPT. Además, las experiencias traumáticas durante el retroceso mostraron una contribución incremental en la predicción de las dificultades de salud mental de los refugiados más allá de las experiencias traumáticas en tránsito.
**Conclusiones:** Este estudio proporciona información valiosa sobre los múltiples riesgos a los que están expuestos los refugiados y enfatiza la necesidad de brindar protección y apoyo adecuados.

## 难民、寻求庇护者和移民在过境和驳回期间的创伤经历对心理健康的影响

**背景**：全世界有 2600 万人被确认为难民。 他们中的许多人在过境中度过了很长一段时间——从他们离开原籍国到到达接收国之前的这段时间。 过境为难民带来了众多保护和心理健康风险。
**目的**：本研究旨在评估难民在过境期间所面临的应激和创伤经历，特别关注驳回经历——没有评估其获得国际保护的权利便拒绝外国国民进入该领土并强行返回原籍国或邻国，以及这些经历对难民心理健康和福祉的影响。
**方法**：目前居住在塞尔维亚的 201 名难民完成了过境过程中的应激和创伤经历调查问卷——简短版 (SET-SF)、评估驳回期间应激和创伤经历的调查问卷 (SET-SF PB)、难民健康筛查 (RHS-15) 和幸福感指数 (WHO-5)。
**结果**：结果表明，难民经历了大量的应激和创伤事件（$M = 10.27$，$SD = 4.85$）。 此外，一半的参与者出现严重的抑郁症状 (50.7%)，而大约三分之一的参与者出现严重的焦虑症状 (37.8%) 和创伤后应激障碍(PTSD) 症状 (32.3%)。 经历过被驳回的难民总体上表现出更高水平的抑郁、焦虑和PTSD。过境和驳回期间的创伤经历与抑郁、焦虑和PTSD的严重程度呈正相关。 此外，与过境中的创伤经历相比，驳回期间的创伤经历在预测难民的心理健康困难方面作用更大。
**结论**：本研究对难民面临的多重风险提供了宝贵的见解，并强调了提供充分保护和支持的必要性。

## 1. Introduction

According to the United Nations High Commissioner for Refugees (UNHCR), it is estimated that over 89.3 million people have been forcibly displaced as a result of war, conflict, persecution, and human rights violations (UNHCR, 2021a). During 2019, in the countries of the European Union, over 738,000 persons sought international protection, which is an increase of 11% in asylum applications compared to the previous year (EASO, 2020). By the end of 2021, the global refugee population was 27.1 million, the highest recorded number so far (UNHCR, 2021a). Numerous studies have documented the stressful and traumatic experiences refugees, asylum seekers, and migrants[1] are exposed to in their countries of origin (Opaas & Varvin, 2015; Priebe et al., 2016; Vukčević et al., 2016a; Vukčević Marković et al., 2017), including witnessing the death or murder of a family member or friend, torture, and physical abuse as the most common ones (Montgomery & Foldspang, 1994; Vukčević Marković et al., 2017). Moreover, they often face extreme economic difficulties, a lack of drinking water, food, shelter, and other basic resources (Bhugra, 2004; Priebe et al., 2016).

### 1.1. Transit

After leaving the country of origin, refugees travel through several established migration routes. On their way from the Middle East, South Asia, and North Africa to Europe, four routes are most commonly used: the Central Mediterranean, the Eastern Mediterranean, the Western Balkans, and the Western Mediterranean route (Frontex, 2020). In 2019, there was an increase in irregular crossings to Europe along the Western Balkan route, with over 150,000 people passing along the route (Frontex, 2020). Although this number is significantly lower than in 2015, when Europe faced 1.82 million irregular crossings, the Western Balkans route remains one of the main migration routes to Europe (Frontex, 2020).

Even though the terms transit, transit countries, and transit routes imply short-term retention in the transit countries, it is important to note that previous studies have shown that the so-called transit period can last from several months to several years (Purić & Vukčević Marković, 2019; Vukčević et al., 2014). In addition, research conducted in countries along the transit routes has indicated that 'life on the road' is particularly dangerous due to the risk of kidnapping, detention, and torture by smugglers, sexual and labour exploitation, human trafficking, and physical abuse by the government officials (Bjertrup et al., 2018; Crepet et al., 2017; CRPC, 2019). A study from Serbia showed that over 80% of refugees were in a life-threatening situation during transit and that refugees, during their journey, experience an average of ten traumatic experiences (Vukčević Marković et al., 2017). These most often include traumatic experiences related to smugglers, severe bodily injuries, death of a close person, discrimination by the local population, lack of

water, food and shelter, and separation from family members (Purić & Vukčević Marković, 2019; Vukčević et al., 2014; Vukčević Marković et al., 2017). A study conducted in Turkey also reports on the presence of violence against refugees (Ben Farhat et al., 2017). Moreover, 44.8% of participants experienced at least one violent event while in Turkey, most often physical abuse by government officials (Ben Farhat et al., 2017). In a similar study from Greece, 23.1% of participants experienced at least one stressful event related to violence, the most commonly physical abuse by government officials or other members of the refugee community (Ben Farhat et al., 2018). In addition, transit as 'life on the road' implies difficulties in accessing adequate accommodation, so refugees often spend days outside collective centres, in abandoned houses, improvised shelters, and even outdoors. Furthermore, refugees often report overwhelming experiences of wasting time, a feeling of missing life opportunities while waiting, and a lack of educational opportunities and chances for a good future (Vukčević Marković, Bobić, et al., 2019; Vukčević et al., 2016b). Finally, the loss of social support networks as a result of separation from family and friends, as well as discrimination and segregation from the local population, are often present among refugees on the move (Bjekić et al., 2020; Crepet et al., 2017; Hynie, 2018).

