




## Hardships, Motivations, and Resiliency: Case Study of Health Implications of 2022 Russian Invasion on Ukrainian Resistance Members

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### Abstract

The 2022 Russian full-scale invasion of Ukraine caused millions of Ukrainians to flee. Yet most citizens continue to reside in the country, playing critical roles in the Ukrainian resistance. Today the Ukrainian fighting force includes trained military and police as well as citizens who either were conscripted or volunteered to take part in national war efforts. This mixed-method study conducted in Spring 2022 presents data collected from 79 respondents in a semistructured survey, using snowball sampling. Data analysis examined individual self-reported motivations, attitudes toward the conflict, resilience, quality-of-life hardships, and scaled perceived stress. Results indicated that Ukrainian resistance members face extreme physical threats, are displaced, separated from family, and experience high levels of stress, especially anxiety, sadness, and anger. Yet individuals tend to experience significantly less overall Perceived Symptoms Scale symptoms if they have intrinsic motivations linked to patriotic ideologies, altruism, and preventing genocide. Bootstrap regression modeling indicates that familial relationship with their nation reduces symptoms by approximately 13%. Comparatively, being extensively separated from family is linked to 21% higher stress. These motivations appear to provide a sense of purpose and source of resiliency despite the health risks associated with resisting a full-scale foreign invasion. My purpose with this article is to represent respondents' motivations and experiences during the war and to help inform future public health policy and program services that many Ukrainians may need to recover.

**Keywords:** *psychosocial stress, Ukraine, motivations, freedom fighters, negative events, Russian invasion, resiliency, diminished quality of life*

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## Introduction

On February 24, 2022, Russia invaded Ukraine, which signaled a major escalation of the Russo-Ukrainian War. Previously, in 2014, Russia first led a partial invasion of the sovereign territories of Ukraine in an attempt to annex Crimea. In 2014, Russian-backed separatists fought for control of parts of Donbas, in the southeast region. Conflict between the separatists and Ukrainian forces in Donbas continue, including naval engagements and cyberwarfare (Kirby & Guyer, 2022; Mulford, 2016). Studies of the 2014 partial invasion capture the negative health impacts. The 8-year war increasingly affected healthcare infrastructure, human resourcing, and even cyberattacks promoting disinformation around COVID-19.

Conflicts often compound preexisting public health needs, as priority frequently focuses on supporting arming forces and ensuring physical security of citizens. There was also an uptick in substance abuse, drug addiction, and suicide in East Ukraine (Patel et al., 2020). Yet the impacts of the 2022 full-scale Russian invasion along with COVID-19 will likely have much more devastating effects, including severe needs around mental health (Patel & Erickson, 2022). The 2014 Crimea incursion resulted in many Ukrainians experiencing mental health trauma, such as the fear of dying, loss of freedom, familial separation, grief, social isolation, and displacement. Because of the ease of accessing refugees in nonwar environments, research initiatives are already being coordinated on mental health needs of Ukrainians who have fled the country; but those who stay will require unique support (Bai et al., 2022). The length of the conflict likely involves complex trauma, which is a combination of various trauma exposures, as well as issues of intergenerational transmission of traumas. The 2022 attack likely compounds Ukrainians' exposure to the psychological stimulus of Russian aggression, magnifying the ramifications of distress and fear first experienced in 2014. The impacts on the mental health of Ukrainians are anticipated to only increase with the scale and length of this latest invasion (Jawaid et al., 2022). Yet to what extent the war impacts Ukrainians still residing in the country remains virtually unknown and unstudied.

In this article, I present the findings of a semistructured digital survey launched in March–April, 2022. Through this research study, I sought to collect both qualitative and quantitative data from Ukrainians currently in the country partaking in the resistance. The purpose was to increase our understanding of the motivations and health effects of the Russian invasion in the first months of a full invasion. There was an initial time concern as the war escalated, cutting access to the internet for Ukrainians, in addition to the mounting death toll. There were 79 Ukrainians who voluntarily completed this survey, using a snowball design over social media platforms, including Facebook. Four million Ukrainians fled the nation in the first month, causing Europe's largest and fastest refugee crisis since World War II. The Ukrainian government authorized drafting male citizens to remain in the country to fight. Yet there are few reports of Ukrainian men being forced to fight against their will. Comparatively, Russian forces and pro-Russian Ukrainian forces have experienced higher rates of low troop morale, attrition, and even resistance to fight (Shinkman, 2022). While more than 7 million Ukrainians have fled to neighboring nations, and one-third of the population is displaced, in Spring 2022, most Ukrainians remained in the country despite the hardships and risks (Keane & Blake, 2022). In this study, I examined the motivations behind their willingness to stay, the roles that they play in the resistance, and the physical and mental implications that participating in the resistance has on their quality of life.

## Literature Review

### Motivations in Conflict Literature

World War I signaled a major shift in research examining the psychological factors, morale, and varied responses of fighters in combat environments. A large proportion of fighters experienced widespread psychiatric duress and postwar trauma (Kellet, 2013). Today, much of the global health crises we face often are a result of a crisis of politics and governance. Dawes (2020) presents information on how political

determinants of health relate to the systemic process involving the structuring of stakeholder relationships, distributing resources, and wielding power. This activity is done simultaneously by means of mutually reinforcing, influencing, or dominating the scenario to mold opportunities to (a) advance health equity, or (b) increase inequities (Dawes, 2020, pp. 3–9). Knowing what feeds the morale of resistance fighters can help identify ways to systemically prioritize health needs to bolster military strength. The literature on motivation and stress has expanded across various sciences, including human resources, military psychology, and political conflict. Motivation can be termed as the various types of drive to seek and accomplish goals. Motivation can be categorized by statements that reflect the impetus driving individuals to act. Patriotic thoughts, statements expressing sympathy or compassion, and altruistic thoughts can represent positive feelings in studies (Mael & Ashforth, 2001; Nissen et al., 2022; Piferi et al., 2006). Military psychological research applying self-determination theory (SDT) indicates that autonomous work motivation is positively correlated with proactive engagement, and alternatively is negatively related to burnout (Chambel & Oliveira-Cruz, 2010; Chambel et al., 2015; Gillet et al., 2017). Motivation is intertwined with resilience in hardship, but understanding the distinctions between these concepts is important.

Resnick (2018) indicates that resiliency is the ability of an individual to rise above or not give in to physical, financial, emotional, or social challenges, but instead to move forward. A resilient person can adapt in the face of great loss, difficulties, suffering, and life stressors. In contrast, motivation is the urge one experiences instead of the stimulus to adversity or challenge. Being motivated is the drive, need, or desire to take steps to achieve a desired result. People who are motivated and those who show resilience have similar characteristics (Resnick, 2018, pp. 221–223). Motivation can sustain a person through a traumatic situation, yet by experiencing that hardship, the person may demonstrate, develop, or fail to realize resilience (Doron, 2005; Kahn et al., 2016). Motivation that is sustained can act as a pillar to help uphold people even in dark times like war, murder, and rape (Doron, 2005). Resilience can influence how refugees handle trauma.

