



War as an Indirect Media-Transmitted Traumatic Stressor

Veronika Jurickova^{1*}, Jiri Horacek², Juraj Jonas³, Marek Havlik¹, Marek Preiss⁴ and Ladislav Kesner¹

¹Department of Applied Neuroscience and Neuroimaging, National Institute of Mental Health, Prague, Czech Republic

²Department of Medicine, Charles University, Prague, Czech Republic

³Department of Humanities, Charles University, Prague, Czech Republic

⁴Department of Psychology, University of New York in Prague, Prague, Czech Republic

*Corresponding author: Veronika Jurickova, Department of Applied Neuroscience and Neuroimaging, National Institute of Mental Health, Prague, Czech Republic; E-mail: veronika.jurickova@nudz.cz

Citation: Jurickova V, Horacek J, Jonas J, Havlik M, Preiss M, et al. (2025) War as an Indirect Media-Transmitted Traumatic Stressor. J Trauma Stress Disor Treat 14(2):428

Received date: 30-Nov-2023, Manuscript No. JTSDD-23-121717; **Editor assigned date:** 04-Dec-2023, PreQC No. JTSDD-23-121717 (PQ); **Reviewed date:** 18-Dec-2023, QC No. JTSDD-23-121717; **Revised date:** 22-Jan-2025, Manuscript No. JTSDD-23-121717 (R); **Published date:** 29-Jan-2025, DOI: 10.35248/2324-8947.1000428

Copyright: © 2025 Jurickova V, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

Abstract

The current Russo-Ukrainian war is undoubtedly one of the most catastrophic and traumatic ongoing stressors for large populations of people. Military personnel, civilians, and refugees are at a high risk of combat-related psychopathology. However, the impact of ongoing war conflicts is not limited to those directly affected. Modern hybrid warfare indirectly affects an even larger population through news media. Exposure to stressors transmitted by the media is as stressful and dangerous as direct exposure to life-threatening events. It is, therefore, crucial to educate distressed clients, who may be sensitized to negative reactions, on how to manage media consumption and mitigate its harmful effects. Additionally, we believe it's important to consider reevaluating and adapting the diagnostic criteria for Post-Traumatic Stress Disorder (PTSD) since it has been confirmed that it can develop as a result of secondary/vicarious traumatization through media exposure.

Keywords: War; Trauma; Stressor; Media coverage; Direct exposure; Indirect exposure

Introduction

War is undoubtedly the most critical and severe traumatic stressor, with both direct and indirect far-reaching effects affecting military personnel, veterans, noncombatant civilian populations, or refugees [1]. Since February 2022, the Russo-Ukrainian War (R-UW) has emerged as a significant cause for concern and fear, leading to widespread distress and presenting a global threat across social, political, economic, and mental health domains. As of August 2023, the recorded toll includes 26,384 civilian casualties, comprising 9,444 fatalities and 16,940 injuries, along with nearly 500,000 Russian and Ukrainian soldiers killed or wounded. Moreover, it has resulted in the displacement of over 16 million Ukrainians and the creation of more than 6 million refugees. It's important to note that the actual number of casualties is likely higher.

Moreover, the impact of the ongoing war conflict is not limited to those directly affected; it also extends to individuals who are only indirectly exposed through news media. Consequently, even those who experience the current R-UW solely through traumatic material presented in news media are at significant risk of developing mental health problems.

Previous studies focused on other global stressors (e.g., COVID-19) or life-threatening events (e.g., terrorist attacks or natural disasters) have reported various negative outcomes in both direct and indirect (media-based) exposure to stressors [2-7]. Indirect, media-transmitted exposure to such global life-threatening stressors has been associated with stress symptoms and other psychopathology comparable to (or stronger than) those linked to direct exposure. Especially, exposure to war-related news has been significantly linked to neurological, cardiovascular, digestive, and musculoskeletal disorders, indicating that the media can have detrimental effects not only on mental health but also on physical well-being [8].

The purpose of this article is to emphasize the role of the media in vicarious war-related traumatization, with a specific focus on the ongoing war in Ukraine. Firstly, we provide a concise overview of how war, as a traumatic stressor, impacts those directly exposed, including military personnel, civilians, and refugees. Subsequently, we delve into the impact of indirect exposure to global life-threatening stressors through the media on the development of psychopathological conditions. Finally, we conclude by summarizing recommendations for safer and healthier media consumption, aimed at mitigating potential negative effects on mental health.