### 1.2. Pushback

Forced return is often referred to as 'pushback,' a term used to describe the denial of access to the territory to foreign nationals and their forcible return to countries of origin or neighbouring countries without an assessment of their rights to international protection (Belgrade Center for Human Rights, 2017b). It is important to note that the excessive use of force by government officials and the collective expulsion of refugees have increased in recent years, as well as accompanying stressful and traumatic experiences (AIDA, 2020; CRPC, 2019; HCIT, 2017). Forced return and the systematic abolition of access to the territory and the asylum procedure are widespread at the border crossings with Bosnia, Croatia, Hungary, and Romania (CRPC, 2019), and in 2020 more than 25,000 refugees were collectively expelled from these four countries to Serbia (AIDA, 2020). Compared to the data from 2014, the percentage of those who experienced pushback during 2017 increased from 38% to 48% (Vukčević et al., 2014; Vukčević Marković et al., 2017). Additionally, it was reported that a large number of persons who have experienced pushback had suffered psychological and physical violence, such as hitting with rubber truncheons, slapping, kicking, being bitten by dogs, being hit by rubber bullets, insulted and humiliated (Belgrade Center for Human Rights, 2017a). Finally, the majority who have been forcibly returned faced obstacles in accessing the asylum procedure, health and psychosocial services, and adequate accommodation (Belgrade Center for Human Rights, 2017a).

### 1.3. Traumatic experiences and mental health of refugees

A large number of refugees show multiple somatic and psychological difficulties, as well as impaired mental health (Ben Farhat et al., 2018; Blackmore et al., 2020; Fazel et al., 2005; Giacco et al., 2018; Vukčević et al., 2014). Compared to the general population, there is a higher prevalence in the range of mental disorders among refugees (Bhugra, 2004; Fazel et al., 2005; Giacco et al., 2018). The prevalence of depression among the refugee and migrant populations ranges from 5% to 44% in various studies, compared with 8% in the general population, while for anxiety disorder, the prevalence in the general population is 5%, as opposed to 4% to 40% among the refugee population (Fazel et al., 2005). Previous studies also showed that refugees are more likely, compared to the general population, to develop post-traumatic stress disorder (PTSD) (Blackmore et al., 2020; Fazel et al., 2005).

Research conducted in Serbia in the period from 2014 to 2020 indicates that more than 80% of refugees residing in Serbia can be considered psychologically vulnerable (Vukčević et al., 2014; Vukčević Marković et al., 2017; Vukčević Marković et al., 2018; Vukčević Marković, Bobić, et al., 2019; Vukčević Marković et al., 2020), and there is a high prevalence of those experiencing depression, anxiety, and PTSD related difficulties (Vukčević Marković et al., 2020). Some of the most pronounced symptoms are excessive worry, repetitive thoughts of the most frightening events, a feeling of constant alertness, tension, and low interest in everyday activities (Vukčević et al., 2014).

Previous studies focused on the transit context indicate that stressful and traumatic experiences during transit predict the symptoms of depression, anxiety, and PTSD (Purić & Vukčević Marković, 2019). Stressful experiences in transit, such as torture, loss of a family member, overall exposure to a traumatic experience, poor living conditions, and discrimination, represent risk factors for PTSD (Purić & Vukčević Marković, 2019; Silove et al., 1997). Research has also shown that negative self-perception of functioning is associated with general stressors, while stressful events experienced in contact with the local population are associated with symptoms of depression (Purić & Vukčević Marković, 2019). Furthermore, additional risk factors for the mental health of refugees in transit include specific stressors related to transit countries, such as inadequate

accommodation conditions and difficulties in accessing health and social care services (Vukčević Marković, Živanović, et al., 2019). Previous studies, however, did not assess the effects of pushback and experiences during pushback on refugees' mental health. In addition to human rights violations and accompanying traumatic experiences it usually includes, it represents a 'step back' for refugees trying to reach their destination countries and, therefore, it might have a particularly harmful effect on refugees' mental health and well-being.

The main aim of the present study is to assess stressful and traumatic experiences refugees are exposed to during transit, and in particular, experiences during pushback, and to assess the relation between stressful and traumatic experiences and mental health difficulties in refugees. We hypothesised that:

(1) Traumatic experiences, both in transit and during pushback would have a detrimental effect on refugees' mental health (i.e. that these experiences will positively correlate with symptoms of depression, anxiety, and PTSD and negatively correlate with well-being).
(2) The refugees who experienced pushback, compared to those who didn't, will show higher levels of depression, anxiety, and PTSD and lower levels of well-being.
(3) Traumatic experiences during pushback would have an incremental effect on refugees' mental health difficulties over and above traumatic experiences in transit.

