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# Volunteers' psychological condition during the war in Ukraine – a survey

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**Summary**

**Aim.** Our goal was to fill a literature gap regarding the impact of volunteering on volunteers' mental health.

**Methods.** A total of 867 individuals participated in the survey. After excluding incomplete questionnaires, 703 individuals were included in the final analysis. The participants consisted of Polish-speaking volunteers actively involved in humanitarian efforts to assist the Ukrainian population affected by the ongoing conflict. The self-developed research questionnaire concerning well-being was available from April to May 2022, with the social media platform *Facebook* being used for dissemination. Respondents were categorized into three groups based on how volunteering had influenced their well-being. Subsequently, two groups were identified: volunteers working in Ukraine and those providing in-home refuge for displaced persons. The impact of volunteering on the well-being of volunteers was examined within each of these groups.

**Results.** 45.10% of participants reported that volunteering had a positive effect on their overall well-being, while 35.56% stated it had no impact, and 19.35% reported a negative effect. Somatic symptoms of anxiety were reported by 11.10% of participants and were more severe in 8.25% of cases. 14.10% of participants reported an increased need to use psychoactive substances. Among the volunteers who housed refugees, 52.23% reported increased tension and irritability. 18% of volunteers working in Ukraine indicated a need to consult with a psychiatrist or a psychologist.

**Conclusions.** The impact of volunteering on an individual's mental well-being ranged from positive to detrimental. The initial mood had significant impact on mental well-being after volunteering. The phenomenon of indirect trauma among non-professional volunteers is not sufficiently explored yet and necessitates further research.

**Key words**: war, Ukraine, volunteering

## Introduction

With the beginning of the war in Ukraine, the lives of many people changed dramatically. On February 24, 2022, the Russian Federation invaded Ukraine, which was an escalation of aggression that has been going on since 2014. According to the Office of the United Nations High Commissioner for Refugees, 1,173,690 people left Ukraine during the first week of the war. The number is currently estimated at 6,162,309 (data on 26 June 2022) [1]. Since the first day of the war, Russian armed forces have bombed not only strategic military targets but also cities and villages inhabited by civilians. This forced Ukrainians to abandon their previous life and flee their homeland. In response to these events, many Poles decided to get involved in helping refugees, often putting their physical and mental well-being at risk [2–4].

A similar scale humanitarian crises are already widely described in the literature. A particular case is the Rwanda genocide that took place in 1994 and claimed from 800,000 to 1,071,000 victims. According to a 2020 meta-analysis, the prevalence of post-traumatic stress disorder (PTSD) among the surviving population is 25%. This is significantly higher than the global estimated prevalence of 3% to 14%, although it should be borne in mind that the prevalence of PTSD in the general population depends on many factors, including geopolitical and cultural ones [5].

The prevalence of depression in Rwanda was found to be correlated with PTSD. Participants who met the diagnostic criteria for PTSD were more likely to suffer from depression and addiction [6].

Previous reports indicate that not only direct exposure to traumatic events can contribute to the development or progression of psychopathology, but its effects extend far beyond that and affect the whole community [7–9]. First aiders and volunteers (such as those who helped Ukrainian refugees) are a prominent component of this overall community that can be negatively affected by humanitarian crises. In a 2006 study, Zimering et al. distinguished two groups of humanitarian workers: those directly affected by the World Trade Centre disaster area, and those indirectly exposed by the stories of survivors. In the directly exposed group, 6.4% met the criteria for acute PTSD, while in the indirectly exposed group it was 4.6% [10]. Schlenger et al., in their study on vicarious trauma, proved that following the events of September 11, 4% of the population outside the attack sites met the PTSD criteria and their exposure was limited only to watching TV news [9]. Moreover, the incidence of PTSD among unaffiliated volunteers is higher than the overall incidence of PTSD among employees previously trained or experienced in disaster relief [11].

