

“Resilience and vulnerability of a person in a community in the context of military events”

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ARTICLE INFO	Olena Kuppenko, Andriana Kostenko, Larysa Kalchenko, Olena Pehota and Oleksandr Kubatko (2023). Resilience and vulnerability of a person in a community in the context of military events. <i>Problems and Perspectives in Management</i> , 21(1), 154-168. doi: 10.21511/ppm.21(1).2023.14
DOI	http://dx.doi.org/10.21511/ppm.21(1).2023.14
RELEASED ON	Monday, 06 February 2023
RECEIVED ON	Tuesday, 03 January 2023
ACCEPTED ON	Wednesday, 01 February 2023
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Problems and Perspectives in Management"
ISSN PRINT	1727-7051
ISSN ONLINE	1810-5467
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

47



NUMBER OF FIGURES

0



NUMBER OF TABLES

8

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BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Received on: 3rd of January, 2023
Accepted on: 1st of February, 2023
Published on: 6th of February, 2023

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Conflict of interest statement:
Author(s) reported no conflict of interest

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RESILIENCE AND VULNERABILITY OF A PERSON IN A COMMUNITY IN THE CONTEXT OF MILITARY EVENTS

Abstract

A full-scale Russian invasion in Ukraine changes people's behavior and determines the current person's resilience/vulnerability in society. This paper aims to estimate individual resilience/vulnerability and its factors in the community during wartime. It used the online survey method based on Google Forms and online focus-group interviews during May-August 2022 at four territorial communities in Kyiv, Lviv, Mykolaiv, and Sumy regions, which geographically represent the whole of Ukraine. A randomly selected 468 respondents were interviewed, including 139 internally displaced persons and refugees and 329 who did not consider themselves in any vulnerable category. The survey shows that according to the "Well-being and baseline status" factor, 66.3% of respondents confirmed an increase in their activity in response to the war.

Along with a high level of trust in their family during wartime, indicators of social atomization (broken social ties, isolation of people from each other) are high. Thus, 37.4% of respondents noted that they rely only on themselves and solve their problems independently, without anyone's help. Using the Connor-Davidson Resilience Scale, it was found that the social resilience of the Ukrainian population is mainly based on individual resilience rather than on the resilience of mechanisms. For almost 50% of the respondents, there are manifestations of atomized sustainability and vulnerability, which increase the likelihood of post-traumatic stress disorder. Therefore, the control over disaster management processes should be based not only on data monitoring but also on training and innovativeness to increase social resilience.

Keywords

Ukraine, war, society, sustainability, post-traumatic stress, resilience, vulnerability factors

JEL Classification

A14, H56, H31

INTRODUCTION

Starting from the first day of the full-scale Russian invasion of Ukraine on February 24, the main features of Ukrainian society became resilience and vulnerability. Thousands of people killed in the war, millions of Internally Displaced Persons, and refugees from all over Ukraine have changed Ukrainian society. Therefore, social resilience and vulnerability are essential characteristics of the local population's reactions to the critical traumatic military events in Ukraine.

In response to the full-scale Russian invasion, the Ukrainians demonstrated different kinds of resilience from the first days. It was not only the military resilience of the servicemen but also the resilience of the civilian population in the conditions of the traumatic events of the war.

The situation is characterized by high turbulence due to the continuation of hostilities/combat operations. The dynamic of the population's

social resilience also reflects this process, in which one can trace the probabilistic nature, and people's vulnerability is entirely possible. In such conditions, the monitoring of the population vulnerability is activated, but not less important is the monitoring of social resilience and the development of appropriate methods for analyzing monitoring results to justify management decisions of different entities at different levels.

1. LITERATURE REVIEW

The phenomenon of social resilience is a complex category concerning different situations of challenges and disasters, varying degrees of traumatic impact, and different duration of action. In the most general understanding of this phenomenon, according to Saja et al. (2021), the four groups of social resilience are identified:

- 1) as the ability of entities – people, social units, social systems – to cope with disasters, resist them and/or restore;
- 2) as the ability of social mechanisms to cope with a disaster, which includes the mechanisms of decision-making and the use of resources;
- 3) as the ability and reliability of public structures, resources, and processes to foresee disasters, cope with and recover from them;
- 4) as the ability to cope with disasters, adapt or transform when the previous capacity is already exceeded.

Within this paper, vulnerability as the quality opposite of resilience is considered. The vulnerability of people reflects the increased sensitivity and reduced ability to cope with “waves of disaster” and affects the fragility and insecurity of systems as a whole. Increasing vulnerability requires progressively fewer perturbations to result in a potentially catastrophic outcome. The accumulation of previously manageable perturbations becomes destabilizing. Adaptive capacities wear out until a “tipping point” is reached, potentially bringing the system into conflict regarding critical resources; when the system's livelihood assets waste away, and institutions fail to adapt to changes, ways of accessing livelihoods become “fragile.” It decreases the system's overall resilience (Glavovic et al., 2002).