Literature Review

War as a traumatic stressor

In the DSM-III, traumatic events were characterized as catastrophic stressors outside the range of normal human experience. A subsequent edition, DSM-IV, extended the definition and stated that people could be also witnessed or confronted with an event or events that involved actual or threatened death or serious injury. Further definition in DSM-5 specifies that a person must directly experience (Criterion A1) or witness a traumatic event (A2), with two exceptions including indirect exposure: a) finding out that a loved one has suddenly died in a violent/accidental way (A3), or experiencing repeated or extreme exposure to aversive details of a traumatic event(s) (A4: termed "vicarious trauma", e.g., first responders collecting human remains, police officers repeatedly exposed to details of child abuse). Importantly, these criteria do not apply to exposure through electronic media, television, movies, or pictures, unless this exposure is work-related [9]. However, several recent studies have shown that post-traumatic stress disorder (PTSD) symptoms may occur even after indirect, media-transmitted exposure to trauma [10].

Pathological consequences of indirect exposure to trauma have been described as secondary or vicarious traumatization [11]. Media-transmitted exposure to global life-threatening stressors may increase feelings of uncertainty, uncontrollability, and unpredictability. All these factors characterize chronic stressors, elicit negative mental states (such as helplessness, anhedonia, anxiety, or frustration), and negatively affect cognitive coping strategies or cognitive flexibility which may lead to further maladaptive behavioral consequences [12,13].

There are distinctions made between three types of traumatic experiences. Type 1 trauma is a reaction to a single traumatic event (e.g., an earthquake or a car accident) [14]. Type 2 trauma results from extended exposure to trauma, such as childhood or domestic abuse, sexual abuse, or extended periods spent in a war zone as a combatant. The most severe and damaging type 3 trauma involves continuous, repeated, and ongoing events, such as discrimination, racism, political conflicts, community violence, or war [15,16].

This traumatization process is triggered by systemic social structural violence and interpersonal and intergroup macro and micro-aggressions. It increases vulnerability to future traumas and can be transmitted through secondary and tertiary traumatization, continuing cross-generationally [17].

The ongoing war in Ukraine (since 2014) has the potential to become continuous traumatic stress (type 3 trauma) with catastrophic (mental) health consequences for military personnel, noncombatant civilian populations, or refugees. Additionally, media-transmitted secondary traumatization may negatively impact people worldwide and can be more severe than primary direct traumatization. Media exposure may also retraumatize individuals who were previously traumatized by similar primary or secondary exposure.

Direct impact of war

Direct exposure to war and war-related violence impacts large groups of individuals, including military personnel, veterans, noncombatant civilian populations, or refugees [18]. In the next section, we briefly summarize the war-related stressors and combat-related psychopathology in each group directly exposed to war.

Military personnel: In a combat environment, military personnel are exposed to a range of traumatic stressors that can lead to combat-induced psychopathological conditions. Fontana and Rosenheck have identified five key combat stress experiences, including engaging in combat, facing the threat of death or injury to oneself, witnessing the death or injury of others, being involved in the killing of others, and participating in atrocities. Additionally, there are two components of a malevolent environment, which include enduring harsh physical conditions and dealing with limited resources in the environment [19].

Notably, experiences such as killing, particularly when it falls outside the boundaries of military standards (such as the killing of civilians, prisoners, elderly individuals, and children), and direct involvement in atrocities have been identified as the most significant predictors of combat-related psychopathological conditions [20,21].

Moreover, in a combat environment, it can be particularly distressing to witness a fellow soldier unable to handle the stress of combat given the value placed on teamwork and mutual reliance in military circumstances. Witnessing combat-related psychopathology (e.g., Acute Stress Reaction; ASR) in team members is relatively common (42% to 52%) [22]. It has been positively associated with meeting diagnostic criteria for PTSD or sub-threshold PTSD in individuals and potentially jeopardizing the safety and effectiveness of the entire military unit.