## 2. Method

### 2.1. Sample

The convenience sample included a total of 201 refugees currently residing in Serbia. The inclusion criteria were: Age 14 or above; the ability and will to give informed consent or to have an assigned guardian that can provide informed consent on their behalf; to be fluent in Farsi, Arabic, French, and/or English and to be able to understand the study instructions. The average age of the participants was 28.75 years ($SD$ = 8.82), ranging from 14 to 65. The percentage of minors who participated in the study was 2.9%, while the majority of participants (73.4%) were young adults between 19 and 35 years old. In terms of gender structure, out of the total sample, 88.9% were men, which adequately represents the gender structure of the refugee population in Serbia, of which 85% are men (UNHCR, 2021b). Participants were accommodated in six asylum and reception centres or were privately accommodated on the territory of Belgrade. The majority of participants were from Syria (24.4%), followed by Afghanistan (19.7%) and Morocco (17.1%), while a lower percentage of participants were from Iran (8.3%), Iraq (5.2%), and Bangladesh (4.7%). The remaining countries (Pakistan, Tunisia, Cameroon, etc.) were represented by less than 5% of the participants. Of the total number of participants, 9% have no formal education, 11.6% have completed lower grades of primary school, 14.3% have completed upper grades of secondary school, 25.9% completed secondary school, 21.2% completed primary academic studies, 9.0% finished specialist academic studies, and 1.6 completed doctoral studies. More than half of the participants (56.5%) declared as not married. More than half of the participants (63.4%) left their country of origin two or more years ago from the moment of participating in the research. The majority of participants (90.6%) did not apply for asylum in Serbia.

### 2.2. Procedure

Data was collected in the period from May to July 2021 in the premises of asylum and reception centres in Serbia (Sjenica, Tutin, Banja Koviljača, Principovac, Sombor, Kikinda) where refugees are accommodated, as well as in the premises of a non-governmental organisation PIN – Psychosocial Innovation Network, with participants privately accommodated in Belgrade. All participants were directly approached in accommodation facilities and asked to participate in the research, and out of those approached, 10% refused to take part in the study. Data collection was conducted in groups of up to ten persons in the form of paper and pencil, and participants had enough space allowing privacy when filling out the questionnaires. All questionnaires used in the research were available in 4 languages – English, French, Arabic, and Farsi. Questionnaires that were not initially available in the listed languages were translated by the back-translation method. A psychologist with experience in providing psychological support to refugees performed the data collection. Translators were available to mediate communication in case of any questions. All participants were informed in detail about the purpose and procedure of the research, protection, confidentiality, and anonymity of data, the right not to answer questions or to withdraw from participation in the study at any time, and were provided with written informed consent to participate in the study. Only those who gave written informed consent or whose parent or assigned guardian gave informed written consent on their behalf were included in the study. The Institutional Review Board of the Department of Psychology of the Faculty of Philosophy approved the study (protocol number 2021–29).

### 2.3. Instruments

The following instruments assessing experiences in transit and pushback and mental health were selected

since they were previously tested in the same context and showed good psychometric properties while being short and easy to complete, which make them adequate for the research setting (Vukčević Marković & Bjekić, 2019):

*Demographic characteristics questionnaire* was developed for this study. Demographic characteristics included: age, gender, country of origin, time of leaving the country of origin, length of stay in Serbia, legal status, level of education, and marital status.

*Stressful experiences in transit questionnaire – short version (SET-SF)* (Purić & Vukčević Marković, 2019) assesses stressful and traumatic experiences in transit. The questionnaire consists of 21 items-20 binary items (YES/NO) and one open-ended question ('*Did you have any other negative experiences during the transit?*').

*Questionnaire for assessing stressful and traumatic experiences during pushback* was created for this study. It consists of 6 binary items (YES/NO), assessing psychological, physical, and sexual violence, separation from family/friends, illegal or violent seizure of personal property, and life-threatening experiences.

*Refugee Health Screener (RHS-13)* (Hollifield et al., 2013) was used to assess refugees' mental health, namely symptoms of anxiety, depression, and PTSD. It consists of 13 items, followed by a Likert scale in the range of 5 points (*0 = not at all, 1 = a little bit, 2 = moderately, 3 = quite a bit, and 4 = extremely*), which assesses the symptoms of depression, anxiety, and PTSD. Participants whose total score is 12 or above are considered psychologically vulnerable, and it is necessary to be referred for further psychological assessment and psychological support. The instrument shows good psychometric properties (Hollifield et al., 2013).

*The well-being index (WHO5)* (Bech, 2004) was used to assess psychological well-being. The questionnaire consists of 5 items that reflect a set of positive emotional experiences. Participants are asked to rate how much each statement applies to them in the last 14 days (i.e. '*I felt cheerful and in a good mood*'). The items are in the form of a Likert scale in the range of 6 points (*0 = at no time, 1 = sometimes, 2 = less than half the time, 3 = more than half the time, 4 = most of the time, 5 = all the time*). The total score ranges from 0 (absence of psychological well-being) to 25 (maximum psychological well-being). The instrument showed good psychometric properties (Topp et al., 2015).

### 2.4. Data analysis

Basic descriptive measures were calculated for all measures, including indices of central tendency and variability and indices of the shape of the distributions of scores (skewness, kurtosis, Kolmogorov–Smirnov test), as well as alpha coefficients. To determine the prevalence of traumatic experiences both in transit as well as during pushback, besides summary scores, we report the percentages for each of the individual traumatic experiences. To establish the prevalence of psychological difficulties among refugees, we report the percentages of positive screenings using the established cutoff scores for RHS. Differences in the severity of symptoms of depression, anxiety, PTSD, and psychological well-being between people who experienced forced return and those did not were analysed using univariate ANOVA. The relationship between traumatic experiences, symptoms of depression, anxiety, PTSD, and psychological well-being was examined by correlation analysis. Finally, to examine the incremental contribution of traumatic experiences during pushback in the prediction of mental health difficulties over and above traumatic experiences in transit, we performed a series of hierarchical linear regressions. All the analyses were performed in IMB SPSS Statistics for Windows, version 21 (IBM Corp., Armonk, NY, USA).

