

Post-traumatic Stress Disorder and War: A Systematic Review

Mairi M. Bazini¹ & Georgia Konstantopoulou¹

¹ Department of Educational Sciences and Social Work, University of Patras, Greece

Correspondence: Georgia Konstantopoulou, Department of Educational Sciences and Social Work, University of Patras, Greece.

Received: March 13, 2023

Accepted: April 10, 2023

Online Published: April 22, 2023

doi:10.5539/ijps.v15n2p30

URL: <https://doi.org/10.5539/ijps.v15n2p30>

Abstract

PTSD has been linked in the literature to traumatic experiences of car accidents, natural disasters, sexual assaults and especially war. This is evidenced by the relevant literature research reported in the thesis. The research was guided by PRISMA 2020, which helped to ensure the quality of the research (Page et al., 2021a; 2020b). Initially, research was sought that addressed the association between this disorder and experiences of war. Of the found sources of material, a part was the category of previous similar type of research (N=7) on the relevant topic, from which the usefulness of the present study became apparent, with the limited Greek literature and the focus of the existing one on veteran soldiers. An important finding was the much higher prevalence of the general population and children and youth, compared to veterans. The association between PTSD and war, its intensity and prevalence, depends on other factors such as demographics, the type of trauma, the psychosocial make-up of the individual and his/her socio-cultural identity. There is a need for further research into this phenomenon, with the aim of formulating targeted policies for prevention, treatment-intervention and rehabilitation of people who have experienced the inhuman situations of war.

Keywords: post-traumatic stress disorder, PTSD, war, general population, adolescents, veterans

Objective

The association between Post-Traumatic Stress Disorder and traumatic war experiences. Specifically, we investigated whether the onset of the disorder or the possibility to develop, is associated with war exposure in the general population, in youth and children, and in veterans.

Methods

We performed a systematic search of PubMed and Google Scholar databases, following the guidelines of the Preferred Reporting Items for Systematic Reviews (PRISMA) 2020 protocol. The data were synthesized using the structured summaries of the conclusions of the studies.

Results

This search yielded 16 relevant articles reporting data supporting the association of the disorder with traumatic experiences of war, in the general population, in youth and children, and in veterans. The general adult population, children and youth, have the highest rates of the disorder, compared to veterans, although their rates are non-negligible. An important finding, is that the intensity and prevalence of the disorder in wartime situations depends on other demographic, sociocultural and psychological factors.

Conclusions

The systematic review shows that PTSD is associated with being in war, and in all three major population groups, high prevalence rates were recorded. Veterans showed lower rates, despite being in direct contact with war. At the same time, different factors influence the strength of the association between the disorder and traumatic war experiences. These data suggest the need for further research and policy programs for prevention, treatment-intervention, and rehabilitation of individuals who experienced the inhumane conditions of war.

1. Introduction

The term "Post Traumatic Stress Disorder" has been appearing more and more frequently in recent research, as much as the term "trauma". In this age of constant information transmission, visibility began to exist into mental health issues, and recognition of past misbehaviors that have been translated into "normal".

Several definitions have been given regarding Post Traumatic Stress Disorder, which always have in common, the exposure to an experience or experiences that is traumatic for the individual. The symptoms affect its functioning, "overloading" it with reminders of the trauma in various ways, causing anxiety, driving it try to avoid them, and ending up "shutting down" to itself, or in other cases, constantly projecting its negative emotional state (Bryant et al., 2019). The disorder, like most, cannot as has been shown, arise solely from the traumatic or traumatic events. There are risk factors that contribute to its occurrence and could be categorized into factors that preceded the trauma, factors related to the timing of its occurrence, and finally, factors that resulted from it (Qi et al., 2016). In a study by Jain et al. (2022), on factors influencing the appearance of a psychiatric profile in war conditions, including the appearance of PTSD, demographic characteristics of the individual such as age, gender, educational, occupational and income status were reported, whether married or not, language of speech, characteristics related to his or her social and mental status such as support network and psychiatric history, and finally, trauma-related characteristics such as number, stress associated with migration, displacement and the war itself. It is interesting to ask whether PTSD is preventable. In some cases, some form of prevention has been implemented, for example, to prepare individuals before they are drafted into war (Bryant et al., 2019). Research, however, has mainly focused on the treatment phase. This may be since people differ in their reactions and disorders do not always result from traumatic experiences, although screening for PTSD is a good practice for those who have been present in traumatic circumstances (Bisson et al., 2015).

