

Post-Traumatic Growth among Ukrainian Women Refugees during the Ongoing Russian-
Ukrainian War

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Abstract

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According to recent data, more than 8 million Ukrainians have been forcibly displaced due to the ongoing Russian-Ukrainian war. Most of the research looks at the war aftermath through pathogenic lenses, which focus on the negative mental health consequences of the war on civilians, such as anxiety, depression, and post-traumatic stress disorder (PTSD). However, researchers have started shifting to the salutogenic approach to conflicts and have refocused on resilience and post-traumatic growth (PTG) which may be developed after traumatized events. PTG is defined as “the positive psychological changes experienced as a result of the struggle with traumatic or highly challenging life circumstances”. This study aims to understand potential factors contributing to the PTG development among Ukrainian refugees who have been forcibly displaced by the ongoing war of Russia in Ukraine.

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To all the defenders of Ukraine thanks to whom I have the Home.

And to God for life, growth, and zest to complete this Journey.

Introduction

Project Aims

Refugee research has predominantly focused on determining problems – such as trauma exposure and mental health conditions such as post-traumatic stress disorder (PTSD). This study aims to understand potential resilience factors among Ukrainian refugees who have been forcibly displaced due to the ongoing war with Russia in Ukraine. Specifically, this study will utilize qualitative interviews and narrative analysis to understand (a) potential indicators of posttraumatic growth (PTG) in this cultural group and (b) factors that may have contributed to the development of PTG.

Table 1. Research Questions

#	Questions
1	What are the life experiences associated with forced displacement among Ukrainian women refugees due to the ongoing Russian-Ukrainian war?
2	To what extent do participants demonstrate potential indicators of PTG in the midst of an ongoing, unresolved sociopolitical conflict?
3	What themes or domains associated with PTG emerge and how consistent do they appear to be with the larger body of research into PTG?
4	What factors facilitate the development of PTG among Ukrainian women refugees during the ongoing Russian-Ukrainian war?

Background and Significance

Modern medicine is based on the pathogenic approach which centers on the concept that the human organism is attacked by the pathogens which results in damage and is sometimes fatal (1). The term “salutogenesis” was coined by Aaron Antonovsky in 1979 in his book “Health, stress and Coping”, which means the origins (genesis) of health (saluto)” (2). It is defined in the salutogenic model of health (SMH), a theory that understands stressful events as an inevitable part of our life and a source of human experiences, which shape the sense of coherence. A strong sense of coherence helps to mobilize energy to cope with stressors. At first, the salutogenic idea appeared during the study of the group of women survived the Holocaust, and among them there was a group of women whose health indicators were surprisingly good (3). In recent decades, a salutogenic approach has been utilized to study different areas of healthcare such as mental health, particularly of militaries, dementia care, primary care, and health promotion (4,5). Meanwhile, regarding the global refugee crisis, when over 100 million people are displaced (6), there is an increased interest in the salutogenic approach to the refugee health (5).

The word “trauma” is a Greek word, and derives from the verb “titrosko”, which means “to pierce, to wound”. In terms of medicine, it includes physical injuries, burns, internal and external damage of body tissues. Metaphorically it means the psychological wound, that is the piercing of the psychological protection. Etymologically the verb “titrosko” derives from the word “teiro”, which means “to rub”. The word “rub” itself enriches the meaning and depth of the term because the outcome of “rubbing in” is piercing, and damaging, while the result of “rubbing off, rubbing away” is erasing, and renewing. All of those actions suggest a transformative process that results in an improved product (7).

Nowadays, there are many connotations of “trauma”, which makes it difficult to understand what it really means, because it may range from the discomfort to the serious psychiatric conditions. It may refer not only to the individual, but to the group of people, and as a response to the cultural, political, and societal events (such as “post-colonial trauma” or “intergenerational trauma” (7).