## 3. Results

### 3.1. Traumatic experiences during transit

Results showed that, out of the 20 listed, refugees experience an average of ten different stressful and traumatic events during transit ($SD = 4.85$). Descriptive statistical measures are shown in Table 1. A very small percentage of participants (3.5%) did not face any traumatic experience during transit, while 30% had more than 13 such experiences. Overall, traumatic experiences in transit proved to be normally distributed. Table 2 shows the percentage of each traumatic and stressful experience refugees survived during transit.

During transit, refugees most often were in conditions where they had no access to food, water, or shelter, situations in which their lives were in danger, or in which they had been separated from family members or close friends or did not have access to relevant information. In addition, almost two-thirds of participants reported experiencing pushback, and psychological violence, while a slightly lower percentage experienced illegal or violent confiscation of money or personal property. Furthermore, more than half of the participants reported they experienced discrimination and severe physical injuries during travel.

The assessment of the experience of pushback indicates that 65.2% of participants experienced pushback to neighbouring countries. Refugees experienced, on average, more than three types of stressful or traumatic experiences during pushback ($SD = 1.72$) of the six described in the questionnaire. Only 7% of participants did not experience stressful or traumatic experiences during pushback. Table 3 shows the summary score of stressful and traumatic experiences

**Table 1.** Descriptive statistics of the SET-SF scale.

| Measures | *M* | *SD* | *Min* | *Max* | *Sk* | *Ku* | *K-S* |
|---|---|---|---|---|---|---|---|
| SET-SF | 10.27 | 4.85 | 0 | 20 | −0.27 | −0.76 | 1.23 |

*M* – mean; *SD* – standard deviation; *Sk* – skewness; *Ku* – kurtosis; *K-S* – Kolmogorov-Smirnov test.

during pushback (SET-SF PB) for a subsample of participants who reported experiencing pushback ($N = 129$).

Data presented in Table 4 show that 8 out of 10 participants experienced insults, humiliation, threats, and other forms of psychological violence, while half of the participants experienced physical violence during pushback. Additionally, about three-quarters of participants were separated from family members or close friends during pushback, and slightly less than three-quarters experienced the confiscation of personal property or money, while about two-thirds found themselves in life-threatening situations. Somewhat less than a fifth of the sample suffered some form of sexual violence during the forced return.

### 3.2. Mental health of refugees

Descriptive statistical measures of the RHS scale presented in Table 5 indicated a high severity of overall psychological vulnerability, depression, anxiety, and PTSD and a low level of psychological well-being. High reliability was obtained for the overall psychological vulnerability subscale, as well as the reliability of PTSD and psychological well-being, while slightly lower coefficients were obtained for the subscales of depression and anxiety, although still satisfactory. The obtained statistics indicated that the scores on certain scales deviate from the normal distribution, specifically the RHS subscales of anxiety and PTSD, as well as the well-being index.

The cutoff score for identifying persons whose mental health is at risk indicated that as many as 84.6% of participants are psychologically vulnerable. Half of the participants (50.7%) experienced pronounced symptoms of depression, while about a third of the participants had pronounced symptoms of anxiety (37.8%) and PTSD (32.3%). The results showed a low level of psychological well-being among participants.

**Table 2.** Percentages of refugees who experienced each of the listed traumatic and stressful experiences during transit.

| During transit: | % Responding Yes |
|---|---|
| Did you experience a lack of food /water? | 84.8 |
| Did you experience a lack of shelter? | 80.0 |
| Was your life threatened? | 76.0 |
| Were you separated from family / close friends? | 65.5 |
| Have you experienced pushback? | 65.2 |
| Were you deprived of the relevant information? | 61.9 |
| Were you a victim of psychological violence (being insulted, humiliated, threatened, etc.)? | 60.0 |
| Did you experience getting lost (not knowing where you are nor where you have to go)? | 59.4 |
| Did you have your personal property or money taken from you illegally or violently? | 58.3 |
| Did you experience suffering severe physical injury? | 55.0 |
| Were you a victim of discrimination? | 54.0 |
| Did you experience death of a close person? | 50.0 |
| Did you have the smuggler not fulfil the deal (but ask for extra money or not leave you at an agreed location)? | 49.7 |
| While in detention, were you deprived of basic living conditions (food, water, heating, bunk, possibility of movement in the premises, possibility of maintaining personal hygiene, medical assistance, etc.)? | 42.2 |
| Were you a victim of physical violence? | 42.2 |
| Were you detained? | 41.1 |
| While in detention, were you deprived of your legal rights (you were detained with no legal basis, legal assistance, you were not released in the legally prescribed timeframe)? | 36.6 |
| While in detention, have you experienced torture (did you receive deliberate and systematic infliction of physical or mental suffering)? | 34.2 |
| Did you have the smuggler request additional services (transporting drugs, recruitment of others, presenting other people's children as your own)? | 19.0 |
| Were you a victim of sexual violence? | 14.2 |

**Table 3.** Descriptive statistics of the scale of stressful and traumatic events during pushback ($N = 129$).

| Measures | *M* | *SD* | *Min* | *Max* | *Sk* | *Ku* | *K-S* |
|---|---|---|---|---|---|---|---|
| SET-SF PB | 3.60 | 1.72 | 0 | 6 | −0.53 | −0.53 | 2.05** |

*M* – mean; *SD* – standard deviation; *Sk* – skewness; *Ku* – kurtosis; *K-S* – Kolmogorov-Smirnov test; ** $p < .01$.