The treatment phase of Post Traumatic Stress Disorder is, therefore, under investigation. Trauma-focused Diagnostic Behavioral Therapy is currently the proposed treatment of choice (Bryant et al., 2019; Qi et al., 2016), as it appears to be the most helpful (Bisson et al., 2015). This form of treatment involves exposure to trauma, using vision and cognitive reconstruction in order that the condition which had been associated with trauma is no longer a threat (Bryant et al., 2019), being delivered individually or in groups, to individuals who are symptomatic for a few weeks. However, in individuals with somatic symptoms it may not be a sufficiently effective form of treatment (Qi et al., 2016). Other treatments include medication to treat the phenomenon (Bryant et al., 2019; Bisson et al., 2015; Qi et al., 2016), but are less effective (Bisson et al., 2015) although research is now being conducted on this with greater frequency due to research supporting the neurobiological factor of the disorder (Qi et al., 2016). Kessler et al. (2017), in a survey based on data from the World Health Organization in 24 countries for about 30 different types of trauma, found that approximately 70% of people have a lifetime trauma, but whether they will develop symptoms of PTSD depends on the trauma, where the main factor appeared to be the death of a loved one and violent episodes. Approximately 3% of individuals are estimated to experience the disorder at any given time in their lives (Bisson et al., 2015).

On the other hand, the PTSD phenomenon is in a controversial state. This arises from the diagnosis phase as it is difficult, especially in war (Jain et al., 2022), from the different definitions that exist (Bryant et al., 2019) since it is not clear what causes it and how it is treated (Bryant et al., 2019) and each individual is different in their reaction, perception and types of traumas experienced (Qi et al., 2016) to compare and obtain results. According to Jain et al. (2022), war has multiple effects on the psychiatric profile of individuals in many population groups such as children, adolescents, women, veterans, displaced persons, older persons, those diagnosed with disorders and addictions, and even in the close family and friends of individuals, as well as in individuals originating from the place where the war is being fought. In this paper, the traumatic event of war was chosen to investigate its association with PTSD, by presenting similar studies and categorizing it into three major population groups: the general population, young people and children, and finally, veteran soldiers.

1.1 Association of PTSD and Traumatic War Events

For the general population, i.e., for citizens who have experienced a war condition and have the symptomatology for the diagnosis of PTSD, something that did not necessarily arise exclusively from the war, seems that on a global level, they make up a large part of the population of war-torn countries (Hoppen et al., 2021; Hoppen & Morina, 2019). On the other hand, the income and economic situation of these countries, when it is low or even middle class, is a factor that favors the appearance of the disorder, something that can be seen from research in them (Hoppen et al., 2021; Hoppen & Morina, 2019). The comparison with countries, which ensure the peaceful living of citizens, shows the predominance of disorder in war-torn countries, confirming the strong connection of the traumatic events of war and disorder (Shaar, 2013). In general population, also, the connection of war

experiences with the appearance of Post-Traumatic Stress disorder is detected to be precise in the people who were victims during it (Burri, & Maercker, 2014). In addition to the income situation of a country (Hoppen et al., 2021; Hoppen & Morina, 2019), the value system also seems to affect the disruption, thus adding cultural elements to whether and to what extent the event of war will favor the disorder (Shaar, 2013). Similar literature searches have been conducted exclusively on veterans to investigate the connection of war to PTSD. Conscription in Vietnam, and specifically for United States soldiers, has yielded research with conflicting evidence (Thompson et al., 2006). The research results compared to those of the general population in war zones (Hoppen et al., 2021; Hoppen & Morina, 2019; Thompson et al., 2006) are much smaller, nevertheless, the negative impact of the presence of the disorder cannot be overlooked (Richardson et al., 2010). Here again, the cultural and social situation seems to have a significant effect on the occurrence of the disorder (Richardson et al., 2010).

1.2 Prevalence of Disorder during or after War

The prevalence of the disorder, as shown by literature research, is found in a very large part of the population that has experienced some war condition. Below, the results from the sources searching are listed, with the criteria described in the methodology chapter.