Traumatic events have been defined by Criterion A of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition as the exposure of a person to “death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence, in the following way(s):

- Direct exposure
- Witnessing the trauma
- Learning that a relative or close friend was exposed to a trauma
- Indirect exposure to aversive details of the trauma, usually in the course of professional duties (e.g., first responders, medics).” (8)

These events can also be understood as “circumstances that significantly challenge or invalidate important components of the individual assumptive world” (9). Traumatic events may have negative psychological effects (on thoughts, emotions, behaviors), negative physical outcomes, psychiatric disorders. For the majority of people, the symptoms fade over time. Time is not the healer itself, but the experience and coping mechanisms used during this period of time (10). Alongside the trauma experienced in person, there is the “vicarious trauma”, that is a “process of change resulting from the empathetic engagement with trauma survivors” (11). There has been research on the media's impact on the emotional distress, anxiety and elevated rate of the secondary PTSD of people being exposed to disturbing images and videos of collective trauma on media (12–14).

Posttraumatic Growth

Most of the research focuses on the negative mental health consequences of the war on civilians, such as anxiety, depression, and post-traumatic stress disorder (PTSD), thus, looking at the war aftermath through pathogenic lenses (15).

Meanwhile, literature started shifting to the salutogenic approach to the conflicts and discovering the resilience and post-traumatic growth (PTG) which may be developed after traumatized events (16,17). PTG is defined as “the positive psychological changes experienced as a result of the struggle with traumatic or highly challenging life circumstances” (9). PTG is not an absence of PTSD. Moreover, they may exist together, and PTG is caused by the same traumatic events as PTSD. There is no linear relation between the traumatic event and PTG (18,19). There is evidence that PTSD among Israeli veterans participating in psychotherapy interventions results in a higher extent of PTG (20). PTG does not deny the challenges and difficulties people faced. The concept proposes to look wider and see other outcomes of the trauma (21).

PTG is not completely a new concept, and it was described in ancient religions and philosophy, yet the concept was operationalized in the psychological research literature by Richard G. Tedeschi and Lawrence G. Calhoun in the mid-1990s (9).

Before the term was studied by *various* scientists and was called as “perceived benefits”, “positive aspects”, “transformation of trauma”, “positive psychological changes”, “perceived benefits or construing benefits”, “stress-related growth”, “flourishing”, “positive by-products”, “discovery of meaning”, “positive emotions”, “thriving”, “positive reinterpretation”, “drawing strength from adversity” and “transformative coping” (22).

Those terms are united with the positive outcomes after the trauma, showing the ability of mental health to adopt and be focused on the potential positive outcomes of the event.

Previous research on PTG has identified 5 main domains:

Table 2. PTG Domains

#	Domains	Explanation
1	Appreciation of life.	This domain means that some people may start seeing life differently with greater appreciation of simple everyday things.
2	Relating to others	This domain could be experienced as positive changes in relationships, such as conscious decisions to spend more time with relatives and friends.
3	Personal strength	This domain may be described as “I am more vulnerable than I thought but much stronger than I could imagine”. PTG can be seen through the perception of oneself as the victor, survivor, rather than the victim. It can lead to new behavioral changes.
4	Spiritual change	This domain reflects changes people experience in their spiritual and religious lives. PTG may be seen in the reflections about life, mortality, and harmony.
5	New possibilities	This domain could be seen in the possibilities an individual is taking, and new interests in life. Sometimes trauma events may make the trauma survivors change their work lives to address the circumstances they experienced and to help other people to go through them (9,22).

Factors associated with the PTG

Regarding environmental factors which may predict PTG, the time to develop PTG since the traumatic event may vary. The growth experienced two years after the event may be evidence of

PTG as people are coping with the stress (23). Individual characteristics such as extraversion and openness to the experience are associated with the PTG. Social support is one of the most important factors contributing to the PTG, especially if it remains stable and consistent over time (22). The benefit of the social support is well-studied, especially if it is experienced through mutual community support groups (10,21). Cognitive processing, such as positive ruminations, aiming to make sense of the event, is related to the PTG. Coping strategies (individual or community) and participation in public demonstrations and rallies may promote PTG. Sense of responsibility is positively associated with the reestablishment of the sense of control (24).