Yet when people affected by the same traumatic event band together around a common motivation or resilience to overcome their negative experience, they can form community resilience (Doron, 2005; Kahn et al., 2016; Hasyim, 2013). For example, this was observed among Southern Lebanese refugees (Doron, 2005), Alaskan Native American elders supporting indigenous youth affected by systemic discrimination (Kahn et al., 2016), and Indonesian families rebuilding lives after a tsunami (Hasyim, 2013).

### **Literature on Terrorists Versus Freedom Fighters**

In the 2022 Ukrainian survey, participants fall into one of two categories—fighters and volunteers (noncombatants) supporting the fight against the Russian invasion. While this 2022 incursion is the first *full-scale* invasion of Ukraine by Russia in more than half a century, conflict between these two nations has a long history (Center for Preventive Action [CPA], 2022; Keane & Blake, 2022). For hundreds of years, various Russian regimes have laid claim to Ukraine as part of its territories. Ukraine regained its independence after the fall of the Berlin Wall (Keane & Blake, 2022). Yet, since the late 1990s, Putin’s interest in reclaiming part, if not all, of Ukraine has intensified, especially in the last decade, prompted by the number of nations joining NATO (Kirby, 2022). This 2022 war is, in fact, an escalation of the Russo-Ukrainian War that started in 2014. This conflict tempered after peace negotiations, but violence and looming indications of a larger war continued after 2014, although many political experts did not anticipate an expansion of this magnitude happening so quickly (Bai et al., 2022; CPA, 2022; Keane & Blake, 2022).

Three days before the 2022 invasion, the Russian government recognized the Donetsk People’s Republic and the Luhansk People’s Republic, which are statelets in pro-Russian separatist regions of Donbas trying to break with Ukraine (Kirby, 2022). Putin authorized military force in these territories. Days later, Putin further authorized a specialized military operation of nearly 200,000 Russian troops to demilitarize and *de-Nazify* Ukraine (Harlan, 2022; Kirby & Guyer, 2022). Sequentially, bombings across Ukraine marked the start of a

large-scale ground invasion, including from Belarus. Ukrainian President Zelenskyy counteracted by declaring martial law, as well as instigating a general mobilization of all male Ukrainian citizens between 18 and 60 years old to fight. Most fleeing refugees are women, children, and the elderly, yet the resistance movement comprises a variety of combatants and volunteers (Bai et al., 2022; Harlan, 2022; Kirby & Guyer, 2022).

There are also war tourists and foreign fighters going to join Russia. Russia also has Ukrainian citizens who are pro-Russian separatists (Kane, 2018). Today, Russia continues to claim it is invading Ukraine to protect its legitimate security concerns as well as to de-Nazify the region (Farley, 2022). Putin also argues that Russian forces are supporting pro-Russian groups in Ukraine, similar to reasons that the U.S. military supported the forces of Northern Alliance of Afghanistan before pulling out in 2021 (Kirby, 2022). As I present in this article, many Ukrainian participants report staying in their country due to a sense of patriotism and national pride.

Patriotism and nationalism can overlap. A nationalist is defined as a person who strongly promotes the interests of their own nation, but the polarized term is also associated with nationalist movements tied to “white nationalists” or neo-Nazism (Perlman, 2017). Accusations of growing neo-Nazism in Ukraine fuel the fire for Russian interests. There are reports of far-right extremist groups. Yet Ukrainian President Zelenskyy, who is Jewish, won the election with nearly three-quarters of the votes. Russian issuances about de-Nazification are mainly viewed by political experts as speculative propaganda (Farley, 2022). Data captured in my study indicates no white supremacy rhetoric or references to anti-institution, Nazism, or other statements that would link survey participants to any negative ideologies outside of patriotic democratic sentiments.

Zelenskyy’s government claims that Russia is illegally invading the sovereign territory of Ukraine, committing mass murder, rape, and possibly genocide (Bai et al., 2022; Harlan, 2022). A country justifying invasion of another country for security reasons often will view any violent resistance as insurgency and terrorism. Yet, if innocent people (invaded peoples who held no threat to the invading country) are killed by invading forces, they can be labeled as freedom fighters or militants (Jan, 2022). Depending on the source, global media is divided on projecting Ukrainian fighters as freedom fighters or terrorists, and whether Russia is committing war atrocities by killing indiscriminately and using rape and torture as weapons of war (Kirby, 2022).

Either the Ukrainians are terrorists just as the Taliban, Iraqis, Kashmiris, and Palestinians or the Taliban, Iraqis, Kashmiris, and Palestinians are freedom fighters just as the Ukrainians. They are either the terrorists or they are the freedom fighters. Similarly, the Russians are either liberators and democracy promoters like the West or else they are the aggressors, like the West (Jan, 2022, p. 1).

The terms for national combatants frequently can have a large impact on members of a national resistance. U.S. troops returning from various incursions received labels that had strong mental health implications, such as being called “baby-killers” in Vietnam (1955–1975; Rogers, 1990). In Iraq and Afghanistan (2002–2021), they were first portrayed as liberators, yet as the civilian death tolls rose, there was a shift in sentiment toward imperialists. Comparatively, American forces returning from WWII (1941–1945) were portrayed as liberators (Kareem, 2019; Smith, 2012). These cases exemplify the great range in motivations, resilience, and emotional states of combatants during and after invading/liberating a foreign country, especially in terms of their healing process and reintegration into society. Research by Mowat (2022) asks, do Ukrainians see Russians as liberators or as invaders? Do Ukrainians view themselves as freedom fighters, patriots, or terrorists? Are war tourists or pro-Russian separatists equal to liberators?

Consideration of these terms in my study is crucial to better understand Ukrainian mindsets (Mowat, 2022, pp. 1–13).

Overall, internationally accepted definitions of terrorism are difficult to pin down, as the saying goes—*one man’s terrorist is another man’s freedom fighter*. Ganor (2002) implies that while terrorism and guerrilla

warfare can overlap in their aims, we may discern between the two by their ultimate targets.

Guerrilla fighters/militants tend to attack military targets, while terrorists deliberately harm and kill civilians (noncombatants). If an organization does not target civilians, they may still be considered freedom fighters struggling for national liberation from an outsider aggressor (Ganor, 2022, pp. 287–289). The Chechen-Russian war also highlights how leadership motivations can shift over time, confounding resistance movements with terrorists. Chechen leadership was mainly secular but eventually shifted to extremely religious. Yet the trauma that Chechens suffered from Russia's use of force against the civilian population caused Chechen forces to resort to acts of terrorism against Russian forces (Shiner, 2019).