Combat-induced psychopathology is commonly manifested as combat stress reaction (CSR; also known as battle shock, battle fatigue, or battle neurosis), Acute Stress Reaction (ASR), or Acute Stress Disorder (ASD), as a result of exposure to an extremely threatening or horrifying event. The prevalence of these psychiatric casualties can vary, ranging from as low as 0.4% to as high as 17.2%,

and it may be influenced by factors such as the severity of combat, the level of training, and the tempo and duration of engagement in conflict. More common contributing factors include difficulties in coping with the challenging physical environment, separation from close family members, or interpersonal problems with peers and superiors.

Acute reactions after combat exposure which typically last for days or weeks may lead to more severe PTSD which may appear a long time after the traumatic event and last several years or decades after the traumatic event. PTSD has an indelible impact on the human brain and results in several undesirable symptoms. Additionally, PTSD often co-occurs with other psychiatric disorders, with up to 80-90% of individuals with PTSD having at least one comorbid condition.

Research has shown that the prevalence of PTSD varies widely among different militaries, with rates ranging from 1% to 35%. Such a high heterogeneity in PTSD prevalence rates can be attributed to a variety of combat-related stressors, differences in diagnostic measurements, and the use of self-reported questionnaires, as well as variations in PTSD symptom presentations. Some PTSD symptoms, such as hypervigilance, increased reactivity, light sleep, and avoidance strategies, are actually adaptive skills acquired through training or combat experience and represent desirable behavioral strategies during deployment. However, these reactions may be maladaptive in a non-combat environment, leading to an overestimation of PTSD in questionnaires. Additionally, the definition of PTSD has changed over time, and it is no longer necessary to be directly exposed to violence, torture, or killing to develop PTSD. Trauma exposure can also result from witnessing a traumatic event or even watching violent scenes on television.

A recent study also found that soldiers who leave the army are at a 65% higher risk of PTSD compared to those who remain in the services even in a disarmed position. Leaving the army results in a loss of social and economic support, and soldiers face new challenges when returning home, such as securing housing or employment, adjusting to changes in the home environment or partner life due to separation, and making new friends. Returning from combat is a crucial period, and soldiers require long-term psychological and health care, along with suitable conditions after returning home.

Moreover, studies confirmed that military personnel's family members, including spouses and children, have a higher risk of developing mental health problems than the general population, indicating that the negative mental health consequences of war can affect not only individuals but entire families and even future generations.

Civilians living in war zones: The combat experience has an even higher impact on civilians than military personnel. The prevalence of ASD is considerably higher (up to 21%) in civilians exposed to war than in military personnel. The prevalence of PTSD also varies widely across different war-affected populations and countries, with civilians experiencing higher rates (ranging from 15% to 87%) compared to military personnel. This difference could be attributed to the fact that military personnel undergo a rigorous selection process and receive extensive training and preparation for war-related stress during their training programs while civilians are not trained to cope with traumatic events associated with war and therefore are more vulnerable to such experiences.

Exposure to combat-related violence, being close to death, witnessing a murder, experiencing the unnatural death of family or

friends, forced separation from family or isolation from others, lacking basic needs (sleep, food, and water), or having no access to health care are significant predictors of stress-related issues (ASR, ASD) or long-lasting posttraumatic symptoms. Other factors associated with PTSD prevalence include being female, younger age, lack of physical and psychological support, greater exposure to trauma, the severity of the trauma, early life adversities, personal and family psychiatric history, childhood physical abuse, and multiple exposures to traumatic events or cumulative trauma.

Moreover, helping people exposed to war has been found as harmful as being a victim of war, and healthcare practitioners are at particularly high risk of vicarious traumatization. Practitioners who work with trauma survivors and share war-related realities with their clients may find the work to be stressful and even traumatic, independently of the level of direct and indirect exposure to war-related traumatic events.

People in Ukraine have been facing ongoing political violence (type 3 trauma) and are therefore at high risk of long-term combat-related psychopathology including PTSD. Before the R-UW, Ukraine already had a high mental health burden, and mental health disorders impacted 30% of the population. According to current estimates, around 9 million Ukrainian people will suffer from common mental health disorders due to Russia's invasion, and around two million will suffer from severe mental health disorders. The Ukrainian Ministry of Health predicts that four million people will need psychotropic medication and as many as 15 million will need other psychosocial support.