Among the factors that can increase a person's vulnerability under martial law are the risks of post-traumatic stress disorder. Among the factors that can increase the vulnerability of the territorial community are the dangers of inequality between people.

1.1. Risks of post-traumatic stress disorders

War always acts as a combination of influential traumatic factors, not only of a physical but also of a psychological nature (Somasundaram & Sivayokan, 1994; Cook et al., 2004; Murthy & Lakashminarayana, 2006; Boehm-Tabib, 2016; Thoompail & Tacchi, 2020; Lim et al., 2022). It is worth noting that post-traumatic stress is a complex system of reactions at the level of the human psyche, mind, and body through manifestations of feelings of helplessness, horror, loss of control, and destruction. It is a normal reaction of humans to challenging events. However, trauma can have different effects on individuals. The issue that remains open is what factors distinguish individuals who develop mental disorders, particularly post-traumatic stress disorder (PTSD), from those who are resilient, display initial solid reactions to the event, but do not have long-term mental health consequences, and may even exhibit post-traumatic growth (Martin-Soelch & Schnyder, 2019).

The problem statement of identifying the relationship between the response to trauma and resilience and vulnerability is present in studies devoted to various types of traumatic events. Edwards et al. (2005) determined that when faced with traumatic events, some people show significant vulnerability and psychological stress and develop chronic clinical psychological problems such as depression or post-traumatic stress disorder. In others, on the contrary, qualities of resilience and strength of character come to the fore. Horesh (2012) draws attention to a possible variant of post-traumatic – emotional, cognitive, behavioral, or physical

damage after exposure to a traumatic event, which can leave a person in a weakened, more fragile state. Such an impact of an early traumatic event increases the risk of developing psychopathology after contact with the next one. However, there is also an alternative option: “stress inoculation” or “prospective resilience” as a reaction to traumatic events, as a person’s experience to cope with them effectively (Horesh, 2012). The probabilistic nature of social resilience and vulnerability in war conditions manifests itself in these variants of human reactions to a traumatic event.

Herman (1992) considers a psycho-traumatic event as a danger, an extremely critical event that threatens life, carries a direct collision with death, and poses a threat of serious harm or sexual violence. It could be military operations, a natural disaster, a car accident, or sexual violence. In addition, the sudden, unexpected death of a loved one is also a traumatic event (MedlinePlus, 2022).

During the first month after a traumatic event, a person develops acute stress disorder (ASD). This temporary disorder usually subsides after a few hours or days (Ministry of Health of Ukraine, 2016). Suppose a person has trouble recovering and negative feelings about the experience last more than three months or worsen over time. In that case, they may have post-traumatic stress disorder (PTSD) (Voznitsyna & Lytvynenko, 2020). Acute stress disorder predicts PTSD (Harvey & Bryant, 1998; Bryant, 2010). PTSD is a complex disorder of mental functioning in response to trauma that can change how a person thinks, feels, and behaves and that causes significant distress or affects the ability to function normally (Voznitsyna & Lytvynenko, 2020).

According to the Ministry of Veterans Affairs and the US Department of Defense, the following conditions according to the time course are stated: acute stress reaction (from the first minutes after the injury to two days); acute stress – complex disorders, up to four days; acute stress disorder – from two days to one month; the acute form of post-traumatic stress disorder (from one to three months); the chronic form of PTSD (more than three months); and PTSD with delayed onset (symptoms of the disease appear after six months or later) (CPG, 2010).

ASD and PTSD have the same primary symptoms in response to a traumatic event (Bryant, 2010, 2016). They are re-experiencing – intrusive distressing memories of the traumatic event; nightmares; intense psychological suffering or somatic reactions (sweating, palpitations, panic) when reminded of a traumatic event; avoidance of activities, places, thoughts, feelings, or conversations related to the event, emotional numbness, loss of interest in usual activities, detachment from others; excessive excitement, insomnia, irritability, attention span difficulties, excessive alertness, excessive start reflex.

Unlike ASD, PTSD refers to disorders related to impaired adaptation and response to severe stress. It includes dissociative personality disorder and symptoms not related to fear. For example, there is risky or destructive behavior, excessively negative opinions and assumptions about oneself or the world, exaggerated blaming of oneself or others for causing trauma, negative affect, decreased interest in activities, and a sense of isolation (National Center for PTSD, 2022). PTSD can be characterized by negative cognitive/emotional disturbances, e.g., memory problems, adverse changes in thoughts and feelings, a feeling of being cut off from one’s own life, a feeling of being disconnected and isolated from others, and loss of the sequence of events in memory. Moreover, there is memory loss for essential components of a traumatic event, loss of interest in hobbies and previously enjoyed activities, and inability to feel happy (Friedman, 2016; National Center for PTSD, 2022; MedlinePlus, 2022). The feature and danger of PTSD is the tendency not only to disappear over time but to become more pronounced and appear suddenly against the background of general well-being (Litin, 2018).