By the end of May 2022, Ukrainian fighters had targeted mainly Russian and Belarusian forces, and Russian-backed separatists. However, Russian forces killed 3,778 Ukrainians (1,419 men, 929 women, 86 girls, and 97 boys, as well as 68 children and 1,179 adults (whose gender had not yet been determined by May 17, 2022). Fatalities are considered to be much higher (OHCHR, 2022). This violence includes bombing civilian-safe spaces, like a maternity hospital (Nott, 2022).

## Purpose of Study and Research Questions

While the body of research on motivation and health outcomes from resisting foreign incursions is growing, there are few studies on modern-day wars in Europe. The 2022 Ukrainian-Russian conflict is the first large-scale war in Europe in nearly a century. Against this backdrop, the key objective of my study is to explore the psychosocial health implications associated with remaining in Ukraine in the first few months of the 2022 invasion, and the motivations behind these actions. This mixed-method study asks the following questions:

1. What are key types of intrinsic and extrinsic motivations of Ukrainian fighters (measured by *categorized motivation statements*)?
2. What are common scaled Perceived Symptoms Scale (PSS) stressors (aggregate and disaggregated by combatant role) and living conditions associated with participating in the resistance (measured by Perceived Risk Scale)?
3. How do motivations affect diminished quality-of-life experiences (measured by common hardships experienced), resilience (as measured by *resiliency statements* during the war), and lower PSS?

First, my study qualitatively explored motivation statements made by the individuals to assess for any common trends of autonomous motivations versus controlled motivations. It used the finding that lower levels of motivation are frequently correlated to higher stress levels (Rücker, 2012) as a foundation. What are the key types of motivations driving these individuals to stay? The statements were then numerically codified by key types of motivations. In the quantitative phase, I statistically assessed PSS symptoms that participants self-reported experiencing as a direct result of the 2022 invasion. A correlation analysis was performed assessing for potential associations between motivations that caused people to stay and resist instead of fleeing and reported experienced stress symptoms and aggregate PSS. Last, PSS levels were compared with reported changes experienced by individuals, weeks into the war.

## Theoretical Framework

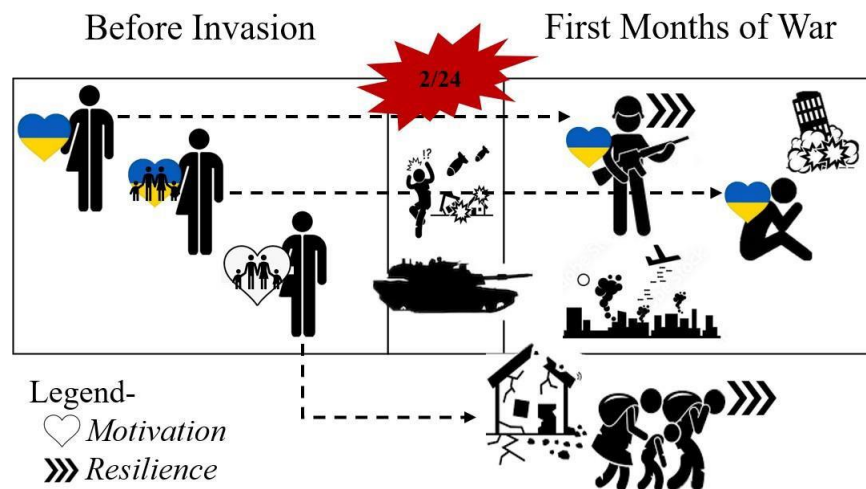
Ukrainian men were mandated in March 2022 to remain in the country to fight. Media indicates there are no identified arrests of Ukrainians trying to leave the country. Military forces and civilian regiments regularly patrolled border crossings and transportation facilities, using oral, emotional persuasion. There were some reports of shaming, taunting, and oral coercion to pressure fleeing citizens to remain.

However, overall, there are rare reports of citizens being physically forced or threatened to stay, and no

documented arrests for desertion are reported in this time frame (Harlan, 2022; Patel & Erickson, 2022). Thus, this research considered the theoretical framework of hierarchical model of intrinsic and extrinsic motivation (HMIEM). An extension of SDT, this model assesses the “why” behind behavior, its antecedents, and consequences. Research in a variety of disciplines elicits common associations between motivation and key quality-of-life outcomes, including psychosocial well-being connected to enhanced positive states of mood. Theoretically, higher self-determination in an individual’s motivation is associated with higher positive outcomes, including coping mechanisms, decreased burnout or negative emotional states, and better mental health overall (Adams et al., 2017; Sheenhan et al., 2018).

My research conceptually builds upon Viktor Frankl’s *logotherapy*, a type of psychology that focuses on helping individuals find meaning. My study posits that motivation fortified by resilience can equivocate in what Frankl (a holocaust survivor and neuroscientist) postulated—a human being’s deepest longing should be to find meaning in life, and if that meaning is found, the individual can survive any hardship. When a person cannot find the meaning or purpose, their mental health and even physical health may suffer (Frankl, 2014, pp. 3–33). Figure 1 presents a theoretical modeling (which I created) of how motivations and resilience can interact among individuals affected by war. The first hypothetical scenario depicts a person motivated by love of their nation (patriotism). Experiences such as the exogenous shock of the February 24, 2014, invasion may inspire a person to fight or to volunteer in the resistance movement, to uphold their nation’s sovereign independence from external forces. The conflict theoretically offers individuals the chance to experience resilience, which when added to motivations, can provide a double self-fortification to continue on during the hardship, finding self-purpose and fulfillment to the cause, or to helping others.

**Figure 1:** Individual Motivations Informing Decision-Making and Supporting Resilience Through Conflict



A second hypothetical scenario in Figure 1 presents a person motivated by both a love of country and family/community who decides to stay to support the resistance, but over time, does not gain the resilience needed to keep a positive mindset in the face of so much tragedy. Those who choose to stay to resist and are either apart or have lost family/friends may become discouraged as they fill that critical autonomous drive. The potential remains that any external motivation to serve their nation may not be enough to sustain their mental health. Lower self-determination in motivations can lead to limited coping mechanisms, possible burnouts, and negative emotions (Adams et al., 2017; Chambel et al., 2015; Sheenhan et al., 2018). The third scenario is a person highly motivated by love of family, who is inspired to flee with their family after the invasion. Refugees can experience and benefit from personal and communal resilience as they adapt to life in foreign environments (Doron, 2005).