### 3.3. Traumatic experiences and mental health

Hypothesis 1: the results presented in Table 6 indicated significant moderate positive correlations between the number of traumatic experiences during transit and the RHS total score, as well as the subscales of depression, anxiety, and PTSD. No significant correlation was found between traumatic experiences and psychological well-being. The same pattern of correlations was obtained for stressful and traumatic experiences during pushback; namely, no significant correlation was found between the number of stressful and traumatic experiences during pushback and psychological well-being, while the number of traumatic experiences during pushback was positively correlated with the RHS total score and subscales of depression, anxiety, and PTSD. Subscales of

**Table 4.** Percentages of refugees who experienced each of the stressful and traumatic experiences during pushback ($N = 129$).

| During pushback: | % Responding Yes |
|---|---|
| Were you a victim of psychological violence (being insulted, humiliated, threatened, etc.) | 80.8 |
| Were you separated from family /friends? | 75.2 |
| Did you have your personal property or money taken from you illegally or violently? | 71.9 |
| Was your life threatened? | 65.6 |
| Were you a victim of physical violence? | 53.9 |
| Were you a victim of sexual violence? | 17.6 |

**Table 5.** Descriptive statistics for RHS full-scale score, RHS subscales, and Well-being index.

| | *M* | *SD* | *Min* | *Max* | *Sk* | *Ku* | *K-S* | *α* |
|---|---|---|---|---|---|---|---|---|
| RHS | 28.64 | 14.27 | 0 | 52 | −0.22 | −0.88 | 1.07 | .92 |
| RHS Depression | 9.01 | 4.85 | 0 | 16 | −0.23 | −1.04 | 1.27 | .77 |
| RHS Anxiety | 9.37 | 4.78 | 0 | 16 | −0.16 | −1.09 | 1.45* | .79 |
| RHS PTSP | 8.45 | 5.20 | 0 | 16 | −0.12 | −1.20 | 1.43* | .82 |
| Well-being index | 7.67 | 6.93 | 0 | 25 | 0.80 | −0.20 | 1.95** | .84 |

RHS – Refugee Health Screener overall psychological vulnerability; RHS Depression – Refugee Health Screener depression subscale; RHS Anxiety – Refugee Health Screener anxiety subscale; RHS PTSD – Refugee Health Screener subscale PTSD; Well-being index – psychological well-being; *M* – mean; *SD* – standard deviation; *Sk* – skewness; *Ku* – kurtosis; *K-S* – Kolmogorov-Smirnov test; * $p$ <.05 ** $p$ <.01.

depression, anxiety, and PTSD were highly correlated, while each showed a negative relationship with psychological well-being.

Hypothesis 2: Tests of the differences in psychological difficulties and psychological well-being between participants who experienced pushback and those who did not are presented in Table 7. Participants who experienced pushback showed significantly higher severity of depression, anxiety, and PTSD symptoms than participants who did not experience pushback, while regarding psychological well-being, no difference between these two groups was obtained.

Hypothesis 3: finally, to test if traumatic experiences during pushback show incremental value in predicting symptoms of depression, anxiety, and PTSD, a series of hierarchical linear regressions were performed on a subsample of participants who have experienced pushback (Table 8). Traumatic experiences in transit positively predicted depression [$F_{(1,127)} = 36.503$, $p < .001$], anxiety [$F_{(1,127)} = 24.721$, $p < .001$], PTSD [$F_{(1,127)} = 19.956$, $p < .001$] as well as overall vulnerability [$F_{(1,127)} = 33.001$, $p < .001$], accounting for 22.3%, 16.3%, 13.6%, 20.6%, respectively. However, traumatic experiences during pushback significantly added to the prediction of depression, accounting for an additional 3.7% of the variance [$F_{(1,126)} = 6.294$, $p = .013$] over and above traumatic experiences in transit, showed a strong trend-level effect in the prediction of anxiety [$R^2 = .023$, $F_{(1,126)} = 3.561$, $p = .061$], and had no incremental value in prediction of PTSD [$R^2 = .008$, $F_{(1,126)} = 1.191$, $p = .277$], thus marginally accounting for 2.4% of the variance in overall psychological vulnerability [$F_{(1,126)} = 3.905$, $p = .050$]. In total, both predictors accounted for 26.0% of the variance of depression [$F_{(2,126)} = 22.159$, $p < .001$], 18.6% of the variance of anxiety [$F_{(2,126)} = 14.390$, $p < .001$], 14.4 of the variance of PTSD [$F_{(2,126)} = 10.589$, $p < .001$], and 23.0% of the overall psychological vulnerability [$F_{(2,126)} = 18.830$, $p < .001$].

**Table 6.** Correlations between traumatic experiences during transit ($N = 201$) and pushback ($N = 129$) and RHS total score, RHS subscales, and psychological well-being.

| | RHS | RHS Depression | RHS Anxiety | RHS PTSD | WB index |
|---|---|---|---|---|---|
| SET-SF | .487** | .451** | .417** | .429** | −.065 |
| SET-SF PB | .406** | .447** | .372** | .302** | −.051 |
| RHS | | .918** | .926** | .899** | −.308** |
| RHS Depression | | | .828** | .721** | −.265** |
| RHS Anxiety | | | | .751** | −.275** |
| RHS PTSD | | | | | −.322** |

SET-SF – Stressful experiences in transit questionnaire – short version; SET-SF PB – Questionnaires for assessing stressful and traumatic experiences during pushback; RHS – Refugee Health Screener overall psychological vulnerability, RHS Depression – Refugee Health Screener depression subscale, RHS Anxiety – Refugee Health Screener anxiety subscale, RHS PTSD – Refugee Health Screener subscale PTSD, Well-being index – psychological well-being; *$p$ < .05, **$p$ < .01.