Literature reviews for the general population, in the post-war phase, result in similar rates of the disorder, around 25% (Hoppen et al, 2021; Hoppen & Morina, 2019; Lim et al., 2022). In two studies, Hoppen et al. (2021; 2019), in the general population they conclude, with a difference of two years in the surveys, with a similar number of sample surveys, approximately 200 million people regarding the prevalence of PTSD. Regarding the timing of the surveys in the general population, in relation to the traumatic event of war, at times there is an increase in records of the disorder over time (Shaar, 2013) and sometimes stable rates of the disorder over time (Lim et al. al., 2022). Literature reviews, regarding military veterans, report sometimes lower (Richardson et al., 2010; Thompson & Zalewski, 2006) and sometimes higher prevalence of the disorder (Lim et al., 2022; Thompson & Zelewski, 2006). The above difference, however, may be due to the fact that different criteria were used in diagnosing prevalence, as in the case of the study by Thompson and Zalewski, (2006), in which different criteria were used to arrive at a common result for two surveys of US Veterans from Vietnam, in which there was a large discrepancy from the outset. In addition, Thompson and Zalewski (2006), report lower rates of the disorder with more specific criteria and higher rates, with more broad criteria. If the results of the general population and the veteran soldiers were compared, it appears that in the former, the rates of the disorder are higher, as shown in Table 1. However, in a study of 23 different wars, it shows that the difference in prevalence between the two population groups is negligible (Lim et al., 2022).

The lowest rates of the disorder are found in male US veterans who were drafted in Vietnam and male veterans from other Western populations (Richardson et al., 2010). Shaar (2013), records for the general population, specifically the adolescent age group, the highest rates of the disorder, adding in addition to war, the criterion of the individual's mental state.

Table 1. Other systematic reviews about Post-Traumatic Stress Disorder and War

Author	Publication Date	Setting	Chronological relationship with war- duration of symptoms	Sample	Prevalence of PTSD
Richardson et al.	2010	Different origins veterans	Post-war	United States Veterans in Vietnam and Iraq, United Kingdom and non-Westerns United States veterans	United States Veterans in Vietnam: 2-17% United States Veterans in Iraq: 4-17% United Kingdom Veterans: 3-6% Very low rates in other western regions.
Shaar	2013	Lebanon	3 weeks or 4 years later	5965 adolescents	29.3% -32.5% to people with mental and educational issues and 8.5% – 14.7% from people in school
Burri & Maerker	2014	European countries	After World Word II	11 countries	No specific prevalence was reported. Although the strong association of prevalence with war victims was reported.
Thompson et al.	2006	-	VES Research: 1-month symptoms NVVRS Research: 6 months symptoms	Male United States Veterans from NVVRS research Male United States Veterans from VES research	Comparative study of two studies. With specific criteria VES: 2.5% NVVRS: 2.9%
Hoppen et al.	2021	Countries involved in war	Post-war Mean rate 6.88% years later	15.420 people from 12 countries for PTSD 1131 people from 6 countries for PTSD and Major Depression	26.51% About 227 million people
Hoppen & Morina	2019	Countries involved in war from 1989 to 2015	Post-war	14 718 people from 14 countries as war survivors	23.81 % About 242 million people worldwide
Lim et al.	2022	Countries involved in war from 1989 to 2019	During war and post-war	65 153 people from 23 countries. Citizens and soldiers	23.5% Difference was negligence among citizens and soldiers

2. Methods

Its editorial was compiled based on PRISMA 2020, which is a reference guide for systematic reviews. PubMed and Google Scholar were the two databases in which the studies were searched, and the sample of participants was over 100 people, as this number is considered representative, for the most part of large population groups, as well as in the case of this particular systematic review.

The research should be free text, i.e., without each research requiring communication with the author or publisher for the reproduction of its data. This specific criterion was chosen in to save time in writing the paper, as it was not possible to predict the response time of the author/editor to the relevant request. It is worth noting that from the search of the sources, the research that were protected by some form of right or required permission from the publisher were a relatively small number (N= 27).

The time of publication of the research was after 2000. This year was chosen because, from the preparation for writing the systematic research and defining the criteria and research questions, it emerged that the phenomenon of Post-Traumatic Stress Disorder was more researched after 2000. Another equally important reason is the Diagnostic and Statistical Manual of Mental Disorders (DSM), since after 2000 two editions DSM-IC-TR and DSM-5 followed. These two versions differ from the previous ones and at the same time differ little from each other. Specifically, in PTSD they differ in criterion A2. The collected surveys must be in English or Greek. Almost all the surveys collected were in the English language. The Greek literature on this subject is limited.