According to Somasundaram and Sivayokan (1994), who investigated the consequences of the civil war and the experience of Sri Lanka (1983–2009), almost half of the citizens experienced five to nine wartime stresses points, and a quarter – more than 10. Only 6% showed stress tolerance and did not experience any negative consequences for their future life. On the other hand, 64% developed psychosocial consequences, including somatization (41%), post-traumatic stress disorder (27%), anxiety disorder (26%), major depression

(25%), hostility (19%), relationship problems (13%), alcohol and drug abuse (15%), and functional impairment (18%). In general, the above statistical data prove that the experienced war traumas are strongly correlated with psychosocial and somatic symptoms, which act as factors of citizens' vulnerability.

In 2022, an interdisciplinary group of scientists from Singapore, Canada, and Poland presented a comprehensive study of post-traumatic stress disorder in military and civilians, which included the results of 45 individual investigations of 23 different military or socio-political conflicts, with 67,153 participants. According to the results, 31 studies confirmed the prevalence of PTSD among the civilian population, while 14 reported the prevalence of PTSD in the military. In the given studies, the prevalence of post-traumatic stress varied within a relatively large interval: from 3.9 to 69.0%. In addition, the research found that women suffered more than men. Vulnerable population groups are children, the elderly, and people with disabilities. However, there is also evidence for the resilience of more than half of the population in the face of the worst trauma of war (Lim et al., 2022).

One of the mechanisms for reproducing the psychological resilience of a person affected by a psycho-traumatic event is a three-stage healing model. It includes: creating safety, reconstructing the history of the trauma – commemoration, and mourning – restoring ties between the victims and their community (social rehabilitation, integration, and adaptation) (Herman, 1992). However, the situation's complexity lies in the fact that existing inequality in the community can make it difficult to re-establish ties or even strengthen disconnection.

1.2. Risks of inequality in communities

As Cannon (2008) highlights, some people have better opportunities than others. Some are richer than others, and some are safer than others. It may also occur that more powerful community members do not want the most vulnerable ones to participate. There is evidence that community people only sometimes have a disposition toward others. Therefore, to understand vulnerability, one needs to perceive the community not as a pleasant place

with the potential for reciprocity and risk-sharing but as a place of inequality. Thus, better governance can mean changing the behavior of those who already have power so that their activities do not increase the vulnerability of others.

Bohle (2006) emphasizes the dual nature of social networks: on the one hand, they promote unification; on the other, they can sometimes restrict access and cause disconnection. As Walker and Salt (2006) concluded, communities should be understood as places of unevenly distributed vulnerabilities and unequally allocated potentials to deal with them. From this point of view, community formation and the development of human social resilience look contradictory and even conflicting. Keck and Sakdapolrak (2013) stated that resilience is expensive. Moreover, it is crucial to achieve it in conditions of limited resources and limited, albeit available, options for action. In building social resilience, one must remember the question of who is the winner and loser.

Other researchers also focus on the importance of resilience in considering individuals' vulnerability. For example, Voss (2008) emphasizes that in the past, those who are vulnerable today did not have a "vote" or representatives who would give them a "vote." As a result, their worldview, needs, and interests did not find an acceptable form of articulation, and no one listened to them.

1.3. Decision models

As noted by S. J. Wolin and S. Wolin (1993), the response to factors that enhance individual resilience and a person's resilience in the community can be given by the "damage model" or the "challenge model." They investigated the resilience of those who grew up in "dysfunctional" families and gave the following interpretations of the proposed models. The damage model focuses on illness, psychopathology, and dysfunction. This model emphasizes negative symptoms, vulnerability, and helplessness.

At the same time, the challenge model considers both disruption and opportunities. The challenge model is designed to help identify human resilience and strengths, although this model does not deny the validity of the negative consequences of

adversity, stress, and trauma. The challenge model encourages activity and creativity (Wolin, 1999). Resilience, in this version, is seen as a person's potential to emerge from a crushing experience, albeit with scars, but strengthened (Helmreich, 1996; Walsh, 1996).

Cannon (2008) proposes to perceive people not as helpless victims but as agents capable of coping and demonstrating resilience with the help of their resources. It has been recorded that residents carry out the largest share of emergency response and rescue in most disasters, thus demonstrating that they have significant capabilities and are not just vulnerable and passively waiting for help from outside.

The challenge model seems to be more reasonable. However, reflecting on the experience of the research team members living at risk of occupation, internal displacement, and as refugees to keep the damage model in focus is needed. Therefore, the paper takes such human properties as resilience and vulnerability in their dialectical contradiction for further elaboration. The paper also considers the risks of developing post-traumatic stress disorder, which increases individual vulnerability, and the risks of inequality in the community, which make it more fragile.