Trauma and Potential Consequences of Forced Displacement

Refugees are “people who have fled war, violence, conflict or persecution and have crossed an international border to find safety in another country” (25). The Russian - Ukrainian war started in 2014, but the full escalation happened on February 24, 2022 (26). As of today, around 8 million Ukrainians crossed the borders with other countries hiding from the attacks (27). PTSD and PTG have been studied predominantly among veterans, although refugees are an important group suffering from unexpected changes as well. Refugees face different challenges, in particular language barriers, access to healthcare services and housing, issues with raising children, cultural differences, and racism (28). Regarding the Ukrainian refugees fleeing the ongoing Russian-Ukrainian war, they may be exposed to potentially traumatic events of army attacks or occupation, damaged or destroyed houses, deaths of relatives, and family separation because males are forbidden to leave the country (29). The International Organization for Migration Crisis Response Plan 2023 has identified “Mental Health and Psychosocial Support” as a priority of its objectives to decrease the impact of the forced displacement (30).

Positive changes in the aftermath of a traumatic experience were reported among different populations: people with cancer, HIV/AIDS, among militaries, sexual assaults survivors, medical staff during the COVID-19, survivors of genocides, after plane crashes and refugees after the wars (18,27,31). PTG may be detected simultaneously with indicators of distress, including PTSD. PTG measures assess the transformative changes that may be shaped by the same trauma factors that may lead to PTSD (9). PTG was conceived and studied as an individual process; however, it may be developed and considered at the population level and the research findings could provide information on the factors facilitating the PTG development in communities (23).

Regarding the Ukrainian population, there are studies on the PTG among internally displaced populations (IDPs) in Ukraine due to the Russian-Ukrainian war in 2014 (23), Ukrainian militaries fighting in Eastern Ukraine (32), and intergenerational trauma of the genocide Holodomor (which has been referred to as Great Famine, a genocide engineered by Soviet government in 1932-1933, which resulted in the deaths of around 7 million people in Ukraine) (31,33). However, there is no study on PTG among Ukrainian refugees during the ongoing Russian-Ukrainian war, which full escalation happened on February 24, 2022. And there is little known on how to promote PTG among refugees through community-based interventions. The research presented here was intended to fill some of these gaps in our understanding of PTG.

Methods

Author positionality and role in the work

Olena Bidovanets is a Ukrainian, Fulbright student, and second-generation medical doctor (infectious diseases and psychotherapy specialization). The author conducted the interviews, transcribed, translated in English, and coded and analyzed the interviews. The researcher brought the experience of her cultural background to her work and strived to be aware of her biases toward the ongoing Russian war in Ukraine and the ways in which it could shape her research.

Study settings

The study was conducted during the period from February 6 to February 23, 2023. There were eight people interviewed, seven females and one male. The numbers were skewed towards females as it is difficult to identify and recruit males because they are forbidden to leave Ukraine during the war. All interviews were conducted via Zoom. All participants were contacted via emails they provided in the surveys or via messengers (Telegram, Viber, WhatsApp) (34–36). Calendly was used to schedule the interviews, which were recorded on Zoom after the participants consented, and saved on Google Drive with the access limited to the author (37). The AVA program was used to simultaneously provide the written transcript from the interview (38). WavePad Audio Editing Software was used to analyze the voice records (39).

Study Population

The project population was all women who self-identified as refugees during the ongoing Russian-Ukrainian war. People who left Ukraine since February 24, 2022, and crossed the border fleeing the war and still were abroad, were eligible to participate in the study. Thirty participants agreed to be interviewed as part of a collaborative study with another investigator (Larisa Ozeryansky) after filling out a quantitative survey. Eight participants were chosen to be interviewed based on

the fact they preferred Ukrainian language to speak. The author elected to conduct an analysis on the seven interviewed women as a more homogenous group to look for shared experiences among this cohort only.

Sampling method/recruitment strategy

This study used the existing database of the Ph.D. student researcher Larisa Ozeryansky, who enrolled the participants for her study and conducted the first stage of the study – an online survey in June/July 2022 that collected data on the refugees' decision-making and health experiences, particularly the destination and route during the war. Participants were recruited through participant-driven sampling starting with a single individual from the community (a Ukrainian refugee) with an interest in this project. Snowball sampling was used to identify additional participants. Participants were given the online survey link and passed it along to their own social contacts. Those who agreed to participate in the interviews were chosen for the next stage of the study that is presented here.