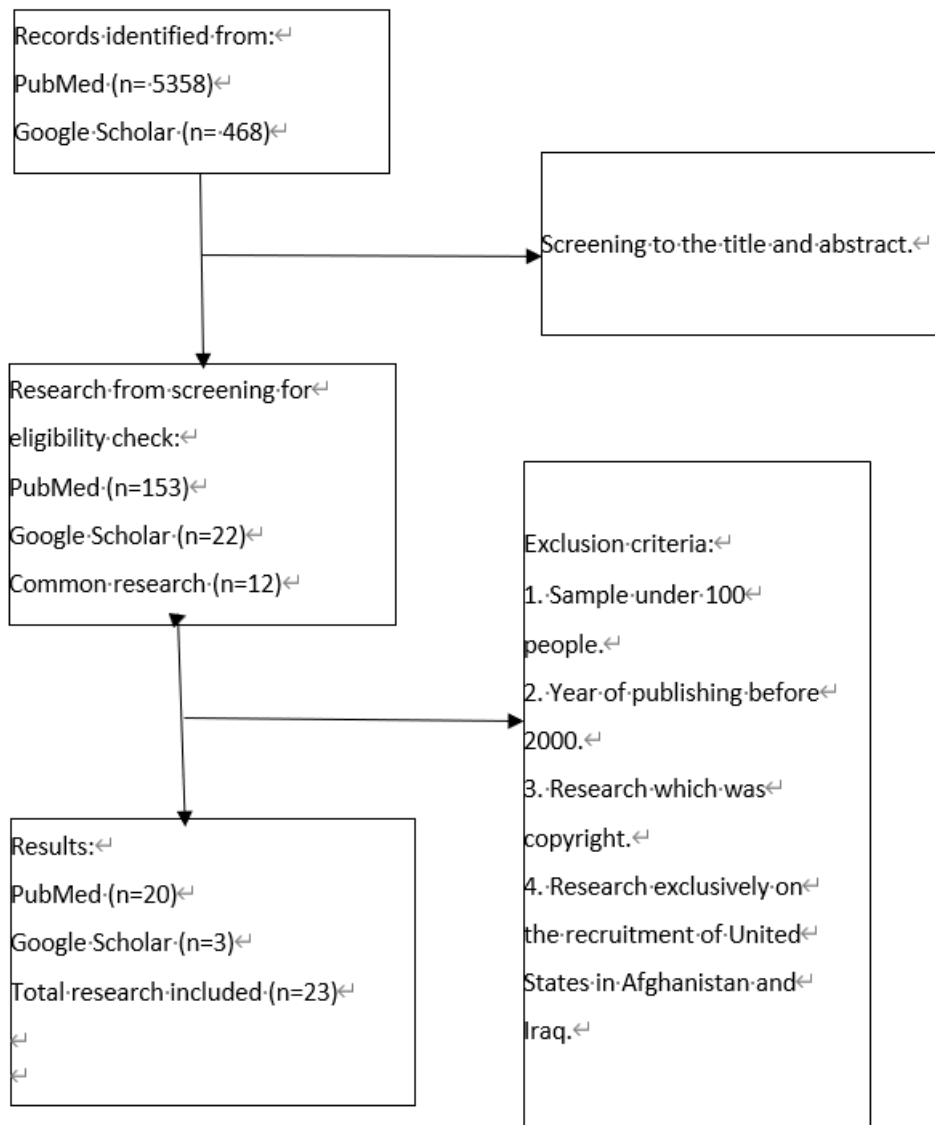
The population groups included in the thesis based on age were children, teenagers and adults, and elderly people.

We included all the research that referred to Post-Traumatic Stress Disorder or other disorders such as depression or other anxiety disorders, or those that researched simultaneously with war trauma, and other factors such as e.g., genetics, or other types of trauma such as car accidents, natural disasters and crimes. In the above categories, however, the disorder related to the war experience was investigated, to the extent that it answers the main research question of the paper.

While those excluded from the paper were studies in which the expected answer to the main research question was not answered clearly and specifically, but in a more general context, related for example to the ways of intervention or other elements related to the disorder but not related to the war to a satisfactory extent.

Also removed from the veteran population were surveys that reported on United States veterans of various wars in Iran, Afghanistan, Iraq, and Syria. The exclusion of these specific studies resulted from the fact that it is a topic that has been extremely well covered in the existing literature. In total, 5826 surveys were screened. Of these, after screening based on abstracts and titles, 153 were from PubMed and 22 from Google Scholar. Also, 12 searches were common, detected in both databases. Then, with the application of the restrictions of the second phase, that is in the chronology, in the sample, and in the references, remained 20 searches from PubMed and 3 searches from Google Scholar. In total, the selected surveys were 23. The results are shown in the flow chart based on the PRISMA Statement 2020.