A current study indicates that a relatively high proportion of Ukrainian civilians were classified as having depression (46.5%), anxiety (46.3%), and experiencing high levels of stress (28.6%), and around 73.2% of them met the diagnostic criteria for PTSD. This study also found that 88.3% of participants were distressed by the war noises; 36% reported poor sleep quality, 50.1% felt angry with the war situation; around 48.3% knew a person who was killed; 91.2% knew a person who was endangered; 81% reported a negative impact on their income, and 72% attributed the war as a major cause of distress.

Moreover, civilians from war zones, refugees, and asylum seekers have an even higher likelihood of transgenerational transmission of trauma than family members of military personnel. This may be due to fundamental aspects of parent-child interaction, parenting style, and family environment. Intergenerational trauma has been most extensively described in the context of European Holocaust survivors and generations of war refugees. The extreme and long-term complex trauma experienced by Holocaust survivors destabilized core aspects of their selves and resulted in the transfer of psychological traumatization to the second, third, and even fourth generations. This indicates a high risk of PTSD development even in subsequent generations.

Displaced people and refugees: The process of displacement is linked to significant stressors, traumas, and life-threatening situations resulting in several mental health problems and psychopathology. People who had to leave their country due to the war suddenly find themselves in new situations and face several challenges before, during, and after displacement. Foster identifies four stages of migration with the potential for traumatogenic experiences that may lead to psychological distress:

- Premigration trauma (events experienced just before migration).
- Traumatic events experienced during transit to the new country.
- Experiences during the process of asylum-seeking and resettlement.

- Sub-standard living conditions in the host country.

Certain pre-displacement characteristics, such as age (children, adolescents, and those over 65 years old), female sex, lower education level, rural living, European origin, and lower socioeconomic status, are associated with poorer mental health outcomes in refugees. Common traumatic events during wartime include bombardment or shelling, torture, detention, imprisonment, siege, lack of basic necessities, violent death of a family member, witnessing violence, severe injuries, physical and sexual abuse, and life-threatening diseases. Risk factors after displacement include separation from family, inadequate housing, poor economic opportunities, difficulties with the asylum process or detention, inadequate support, language barriers, acculturation issues, and minority persecution.

The sociopolitical context, such as marginalization, socioeconomic disadvantage, cultural dislocation, acculturation difficulties, discrimination, prejudice, and racism, is also important for refugee mental health and can contribute to negative outcomes. When refugees are suddenly forced to leave their country due to war, they find themselves in new and often hostile environments. They may face discrimination and prejudice based on their nationality, while also grappling with their new refugee identity. This transition can change the way they perceive social interactions, making them more sensitive to prejudice and more likely to perceive in-group homogeneity. Moreover, refugees must balance the tension between integrating into the host culture and preserving their cultural heritage, leading to different acculturation strategies.

Research has shown that refugees, compared to the general population, have a higher prevalence of mental health problems and psychiatric disorders (such as PTSD, depression, anxiety disorders, and substance abuse) which tend to persist for several years after displacement and may even increase over time following war trauma.

In recent years, the ongoing war in Ukraine has resulted in a significant number of Internally Displaced Persons (IDPs). In 2016, an estimated 1.5 million Ukrainians were displaced as a result of the conflict. Many of these individuals are suffering from mental health issues, with a large percentage experiencing PTSD (32%), depression (22%), and anxiety (17%). Currently, over 16 million displaced Ukrainians and over 6 million refugees have been identified due to R-UW. Among war refugees, high levels of anxiety disorders (28.9%), depression (58.8%), anger (26.4%), and sleep disturbances (17.1%) were observed. Also, positive PTSD result was obtained by 73% and emotional distress in 66% of refugees. It is clear from these findings that the impact of war-related home loss on the mental health of Ukrainians is significant and will likely continue to be a major concern for years to come. All these people and their family members are at high risk of exposure to several war-related traumas and stress-related psychopathology development.

Discussion

Traumas and mental health issues associated with indirect (media-transmitted) exposure to war

Mass media, social networks, and other advances in technology allow people easy and unprecedented indirect, second-hand exposure to global news, events, and threats. Apart from the media's advantage of quickly informing the public, it is crucial to realize the potential negative effects of threat-related media content. Due to the increasing number of people consuming media, it is important to consider that

modern hybrid warfare has far-reaching consequences and impacts broader populations indirectly through the mass media.