2. AIM AND HYPOTHESIS

The study aims to analyze human resilience and vulnerability under martial law, implement the appropriate data collection at the level of territorial communities in the war situation, and develop an algorithm for analyzing the obtained data to substantiate different management decisions. The study also elaborates the following hypothesis:

H1: Communities and vulnerable people groups can show certain resilience factors in a war emergency.

In particular, this hypothesis is tested on the example of internally displaced persons and refugees with dual vulnerability compared to those who do not consider themselves to be in any vulnerable category.

3. METHODOLOGY

The data were generated from the sociological survey (May 2022) and focus-group interviews (August 2022), which covered territorial communities (TC) of the central part of Ukraine (Kyiv), northeastern (Sumy TC), southern (Mykolaiv TC), and western (Lviv TC). The manifestation of social resilience and vulnerability is considered in the context of the local population's reactions to the following critical traumatic military events in the spring and summer of 2022:

- The suburbs of Kyiv were occupied during February-March 2022. On April 2, 2022, the Ministry of Defense of Ukraine reported about the complete liberation of the Kyiv region from Russian troops;
- After February 24, the Lviv TC was subjected to repeated rocket attacks and became the most significant transit and most powerful volunteer and social security hub for citizens, internally displaced persons (IDPs)/refugees from all over Ukraine;
- Since February 24, the Mykolayiv TC has been under constant rocket fire. On March 24, Mykolaiv was awarded the honorary distinction "Hero City of Ukraine." Since May 1, the TC has been on the list of territorial communities located in the area of military (combat) operations or under temporary occupation, encirclement (blockade);
- The Sumy TC was under fire from the first day of the full-scale Russian invasion on February 24. On February 25, the blockade of the city of Sumy began, and on April 4, the occupying forces left the territory of the Sumy region. The first humanitarian corridor for the people's evacuation became operational on March 8;
- The socioeconomic indicators typical for the studied communities as of spring-early summer 2022 were also reordered;
- After the liberation of the territories and the publication of war crimes committed by Russian soldiers in the cities of Bucha, Irpin, Borodyanka, and others, the Kyiv TC found it-

self in a situation not only of destroyed transport, logistics, social, marketing, and engineering infrastructure, but faced with a powerful outflow of personnel abroad and their partial redeployment to the west of Ukraine, temporarily withdrawing from active economic life hundreds of thousands and even millions of Kyivans;

- The Lviv TC received a critical load on the existing infrastructure resulting from citizens' evacuation, their internal replacement, and accommodation. Besides, the community received the status of a transit location for traveling abroad. In April 2022, the process of relocation of businesses/enterprises from the zones of warfare started, which imposes an additional burden on the industrial and housing stock of the Lviv region;
- Residents of the Mykolaiv TC remained without drinking water sources due to the latter's destruction or occupation of their locations. At the time of writing this paper, only technical water from the Ingulets River is available in the city. Also, the city is constantly experiencing destructive massive rocket attacks on civilian infrastructure, which forces people to leave their homes and evacuate;
- The Sumy TC functions as an outpost close to the Ukrainian-Russian border, constantly under fire, the consequences of which are the destruction of the vital infrastructure of the border communities in the Sumy region. The Ukrainian regions were always different regarding socioeconomic development, but they were not so different from having military confrontations without external force (Melnyk et al., 2016).

From the methodological point of view, the study involved a quantitative and qualitative field research strategy. Accordingly, data collection and analysis took place in two stages. In the first stage, a sociological survey was conducted in May 2022. The sample included 468 respondents, including 139 IDPs and refugees and 329 who did not consider themselves in any vulnerable category. The data analysis employed the factors for reducing the risk of vulnerability (Cannon, 2008):

- 1) livelihood strength and resilience;
- 2) well-being and baseline status;
- 3) self-protection;
- 4) social protection;
- 5) governance.

This stage primarily aims to identify manifestations of community human resilience/vulnerability factors.

The second stage took place in a focus group interview in August 2022. Internally displaced persons (IDPs) and Ukrainian refugees in the Republic of Bulgaria, the Federal Republic of Germany, the Republic of Poland, the Czech Republic, and the Swiss Confederation participated in the survey. Sixteen respondents were involved. Participants with dual vulnerability (pensioner-refugee, pensioner-IDP, IDP-mother of many children, IDP-disabled person, IDP-single mother, IDP 2014-IDP 2022) were involved. The task of the stage was to check the hypothesis about certain factors of resilience in a vulnerable population category. It analyzed the data from the focus group interview to identify compliance with The Connor-Davidson Resilience Scale:

- 1) able to adapt to change;
- 2) close and secure relationships;
- 3) sometimes fate or God can help;
- 4) can deal with whatever comes;
- 5) past success gives confidence for new challenges;
- 6) see the humorous side of things;
- 7) coping with stress strengthens;
- 8) tend to bounce back after illness or hardship;
- 9) things happen for a reason;
- 10) best effort no matter what;
- 11) can achieve goals;
- 12) when things look hopeless, do not give up;
- 13) know where to turn for help;
- 14) under pressure, focus, and think clearly;
- 15) prefer to take the lead in problem-solving;
- 16) not easily discouraged by failure;
- 17) think of oneself as a strong person;
- 18) make unpopular or difficult decisions;
- 19) can handle unpleasant feelings;
- 20) have to act on a hunch;
- 21) strong sense of purpose;
- 22) in control of life;
- 23) like challenges;

- 24) work to attain goals;
- 25) pride in achievements (Connor & Davidson, 2003).