## Methods

### Context

My research used a mixed-method design, utilizing semi-structured snowball surveying of Ukrainians residing in country. The project, entitled *Motivations and Psychosocial Impacts on Ukrainian Resistance in Spring 2022*, received ethical approval from the University of Texas-Dallas IRB#22-461. This is one of the only known psychosocial stress survey studies conducted in Ukraine at the start of the 2022 invasion. I would like to express gratitude to my Ukrainian UN police colleague who supported the study concept and translation. This is dedicated to those individuals who bravely continued to take part despite the obstacles that they faced. I designed the survey using previous studies on psychosocial stress in conflicts and disasters, including using a modified PSS. The survey captured data from Ukrainians who, at some point, took part in the resistance, either as combatants or noncombatant volunteers.

### Participants

Of the 133 people who opened the survey, a total of 79 participants consented to take part and provided self-reported information. While the survey was originally intended for citizens who were still physically in the country when completing it, 40% of participants have since left the country but had played a role in the in-country resistance in March 2022, and 9% did not want to disclose their physical location.

Approximately 4 of 10 survey-takers self-reported as being police officers/law enforcement transitioned to combatant fighters, while the rest identified as noncombatants—often volunteer civilians preparing meals for fighters, providing medical support, and providing childcare, among other activities.

### Instrumentalization

PSS scales are commonly used to research psychosocial stress self-reported by individuals experiencing increased trauma events and are also used to diagnose posttraumatic stress for clinicians (Foa et al., 1997; Garbóczy et al., 2021; Kader et al., 2021; Lee, 2012). Such scales, capturing issues like anxiety, extreme anger, or withdrawal, are well-regarded stress assessment instruments, and “remain a popular choice for helping us understand how different situations affect our feelings and our perceived stress” (DAS, 2022, para. 3). My study builds on research of stress symptoms commonly experienced by Liberian Ebola survivors and their family members, many of whom also experienced complex trauma, surviving a 14-year civil war as well as the Ebola pandemic (Hanson et al., 2016). The research by Hanson et al. (2016) included a government-authorized PSS scale for nonclinicians.

### Data Collection

After IRB approval in March, the survey was launched on Qualtrics through May 2022 on Ukrainian Facebook pages using a snowball approach and later was shared by survey-takers on other media including Instagram. By April, Internet access became limited in parts of Ukraine because of increased fighting, which likely resulted in a smaller sample size. The survey included an informed consent process and was fully anonymous, excluding all identifiable data, including gender, name, and locations to protect participants. Due to privacy and ethical concerns, neither the data nor the source of the data can be made available.

The survey was translated into both English and Ukrainian. The instrument asks participants a series of questions on nationality, age range, whether they are residing currently in Ukraine, their role in the resistance movement, their perceptions about Russia and the war, and the magnitude to which they were experiencing any PSS symptoms as a direct result of the 2022 Russian invasion. The PSS instrument assessed for seven items: nightmares, poor sleep, anxiety, anger, withdrawal, poor eating habits, and sadness/crying. A *t*-test

analysis assessed for disaggregated differences between fighters and noncombatants as well as total level of PSS symptoms. The PSS aggregate scale had an  $\alpha$  of 0.73 and thus has high internal reliability for measuring individual levels of stress. Furthermore, the survey asked a series of open-ended questions concerning participants' physical and mental health, their motivations to stay and partake in the resistance, and their daily life experiences as a result of staying in Ukraine. Both qualitative and quantitative data are presented in the next section. Qualitative statements were assessed for patterns that were then quantitatively codified. The survey sample size is limited and not randomized. Yet, descriptive statistics, correlation analyses, and bootstrap regression modeling were performed for combatant participants, as well as total level of PSS symptoms. The PSS aggregate scale's  $\alpha$  of 0.73 indicates high internal reliability to identify key patterns. A qualitative analysis of participants' written statements to open-ended questions further triangulated quantitative findings and explored the meaning behind their war experiences.

## Results and Discussion

### Motivations of Ukrainian Resistance

The survey asks the open-ended question, "What are the reasons that you have decided to participate in resisting the Russian military occupation?" This question aimed to explore the "meaning" behind their decision to stay in the country. Of the 79 completed surveys, 50 participants provided written statements describing their individual motivations to stay in Ukraine after the invasion. Some would later flee and complete this survey, but for a time, they stayed in the country hoping to wait out the invasion. Several statements indicated that most Ukrainians are motivated to stay as an act of *patriotism* (see Table 1). They provided testimonials that assert positive feelings and devotion to their country. Some statements indicated a need to preserve Ukraine's sovereign independence, while others used words of familial devotion to their country. Nearly 3 of 10 used familial devotional descriptions when referring to Ukraine, like *Motherland*, *Fatherland*, or *Homeland*, especially among fighters.

Most patriotic and motherland statements are positive, reflecting an authentic valuation of having a democratically free nation where Ukrainian culture and language can flourish. Examples include the following:

A Ukrainian woman who lives on her native land and does not need "salvation." A girl who will fight for her native language, native land, and Ukrainian culture. Українка, яка живе на рідній землі і не потребує «спасіння». Дівчина, яка боротиметься за рідну мову, рідну землю та українську культуру. (Written in Ukrainian/translated into English)

Because this is my motherland. (Written in English)

The use of the term motherland is most commonly used in patriotic scholarship and national armed forces' rhetoric. Most quotes using the word, in fact, appear more frequently by Ukrainian fighters than noncombatants. Likewise, the masculine term of fatherland is more often used in Europe. Both parent-referencing terms can be connected with espousing institutionalization of nationalist sentiment and patriotism. Fatherland can be associated with government and order, motherland to the place of origin/birth and nurturing, and homeland as a gender-neutral but a supportive environment where one belongs (Paracha, 2021). Other patriotic statements in my 2022 study allude to the imminent threat of Russian incursion on the sovereignty of their nation and culture:

Ukraine is my home and place, where all previous generations of my family lived. Russia invaded another country without any reason, just because of its government's ambitions to recreate USSR. I don't want to be a slave of someone's crazy ideas. I want to live in an independent country. (Written in English)



Because this is my homeland, I am Ukrainian, this is the land of my people, we are already fed up with Russia's aggression and interference in our state affairs. Russia cannot decide our foreign policy. Тому що це моя батьківщина, я українка, це земля мого народу, ми вже вдосита ситі агресією і втручанням Росії у наші державні справи. Росія не може вирішувати нашу зовнішню в внутрішню політику. (Written in Ukrainian/translated into English)

Protection of the Fatherland from invaders. Захист Вітчизни від окупантів. (Written in Ukrainian/translated into English)

Ukraine is an independent, indivisible, free state. (Written in English)

A third pattern includes Ukrainian altruistic statements; specifically, statements that express the desire to help others, including family, community, and people being hurt. Fighters (mostly Ukrainian police converted into military roles) and noncombatants (including resistance volunteers) were just as likely to be motivated altruistically. Many of the fighters who participated in my study reported being former police officers who are dedicated to continuing to protect and serve their fellow citizens and the nation.