In 2022, a Czech-British team dwelled on the problem of the level of anxiety and depression among young adults in Central Europe staying outside the war zone in Ukraine. They showed that moderate and severe anxiety occurred in 22.3% and 13.7% of study participants, respectively. In turn, symptoms of moderate depression occurred in 22%, moderately severe in 11% and severe in 7.1% of study participants.

In addition, 3.6% of the respondents declared suicidal thoughts almost every day, and in 4.8% they occurred for more than half of the days [12].

The literature review conducted by Bogic et al. regarding the prevalence of mental disorders among adult war refugees several years post-displacement revealed significant heterogeneity concerning the incidence rates of PTSD (4.4–86%), depression (2.3–80%) and unspecified anxiety disorders (20.3–88%). This finding underscores the necessity for further investigation into these phenomena. The authors explain the above heterogeneity by factors such as the period of displacement, the region to which the refugees arrived, the geographical area of the conducted study, the language used by the researcher, the size of the study groups, and the difference in the methodological quality of the studies [13].

The literature pertaining to the impact of war trauma on areas other than PTSD remains inadequate, and the present study attempts to address this gap.

Volunteers involved in helping Ukrainian refugees are usually people who are not professionally involved in assisting and thus often not adapted to dealing with crises, often without easy access to specialist psychological or psychiatric help. This dependence makes them a group potentially highly exposed to the impact of volunteering on their well-being and mental health. Consequently, they have become the focus of this paper.

## Materials and methods

A total of 867 individuals participated in the survey. After excluding incomplete questionnaires, 703 individuals were included in the final analysis. The study population consisted of Polish-speaking volunteers involved in helping Ukrainians affected by the war. Participation in the survey was voluntary. A questionnaire was available from April 18 to May 2, 2022, via *Facebook* platform. All potential survey participants were informed that their answers were anonymous and that the data were collected for research purposes only. The link to the questionnaire was placed on groups for volunteers supporting victims of war in Ukraine. In order to achieve the broadest reach, we implemented a strategy utilizing specific key words such as "aid to Ukraine," "volunteers for Ukraine," "city for Ukraine," "province for Ukraine," and "assistance to Ukrainian refugees." These phrases were searched in conjunction with names of cities and provinces. Through this operation, we were able to reach the greatest possible number of groups gathering volunteers. To obtain the data, a 32-item author-developed questionnaire was utilized. The complete questionnaire used for the study can be found in the supplementary materials [Appendix 1].

Frequencies with percentages were used in data analysis. The studied population was divided into respective groups three times. In the first division, respondents were split into three groups based on the impact of volunteering on their well-being. In the following two divisions, a study group and a comparison group were distinguished.

In the first of these divisions, the study group consisted of volunteers working in Ukraine, who were compared with the rest of the volunteers. In the subsequent division, the study group comprised volunteers who had hosted a refugee. The purpose of distinguishing these groups was to examine the impact of volunteer work in Ukraine and taking in refugees on mental health. The chi-square test statistic was used to test for association between variables with the level of significance set below 0.05. STATISTICA 12 software was used to compile the results.

## Results

Of the 703 respondents, 569 (80.94%) were female, 131 (18.63%) were male and 3 (0.43%) non-binary. Over 51% of respondents were people aged 31–45, while only 1.5% were over 60 years old. In total, 22.9% of respondents were from rural areas and 77.1% were from urban areas. The percentage of people with higher education was 67.71%, secondary 26.31%, post-secondary 2.84%, primary 2.13%, and basic vocational 0.99%. 30.02% of respondents were not in a relationship, 15.65% were in an informal relationship, and 54.34% were married. The characteristics of the study group are presented in Table 1.