As mentioned above, the DSM-5 explicitly states that media consumption alone cannot constitute exposure to trauma for a diagnosis of PTSD. However, results of numerous studies have found evidence that media exposure may act as an antecedent of posttraumatic symptoms and lead to PTSD symptomatology even if it does not fit into prevailing PTSD models, or diagnostic criteria.

Threatening and intrusive images play a central role in PTSD, leading to the development and persistence of post-traumatic stress symptoms. Functional MRI studies have confirmed that even vicarious exposure to traumatic images activates brain regions associated with intrusive flashbacks, a characteristic feature of acute and posttraumatic stress responses. It indicates that media exposure to traumatic stressors and information warfare influences the likelihood of vicarious or secondary traumatization and underscores the need to reevaluate and adapt the diagnostic criteria for PTSD to account for the influence of media exposure on the development of post-traumatic stress symptoms.

Association between media exposure and symptoms of post-traumatic stress have been reported in several previous studies dealing with various life-threatening global stressors, such as the September 11 attacks, the Iraq War, the Boston Marathon Bombing, Hurricane Irma, or the COVID-19 pandemic. Exposure to media during public health crises (*i.e.*, Ebola, H1N1 outbreaks, or COVID-19) and other collective trauma (*e.g.*, terrorist attacks, or natural disasters) may result in physical and psychological effects previously assumed to require direct trauma exposure. Prior research has indicated that media exposure to such community-wide trauma and consumption of disasters and large-scale violence-related material has the potential to establish psychological distress and psychopathology similar to direct exposure to such events.

A man-made disaster (*e.g.*, a terrorist attack) has been associated with a higher risk of subsequent psychopathology than a disaster of accidental or natural origin. Political violence and terrorism (as a subset of human-caused disasters) can have a potentially greater impact than other disasters on distress responses, behavioral change, and psychiatric illness due to a perceived lack of control. Also, the impact and extent of damages caused by political violence are more unpredictable. People consuming terrorism-related media are consequently experiencing fear, because the media coverage of such events tends to be intense, capturing horror, acute suffering, and personal vulnerability and is associated with PTSD, posttraumatic stress reactions, depression, anxiety, and substance use.

Typical examples of the harmful effect of media exposure to violence have been documented during and after the terrorist attack on September 11, commonly known as 9/11. Negative impacts on mental health have been found even in populations not living in the US who only witnessed attack through media coverage. Similarly, direct and indirect exposure to the Boston Marathon Bombing (BMB) increased acute stress symptoms. People with the highest media exposure reported higher acute stress than did people who were directly exposed to the bombings. Except for the amount, the context of media news matters—exposure to graphic images that included blood was linked to increased posttraumatic stress and fear of the future 6 months after the BMB. Higher media exposure to the Paris terrorist attacks in November 2015 was also positively associated with post-traumatic stress symptoms, not only in people directly affected. Perception of

threat, rather than the real risk of being affected by a terrorist attack, was the most important predictor of self-reported mental and physical health problems in the Belgian population.

However, exposure to ongoing political violence and constant threats results in more severe PTSD symptoms than exposure to single/short-duration trauma. Typical examples are Israeli citizens who have been living with wars, political violence, and acts of terror for a long-lasting decade (since the country's existence as an independent state). High levels of media exposure to repeated collective trauma may create a cycle of distress. People who experience multiple community-based traumas may be sensitized to the negative impact of subsequent events, especially in communities previously exposed to similar disasters. Distress responses to past collective traumas may sensitize some individuals and this sensitization process may fuel a cycle of distress-increased subsequent trauma-related media consumption promotes increased distress to later events. Exposure to repeated trauma-related media coverage may render some individuals more vulnerable to mental health consequences as collective traumas accumulate over time.

The war situation may appear uncontrollable and unpredictable and lead to the most natural fear-fear of death which is also the basis for anxiety and worries (symptoms of affective and neurotic disorders). If media information captures the attention of an individual and the event is subjectively perceived as a threat, it could challenge the sense of security and result in the formation of a fear and anxiety-laden trauma network. Current research indicates that the fear and uncertainty created by the ongoing war have a long-term impact on the mental health of Ukrainians and individuals from other parts of the world, both actively being affected by the conflict and observing it from a distance *via* media. Direct and indirect exposure to traumatic stressors thus seems to be the same serious threat to mental health and well-being.