Table 2. Flow diagram based on the PRISMA 2020 flow diagram



3. Results

A total of 16 studies were found from the research search, which investigated the link between PTSD and war. Below, the results of the studies are listed in three categories: the general population, children and youth, and veterans. The results are linked to PTSD and war, but also to other factors that influence the association between the two.

The highest scores from all three categories, which are found in over 50% of the population group, are found in doctors and nurses in hospitals in the Gaza Strip (Abu-El-Noor et al., 2020a; 2020b), in Afghan refugees in a psychiatric setting (Mufti et al., 2007) and in children and adolescents in schools and facilities in Northern Uganda (Ovuga et al., 2008). Close to 50%, high rates were recorded in adolescents in schools in Mosul, Iraq (Khaleel & Al-Doori, 2020). Rates close to 50% were not recorded in veterans' population group Table 3. The highest prevalence of the disorder is found in health care workers (Abu-El-Noor et al., 2020a; Abu-El-Noor et al., 2020b), followed by refugees from Afghanistan (Mufti et al., 2007). In contrast, the lowest rates of the disorder were found in mothers of very young children (Seino et al., 2008), and in survivors of the war in Kosovo (Kashdan et al., 2008). However, the characterized lower rates, in a general context are not considered low, for example when compared to the rates of the disorder in children and young people (Mousawi, 2017; Betancourt et al. 2013 Yousef, 2021; Khaleel & Al-Doori, 2020) or in military veterans (Wolf et al., 2013; Magruder et al., 2015; Goldberg et al., 2015; Frueh et al., 2009). From most of the research gathered, there is either a direct link

between the symptomatology of PTSD and exposure to traumatic events of wars (Seino et al., 2008; Kashdan et al., 2009; Abu-El-Noor et al., 2020a, 2020b; Kakaje et al., 2021), or indirect, i.e., without investigating only this disorder or only this factor (Mufti et al., 2007).

From the research search process, six studies on PTSD in young people and children were collected. The age range of the participants in these studies is from 6 to 25 years. The surveys cover many geographic locations and wars. Some of them involve children former soldiers and others involve school and university students.

Regarding young people, three surveys were collected, two of which were conducted in universities in Syria (Yousef et al., 2021) and Iraq (Mousawi, 2017). The age range of participants was between 15-25 and older. One study was conducted in a secondary school, among adolescents (Khaleel & Al-Doori, 2020). Yousef et al. (2021) reported high rates of PTSD symptoms in young people. More specifically, a survey at Al-Fourat University in Del Al Zor revealed that 28.2% of participants were symptomatic for a diagnosis of the disorder and 86.4% reported at least one traumatic event. Contrasting data emerged in a study at a university in Iraq (Mousawi, 2017). Mousawi (2017), while reporting symptomatology of PTSD at 30%, concludes the late prevalence of the disorder at 3% of participants, a fairly low rate, and links it to protective social and cultural factors and high mental resilience. Social networks such as family and community seem to have a protective effect (Betancourt et al., 2013). In contrast to Mousawi's research in Iraq (2017), in another study the rate of disorder was observed at high rates and of different intensity (mild, moderate, severe and very severe) (Khaleel, R. & Al-Doori, N., 2020). War-related traumatic events in academia sometimes seem to be more common in men than in women (Mousawi, A., 2017), while other studies show that no gender differences emerge (Yousef et al., 2021). Khaleel and Al-Doori (2020), in a school-based survey in Iraq to adolescents aged 15 to 21, reported higher rates of PTSD in the female gender in war zones, contrary to the above studies.

The association of experiences in war zones with the onset of PTSD in children is common. Perkins et al. (2018) confirm the above, with 35% of children aged 8-15 in schools in Syria likely to have a diagnosis of the disorder, among others such as depressive and anxiety disorders. Corresponding to research by Khaleel and Al-Doori (2020), females were more likely to develop the disorder (Perkins et al., 2018).

Negative traumatic experiences of war play an important role in the onset and diagnosis of the disorder in children and young people, which include battlefield, acts of violence (Mousawi A., 2017; Yousef et al., 2021), internal displacement (Perkins et al. 2018) and witnessing violence in war situations (Perkins et al., 2018; Yousef et al., 2021).