Table 1. **Demographic characteristics of the surveyed group**

| Demographic characteristics of the surveyed group | | |
|---|---|---|
| Characteristic | Number (Total respondents: 703) | Percentage |
| Gender | | |
| Women | 569 | 80.94% |
| Men | 131 | 18.63% |
| Non-binary | 3 | 0.43% |
| Age group | | |
| <20 years old | 28 | 3.98% |
| 20–30 years old | 139 | 19.77% |
| 31–45 years old | 360 | 51.21% |
| 46–60 years old | 165 | 23.47% |
| Over 60 years | 11 | 1.56% |
| Place of residence | | |
| Rural areas | 161 | 22.9% |
| Cities | 542 | 77.1% |
| Education | | |
| Higher education | 476 | 67.71% |
| Secondary education | 185 | 26.32% |

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| | | |
|---|---|---|
| Post-secondary non-tertiary education | 20 | 2.84% |
| Primary education | 15 | 2.13% |
| Vocational education | 7 | 0.99% |
| Marital status | | |
| Single | 164 | 23.33% |
| In informal relationship | 110 | 15.65% |
| Married | 382 | 54.34% |
| Divorced | 39 | 5.55% |
| Widowed | 8 | 1.14% |

Volunteers were motivated primarily by their selfless willingness to help (88.76%) and compassion towards war victims (71.98%). A large part wanted to improve their own well-being (17.78%), others motivated their actions with political (14.65%) or religious views (13.94%), while 1.28% of respondents decided to volunteer due to social pressure. Among those who were motivated by a desire to improve their own well-being, volunteering less often caused mood deterioration ($p$ <0.05). Before volunteering, 30.16% of respondents assessed their well-being as very good, 40.82% as good, 19.63% as average, 7.54% as poor, and 1.85% as very poor. Before volunteering, 39.12% of people had no concerns and 11.95% were concerned that it would affect their mental health. 35.56% of study participants declared that their involvement did not affect their well-being, 19.35% said that it had deteriorated, and 45.10% reported an improvement.

People in whom volunteering caused mood deterioration were those who had a very good mood before it ($p$ <0.05), and those who were more likely to worry that it might take a toll on their mental health and that they would not have time to fulfill their existing obligations ($p$ <0.05).

There were no statistically significant differences in terms of gender, age, place of residence, education, marital status, having children, occupation, or monthly income in the case of the influence of volunteering on mood. For 7.90% of the respondents, sleep difficulties worsened after starting volunteering. Non-restorative sleep was not an issue for 46.51% of respondents before, and for 38.98% after volunteering. 20.91% of the respondents said the problem got worse. Dreams about war occurred in as many as 47.51% of study participants. Somatic symptoms of anxiety appeared in 11.1% and intensified in 8.25%. People whose volunteering caused a mood deterioration felt anxiety for no apparent reason more often than usual ($p$ <0.05). Volunteering was correlated with experiencing increased tension and irritation in 38.97% of cases. A summary of all observations mentioned above is presented in Table 2.

Table 2. **Summary of observations regarding various aspects of the study group**

| Observations regarding various aspects of the study group | |
|---|---|
| Aspect | Percentage |
| Motivation for action | |
| Selfless willingness to help | 88.76% |
| Compassion towards war victims | 71.98% |
| Improvement of personal well-being | 17.78% |
| Political views | 14.65% |
| Religious views | 13.94% |
| Social pressure | 1.28% |
| Pre-volunteering well-being | |
| Very good | 30.16% |
| Good | 40.82% |
| Average | 19.63% |
| Poor | 7.54% |
| Very poor | 1.85% |
| Concerns about the impact of volunteering on mental health | |
| Volunteers without concerns | 39.12% |
| Volunteers with concerns | 11.95% |
| Impact of volunteering on well-being | |
| No impact | 35.56% |
| Deterioration | 19.35% |
| Improvement | 45.10% |
| Impact of volunteering on sleep | |
| Exacerbation of sleep difficulties | 7.90% |
| Individuals without non-restorative sleep issues before volunteering | 46.51% |
| Individuals without non-restorative sleep issues after volunteering | 38.98% |
| Exacerbation of non-restorative sleep issues | 20.91% |
| Individuals who had dreams about war | 47.51% |
| Somatic symptoms of anxiety and increased tension and irritation | |
| Occurrence of somatic symptoms of anxiety | 11.1% |
| Increase in somatic symptoms of anxiety | 8.25% |
| Elevated tension and irritability due to volunteering | 38.97% |