The war in Ukraine receives practically constant media coverage and anyone with access to the Internet and television may view the drastic scenes and images. It indicates that people all over the world are facing vicarious war-related traumatization and are at high risk of media-transmitted psychopathology.

The fact that traumatization can also occur vicariously, *i.e.*, through the media, is documented by a current study finding that more than half of Polish (80.3%) and Taiwanese (54.3%) participants were distressed by the war in Ukraine scenes in the media. Around 82.6% of Polish and 89.4% of Taiwanese participants agreed that media exposure to the current war caused psychological trauma. Participants in both samples were classified as having depression (29% Polish; 11.2% Taiwanese), anxiety (36.5% Polish; 14.9% Taiwanese), and stress (17.4% Polish; 3.7% Taiwanese). Most importantly, 57.2% of Polish and 56.9% of Taiwanese participants met the cut-off for post-traumatic stress. Most Polish (52.8%) and Taiwanese (52.7%) participants spent up to 1 h per day on the news related to war reporting the internet as the most popular source of information about the war (Polish 34.6%; Taiwanese 47.3%).

Another present study revealed that Czech university students (Czech nationality 68.2%, Slovak 22%, and other nationalities 9.8%) were highly concerned about the ongoing war news. Slovak students had a significantly higher score than Czech students, and international students had the lowest score. When asked about the frequency of following war news, 11.8% reported checking the news every couple of hours, 6.6% three times a day, 15.6% twice a day, and 27.7% at

least once a day, with digital news portals being the most utilized outlet (82.8%), followed by social media networks (72.4%) and television (37.5%). More than one-third of the participants exhibited moderate (22.3%) and severe (13.7%) anxiety according to the GAD-7 scale while following the news every couple of hours (11.03 ± 5.84) and using social media networks (8.38 ± 5.32) were associated with the highest anxiety (based on GAD-7 scores). Respondents also exhibited moderate (22%), moderately severe (11%), and severe (7.1%) depression (based on the PHQ-9 scale), while following the news every couple of hours (12.40 ± 7.08) and using social media networks (9.14 ± 6.29) were associated with the highest depression rate.

Both studies suggest that individuals living in Ukraine's neighboring countries are particularly at risk of developing media-related psychopathology due to vicarious exposure to trauma, and the closer they live to the conflict zone, the more susceptible they are to these negative effects of media coverage. After the COVID-19 pandemic, which has been found a significant media-transmitted stressor, exposure to the current R-UW may lead to a cycle of distress and continuous collective trauma in European populations.

Moreover, the COVID-19 pandemic and the associated anxieties have made individuals more vulnerable to conspiracies and disinformation. During public crises and times of uncertainty, people may increase their reliance on the media and depend more on the media to convey accurate and up-to-date information to make informed decisions regarding protective behaviors. The absence or ambiguity of information about a global threat contributes to the spread of misinformation or disinformation. Moreover, most of the traumatic and stressful events in history have been accompanied by alternative explanations, such as conspiracy theories.

Disinformation, fake news, foreign propaganda, and conspiracy theories are tactics of so-called cognitive warfare which is becoming an established concept in military circles and a part of future battlefields. All these tactics are associated with rigid cognitions, rumination, and cognitive inflexibility, lead to delusional ideation and beliefs, fuel social tensions, and promote polarization or fragmentation of society. In the current war situation, such media representation may lead to prejudices, hostility, or even xenophobia, similar to in European refugee crisis, even if we had no negative previous experience with the Ukrainian people and no history of conflict.

Implications for the current situation

Consequently, clinicians and healthcare professionals should educate distressed clients, who may be sensitized to negative reactions, on how to navigate media consumption and mitigate its harmful effects. Based on the previous studies of other life-threatening and traumatic events, such as the COVID-19 pandemic, terrorist attacks or armed conflicts, and natural disasters, some recommendations on the use of media more safely and healthily while minimizing the potential negative effects on mental health can be formulated as followed:

Limited exposure: Excessive consumption of media, particularly TV news, and social media, has been associated with negative mental health outcomes. Limiting the overall media consumption, especially during times of traumatic events or crises, could reduce the risk of distress and psychological symptoms. Even one or more hours of daily TV watching might have some negative consequences. Repeated

exposure to trauma-related media coverage can make certain individuals more susceptible to mental health consequences over time.