Criteria for eligibility/exclusion of cases

All participants had to be adult women, 18 years or older, who left Ukraine after February 24, 2022 due to the war escalation, and who considered themselves as a refugee, and at the moment of interview was outside Ukraine.

Study Design

During the research the author aimed to answer the following research questions (see Table 1). For this study, qualitative data collection and analysis methods were used. Semi-structured interviews included questions about the participants' experience of trauma exposure and responses to the war aftermaths. The interview questions were structured based on five domains of PTG (see Table 2).

Data Collection

The interviews were conducted online via Zoom and Viber. All conversations were recorded, and the interviewer was taking contemporaneous notes. AVA software was used to provide a transcript of the conversation from Ukrainian to English. The participants gave their consent to be interviewed during the first phase of the study. The interview started with an introduction describing the project and asking whether they agreed to record the conversation. The interview duration was around 1 hour. There were five interview questions about trauma experience and potential PTG features (see Appendix 1). Participants were located in different countries, such as Germany, Hungary, Norway (two participants), Portugal, Sweden, and the US (see Table 3).

Data Analysis

The author started the interview transcription and coding process simultaneously using Dedoose software 9.0.78 qualitative analysis data application. Coding of interviews used a hybrid approach combining deductive and inductive code creation. The author started with the deductive (a predefined set of codes developed based on the research question and literature) coding approach. New codes (inductive coding) were developed and added while the author was reading through transcripts and refining the codebook (see Appendix 2).

Results

Table 3. Participants Demographic Data

Participant	Age	Marital status	Education	Occupation before February 2022	Change in Occupation
1	27	Married	Master's Degree	Teacher	Unemployed
2	29	Single	Master's Degree	Sportswoman, cosmetologist	Same as in Ukraine
3	36	Married	Incomplete Degree	Cook	Same as in Ukraine
4	38	Divorced	Bachelor's Degree	Maternity leave	Maternity leave
5	38	Married	Bachelor's Degree	Teacher	Same as in Ukraine
6	42	Divorced	Bachelor's Degree	Chairwoman	Same as in Ukraine
7	52	Divorced	Bachelor's Degree	Psychotherapist	Unemployed

Qualitative data results

During the analysis process there were quotes, which could be coded with two or more different codes. For instance, the quote about worsening relationships with the relatives from Russia after the war started, was indicated with the code “less communication” and “betrayal trauma”.

Six themes identified at the beginning of the research based on the trauma exposure and PTG domains described by R. Tedeschi and L. Calhoun were detected:

- a) Since February 2022 all participants experienced **trauma exposure** such as personal traumatic events and traumatic events to others. One participant experienced trauma the second time since February 2022. The first time was in 2014. There were identified secondary trauma through media impact in all participants:

“Yes, I can't... I'll just watch the news now. ...I feel very, very bad for Ukraine. I am very... at first I had these Instagrams connected, that's all. I deleted it now, because... Well, I can't be disconnected from it anyway, I still watch some news. I watch the news, then I dream about the war. Although I didn't really see it. Yes, a rocket was shot down near me, which scared me a lot. We have a big house, a brick house, a strong house, you could say. We have plastic windows. A rocket was shot down two kilometers away from us. The house shook as if it were made of paper. At night, one and two rockets. The children were very scared then. I don't remember what day it was. After that, my children slept with their clothes on. They were afraid themselves. That's when we started thinking that we should probably leave. Because I saw that the children were getting very stressed. So I decided to try to leave.”

Participant 4

“, I have relatives there. I have a cousin in Bakhmut. I don't know what happened to his family, they couldn't leave. He is there, he, his wife and three children. We don't have any information about them, and I think there won't be any. And well, a cousin lived there too, she left with the child, and the rest of the family didn't want to, and they died a month ago. They had a direct hit in their house, no one survived there.”