## 4. Discussion

This study aimed to assess stressful and traumatic experiences refugees face during transit – from the country of origin to the country of destination – with a particular focus on pushback and the impact of these experiences on the refugees' mental health and psychological well-being.

The results provide evidence of the high prevalence of stressful and traumatic experiences refugees face during transit. Comparing current findings with the research from 2017 (Vukčević Marković et al., 2017), which included 261 participants and used the same methodology, it can be noticed that there is an increase in the percentage of refugees who are experiencing some of the traumatic and stressful situations during transit. Thus, compared to the data from

**Table 7.** Tests for differences in psychological difficulties and well-being between persons who have and have not experienced pushback.

| | | *M* | *SD* | *F* (1,196) | *p* |
|---|---|---|---|---|---|
| RHS | No experience of pushback | 22.77 | 13.92 | 20.01 | <.001 |
| | Experience of pushback | 31.87 | 13.49 | | |
| RHS Depression | No experience of pushback | 7.51 | 4.91 | 11.09 | .001 |
| | Experience of pushback | 9.85 | 4.62 | | |
| RHS Anxiety | No experience of pushback | 7.67 | 4.71 | 14.00 | <.001 |
| | Experience of pushback | 10.26 | 4.60 | | |
| RHS PTSD | No experience of pushback | 6.39 | 4.97 | 18.31 | <.001 |
| | Experience of pushback | 9.58 | 5.01 | | |
| Well-being Index | No experience of pushback | 7.32 | 6.46 | 0.38 | .537 |
| | Experience of pushback | 7.96 | 7.22 | | |

**Table 8.** Incremental contribution of traumatic experiences during pushback over and above traumatic experiences during transit on the mental health difficulties ($N = 129$).

| | | RHS Depression | | RHS Anxiety | | RHS PTSD | | RHS | |
|---|---|---|---|---|---|---|---|---|---|
| | Predictors | β | p | β | p | β | p | β | p |
| 1. Block | SET-SF | .316 | .002 | .280 | .008 | .295 | .006 | .329 | .001 |
| 2. Block | SET-SF PB | .248 | .013 | .196 | .061 | .116 | .277 | .199 | .050 |

2017, one-third of refugees more experienced separation from family members. Twice as many refugees experienced the death of a close person during transit compared to 2017. Furthermore, sexual violence during transit and the percentage of those who have suffered serious bodily injuries has also increased.

Furthermore, this study highlights the increasing number of experienced pushbacks compared to previous years. Thus, the data from 2014 (Vukčević et al., 2014) showed that the percentage of those who experienced pushback was 38%, which increased to 48% in 2017 (Vukčević Marković et al., 2017), and to 65.2% of those who experienced pushback in 2021. This trend is in line with data from 2019, when it was recorded that 25,180 individuals experienced pushback to Serbia from neighbouring countries (AIDA, 2019), compared to the data from 2018, when the number of persons who experienced pushback was 10,000 (AIDA, 2018). In addition, results showed a high percentage of stressful and traumatic experiences during pushback, including psychological violence, physical violence, and life-threatening situations. This result is also in line with previous studies showing that the number of reported cases of excessive use of force by the state authorities at border crossings has increased significantly in the last few years, as well as traumatic experiences that often accompany this phenomenon (Belgrade Center for Human Rights, 2017a, 2017b; CRPC, 2019; HCIT, 2017). These included racial insults, confiscation of personal belongings, abuse in the form of forcing refugees to stand still or walk for hours, beatings, pouring cold water during low temperatures, and neglecting medical needs (Beogradski centar za ljudska prava, 2017a, 2017b; HCIT, 2017). A high prevalence of psychological abuse, such as intimidation, threats, insults, and humiliation by government officials, was also reported (Belgrade Center for Human Rights, 2017a, 2017b). The results of this study confirm previous and provide new data on high-risk and dangerous transit routes, especially emphasising traumatic and stressful experiences related to pushback.

Changes in stressful and traumatic experiences over time could be interpreted in light of changing border-related political circumstances. Namely, at the beginning of 2020, the Hungarian authorities closed the transit zones on the border with Serbia, including closing the waiting list for the process of accepting refugees from Serbia to Hungary, which directly affected the increase of irregular crossings and the selection of risky routes (CRPC, 2019), forcing families travelling together to split due to financial and logistical reasons, as supported by our data showing an increase in the number of those being separated from family members during transit. Furthermore, the increase in irregular crossings and the selection of risky routs resulted in a higher number of pushbacks experienced by the refugees now, compared to 2017, and increased violence and harmful border practices by the government officials (CRPC, 2019; HCIT, 2017). This is supported by our results showing the increased percentages of refugees experiencing serious bodily injuries and sexual violence. Irregular crossings and, consequently higher number of unregistered refugees, as well as the increase in pushback practices, show changes in the way irregular migration flow is being managed by the officials. Therefore, the result showing a smaller number of those being detained during transit in 2021, compared to 2017, does not come as a surprise. This also represents one of the few stressful and traumatic experiences with a negative trend throughout the years.