Content attention: The content of media news plays a significant role in developing media-related psychopathology. Human-caused disasters tend to be associated with a higher risk of subsequent psychopathology compared to accidents or natural disasters, primarily due to the perceived lack of control. Media coverage of such events may evoke fear and anxiety and can be intense, portraying horror, acute suffering, and personal vulnerability. It is therefore crucial that reliable and credible resources are available to provide risk assessments and recommendations. In addition, reading anonymous and often highly negatively balanced comments under web news articles increased subjectively perceived stress, anxiety, and depression induced by the media.

Diversifying sources: It is also crucial to seek information from a variety of reliable and reputable sources that provide accurate and balanced information. People should avoid relying solely on one outlet or platform, it can lead to a skewed perspective. They should also avoid sources that sensationalize or exaggerate events and look for sources that provide balanced and evidence-based reporting.

Critical thinking: People should develop a critical mindset when consuming media, and question the sources, biases, and potential motivations behind the information presented.

Considering media formats: Video footage was found to evoke a stronger negative psychological outcome than traditional forms of media such as newsprint or radio, due to a more emotionally arousing experience (a sense of realism that has been referred to as presence). More sensitive people should therefore opt for print or static media images instead of videos to minimize the emotional arousal and potential distress.

Monitoring reactions: It is important to pay attention to emotional and psychological responses when consuming media. Noticing increased distress, anxiety, or other negative symptoms may be a sign to reduce or adjust media exposure and find alternatives where to seek support (friends, family, or mental health professionals if needed).

Creating boundaries: People should establish their boundaries around media consumption, consider setting specific times or limits for engaging with news or social media platforms, avoid using media as a primary source of distraction or emotional regulation, and find healthier ways to cope with stress and anxiety.

Practicing self-care: After experiencing stress reactions, it could be beneficial to engage in activities that promote relaxation, stress reduction, and well-being; take breaks from media consumption and allocate time for hobbies, exercise, socializing, and other enjoyable pursuits that can help to maintain a healthy balance and perspective. It is also necessary to build resilience and coping strategies to effectively deal with current ongoing stressful events.

Conclusion

The R-UW is a new source of worldwide fear, uncertainty, and distress that negatively affects many areas of society. It has been an ongoing critical global threat in the social, political, economic, and mental health fields. Such a traumatic stressor has substantial mental health consequences for people who have been directly exposed to combat, as well as their relatives or caregivers. Moreover, mass media, social networks, and other cutting-edge technologies provide people

with unprecedented indirect, second-hand exposure to this threat. Apart from the media's advantage of quickly informing the public, it is crucial to realize the potential negative effects of media-transmitted traumatic content. Mass media exposure and the information war are contributing to the general growth of psychopathologies, mental health problems, psychosocial dysfunctions, self-destruction, and other mental disturbances. Thus, people indirectly exposed to war through media coverage are at the same risk of developing psychopathology as those directly exposed. We consider it crucial to inform the wider community about the harmful effects of media and educate individuals on how to use media more safely and healthily. Moreover, we believe it's important to consider reevaluating and adapting the diagnostic criteria for PTSD since it has been confirmed that it can develop as a result of secondary/vicarious traumatization through media exposure.

Authorship Contributions

Conceptualization: V.J. and L.K.

Writing-original draft preparation: V.J., J.J. and M.H.

Writing-review and editing: L.K., M.P. and J.H.

Supervision: L.K., M.P. and J.H.

Funding acquisition: L.K. and J.H.

All authors have approved the manuscript and agree with its submission to the journal of traumatic stress disorders and treatment.

Conflicts of Interest

The authors declare no conflict of interest.

Funding

This work was supported by the GRANT AGENCY FOR HEALTH RESEARCH of the Czech Republic (NU22-D-123), the Czech Science Foundation (GACR) (grant no. 20-13458S), and the Ministry of Health of the Czech Republic (MH CZ-DRO; NUDZ, 00023752).