This stage mainly aims to identify manifestations of human resilience/vulnerability factors.

4. RESULTS

4.1. Identification of human resilience/vulnerability factor manifestations in the community

By the component “1 – Livelihood strength and resilience,” evidence of the existing risk of population vulnerability is found. Thus, the results of a sociological survey demonstrate people’s low assessments of their socioeconomic status (Table 1). About 70% noted that they either did not have enough money for food, utility bills, and medicine, or they had enough money to meet basic needs but no more. Women predominate among the poorest part of the respondents (according to their estimates).

The most vulnerable are persons with disabilities and single mothers/fathers, who often do not have enough for basic needs (63.5% and 64%, respectively). Notably, 43.5% of respondents who do not belong to any social categories also note the possibility of satisfying only basic needs, and 18% answer that there are not enough funds for basic needs.

In addition, the study results proved that the full-scale Russian invasion of Ukraine negatively affected employment and people’s income levels, exacerbating the population’s financial instability and increasing the risk of falling into a vulnerable situation. 27.1% of respondents faced a reduction in the rate share and salary level, 14% lost their official job, 6.9% lost their unofficial job, and another 21.3% still do not work as earlier.

Financial assistance, employment, and humanitarian support are most in demand among community residents. Against the background of relative satisfaction of basic needs, this may indicate both a strategy for overcoming a sense of uncertainty by the population and an increase in paternalistic sentiments. 57% of respondents express the need (as of May 2022) for financial assistance.

The current situation seems risky for social resilience. Obrist et al. (2010) emphasize the importance of entities’ ability to access capital not only to cope with adverse conditions but also to adapt to them, i.e., to react but also to seek and create options, i.e., to be proactive.

By the component “2 – Well-being and baseline status,” evidence of existing vulnerability factors and people’s resilience is found. The obtained data on physiological needs under martial law are presented in Table 2. Ukraine’s strength (a resource for development and recovery) is that access to clean water, housing, and food is available for most residents. However, under martial law, community residents experience limited access to rest and sleep, which is more common among women. Vulnerable groups of women and men are more often restricted in access to physiological needs, in particular, IDPs (limited access to recreation, housing), disabled people and large families (limited access to recreation), single mothers/fathers (limited access to food), pensioners (limited access to food and sleep). The proximity of the community to the territory of warfare also affects the limited access to physiological needs.

66.3% of respondents confirmed the growth of their activity in response to the war, which is quite understandable because people’s activity acts as a psychological mechanism of protecting and overcoming the stress that Ukrainians

Table 1. Assessment of socioeconomic situation (by gender)

Source: Survey data as of May 2022.

Social strength and resilience measures	Total, %	Women, %	Men, %
Not enough for basic needs	29.8	32.8	23.4
Enough for basic needs but no more	41.1	43.4	36.4
I can afford to buy clothes and small appliances; I have minimal savings	19.1	17.8	21.8
I have enough money for all needs	10	5.9	18.4

Table 2. Assessment of physiological needs satisfaction (by gender)

Source: Survey data as of May 2022.

Indicator	Category	Limited access, %	Have access, %	Hard to say, %
Food	Women	9.3	87.9	2.8
	Men	8.0	91.2	0.8
Pure water	Women	5.9	91.7	2.4
	Men	6.1	93.1	0.8
Sleep	Women	14.8	73.8	11.3
	Men	11.9	80.5	7.7
Rest	Women	38.8	41.9	19.3
	Men	27.6	54.4	18.0
Housing	Women	6.3	89.2	4.5
	Men	6.9	91.2	1.9

have to endure because of the war. Data by gender are available in Table 3. Regarding vulnerability groups, forcibly displaced persons (moved abroad, moved to other inhabitant areas of Ukraine) constitute 70.5%, single mothers/fathers – 70%.

Table 3. Assessing activity in response to war (by gender)

Source: Survey data as of May 2022.