Mental health screening showed that eight out of ten refugees are in need of additional psychological support, and these data are in line with previous studies indicating a high degree of psychological vulnerability in this population (Blackmore et al., 2020; Fazel et al., 2005; Giacco et al., 2018; Vukčević et al., 2014; Vukčević Marković et al., 2017; Vukčević Marković et al., 2018; Vukčević Marković, et al., 2019; Vukčević Marković et al., 2020). The study also showed a high prevalence of symptoms of depression, anxiety, and PTSD. Depression was identified in 50.7% of participants, 15.7% more than in the study from 2020 when mental health screening showed that 35% of refugees experience severe symptoms of depression (Vukčević Marković et al., 2020). In addition, the results showed that somewhat more than three out of ten refugees had pronounced symptoms of anxiety, representing a slight increase compared to 2020 (Vukčević Marković et al., 2020). Finally, concerning psychological well-being, it has been shown that the majority of participants show a low level of psychological well-being and a negative trend compared to previous years (Vukčević Marković et al., 2018; Vukčević Marković, et al., 2019; Vukčević Marković et al., 2020). Based on previous studies discussing the impact of restrictive measures on the mental health

of refugees (ECDPC, 2020; Pinzón-Espinosa et al., 2021; Porter et al., 2021; Spiritus-Beerden et al., 2021; UNHCR, 2020), it can be assumed that the increase in the psychological difficulties compared to 2020 could be related to the stressors caused by the coronavirus pandemic and the specific measures applied in the accommodation centres during the state of emergency (A11, 2020). Similar results regarding mental health difficulties during the COVID-19 pandemic were found in members of the local population (Kostić & Dzamonja Ignjatović, 2021; Vujčić et al., 2021). However, the introduced measures have multiple negative effects on the refugees' circumstances. In addition to fear of contagion and worry for their own health and the health of close ones, introduced measures, in particularly restriction of movement, lead to smaller chances for refugees to cross borders and continue their transit towards Western Europe. In addition, these measures further jeopardise contacts with friends and family and overall social support networks, which are already limited in the context of refugees and migration. Moreover, introduced measures lead to limited access to social and health services. In addition to COVID-19-related circumstances, it should be noted that refugees in transit context are exposed to numerous well-documented risk factors for mental health. These include unfavourable accommodation conditions, typically encountered in the collective centres (Hynie, 2018), safety concerns (Farhat et al., 2018; Vukčević Marković et al., 2020), poverty, discrimination and segregation from the local population (Bjekić et al., 2020; Hynie, 2018; Purić & Vukčević Marković, 2019), problems related to integration (Silove et al., 1997) and loss of cultural rituals and practices (Cantekin & Gencoz, 2017).

Regarding the difficulties related to trauma, this research shows that one-third of refugees have pronounced symptoms of PTSD, which is in line with data from the literature suggesting that PTSD symptoms are more prevalent in refugees than among the general population (Cantekin & Gencoz, 2017; Fazel et al., 2005). This can be attributed to greater exposure to stressful and traumatic experiences in countries of origin during transit (Cantekin & Gencoz, 2017; Giordano et al., 2019; Pejušković & Vukčević Marković, 2020; Purić & Vukčević Marković, 2019; Silove et al., 1997), as well as post-migration stressors and traumas (Vukčević Marković, Kovačević, et al., 2021; Vukčević Marković, et al., 2019). In addition, our study indicated an increase in the percentage of refugees with PTSD difficulties compared to 2020 (Vukčević Marković et al., 2020), when mental health screening results indicated that one in five refugees had pronounced trauma-related difficulties. A potential explanation for these results can also be linked to the impact of the coronavirus pandemic. Namely, the specific measures that were applied in collective centres where refugees were accommodated in order to prevent the spread of COVID-19 included, among others, restriction on freedom of movement, the introduction of a uniformed army to secure camps, and the announcement that barbed wire will be put up around the accommodation facilities (Vukčević Marković et al., 2020). All these represent stressors specifically related to and associated with traumatic experiences refugees survived in their counties of origin. Therefore, circumstances refugees were exposed to during the state of emergency could affect the retraumatization and exacerbation of PTSD symptoms, particularly for refugees with a history of trauma.

In regards to the relationship between traumatic experiences during transit and during pushback, with psychological vulnerability, depression, anxiety, and PTSD, this study confirmed previous findings (Giordano et al., 2019; Purić & Vukčević Marković, 2019; Silove et al., 1997), showing that both are positively related to the symptoms of depression, anxiety, and PTSD. As previously documented, traumatic experiences are one of the risk factors for the endangered mental health of refugees (Giacco et al., 2018; Purić & Vukčević Marković, 2019). In addition, most refugees have experienced some traumatic experiences in their countries of origin, so it could be expected that the experiences of new stressful and traumatic events during transit will have an increased impact on the onset of mental health difficulties, in particular PTSD symptoms, and potentially retraumatization (Fazel et al., 2005; Purić & Vukčević Marković, 2019).

Additionally, the results of the study highlight mental health risks posed by the experience of pushback, showing that those who experienced pushback were more psychologically vulnerable than those who did not, namely, they showed a significantly higher severity of depression, anxiety, and PTSD symptoms. Furthermore, traumatic experiences during pushback significantly added to the prediction of depression and showed a strong trend-level effect in the prediction of anxiety over and above traumatic experiences in transit. The explanation for these results could be found in the specifics of pushback experience and its practical and psychological implications. Namely, stressful and traumatic experiences during transit are mainly happening while a person is on their way, determined to reach the goal on which they put their mind to, i.e. desired destination, thus actively trying to fight overwhelming uncertainty, suffering, and life-treating risks. Therefore, despite the cost and challenges faced along the way, at least they are still 'in control' and one step closer than before, which may represent a potential coping strategy in handling numerous stressful and traumatic events experienced during transit. On the other hand, pushback per se means that the final goal became one step further