Participant 5

“And it's so hard, when you sit with the news about how they are being killed, the bomb hit again, about rape (this is the most for me) you read everything. You don't protect yourself from it. And you yourself, you have no one to share this information with. You need support at this moment. But people think that you are abroad, that you are doing great here.”

Participant 1

- b) All participants reported **relationship changes**. The equal number of participants reported less communication with friends and relatives and closer relationships. Meanwhile, the distance in both cases was either a burden or a facilitator of communication.

“But in general, everything has changed a lot, because, as shown not only by war, but also by distance, it sifts your friends so much... And the moment when you needed support and the most you need support from family and friends, it was not there.”

Participant 1

“Yes, I am saying that we have become closer to each other. I have a brother who is currently fighting in the East of Ukraine, and I remember the first days. This is how we communicated with him before. He is much older than me, we didn't have such a close relationship, but from that moment, about a month after February 24, we talked almost every day.

“How are you? What is there?” So with my brother. With parents, of course, this connection was like that. And with friends, any help was also received, text messages "What are you doing there?", "How are you?" came. "Do you need any help? Is it with money or moral? Then you can apply." And I also responded to my friends in the same way.”

Participant 2

- c) **Appreciation of life** was noticed among all of the participants and in different categories. The majority of the participants reflected on the increasing importance of other people and everyday life. Almost everyone mentioned the reevaluation of their perception of the home (they were talking about the importance of Ukraine).

“And then I understood, when our house was fired upon and robbed, there was also a fire, I understood that things are worthless. Absolutely nothing. That is, the main thing is that you have your relatives. That is, what can you take? Backpack and two palms in hands. Any memories? Because the photos were burned. I have no children's photos, they were burned in Slavyansk. That has changed.”

Participant 5

“The value of life has grown many times over. The value of today has grown many times over. The value of some kind of close relationship has grown. ”

Participant 7

“Yes, they have changed, not fundamentally, but in some moments. For me, the most important thing is my family, its well-being, but my attitude has changed. Before the war, like many people, I wanted to go somewhere, somewhere abroad, to live abroad. Now it's the opposite. I want to go back. I want to arrange my life. I want to buy a small house somewhere in Ukraine, maybe in the west. I want to open a small business there, a small business. Yes, now I totally want to go back and live my life there. Because after traveling a little, I see that there is nothing better...I think there are two factors here. First of all, the fact that I visited other countries, I talked with people, I saw in general what I was heading for, I can compare. And secondly, there is something that we have, we don't care, what we lose, we cry for it... That's how you understand all the value, you understand all the beauty, all the uniqueness, exactly when you don't have the ability to embrace it, let's say”

Participant 3

- d) All participants reported that they had **new possibilities** being in a new country;. New possibilities mentioned by the participants included the following: the opportunity to find the same work as they were doing in Ukraine, participation in the meetings in support of Ukraine and communication with the people of higher positions (which was impossible earlier), creation of organizations supporting Ukrainians abroad, faster realization of their

projects, because they had all support from the foreign country government willing to help Ukrainians, activities focused on a healthy lifestyle.

Participants also expressed that they experienced challenges after displacement. there were feelings of isolation, learning new language, difficulties in understanding the culture and people.

“Life goes on, you have to raise your children. So I found this colleague and friends. And together with my friend, who has been living in Portugal for a long time, we founded and continued the existence of a non-profit organization that was created in Ukraine, and we also created an additional legal entity in Portugal in order to continue helping Ukrainian businesses, Ukrainian startups. And now we have created, for example, a program for women who want to create businesses here, which can then be relocated back to Ukraine. That is, small and medium-sized businesses, which they, if they had in Ukraine, relocate to Portugal, if they did not have anything, did not have such experience, we help to create it from scratch, so that they can develop here and support themselves, their children, their old parents, that is, to have some basis for existence.”

Participant 6

- e) **Changes in their personality** were reported by all the participants. The majority of participants mentioned positive changes, which included “maturity” and “seriousness”. Participants were able to do something they had not done earlier (e.g., learn a new

language). Among negative changes, participants mentioned that they became more distant with people, more vulnerable and impulsive. Some of them described themselves as “depressed” or as a “sociopath”.