Because innocent people die. Бо гинуть невинні люди. (Written in Ukrainian/translated into English)

As a police officer, I took an oath to the Ukrainian people. Як поліцейський склав присягу українському народові. (Written in Ukrainian/translated into English)

That is my native country, [I] want it free and democratic. Don't want Russians killing our people, don't want [R]ussians dictate to Ukraine what to do and how to live. (Written in English)

Some of these statements also reference the desire to prevent genocide. Studies indicate a lingering memory of the 1932–1933 Holodomor genocide in Ukraine, perpetrated by the Soviet Union (USSR), which includes the legacy of intergenerational transmission of trauma affecting survivors and the second and third generations. A study by Bezo and Maggi (2015) indicated that affected Ukrainian families and their descendants demonstrate a collection of transgenerational emotions, inner states, and trauma-based coping mechanisms. This includes participants feeling that they are living in “survival mode,” often feeling horror, fear, sadness, shame, anger, stress, low self-worth, stockpiling food supplies, anxiety and overemphasis of food access, social hostility, indifference to others, unhealthy behavior-seeking, and unwillingness to discard unneeded items (Bezo & Maggi, 2015, pp. 87–94). Statements from my 2022 survey study include the following:

Russia commits genocide of the Ukrainian people and encroaches on the territorial integrity and state sovereignty of Ukraine. I am involved in confronting the Russian occupation to prevent this. Росія здійснює геноцид українського народу та посягає на територіальну цілісність та державний суверенітет України. Я беру участь у протистоянні російської окупації, щоб запобігти цьому. (Written in Ukrainian/translated into English)

Ukraine is my home, there's no other choice but to resist. Ukraine will never surrender because this is a genocide. (Written in English)

For inclusive purposes, my study tried to incorporate more neutral, less biased language in introducing the purpose of the survey during the *Informed Consent Process*, including referring to the invasion as a *crisis* or *conflict*. This language choice was also suggested by the UN police who helped in the translation of the survey. There was the assumption that pro-Russian Ukrainians might also fill out the survey, although there appears to have been little participation by them. Two participants expressed feeling pro-Russian sentiments, or being unaffected by the war, but hoped that it will end.

I want Putin to do well. Хочу щоб путін здох. (Written in Ukrainian/translated into English)

Comparatively, others took offense at the use of neutral words like occupation or crisis. They expressed concern that narratives should label the event as a war, genocide, or invasion:

Please don't use the term the [R]ussian military occupation. They won't be able to occupy Ukraine. There is a large-scale war started by the country-aggressor. The reason to participate is to restore territorial sovereignty of Ukraine, de-occupy the territories of Donbass and Crimea, and return the world to the international law order. The reason is to restore justice for those who were brutally killed by the [R]ussian fascists. (Written in English)

Quantitative codification of the motivational statements indicates nearly one-third of the participants experienced the desire for violence, to harm Russians, or to seek revenge for the invasion (see Table 1). Most of these statements were made by participants completing the survey in late April, implying more hostile sentiments as the weeks of war progressed:

Ready to kill any Russian. Готовий вбити будь-якого росіянина. (Written in Ukrainian/translated into English)

I feel anger and anger for the murders of Ukrainian soldiers, civilians, for the rape of women, for torture of children, for the destruction of Ukrainian cities, the destruction of Ukrainian cultural monuments. I want revenge. I feel sad that the children were left without parents, the families lost their defenders, the Ukrainian cities were destroyed. Physically ready to kill every Russian who wants to seize Ukraine. Почуваю злість та гнів за вбивства російськими військовими українських військових, мирних громадян, за згвалтування жінок, за тортури над дітьми, за руйнування українських міст, нищення українських культурних пам'яток. Хочу помсти. Відчуваю смуток через те, що діти залишились без батьків, родини втратили своїх захисників, українські міста знищені. Фізично готовий вбивати кожного росіянина, який хоче загарбати Україну. (Written in Ukrainian/translated into English)

**Table 1:** Individual Motivations Informing 2022 Ukrainian Resistance to Russian Invasion

Motivation Category	Ukrainian Resistance Role		Total (n = 50)
	Fighter (n = 22)	Noncombatant (n = 28)	
Patriotism	90.9% (94.1%)	96.4% (93.9%)	94.0% (94.0%)
Altruism	36.3% (35.9%)	35.7% (36.1%)	36.0% (36.0%)
Motherland	36.3% (28.2%)	21.4% (27.8%)	28.0% (28.0%)
Genocide	13.6% (20.5%)	25.0% (19.6%)	20.0% (20.0%)
Vengeance	9.0% (34.1%)	53.6% (33.9%)	34.0% (34.0%)

*Note:* Observed frequency outside parentheses, expected frequency in parentheses.

### Perceived Stress Symptoms

The PSS asked individuals to rate how much they agreed that the Russian invasion was directly causing them to experience severe/frequent nightmares, anxiety, sadness/crying, anger, withdrawal, bad eating habits (overeating or lack of eating), and lack of sleep. This included a Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) that they were experiencing a specific stressor as a result of the war (see Figure 1). The quantitative analysis first examined aggregate PSS symptoms, adding up scaled items. Second, a *t*-test

analysis was performed that disaggregated by role, assuming that most fighters (mainly former police and military) have been trained and/or have more experience in handling personal stress in violent situations. Aggregate PSS levels were also assessed, with 1 (being the lowest) to 35 (being the highest) stress level (see Table 2).

**Figure 1:** Average PSS Symptoms of Individual Ukrainians Due to 2022 Russian Invasion



Nearly all survey participants reported experiencing moderate to high levels of a range of stressors, with anxiety, anger, and poor sleeping having the highest averages (1 [low]–5 [high]). The average level of total PSS was 30.1 (95% CI—28.2, 31.9) of up to 35 potential points, or 86% of potential magnitude of total stressors. When examining PSS experiences between combatants and noncombatants (who reported not picking up a gun or fighting), there were few noted differences in most of their average levels among the different stressors. However, two stunning differences did appear.

In the first months of the 2022 invasion, noncombatants reportedly suffered significantly higher levels of extreme sadness and crying than did those with military experience ( $t = -2.35$ , Cohen's  $d = -0.67$ ).

Comparatively, Ukrainian fighters experienced statistically significant higher differences in anger ( $t = 2.18$ , Cohen's  $d = 0.62$ ). It can be inferred from these differences that fighters may be better prepared to manage sadness/crying as a result of their training and experience as police officers and military. Yet, they also are much more likely to engage the enemy on a frequent basis, which sparks issues of feeling intense and chronic anger.