Category	Yes, %	No, %	Hard to say, %
Women	66.8	32.7	0.6
Men	65.0	33.0	1.9

Along with a high level of trust in their family members (56% count on support; 46% – asked for help; 53.5% – assisted), even in wartime, indicators of social atomization (broken social ties, isolation of people from each other) are high. Thus, 37.4% of respondents noted that they rely only on themselves and solve their problems independently, without anyone’s help. 12% of respondents noted that they do not count on anyone. It can sound like evidence of human independence, but such atomized resilience has its limits and therefore belongs to a risk factor.

By the “3 – Self-protection” component, evidence of the existing vulnerability of the population is found. Anxiety and a sense of danger have become part of the everyday life of Ukrainian women and men. The assessment of one’s safety by gender is shown in Table 4. In general, about 50% of the residents in the tested communities feel danger, and another 24.5% feel uncertain. In terms of vulnerability, disabled people and those who care for or raise a person with disabilities (69.8%), pensioners (66.7%), and single mothers/fathers (60%) most often felt unsafe.

Table 4. Assessment of the level of own safety (by gender)

Source: Survey data as of May 2022.

Category	Feel safe,%	Feel unsafe, %	Hard to say, %
Women	20.8	50.6	28.6
Men	34.1	49.8	16.1

85.6% of the respondents noted increased stress, anxiety, and tension (Table 5). Persons with disabilities (90.5%), pensioners (89.6%), and IDPs (89.2%) show the highest growth rates of anxiety and stress.

Table 5. Assessment of stress, tension, and anxiety levels (by types of existing vulnerability), %

Source: Survey data as of May 2022.

Vulnerable group	Increased stress, anxiety, tension	Feel normal
A forcibly displaced person, refugee	89.2	10.8
A person with a disability/looking after or raising a person with a disability	90.5	9.5
An unemployed person	86.3	13.7
A large family	82.4	17.6
A single mother/father	88.0	12.0
A family of a serviceman/servicewoman	76.8	23.2
A retired person	89.6	10.4
None of the categories	84.2	15.8

The “4 – Social protection” component assumes a significant gap between the needs for services in different social groups as a human vulnerability factor. Thus, 76.2% of people with disabilities and those who care for people with disabilities need help with food, 68% are single mothers/single fathers, and 64.6% are pensioners. It makes a sufficient gap (over 52%) compared to the 12.5% of those who did not assign themselves to any vulnerable category.

An even wider gap (more than 57%) is in medication assistance: 85.7% of disabled people and those who care for people with disabilities, 72.9% of pensioners versus 15.8% of those who did not refer themselves to any social category are people in need.

A significant gap (almost 44%) in medical service needs is seen. For example, 65.1% of disabled people and their caregivers, 56.3% of retired versus 12.5% of those who did not classify themselves in any social category require help.

There is a more than one-and-a-half-fold gap in financial assistance: 77.8% of disabled people and their caregivers, 76% of single mothers/single fathers, 72.9% of retirees against a background of 42.9% of those who did not refer themselves to any social category are in need.

Under component “5 – Governance,” it is considered to create conditions for implementing all the features mentioned above, and hence the component “4 – Social protection.” However, the above gaps in service needs indicate existing inequalities and the need for improvement in the governance component, which may be explained by the growth potential of people’s trust in the authorities.

4.2. Identification of manifested factors of human resilience

Focus group interviews were conducted with IDPs and refugees to test the research hypothesis at the second stage of the field research. This group was selected due to the rapid increase in its numbers resulting from the full-scale invasion. According to the UN Refugee Agency, as of August 30, 2022, the number of border crossings from Ukraine since February 24, 2022, amounted to 12 million,

while 5.3 million people returned to Ukraine (RBC-Ukraine, 2022). This fact shows that 6.7 million Ukrainian citizens are outside Ukraine. According to Ahmed (2007), refugees are particularly vulnerable. They experience successive stresses: migration, loss of a social role, stress of acculturation, change in the status from the majority to the minority, social isolation, and lack of knowledge about the norms of the new culture.

According to the sociological survey conducted at the first stage of field research (May 2022), IDPs and refugees demonstrated average vulnerability risk indicators. The figures for this group are lower than for people with disabilities and their caregivers, pensioners, and single mothers/fathers. Nevertheless, IDPs and refugees had a higher vulnerability risk index than those who did not consider themselves vulnerable.

Thus, a gap was revealed in the choice of the answer option “not enough for basic needs” between IDPs and refugees (30.2%) and persons who did not classify themselves as vulnerable categories (18.8%). There are also gaps regarding changes in employment: 27.3% of IDPs and refugees lost their official jobs versus 1.5% of those who did not classify themselves as vulnerable. 12.9% of IDPs and refugees lost their unofficial jobs versus 2.4% of those who did not consider themselves vulnerable. Instead, 15.8% of IDPs and refugees experienced a rate reduction versus 38.95% of those who did not put themselves in vulnerable categories. 25.9% of IDPs and refugees are still unemployed, compared to 11.6% of those who did not classify themselves as vulnerable categories. 10.8% of IDPs and refugees work as earlier, compared to 43.2% of those who did not assign themselves to the vulnerable category.