“I will say that I remained as I was, but I believed in myself. Now, wherever life takes me, I find a way out of any situation. Maybe I became more confident. Now that I am already in a new country...”

Participant 2

“I have probably become stronger psychologically, but sometimes I can get emotional over such a small thing and start crying.”

Participant 5

- f) In terms of **spirituality**, most of the participants have not experienced any changes in their religious life, because they had not been religious people. Meanwhile, most of them started asking existential questions and seeing the impact the war has on people as a nation.

“I didn't think about the world and other people until February 24. Now there are more philosophical thoughts. And what is there? Where are we moving? God, where is the world going? Why did this happen? And why?.. I have relatives in Russia, we haven't talked since the moment everything started. In general. Because my cousins told me how they tried to communicate and what it led to and said I wouldn't even try. And I... Many such questions arise, what happened to them? What about us? What about them? Why so? We study some historical and cultural moments there. And how was it in Serbia? And how was it in Armenia? And how was it in Abkhazia? And how was it in Chechnya? And what is

similar and what is not similar? and what else? will there be more wars? what will they look like? will they press the red button there or not press the red button? Well, that is, they are constantly replaying all these moments in their heads. Thoughts were a little more down-to-earth before. I thought more about what I could influence. Now thoughts are somehow more global, or more large-scale, or more philosophical. ”

Participant 6

“Now our people have become more embittered. And we are more embittered towards the Russians, well, the Russian population, but I want to tell you that at some point that situation united us. Many people with whom I did not communicate, I reconnected or began to value more this time that we have been given, in order to... Well, we began to value people more and really became there.. this war did not separate us, and united.”

Participant 2

- g) Life before the war escalated.** All participants were satisfied with their life in Ukraine and they did not want to leave the country. They had to flee because of the war escalation. Many of them have been planning to return to Ukraine.

“as long as I lived in Ukraine, I never had the desire to leave, never until this moment... I was fully satisfied with my life in Ukraine before the

invasion. I had a happy life, I had a job, I had friends, a family. Passion, as it were.”

Participant 2

Well, we lived normally in Poltava, absolutely normal. Our apartment was in the city center. I had a normal job at school, like a teacher's job. But I had a lot of tutoring, I was a popular English teacher. Everything was fine, absolutely fine. We traveled and did repairs. We did everything right before the 24th. Well, just as my husband was coming in January, we did a complete renovation and a week before the start of the war, I hung the curtains that I had ordered there, well, we didn't even have time to live there. Well, everything was completely done, the children's room separately. That is, it is normal, we had absolutely normal conditions.

Participant 5

- h) Feeling of guilt** because they left the country was experienced by a few of the participants. This feeling has been enhanced by the critical attitude of the people who stayed in Ukraine, and often via social media.

“...it is easy to say that "you abroad do not understand how difficult it is for us in Ukraine", and I have heard such accusations from relatives. Although they support me in every way, I heard a word thrown so carelessly, but it stuck with me. This is exactly what I read in public

somewhere on Instagram, on Facebook, that you are abroad, you should be silent there, donate money and that's it. ”

Participant 1

“You think about it, you are bitten by the worm that you left. But every time he bites, "Okay, I'll drop it on the Armed Forces, it will be easier”

Participant 3

Discussion

Summary or Key findings

This research aimed to investigate the potential features of PTG in Ukrainian refugees during the ongoing Russian-Ukrainian war. Findings show that all participants were exposed to the trauma, which was the start of the full-scale war on February 24, 2022. Many participants did not recognize that they were traumatized, referring to the fact that they were alive, not wounded, and had lived outside of the war zone. Meanwhile, all participants mentioned threats that they were exposed to (shelling nearby, air raid sirens, and explosions). Two of the participants remembered the start of the war in 2014, which made them “prepared” for the current situation. Some of the women talked about their relatives or friends who were exposed to the traumatic events since February 2022. All of them mentioned social media which has had a great negative impact on their mental health. Discussing their mental health, a few of the participants mentioned that they felt isolated, depressed, anxious, and they tried to avoid people. Those results correlate with the findings in the literature on the trauma outcomes and its impact on the mental health (7,10).