Among individuals for whom volunteering was correlated with a deterioration in well-being, increased tension and irritation ($p$ <0.05) were significantly more

frequent, and they experienced somatic symptoms of anxiety during its course more often ($p$ <0.05). Additionally, they perceived that the increased tension and irritation had an impact on their daily lives ($p$ <0.05). Table 3 compares feelings of anxiety or fear for no apparent reason before and after volunteering. 13.4% of the respondents stated that there was a need to take sedatives or hypnotics (10.24% used sedatives and 4.98% – hypnotics) (Figure 1). Whereas 14.10% experienced an increased need to use psychoactive substances (alcohol, cigarettes and others) (Figure 2). Sedatives and sleeping pills ($p$ <0.05), psychoactive substances ($p$ <0.05), alcohol ($p$ <0.05), and cigarettes ($p$ <0.05) were used more often by those whose volunteering caused mood deterioration.

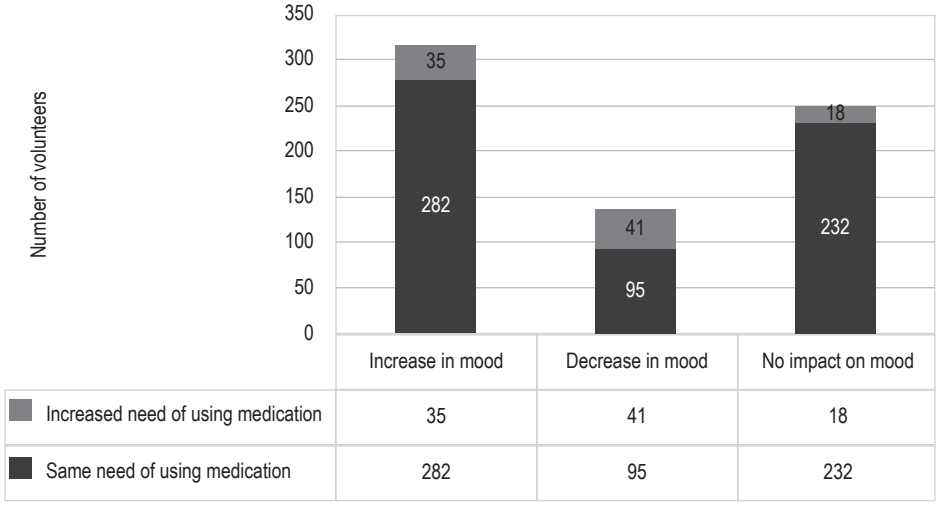


Figure 1. **Comparison of need of using medication depending on impact volunteering had on volunteers' mood**

A statistically significant association was demonstrated between participation in volunteering and the need for contact with a psychologist or psychiatrist in 8.10% of instances. Such a need arose more often in the group in which volunteering caused a deterioration of well-being ($p$ <0.05). Eating habits changed in 46.1% of study participants. Lack of regularity in eating meals, unrelated to work/volunteer hours, occurred in 11.66% of volunteers. "Stress eating," excessive appetite/overeating and loss of appetite occurred in 13.94%, 6.97%, and 11.38%, respectively. Among those in whom volunteering worsened well-being, stress eating ($p$ <0. 05), excessive appetite/overeating ($p$ = 0. 02) or loss of appetite ($p$ <0. 05) were more common.