The survey also indicates higher (compared to representatives of the “invulnerable” group) needs of IDPs and refugees for services (Table 6). However, it is worth emphasizing that these needs are lower than those of disabled people, their caregivers, and pensioners. In addition, internally displaced persons and refugees have higher expectations from the authorities than representatives of the “invulnerable” group (Table 7).

That is, the paper treats IDPs and refugees as a vulnerable category. Moreover, people with dual

Table 6. Social service needs of internally displaced persons and refugees

Source: Survey data as of May 2022.

Social service needs indicator	IDPs, refugees	Persons who do not classify themselves vulnerable
Help with food, %	42.4	12.5
Assistance with medication, %	43.9	15.8
Help with hygiene products, %	41	9.4
Assistance with housing (settlement, restoration), %	41.7	2.4
Financial aid, %	62.6	42.9
Employment/additional employment, %	59	29.8
Home care (for persons with disabilities), %	7.9	3
Administrative services, %	43.9	10.6
Information support, %	43.2	14.6

Table 7. Appeals to the authorities by IDPs and refugees

Source: Survey data as of May 2022.

Kind of appeals to the authorities	IDPs, refugees	Persons who do not classify themselves as vulnerable
Asked for help after a full-scale invasion, %	To representatives of central (state) authorities	20.9
	To representatives of local authorities	12.9
In case of the deteriorating military situation, they count on, %	Representatives of central (state) authorities	29.5
	Representatives of local authorities	15.8

vulnerabilities (double displacement in 2014 and 2022, a mother with many children and a refugee, a pensioner, and an IDP) became participants in focus group interviews. It is hypothesized that these people have certain resilience factors. The transcripts of the focus group interviews were analyzed for manifestations on the Connor-Davidson Resilience Scale. Here are the indicators: close and secure relationships; sometimes fate or God can help; can deal with whatever comes; coping with stress strengthens; and a strong sense of purpose. Therefore, out of 25 factors of the Connor-Davidson Resilience Scale, only five elements revealed the corresponding typical statements of focus group participants. The identified factors make it possible to classify the social resilience shown by the Ukrainian population as individual resilience of subjects rather than resilience of mechanisms, including decision-making, the use of resources, and disaster prediction.

5. DISCUSSION

The results of this study are generally comparable to the results of Goodwin et al. (2023), who collected the data at approximately the same time (April 2022). This is fundamental, taking into account the significant dynamics of war events and their impact on

the social stability of the population. The conclusions about a high level of resilience are comparable, in particular, as a result of the individual resilience of the Ukrainian population and the ability to recover from stress. Moreover, the conclusions about the growth of population stability as a result of social cohesion and the development of horizontal and vertical ties in the first months after a full-scale Russian invasion in 2022 are also comparable. However, it is vital to differentiate different social groups in analyzing Ukrainian social stability.

According to the current survey, people's expectations for help from the authorities after a full-scale invasion have increased compared to expectations under the conditions of COVID-19, at least, in the example of Mykolaiv and Sumy territorial communities, based on previous studies (Kostenko et al., 2022a, 2022b). The relevant data are shown in Table 8.

Table 8 gives grounds to understand which factors determine the existing vulnerability but does not reveal the aspects of manifested resilience. Keck and Sakdapolrak (2013) define a system as fully resilient if it can more or less appropriately operate in conditions of uncertainty but also cope with future crises by learning through shock and suffering. Another characteristic necessary for resilience is innovativeness (Keck & Sakdapolrak, 2013; Saja et al., 2021;

Table 8. The appeal of people to authorities compared to the situation of danger due to the spread of COVID-19

The appeal of people to authorities		Mykolaiv TC		Sumy TC	
		COVID-19	Full-scale invasion	COVID-19	Full-scale invasion
Asked for help, %	The regional or central (state) government	0.2	5.0	0.7	4.7
	The local government	1.2	11.9	2.9	13.2
If the situation worsens, %	Rely on the regional or central (state) government	2.4	13.9	5.1	8.5
	Count on local authorities	4.7	12.9	7.4	15.6

Melnyk, 2021). That is, it is not only about the ability of the system to learn but also about its ability to create new things – new solutions, new ways of behavior, and bring them into life practice. Therefore, control over disaster management processes, considering the high current turbulence, should draw not only on data monitoring and appropriate analysis methods but also on training and innovativeness. In turn, it still needs further regular data collection and analysis.