Intense anger among militant groups is a common phenomenon, such as among Northern Ugandan former LRA fighters (Liebmann, 2014), jihadists and Syrian fighters (Mironova, 2019), and U.S. military who fought in Iraq and Afghanistan (Shea et al., 2018). Such levels of anger, left untreated properly, are associated with long-term mental health and physical health risks, including substance abuse, addiction, unhealthy relations, spousal abuse, depression, self-harm, and suicide (Naifeh et al., 2021; Shea et al., 2018).

**Table 2:** PSS Symptoms Due to 2022 Russian Invasion Disaggregated by Role in Ukrainian Resistance

PSS Variables	Fighter <i>M, SE, SD</i> [ <i>CI</i> ], <i>N</i>	Noncombatant <i>M, SE, SD</i> [ <i>CI</i> ], <i>N</i>	Difference <i>M, SE, [CI]</i> , <i>t</i> Value, Cohen's <i>d</i>
Nightmares (1–5 strongly agree)	4.0, 0.24, 1.18 [3.5–4.5], 24	3.8, 0.22, 1.16 [3.4–4.3], 27	0.2, 0.32, [-2.1–0.8], 0.45, 0.13
Anxiety (1–5)	4.6, 0.15, 0.72 [4.3–4.9], 23	4.5, 0.20, 0.98 [4.1–4.9], 24	0.1, 0.25, [-0.4–0.6], 0.43, 0.13
Sadness/crying (1–5)	3.1, 0.26, 1.24 [2.6–3.6], 23	4.0, 0.26, 1.37 [3.4–4.5], 27	-0.9, 0.37, [-1.6– -0.1], -2.35, -0.67
Anger (1–5)	4.8, 0.07, 0.38 [4.7–5.0], 24	4.4, 0.18, 0.94 [4.0–4.8], 27	0.4, 0.21, [0.0–0.9], 2.18, 0.62
Withdrawal (1–5)	3.4, 0.20, 0.95 [3.0–3.8], 23	3.5, 0.26, 1.33 [3.0–4.0], 26	-0.1, 0.33, [-0.7–0.6], -0.20, -0.05
Bad eating habits (1–5)	3.3, 0.27, 1.29 [2.7–3.9], 23	3.1, 0.19, 1.45 [2.6–3.7], 27	0.2, 0.39, [-0.7–0.9], 0.40, 0.11
Poor sleep (1–5)	4.4, 0.11, 0.58 [4.1–4.6], 24	3.9, 0.23, 1.20 [3.4–4.3], 27	0.5, 0.29, [0.00–1.1], 1.95, 0.55
Total PSS Level (1 [low]–35 [high])	27.6, 0.83, 3.96 [25.9–29.3], 23	27.9, 1.01, 4.86 [25.8–30.0], 23	-0.3, 1.31, [-2.9–2.3], -0.23, -0.07

Note: *CI* is confidence interval.

## Attitudes Toward Russia

While motivations theoretically contributed to the decision to stay in Ukraine or to flee, the exogenous shock of the war and the proceeding experiences of the war in the first few months can impact an individual's attitudes toward the invader, their quality of life, and their resilience. My research assessed individual attitudes toward the enemy to gauge how individual Ukrainians perceive the attitude of Russia's government and its people toward war. Most participants (94%) strongly believe Russia's government is corrupt, while no one disagreed with the statement. A majority of participants (70.5%) disagree or strongly disagree that the Russian people do not want this war, while 15.7% remain neutral, and 13.6% believe that, at some level, they are against the war. There are no statistically significant differences between combatants and noncombatants on this statement ( $t < 0.50$ ). Overall, Ukrainians perceive Russia negatively, which may further divide any historical Russian–Ukrainian bonds and fuel Ukrainian national ideology, language, and culture.

## Quality of Life

The survey also asked the participants to scale their quality of life as a result of war, using a Likert scale of statements (strongly disagree = 1, disagree = 2, neither = 3, agree = 4, strongly agree = 5) about whether they are in physical danger, have lost their residence, and/or are separated from family. The average scale is 3.35 (95% *CI*–2.96, 3.75) for agreement statements of being at risk of physical harm. Most disagree with losing their residence, with an average response being 2.28 (1.91, 2.67). Yet, the most extreme average impact on quality of life appears to be being separated from loved ones, 4.13 (3.78–4.48). Overall, 58.5% reported being in imminent physical danger. Ukrainian fighters reported significantly higher levels of physical danger than noncombatants ( $t = 2.63$ ). This finding is likely because their role requires increased chances of combat. While technology helps locate Russian-backed forces, most fighting conditions include guerrilla warfare tactics, continuous bombing, and unplanned attacks (OHCHR, 2022; Nott, 2022).

Additionally, 21.2% have lost their home or residence, likely due to bombing or fleeing heavy fighting zones. However, a startling three of four persons reported being separated from family, including members who have fled, are displaced, or have been killed. The impacts of these variables on PSS are tested using a Pearson correlation analysis (see Table 3). The scale at which one is separated from family is strongly associated with experiencing higher rates of PSS ( $r = 0.45$ ). In particular, 63% of the variation of experienced anxiety levels is explained by being parted from loved ones. Thus, the policy set by Zelenskyy requiring male citizens to remain in the country while women and children are allowed to flee may, in fact, contribute to significantly higher PSS, including anxiety and worry in Ukrainian men. Despite these hardships of war, the qualitative data implies that Ukrainians demonstrate resilience, likely forged in the fire of their fight for freedom.

## Resilience

Resilience displayed during the war is deduced from qualitative narratives that participants provided about their circumstances, marked by whether or not each person is trying to stay active and positive in the face of the challenges on the ground. The survey asked the following open-ended questions: *Please describe how you believe this crisis is affecting your physical health or mental well-being. What is your normal day like as a result of the crisis?* A qualitative assessment of their responses uncovered several critical trends. First, nearly all the responses included some element of how the war has greatly disrupted their overall well-being:

I depend on sirens, sometimes I work, volunteer, live at home, communicate with friends, sleep, and psyche deteriorate. Я залежу від сирен, інколи працюю, займаюсь волонтерством, живу вдома, спілкуюсь з друзями, погіршився сон та психіка. (Written in Ukrainian/translated into English)

Well, often sad and thoughts reappear about God. Ну часто сумно і знову з'являються думки про Бога. (Written in Ukrainian/translated into English)

Because of the stress and fear for my child's life, I started smoking, sleeping poorly, I couldn't do routine things and work at the same level as before. Через стрес і страх за життя моєї дитини, я почала палити, погано сплю, не можу займатися рутинними справами і працювати на тому рівні, як раніше. (Written in Ukrainian/translated into English)

Honestly, [I] still don't know. It's hard to evaluate this in the current moment.... [I] guess, [I] need some time to process it and answer. But physically [I] feel more weak, lack of sleep, nightmares, my body temperature rises from time to time. It's a feeling like you're trapped inside of the box and you just cannot get out or help in any way to break this box. I could move to another country but then I would also feel guilt and anxiety for leaving my country, friends, and family. (Written in English)

Their words are haunting, filled with fear, worry, and constant mental fatigue. Some reported taking on negative behaviors, like smoking, lingering in bed, or choosing not to work. Likewise, many expressed the constant urge to keep up with the media, either watching television or scrolling the internet, almost addictively listening to news about the war. Chronic media use seemingly contributes to negative mental states.