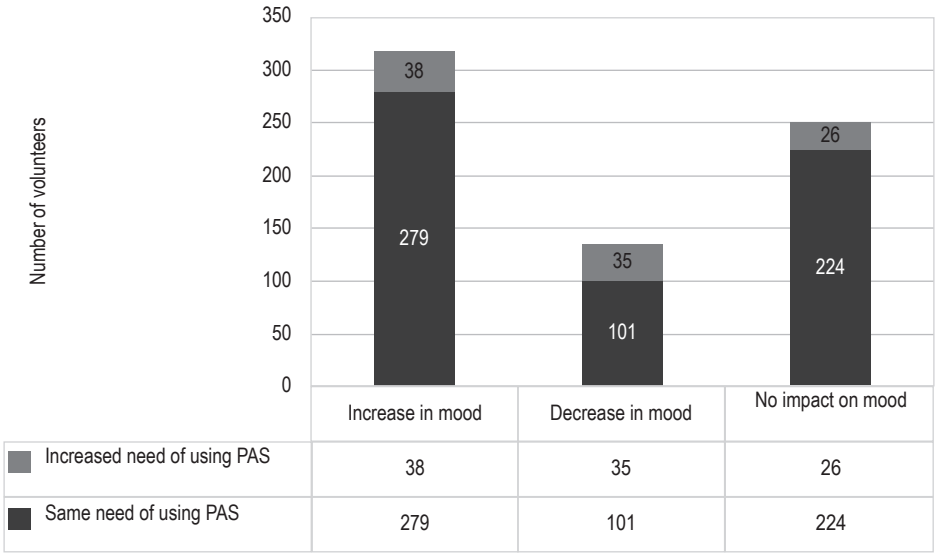


Figure 2. **Comparison of need of using psychoactive substances (PAS) depending on impact volunteering had on volunteers' mood**

Table 3. **Comparison of feeling anxious for no apparent reason before and after volunteering**

| Feeling anxious for no apparent reason | | | |
|---|---|---|---|
| Before volunteering | | After volunteering | |
| No | 43.24% | No | 39.83% |
| Rarely | 25.04% | Rarely | 9.82% |
| Sometimes | 24.04% | Sometimes | 27.45% |
| Often | 7.68% | Often | 22.9% |

## Volunteers operating in Ukraine

Volunteers operating in Ukraine did not differ from other study participants in terms of age, place of residence, education, marital status, having children, and earnings. They were more often male ($p$ <0.05) and entrepreneurs ($p$ <0.05). Regarding motivation, they did not differ from the control group in terms of the desire to improve their own well-being, compassion towards war victims, social pressure, political and religious views. The willingness to help as motivation was less frequent in this group ($p$ <0.05).

The study and comparison groups did not differ in terms of well-being, irritability due to excess responsibilities, difficulty sleeping, anxiety for no apparent reason, sleep recovery, perceived levels of tension and irritability both before and after volunteering. In addition, no differences in concern about volunteering, the occurrence of somatic

symptoms of anxiety, the frequency of taking sedatives and sleeping pills, and the frequency of using psychoactive substances were observed. Volunteers in the study group declared feeling a greater need for contact with a psychologist/psychiatrist compared to the comparison group (18% vs. 7.35%, $p$ <0.05).

### Volunteers housing a refugee at home

This study group did not differ from the others in terms of gender, age and monthly income. They were older than the others ($p$ <0.05), more often married ($p$ <0.05) and more often having children ($p$ <0.05). They were more often from a rural area or small town ($p$ <0.05). No correlation was demonstrated between the presence of social pressure and the decision to host refugees in one's home ($p$ <0.05), religion turned out to be the motivation more often (18.75% vs. 11.69%, $p$ <0.05). Depending on whether the volunteering consisted of housing the refugee at home or not, the groups did not differ in terms of feeling anxious for no apparent reason, difficulty falling asleep and a sense of restorative sleep, both before and after volunteering. The comparative and study group did not differ in terms of the prevalence of dreams about war, presence of somatic symptoms of anxiety, use of sedatives or sleeping pills, frequency of psychoactive substances use, need to contact a psychologist or psychiatrist, and the impact of experiences on re-joining volunteering. Housing a refugee was more often associated with increased tension and irritability (52.23% vs. 32.78%, $p$ <0.05). It also had a greater impact on everyday life (44.2% vs. 32.57%, $p$ <0.05). Mood deterioration was observed more frequently in the study group (28.57% vs. 15.03%, $p$ <0.05). A summary of observations regarding volunteering in Ukraine and taking in refugees at home is presented in Table 4.