References

- Jain N, Prasad S, Czarth ZC, Chodnekar SY, Mohan S, et al. (2022) War psychiatry: Identifying and managing the neuropsychiatric consequences of armed conflicts. *J Primary Care Community Health* 13.
- Dick AS, Silva K, Gonzalez R, Sutherland MT, Laird AR, et al. (2021) Neural vulnerability and hurricane-related media are associated with post-traumatic stress in youth. *Nat Hum Behav* 5: 1578-1589.
- Garfin DR, Holman EA, Silver RC (2015) cumulative exposure to prior collective trauma and acute stress responses to the Boston Marathon Bombings. *Psychol Sci* 26: 675-683.
- Holman EA, Garfin DR, Silver RC (2014) Media's role in broadcasting acute stress following the Boston Marathon bombings. *Proc Natl Acad Sci U S A* 111: 93-98.
- Liu C, Liu Y (2020) Media exposure and anxiety during COVID-19: The mediation effect of media vicarious traumatization. *Int J Environ Res Public Health* 17: 4720.
- Silver RC, Holman EA, Andersen JP, Poulin M, McIntosh DN, et al. (2013) Mental and physical-health effects of acute exposure to media images of the September 11, 2001, attacks and the Iraq War. *Psychol Sci* 24: 1623-1634.
- Thompson RR, Jones NM, Holman EA, Silver RC (2019) Media exposure to mass violence events can fuel a cycle of distress. *Sci Adv* 5.
- Kira IA, Templin T, Lewandowski L, Ramaswamy V, Ozkan B, et al. (2008) The physical and mental health effects of Iraq war media exposure on Iraqi refugees. *J Muslim Ment Health* 3: 193-215.
- Bridgland VME, Moeck EK, Green DM, Swain TL, Nayda DM, et al. (2021) Why the COVID-19 pandemic is a traumatic stressor. *PLoS One* 16: e0240146.
- Holman EA, Garfin DR, Lubens P, Silver RC (2020) Media exposure to collective trauma, mental health, and functioning: Does it matter what you see? *Clin Psychol Sci* 8: 111-124.
- Ben-Zur H, Gil S, Shamshins Y (2012) The relationship between exposure to terror through the media, coping strategies and resources, and distress and secondary traumatization. *Int J Stress Manag* 19: 132-150.
- Koolhaas JM, Bartolomucci A, Buwalda B, de Boer SF, Flugge G, et al. (2011) Stress revisited: a critical evaluation of the stress concept. *Neurosci Biobehav Rev* 35: 1291-1301.
- Kesner L, Horacek J (2020) Three challenges that the COVID-19 pandemic represents for psychiatry. *Br J Psychiatry* 217: 475-476.
- Wilkinson S, Dodgson G, Meares K (2017) Predictive processing and the varieties of psychological trauma. *Front Psychol* 8: 1840.
- Kira IA, Fawzi MH, Fawzi MM (2013) The dynamics of cumulative trauma and trauma types in adults patients with psychiatric disorders: Two cross-cultural studies. *Traumatology* 19: 179-195.
- Kira I, Ashby J, Lewandowski L, Alawneh A, Mohanesh J, et al. (2013) Advances in continuous traumatic stress theory: Traumatogenic dynamics and consequences of intergroup conflict: The Palestinian adolescents case. *Psychology* 4: 396-409.
- Pat-Horenczyk R, Schiff M (2019) Continuous traumatic stress and the life cycle: Exposure to repeated political violence in Israel. *Curr Psychiatry Rep* 21: 71.
- Levy BS, Sidel VW (2009) Health effects of combat: A life-course perspective. *Annu Rev Public Health* 30: 123-136.
- Fontana A, Rosenheck R (1999) A model of war zone stressors and posttraumatic stress disorder. *J Trauma Stress* 12: 111-126.
- MacNair RM (2002) Perpetration-induced traumatic stress in combat veterans. *Peace and Conflict: J Peace Psychol* 8: 63-72.
- Maguen S, Lucenko BA, Reger MA, Gahm GA, Litz BT, et al. (2010) The impact of reported direct and indirect killing on mental health symptoms in Iraq war veterans. *J Trauma Stress* 23: 86-90.
- Adler AB, Svetlitzky V, Gutierrez IA (2020) Post-traumatic stress disorder risk and witnessing team members in acute psychological stress during combat. *BJPsych Open* 6: e98.