Yet there are those whose statements indicate experiences of resilience during the conflict. These statements include mentioning activities that they do to keep moving forward, staying busy. They seemingly want to find purpose or to contribute. They made statements of trying to keep a positive mindset:

I spend most of my time studying and on self-development. I try to read more specialized literature based on my major, and some psychological books to find my balance and return my ability to think about the future. Also, I am listening to analytics who analyze the war, our results, and perspectives. (Written in English)

## 24/7 Volunteering. Волонтерство 24/7 (Written in Ukrainian/translated into English)

In all ways, I help bring victory day closer. Morally and physically ready every second to join the battle with the Russian invaders for the independence of Ukraine. Every day I honor the memory of the dead Ukrainians in this war with a moment of silence. Усіма способами допомагаю наблизити день перемоги. Морально та фізично готовий щосекунди вступити в бій з російськими окупантами за незалежність України. Щоденно вшановую пам'ять загиблих українців у цій війні хвилиною мовчання. (Written in Ukrainian/translated into English)

I later categorized these qualitative statements into binary variables of *resilience* indicators. The first resilience variable includes if the person made a statement indicating that their physical or mental well-being was negatively impacted. A decline in personal well-being due to disruptions caused by the war was evident in 49 of the 50 statements. The second dummy variable categorized their statement as demonstrating *positive attitudes and positive actions* in face of the war. Of the 50 participant statements, 44% indicate individuals demonstrating resilience. There are likely limitations to categorizing their statements, and nearly a third of the participants did not make qualitative testimonials. However, these narratives help capture insights into how Ukrainians in the country continue to live as best as they can, even as their cities and towns are bombed, and their fellow citizens are tortured, raped, and killed.

### Multivariate Modeling

As shown previously, the qualitative analysis offers intrinsic insights into the experiences of Ukrainians on the ground. Moreover, my survey also helped uncover patterns within their experiences and the implications on their health. This next section explores the interactions of the variable types presented earlier. I explore the potential correlations and causal mechanisms among motivation, attitudes toward the enemy state, diminished quality of life, and resilience on the dependent variable of individual PSS level. This statistical analysis includes a correlation analysis using both point biserial and Pearson's *R* testing (see Table 3).

**Table 3:** Correlation Analysis of 2022 Ukrainian Total PSS Levels During Months Into War

	Total PSS	Nightmares	Anxiety	Sadness	Withdrawal	Poor Eat	Poor Sleep
<i>Motivation Statement (made = 1/not made = 2/blank–no statement)–Point Biserial</i>							
Patriotic motivation	-0.01	-0.15	0.18	0.13	0.01	-0.01	-0.10
Altruistic motivation	-0.01	-0.13	-0.07	-0.11	0.07	0.15	0.22
Motherland motivations	0.41***	0.11	0.29*	0.25*	0.12	0.23	0.28*
Prevent genocide	-0.17	-0.09	-0.36**	-0.24	-0.23	-0.12	-0.09
Vengeance motivations	-0.13	-0.03	-0.24	-0.22	-0.02	0.01	-0.04
<i>Attitudes Toward Enemy State (1 = strongly disagree–5 = strongly agree)–Pearson's R</i>							
Russian gov't. is corrupt	-0.04	-0.01	-0.01	0.12	0.36***	0.27*	0.10
Agrees most Russians don't want war	0.14	0.00	0.10	-0.09	-0.13	0.25*	0.31**
<i>Quality-of-Life Indicators (1 = strongly disagree–5 = strongly agree)–Pearson's R</i>							
Physically in danger	0.16	0.07	0.13	0.09	0.33**	0.04	0.20
Lost home/residence	0.16	-0.01	0.30**	0.08	0.12	0.08	0.04
Separated from family	0.45***	0.11	0.63***	0.22	0.40***	0.17	0.08
<i>Resilience statements (made = 1/not made = 2/blank–no statement)–Point Biserial</i>							
Health negatively impacted	-	-0.21	-	-0.26*	-0.29***	-0.28*	0.22
Keep positive attitude	0.26*	0.37***	0.37**	0.21	0.15	0.18	0.21

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . *Italicized*–correlation analysis.

Key associations emerged, including around strong familial affections to Ukraine and referring to the nation in terms of motherland and fatherland. Persons who made these motivation statements tended to also have higher rates of perceived stress, primarily anxiety and chronic sadness/crying. Yet, those individuals who are motivated to stay to prevent genocide of the Ukrainians reported significantly less anxiety ( $r = -0.36$ ).

Moreover, attitudes toward Russia related to this war appear mainly associated with higher rates of withdrawal, poor eating habits, and poor sleep. Yet, overall, most Ukrainians appear not to hold violently hostile sentiments against Russians; mainly, they have a desire to regain their territory.

The invasion has led to many families and communities being disrupted, separated, or killed, which appears to have one of the greatest associations with overall PSS, as well as anxiety and withdrawal. Sadness, which noncombatants suffer at greater rates, is additionally linked to negative statements about one's physical and emotional well-being. One recommendation would be for Ukraine to offer support services targeting nutrition and health services for noncombatants, as well as ensuring access to medical centers. However, starting in mid-March, various hospitals and clinics were hit by Russian artillery, which may deter people from seeking the help that they need.

My 2022 survey is limited in its sample size, thus standard OLS or logistical modeling is not recommended. It is possible for regression models to be bootstrapped, which is a method of random sampling with replacement. Nonparametric bootstrapping holds no assumptions about underlying population distribution, and can be an alternative method for testing hypotheses for studies with small or extremely small sample sizes (Dwivedi et al., 2017). Bootstrapping a regression model can elaborate on the variability of the model parameters. This allows us to better know the extent of random variation in regression coefficients due to small changes in data values. Building on Fox (2015), this analysis presents the following modeling in Table 4 for consideration:

**Table 4:** Statistics for Bootstrapped Regression Modeling of 2022 Ukrainian Total PSS Level

	Coefficient			
	Constant	Motivated by Motherland (1 = yes; 2 = no)	Separated from family (1–5 strongly agree)	Maintain positive attitude (1 = yes; 2 = no)
Avg. bootstrap estimate	11.91***	4.60***	1.88***	1.29
Bootstrap SE	3.73	1.62	0.59	1.71
Bias	0.59	-0.05	-0.11	-0.03
Normal CI	(4.59, 19.24)	(1.42, 7.77)	(0.72–3.03)	(-2.04, 4.63)
Percentile CI	(5.28-20.65)	(1.47, 7.75)	(0.45–2.76)	(-1.92, 4.70)
Bias-corrected CI	(4.75-19.70)	(1.60, 8.05)	(0.75–2.92)	(-1.82–4.83)

Notes: Two bootstrap confidence intervals (CI) are shown for each coefficient. Standard error = SE.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Number of observations = 42, replications = 1000. Adj.  $R^2 = 0.30$ , Wald  $\chi^2 = 24.02$ ,  $p = 0.00$ .