Table 4. **Summary of observations: Volunteering in Ukraine and taking in refugees at home**

| Volunteering in Ukraine vs. hosting refugees at home | | |
|---|---|---|
| | Volunteering in Ukraine | Taking in refugees at home |
| Gender | More men (p <0.05) | No difference |
| Age | No difference | Older (p <0.05) |
| Place of residence | No difference | More frequently from rural areas or small towns (p <0.05) |
| Marital status | No difference | More often married (p <0.05) |
| Having children | No difference | More often have children (p <0.05) |
| Social pressure | No difference | No difference |
| Motivations | Less frequent desire to help (p <0.05) | More often religious motivation (p <0.05) |
| Increased tension and irritability | No difference | More often (52.23% vs. 32.78%, p <0.05) |

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| | | |
|---|---|---|
| Impact on daily life | No difference | Greater impact (44.2% vs. 32.57%, p <0.05) |
| Mood changes | No difference | More frequent mood deterioration (28.57% vs. 15.03%, p <0.05) |
| Need for contact with a psychologist/psychiatrist | Greater (18% vs. 7.35%, p <0.05) | No difference |

## Discussion

Impact of volunteering on mental health can be clearly noticed. Its positive influence from both individual and societal standpoint has been extensively touched upon in national and international literature [14, 15]. Benefits gained from volunteering may depend on age, health, socioeconomic standing, and exact type of volunteering [4, 16]. Studies carried out on a group of elder adults not only showed positive impact on their mental health but also decreased risk of physical impairment and death. It also improves self-esteem and can help to slow down age-related loss of cognitive functions [17, 18]. Among young adults it was shown that volunteering during COVID-19 pandemic influenced the direction of their career path and development of empathy and altruism [19]. Ying Chen et al. noted that a sense of mission accompanying volunteers is conducive to their mental well-being [18]. Time spent on volunteering was also an important factor. The best results in terms of mental well-being were noticed in people involved in at least 100 but not more than 800 hours a year [20].

While describing the effects of volunteering negative aspects also cannot be omitted. The results obtained in our analysis revealed that well-being of some volunteers decreased, tension and irritability increased and the somatic symptoms of anxiety became more pronounced. In some difficulties with falling asleep intensified, they struggled with the phenomenon of non-regenerative sleep and complained about the occurrence of nightmares about the war. These negative effects may be related to indirect trauma, the occurrence of which was associated with exposure to Ukrainians' accounts of the war. This is consistent with the results reported by Zimering which demonstrate that indirect exposure to traumatic stressors contributed to PTSD in 4.6% of those working at the World Trade Center disaster site [10]. Cetin, on the other hand, linked the development of PTSD in volunteers working on removing the effects of the earthquake that took place in Turkey with their identification with the victims [21]. The geographical proximity of Poland and Russia as well as historical issues in Polish-Russian relations may cause Poles to subconsciously identify with the Ukrainian nation, which may intensify the impact of indirect trauma on the mental well-being of volunteers. Similar conclusions were reached by Czech scientists who assessed the symptoms of anxiety and depression among university students in the Czech Republic during the Russian-Ukrainian war in 2022. Compared to Czech students, students of

Slovak origin presented a higher level of "feeling of anxiety" which was related to the fact that Slovakia borders a war-torn country [12].

Collaboration between volunteers and professionals is common in crisis situations. The unquestionable advantage of the latter is their professional education and previously gained experience enabling them to operate more efficiently and effectively [22]. However, anyone can become a volunteer, regardless of their predispositions. In the case of our study, this group consisted of Poles involved in helping Ukrainian refugees seeking shelter from war. The analysis of respondents' answers revealed that for many individuals, participation in volunteering was correlated with a deterioration in mood, and in 8.1% of the subjects, there emerged a need for contact with a psychologist or psychiatrist. Furthermore as many as 19.91% of people were not sure of their feelings concerning the need to consult a specialist. All these factors confirm that volunteering can have a significant impact on mental well-being and dealing with its negative effects may require specialist care, to which professionals have easier access.