One of the findings of our research is related to trauma exposure, particularly betrayal trauma. According to the Betrayal Trauma Theory, coined by Jennifer J. Freyd, betrayal trauma “occurs when the people or institutions on which a person depends for survival significantly violate that person’s trust or well-being” (40). Responding to the question about the change of the world view since February 2022, most of the participants replied that they did not expect the war's full escalation. It may be related to the fact that before the Russian troops invaded Ukraine in February 2022, despite the US anticipation of the threat, the Ukrainian Government denied the potential threat, as did the Russian Federation representatives (41). The participants mentioned their

relatives living in Russia, with whom relationships and communication were ruined since February 2022, because they supported the invasion.

Among findings related to the PTG, based on 5 domains, the most prominent were personality changes (such as “strength”, “maturity”, “new skills”) and appreciation of life (values of everyday life, people, and Ukraine as Home). Those findings are consistent with the study conducted among Syrian women refugees who experienced growth, particularly in positive changes of personality (42).

Regarding spirituality, according to the study of PTG among Syrian women, they experienced spiritual changes following the trauma (42). Meanwhile, the researcher had not observed religious changes in the lives of the participants. It may be explained that while people from the western part of Ukraine are more religious, the majority of the participants were from the central and eastern parts of Ukraine (43). However, there were changes in the life perception of most of the participants. They reported that before the war full escalation they have not been interested in other countries, they did not know about wars happening in the world. Since February 2022, they started being more empathetic towards other nations, looking for the cause-and-effect relationships of the events, they started seeing the Ukrainian nation differently and giving the meaning of the war, stating that the war united people because they had a common purpose, were ready to support each other, do their best to resist the invasion.

Among facilitators to the PTG development, the author noticed the importance of social support provided to refugees (communication with relatives, friends), providing support to others (to their kids, other refugees through education, assistance in developing their own business, advocating for Ukraine), coping strategies (such as participation in the demonstrations to support Ukraine, a donation to charitable organizations in Ukraine, positive rumination). Those findings on PTG

among Ukrainian IDPs showed the same results – positive reinterpretation, social support contributed to the PTG development (23).

The feeling of guilt, as one outcome related to trauma impact, is a complex paradoxical “finding” in that it may be either a facilitator or barrier to PTG development (10). While most of the participants mentioned the feeling of guilt because they left Ukraine, it was enhanced by social media (especially Facebook pages where other people criticize them) or relatives'/friends' critical attitudes. On the one hand, feeling of guilt motivated some participants to be more active, donate and support Ukraine. They mentioned that after they donated or reposted the information on social media they felt a short-term mitigation of the feeling of guilt. On the other hand, this feeling triggered other participants to negative rumination and feelings of helplessness. Those findings strengthen previous research that overcoming guilt could help to find the strength to sympathize with others, facing similar challenges (10).

The war in Ukraine started in 2014, and two of the participants experienced it personally - as an IDP, whose house was destroyed in 2014, and as a psychotherapist providing mental health support to the military since 2014. Therefore, it is hard to say definitively whether the PTG features were developed after 2014 or whether they are the result of the full-scale war that started since February 2022. The literature supports the idea that the challenges people have faced earlier made them stronger and more prepared for current trauma aftermaths (10,44).

Implications of findings and future research

While positive changes can be experienced spontaneously, there are approaches to promote significant increase of the PTG among refugees (45). As previously identified in Spain, community-based interventions aimed to promote PTG among refugees, resulted in the

improvements of PTG dimensions among refugees participating in the program. Mutual support, participation in the same setting with peers, sharing the same language, culture, and background, can be helpful for self-disclosure through story-telling (21). Mutual social support through the narratives helps to establish a feeling of belonging, on being heard, and reflect on one's own experience while listening to others'; this can lead to the feeling socially connected (45). Developing and implementing community-based programs focused on story-telling will be an important asset to the global health interventions aiming to help refugees.