than before, and therefore, both the practical and psychological impact of such experience may be substantively different than other events experienced while heading toward the goal. As a result, one may become aware that the duration of stay in transit will be significantly prolonged, which increases the experience of uncertainty, wasting time, and missing out on opportunities. At the same time, due to the loss of control, the fear of not being able to reach the desired final destination may increase, together with the feelings of helplessness and loss of hope (Dimoski & Vukčević Marković, 2022a). This in particular may happen in case of multiple pushback experiences which, all together, can lead to increased severity of depression and anxiety symptoms. The lack of incremental contribution of experiences during pushback in the prediction of PTSD can potentially be found in the fact that experiences of pushback chronologicaly happened more recently since they are often documented at the Serbian borders with neighbouring countries (AIDA, 2020), which might be too soon to allow for detection of its effects on PTSD symptomatology. However, it can be expected that they could, after a while, have a cumulative impact on trauma-related difficulties.

The absence of relationships of both stressful and traumatic experiences in transit and pushback with well-being seems unexpected at first. However, interpretation of both psychological difficulties and well-being scores should be taken with caution bearing in mind the population and circumstances in question. Namely, previous studies indicated a high percentage of those reporting positive emotional experiences in the refugee population while at the same time struggling greatly with the negative symptoms (Dimoski & Vukćević Marković, 2022b; Vukčević Marković, Stanković, et al, 2021). This requires thoughtful and adequate interpretation of both positive and negative experiences in this context. Namely, psychological difficulties occurring among refugees will, at least to some extent, represent rather reactive psychological states. Such difficulties occur due to numerous stressful and traumatic experiences and current difficult life circumstances, and not mental health disorders per se, in particular not endogenous disorders which by definition include the inability to experience pleasure, or other positive emotions and experiences. It could be expected that, in the majority of cases, these psychological difficulties will resolve as the situation improves, while for some, symptoms may persist or even progress into a more chronic condition. Furthermore, well-being, as operationalised in this study, represents rather a measure of positive emotional experiences than overall emotional or psychosocial well-being reflecting the absence of mental health difficulties. When understood in this way, from a clinical and theoretical standpoint, it is not surprising that stressful and traumatic experiences will lead to increased severity of mental health difficulties, in particular depression, anxiety, and PTSD, without necessarily affecting the ability to experience positive emotions or psychological experiences, assessed by the well-being measure used in this study.

### 4.1. Contribution and limitations

The limitations of this study include the gender structure of the sample, which contained vast majority of male participants. However, the gender structure of the sample adequately represents the refugee population in Serbia (UNHCR, 2021b). Another limitation could be linguistic barriers, given the diversity of nationalities in the sample. This limitation was minimised by the presence of trained translators and cultural mediators during data collection, which was at disposal in case of the need for clarifications or any questions. Furthermore, it may be questioned whether there is a tendency among refugees to report a high degree of symptomatology and traumatic experiences to potentially positively influence the asylum procedure. However, this risk should be negligible, given that most participants do not want to stay in Serbia, did not apply for asylum in Serbia, and in addition, they were informed in advance that the information they provided would not affect their legal status in any way. Furthermore, there is a possibility that some participants were reluctant to report certain experiences due to shame or fear of stigmatisation. Finally, one of the main study limitations is the lack of data on COVID-19-related experiences and the extent of individual exposure to introduced measures during the state of emergency. This information would allow interpretation of the relation between identified deterioration in refugees' mental health and COVID-19-related circumstances.

The main contribution of this study is providing data on the numerous risks refugees are exposed to during transit and, specifically, the experiences related to pushback and the effects these experiences have on their mental health. Much existing research focuses on the traumatic experiences from countries of origin and the refugees' difficulties in settling in the countries of their final destination. The results of our study raise awareness of the period in between, which, for many, represents the new reality of living on the move. These results provide valuable information for decision-makers on measures related to refugees' protection that need to be introduced. These include urgent protection measures to reduce numerous risks along the transit routes, as well as specialised mental health services and psychosocial support programmes in countries along the transit route aimed at protecting mental health,

which, as this research showed, is endangered among refugees in transit. Accordingly, the study results call for attention concerning mental health needs, not only in refugees but also in service providers who are secondarily exposed to trauma, whose mental health might also be at risk (Vukčević Marković & Živanović, 2022; Živanović & Vukčević Marković, 2020).

## 5. Conclusion

This research indicated a high prevalence of traumas and stressors experienced by refugees during transit, as well as during pushback, and a high prevalence of psychological difficulties. In addition, the study showed that both traumatic and stressful experiences from transit, as well as those experienced during pushback, negatively affect the symptoms of depression, anxiety, and PTSD. Finally, the study showed negative trends both in the prevalence of stressful and traumatic experiences and the psychological vulnerability of refugees. The protection of refugees during transit continues to be a major challenge for both the government sector and NGOs, despite the identified risks documented in 2014 and 2017 (Vukčević et al., 2014; Vukčević Marković et al., 2017). Adequate and effective measures have not been taken to provide the necessary protection to persons in need of international protection.

## Note

1. For better readability and simplicity, the term refugee will be used throughout the text regardless of persons legal status.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Funding

The study was part of the project funded by the Open Society Foundation and implemented by the Psychosocial Innovation Network in cooperation with the University of Belgrade. Marko Živanović and Maša Vukčević Marković receive institutional support from the Ministry of Education, Science and Technological Development of the Republic of Serbia (no. 451-03-9/2021-14/200163; 451-03-68/2022-14/200163).

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