The study proved that 66.3% of respondents confirmed increased activity in response to the war. Similar results could be found in other fields of social activity. Despite the war, Ukrainian scientists proceed with their research, establish international cooperation, participate/apply for new projects, and engage in other types of volunteering (Fiialka, 2022; Ostapenko, 2022). However, it is not only scientists; the whole society has become resilient to war aggression, and many new recommendations and policy implications appeared as a response to war. Thus, Danylyshyn and Bohdan (2022) recommend key directions, including stable external financial support, to ensure macroeconomic stability. Lopushniak et al. (2022) discuss new managerial competencies needed for public and corporate management specialists in Ukraine. The war increased the necessity to transform human capital in line with Industries 4.0 and 5.0 (Melnyk et al., 2021), and new competencies would be needed to work efficiently under the war conditions and future recuperation of the economy. The Ukrainian economy has to be rebuilt within the achievements of Industries 4.0 and 5.0, reducing the environmental load (Karintseva, 2017) and increasing efficiency.

Thus, it was found that against the background of the growth of social cohesion in general, the indicator of social atomization is also high: 37.4% of the respondents noted that they rely only on

themselves and solve their problems independently, without anyone's help. Such atomization also enhances the risks of post-traumatic stress disorder. The basis for this statement is several conclusions by various research groups. Thus, Lim et al. (2022) noted that the prevalence of mental disorders is related to the degree of trauma and the availability of physical and emotional support. According to Lauth-Lebens and Lauth (2016), there is consistent evidence for the predictive and protective function of social support and relationship quality in traumatic conditions. Martin-Soelch and Schnyder (2019) stated that the difference in the development/non-development factors of mental disorders, in particular, PTSD, is still not clear. However, the best-documented factors of psychological protection include social support. Consequently, atomized resilience seems perilous.

Trust is an essential outcome of mass stress and a manifestation of national resilience, but trust can weaken over time, especially in situations of limited resources (Goodwin et al., 2023). Moreover, in this context, the differentiation of different social groups is also important. Against the background of the fact that the findings of this study are comparable to Goodwin et al. (2023) regarding the loss or reduction of income in general, this study has significant differences regarding the stability and vulnerability of different population strata. In particular, 10% of the population stated that funds are sufficient for all needs, 19.1% noted the possibility of purchasing clothes, small appliances, and the presence of minimal savings. On the other hand, 41.1% expressed the availability of funds only for basic needs, and 29.8% noted the lack of funds for basic needs. Therefore, people had different resilience/vulnerability levels during the first month of the war. Future research can discuss how society resilience/vulnerability changed in 2022 and early 2023.

CONCLUSION

The paper aimed to analyze human resilience and vulnerability under martial law, implement the appropriate data collection at the level of territorial communities, and develop an algorithm for analyzing the obtained data for substantiate different management decisions. As evidence of individual people's resilience, it used the data from a qualitative study involving IDPs and refugees with dual vulnerability. The hypothesis about the availability of certain aspects of resilience has justified itself. In particular, it identified indicators of five out of 25 factors on the CD-RISC scale: close and secure relationships; sometimes fate or God can help; can deal with whatever comes; coping with stress strengthens; and a strong sense of purpose.

However, the study found that for almost 50% of the respondents, there are manifestations of atomized sustainability and vulnerability. This conditions poor forecasts of future vulnerability and increases the likelihood of PTSD in case of social support lack. Therefore, the paper classified the existing resilience of communities as the resilience of entities with poor resilience of mechanisms, including decision-making mechanisms and risk foresight as of May 2022.

The strategy of ensuring the resilience of the population and community based on the "damage model" is more relevant for Ukrainians. However, activating processes based on the "challenge model" is also reasonable. Resilience factors are available even for people with a dual vulnerability status. According to the challenge model, these factors should ground on strategies for further development of social sustainability. The conducted analysis determines the relevance of the multi-level discussion regarding the fact that humanitarian aid is necessary during war conditions but not sufficient. The phenomenon of "social resilience" has to be reflected in the mechanisms of social interaction, social learning, and management to ensure the availability of community capital. In response to the manifestations of war trauma, searching for activation forms of resources and mechanisms for forming social resilience, developing cohesion, strengthening vertical and horizontal ties in society, overcoming exclusions, and ensuring human rights equality is necessary. The basis for this is the resilience of territorial communities, including the strength of decision-making mechanisms, disaster prediction, and management in a dangerous situation.

LIMITATIONS OF THE STUDY AND FUTURE RESEARCH DIRECTIONS

This study is more concerned with the aspects of human social resilience in the community. Therefore, it considered factors of an individual's psychological stability and economic aspects of community stability. However, one could not leave the risks of post-traumatic stress disorders beyond consideration. Therefore, it is necessary to admit insufficient definition and systematization of resilience and vulnerability factors, on the one hand, and the development of post-traumatic stress disorders or post-stress resilience, on the other.

It is necessary to state the high dynamics of changes in the situation on the parameters and factors under study in response to the security situation in Ukraine during the current war times. The perspective for future research is to record new factor values of an individual's social resilience in the community.

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ACKNOWLEDGMENT

This study was funded by a grant “Restructuring of the national economy in the direction of digital transformations for sustainable development” (No. 0121U109557).

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