The coefficients for motivation statements referring to the motherland, fatherland, or homeland and being physically separated from family are significant. The resilience variable of maintaining a positive attitude appears limited. Yet this modeling is significant (replications = 1000). Accordingly, if a Ukrainian feels a familial relationship to their nation, their PSS level will predictably be about 13% (4.6 points of a possible 35) less than a compatriot who does not make this statement. A Ukrainian who strongly agrees (5) to being separated from family due to the war is likely to suffer approximately 21% (7.5 points) higher in their stress level, compared with a person who partially agrees to being separated who will score 16% (5.6 points) higher perceived stress. This bootstrapped regression model can help abductively explore the more advanced models

of stress experienced by Ukrainians who did not flee the invasion. My research may help inform future large-scale studies if and when it is possible to more readily collect data from within the country.

## Limitations

The generalizability of the statistical findings is limited by the small sample size. Originally, the study aimed to have a larger number, but as the war on the ground developed each week, reports from colleagues in the country highlighted the difficulty for people to take or to share the survey, particularly in heavy-combat zones. My study is able to present simplified statistical analyses that indicate the magnitude of psychosocial stress experienced by Ukrainians. It disaggregated certain analyses by resistance role, whether a person is a fighter or a noncombatant. It also used statistical approaches like bootstrapping to enhance the analysis. Moreover, my study explored how to categorize and quantify motivational and resilience statements by participants. The main objective of collecting open-ended answers was to qualitatively capture narratives that explored the essence behind their experiences. A quantitative analysis came secondary. There was limited time to prepare and launch my study due to the nature of the growing war. Future research would benefit from pilot-testing this method more rigorously. A larger-scale survey can better inform the generalizability of these results to an extended Ukrainian population. The PSS instrument used in the survey appears to have a high inter-rater reliability, and thus, may prove a useful scale to incorporate in future health studies.

## Conclusions

As the literature review indicates, there is some research examining the impacts of the 2014 Ukraine–Russian war. Yet, 2014 only involved a partial skirmish between the two forces in the country. Historically, the conflict between these two nations has left a legacy of generational trauma, and despite having a pro-Russian population, most Ukrainians consider their nation as a sovereign democratic state with its own language and culture that must be preserved at all costs. In February 2022, the tensions between these countries ignited into a full-scale invasion that has had crippling consequences worldwide, including the largest refugee crisis in recent European history, food shortages, and concern of sparking a potential world war. Thousands have died in-country, the cause of which remains much of a mystery even to the international diplomatic community. Yet while millions flee, most Ukrainians remain in the country, resisting Russian assaults.

To date, there are few studies examining motivations, perceived stress, and resilience of Ukrainians who stayed in the country in the first months of the 2022 Russian invasion. The semi-structured survey of this study offers unique insights into the life experiences and related health implications on this war-affected population. The HMIEM model allows us a means of theoretically exploring the “why” behind behavior, its causes, and eventually its consequences. My research reasserts the important associations existing between motivation and key quality-of-life outcomes, particularly psychosocial well-being and positive states of mood. Higher self-determination in a Ukrainian resistance member’s motivation appears correlated to better coping mechanisms, decreased negative emotional states, and better mental health overall as measured by total PSS. Building on HMIEM/SDT, my mixed-method research explored why Ukrainians remain in their country, including important antecedents and consequences. Initial findings from my study explored the motivations that drove so many to stay. Most participants reported being motivated by patriotic sentiments that reflect an authentic desire to fight for a democratically free nation. Others strongly experienced altruistic motivations, expressing hope to help their fellow people from being hurt. One of the starkest findings is the concern about preventing a second Ukrainian genocide. In general, these motivations can impact people’s state of mind in the weeks and months after the invasion.

Motivation can impact a variety of quality-of-life outcomes, including psychosocial well-being and better positive states of mood. Fighters tend to be more concerned with serving their motherland/fatherland, offering both intrinsic and extrinsic motivational statements. As the literature implies, not all motivations are



correlated to improved PSS. Motherland motivations appear to be correlated to higher levels of perceived stress. This finding may indicate a need to build morale among Ukrainian fighting forces using a more varied *logotherapeutic* approach, helping them find diversified meaning in their struggle to liberate their nation. Comparatively, noncombatants who often volunteer to support the resistance seem intrinsically motivated to help others, although its significance appears limited. However, those who make statements of concern about preventing genocide appear to have significantly lower rates of anxiety.

As the analysis indicates, stress may be an endemic problem. Most participants experience medium to high levels of perceived stress, the most chronic being anxiety and anger. The average person reports suffering from 86% of the potential magnitude of seven key stressors. Fighters tend to experience higher rates of anger, which if left untreated, can have long-term consequences, including depression and suicide. Perceived stress rates are associated with decreased quality of life. While losing one's home or being in harm's way can compound trauma, the fact that the war has separated so many families appears the most detrimental to individual psychosocial well-being. Constantly being isolated from loved ones, not knowing if they are safe, and the increase in killings by Russians is taking a toll. Yet forming coping mechanisms and maintaining a positive mental state can alleviate average strain.

Resilience differs from motivation, often coming to light after experiencing a traumatic event like a sudden invasion. Again, the Russian–Ukraine conflict has been building for more than a decade, with Putin leading the call to annex parts of the east where pro-Russian separatists reside. Yet, few could have predicted the scale of this latest invasion. Resilience statements made by survey participants paint a vivid picture of how many are trying to keep moving forward to find meaning in their suffering, to contribute to the fight for freedom, and to help others. Staying positive and staying active is strongly correlated with lower overall stress, including fewer nightmares and less anxiety. Conversely, when people make negative statements about their physical and mental health, they appear to have increased PSS. Moreover, bootstrapped regression modeling indicates how motivations, decreased quality of life, and resilience may feed into perceived stress levels. Most Ukrainians face insurmountable obstacles, which seem to grow as the conflict continues. In this article, I have tried to capture their experiences, their hopes, and their voices, before the clatter of violence deafens the world to their cries for freedom.

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