Polish soldiers on a stabilization mission in Iraq had their levels of anxiety, depression, aggression, and PTSD symptoms examined after their return. The control group consisted of soldiers stationed in Poland. The incidence rate of depression and anxiety was not significantly different from the comparison group. However, the assessment of the intensity of aggression showed that it was higher in the study group. Ultimately, none of the soldiers met the criteria for a PTSD diagnosis. The author correlates these results with proper training of soldiers and preparing them to operate in crisis situations [23].

The results obtained in our analysis coincide with the study conducted in 2006 at Columbia University on the issue of increased alcohol consumption among people exposed to traumatic experiences [3]. So far, there have been no studies examining the relationship between volunteering and the frequency of using drugs or psychoactive substances. In our study, the use of sedatives and sleeping pills was identified in 13.4% of the surveyed individuals. A small percentage declared the need to use psychoactive substances (1.56%). This is one of the ways that people affected by significant psychological stress or trauma can strive to improve their own well-being.

Among people operating in Ukraine, we noted an increased need for contact with a psychologist in relation to the comparison group (18.00% vs. 7.35%). This is consistent with our expectations, as it was the form of volunteering that seemed to carry the greatest risk of negative impact on mental and physical health of volunteers. Direct exposure to war-related traumatic events, lack of support from family and friends [24], and being in an unfamiliar area made this group more aware of possible negative psychological effects of this form of volunteering. In addition, a large percentage in this group were people with higher education (67.70%), which certainly positively influenced their self-awareness and did not stop them from admitting that they might need the help of a specialist.

Our study showed that people who housed a refugee more often felt increased tension and irritability (52.23% vs. 32.78%) and their mood deteriorated more often. This may be related to the phenomenon of secondary traumatic stress defined as the risk incurred by a person when empathizing with a person who has suffered a trauma [25]. Ukrainians may have felt a strong need to share stories that have happened to them since the beginning of the war, which in turn could be a constant source of potentially traumatizing stimuli for the volunteers, the influx of which they could not control. Perry emphasized that repeated listening to the same or similar stories without resting long enough is one of the reasons for the increased risk of developing indirect trauma [26].

## Limitations

The methodological limitation of our study was sending the invitation to the survey only via the Internet. This narrowed the study group to people using social media sites, and thus made it much more difficult to reach volunteers over 60 years of age. Due to the full anonymity of the participants, it was not possible to identify the personal data provided by them and to verify whether they were actually involved in volunteering for Ukraine. We are unable to determine whether the low percentage of men among the survey respondents is due to their lower involvement in volunteering or their reluctance to participate in the survey.

Another significant limitation appears to be the disregard for intergroup differences between volunteers who have taken in a refugee at home, and those operating in areas of armed conflict. This constitutes an interesting field for further research. An additional limitation of the study was the absence of established boundary criteria for the degree of involvement in volunteer work. Another limitation seems to be the non-implementation of a system that prevents the same individual from filling out the survey multiple times. Consequently, there might have been a risk that the number of obtained survey responses did not accurately reflect the number of volunteers involved in aiding refugees from Ukraine.

## Recapitulation

To the best of our knowledge and belief, this is the first study dealing with the subject of the impact of volunteering and its scope on the psychological well-being of Polish volunteers helping Ukrainian refugees. The propagation of our survey via the Internet made it possible to reach volunteers from various parts of Poland, which would not have been possible in the case of a traditional survey. Thanks to this, the obtained study group better reflects the cross-section of the volunteer community. The use of our self-made questionnaire as a research tool enabled the best possible collection of data on the mental state of the respondents, while also maintaining a short form of the survey not to discourage them from sending full answers.

## Conclusions

Exposure to indirect trauma may result in sleep disorders, somatic symptoms of anxiety, increased tension and irritability, and in some cases may cause the need to reach for sedatives/sleeping pills, psychoactive substances or alcohol. Despite the often positive or neutral impact of volunteering on well-being, it is impossible to ignore the cases in which it is associated with a negative impact on individual mental health.

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