Study Strengths and Limitations

The project has some limitations. Due to the small number of participants and the inclusion of women only, the perspectives and experiences of people participating in the project may not be representative of a more general population of Ukrainians who fled after the war began. Similarly, some of the participants experienced the war impact since 2014, and despite their leaving the country after February 24, 2022, it is difficult to state definitely that their migration after the full escalation of the war caused the observed changes. Other limitations are related to the absence of males in the investigation which could be explained by the law the males should stay in Ukraine. Another limitation can be related to the fact that the research was conducted in the midst of the war, and that the author was investigating PTG as a process, not as an outcome. Further investigations are required to follow up with the participants. The finding of the potential "betrayal trauma" and secondary trauma through media requires a deeper investigation of the topic. To evaluate the level of the PTG, a mixed-method approach would be useful.

Conclusions

PTG is a phenomenon in which development may take months, years, and decades. While PTG is a process, as well as an outcome, the current study presents the opportunity to investigate the PTG process among Ukrainian female refugees during the ongoing Russian-Ukrainian war. Based on the findings of this study, future research should consider developing and assessing community-based interventions to facilitate PTG development among refugees.

Appendices

Appendix 1. Interview Questions

1	<p>1A. Many people are exposed to a disturbing or traumatic event at some point in their lives.</p> <p>Have you experienced such an event?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>1B. Are you affected by seeing the situation of Ukraine in the media?</p>	<p>Traumatic events could include:</p> <ul style="list-style-type: none"> • natural disasters • accidents • sexual assault • physical assaults • combat • childhood sexual abuse • torture • or life-threatening illness. <p>These experiences can happen in any of the following ways:</p> <ul style="list-style-type: none"> • Directly experiencing the event • Witnessing the event • Learning that the event happened to a close family member or close friend • or • Experiencing repeated or intense exposure to distressing details of the event.
2	<p>How would you compare the possibilities in your life from before February 24 2022 to now?</p>	<p>Are there challenges in your life now that were not present in your life before February 24, 2022? Which kind?</p> <p>Are there opportunities in your life now that were not present in your life before February 24, 2022? Which kind?</p> <p>What/who contributed to those opportunities?</p> <p>What/Who did hinder possible opportunities to happen?</p>

		<i>If they say that their lives are the same now as they were before February 2022, then you can remind them about something they said earlier in the interview that made it seem like their life had changed.</i>
3	<p>3A. How would you compare your personal traits from before February 24, 2022 and now?</p> <p>Personal traits could include your personality, physicality, or emotions, or the way you interact with other people.</p> <p>3B. How would you compare the way you think about yourself, the world, and others, now, as compared to before February 24, 2022?</p>	<p>If they report changes - ask what they think may have contributed to those changes.</p> <p>Do you perceive these changes as negative, positive, or neutral? (can ask for each change they reference)</p>
4	<p>How would you compare your relationships with family and friends from before February 24, 2022 and now?</p>	<p>Do you feel closer to some people?</p> <p>Or more distant?</p> <p>Why? How so?</p>
5	<p>How would you compare your values and perspective on life from before February 24, 2022 and now?</p>	<p>Has your spirituality been affected? And how?</p>

Appendix 2. Codebook

Betrayal trauma: feeling of betraying by relatives or Russian citizens supporting the war since February 24, 2022, and the Russia as the country attacking Ukraine

Challenges: any challenges participants have been facing since displacement

Closer relationships: relationships with relatives and friends since displacement

Existential questions: any existential questions arising since February 24 2022

Feeling of guilt because they left country: feeling of guilty and being criticized because the participants left the country

Importance of Ukraine: life in Ukraine since February 24, 2022

Importance of people: importance of people in the participants' lives since February 24, 2022

Less communication: participants have noticed less communication with relatives and friends

Negative changes of personality: any changes in participants' personality which they found as worsening since February 24, 2022

New opportunities: any new opportunities participants faced since their displacement

No changes in Spiritual Life: spiritual life did not change since February 24, 2022

Personal traumatic events: any traumatic event the participants faced personally since February 24, 2022

Positive changes of personality: any changes in participants' personality which they found as positive since February 24, 2022

Social Media Impact: the impact social media have had on the participants

Traumatic Events to others: any traumatic event the participants' relatives or friends faced since February 24, 2022

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