While from research, the highest prevalence rate was recorded in female US veterans in Vietnam (Magruder et al., 2015) and in twin veterans under 60 years of age in key locations where war events occurred in Vietnam (Goldberg et al., 2015). A common element, regardless of gender, seems perhaps to be the place where the war is fought. While, the lowest rate of the disorder appears to occur in Vietnam veterans under the age of 60, in locations of enlistment that were not or were not likely to be a place of war (Goldberg et al., 2015), and in US veterans with late onset PTSD (Frueh et al., 2009).

Table 3.

Author	Sample	PTSD prevalence rate	Limitations
Abu-El Noor et al.	244	89.3%	-
Abu-El Noor et al.	324	89.9%	-
Khaleel & Al-Doori	1034	44.3% Moderate PTSD	-
Mufti et al.	1500	61.2%	Research in psychiatric setting, fact that may explain the results. MINI measurement scale, where cultural issues can arise. Limited sample and selected with criteria, which they intended.
Ovuga et al.	102	55.9%	Boy's lower likelihood of receiving mental health services may be explained by social demands not to express emotions.

4. Discussion

War is one of the most inhuman crimes of humanity, involving death itself and the idea of death for those who survive. It threatens the freedom of the individual and has enormous social and economic consequences. But even those who manage to survive and are left behind, try to move on, displaying many different disorders, either separately or simultaneously, emotional and anxiety, personality disorders and emotions such as sadness and fear. Post-Traumatic Stress Disorder hinders functioning and brings back in many ways such as images, emotions and thoughts, the reality of war, to people.

The conclusions of the research are supported by recent research into the war in Ukraine, although few in number. In February 2022 Russia finally invaded Ukraine. Rizzi et al. (2022) report high rates of symptoms of anxiety, depression and sleep disorders in Ukrainian refugees and internally displaced persons, highlighting at an early stage, the need to build mental resilience and prevent the onset of PTSD. In another study, Karatzias et al. (2022), link in parents in Ukraine traumatic experiences of war with the development of Post-Traumatic Stress Disorder (PTSD) and Complex Post-Traumatic Stress Disorder (CPTSD) symptomatology, since they detect a relationship between them, as when traumatic events increase, the development of both disorders increases. The systematic review of the existing literature, with inclusion and exclusion criteria, links the traumatic experience of war with PTSD, in three major population groups: the general population, youth and children, and finally, veteran soldiers.

Most research points to this relationship and supports it by looking for the correlation between specific traumatic events and experiences that one may encounter during war for both a civilian and conscripts. In addition, they examine the relationship with the sample's demographics, but also its socio-cultural identity, as well as other environmental factors and other traumatic events that may have happened to the individual and prepared the "soil" for the appearance of the disorder.

5. Conclusions

The research is consistent with the research of Richardson et al. (2010), in which the prevalence scores for veterans were very low, but remained significant for the negative impact of war on the functioning of these individuals. Also, from the research, the thesis agrees with Shaar's (2013) research on the high prevalence in adolescence and the importance of adolescent mental health in the onset of the disorder, as shown through Ovuga et al.'s (2008) research that in structures and schools, prevalence was associated with other mental health disorders.

In the difference between the two genders recorded, i.e., males and females, it appears sometimes that high prevalence predominates in the former, sometimes in the latter, and sometimes that they have relatively similar levels of prevalence. More specifically, Ovuga et al (2008), report that boys, are more likely to be exposed to war traumatic events but less likely to receive psychological support, perhaps linking this to the social demands for a specific male gender profile regarding emotions. Khaleel Al-Doori (2020), like Perkins et al. (2018), report a higher prevalence in women, with the latter defining female gender as a factor in the disorder as well. However, Goldberg et al. (2015) and Wolf et al. (2013), report relatively similar rates of the disorder among male and

female veterans. The differences in prevalence records between the sexes are the result of many factors. One factor may be social reality and existing gender 'norms' in different cultures. These norms may result in men not expressing themselves as they would like by showing their feelings. Women, on the other hand, have identified with the gender that shows more of their emotional state, and may have found it easier, to perform on the relevant diagnostic tests that measured symptomatology. PTSD is associated with being in war and is shown by the prevalence of the disorder in the general population, in children and youth and in military veterans, which is at a high rate. As shown by comparisons between population groups, the general population, children and youth, appear to have the highest rates of the disorder. Veterans while having the lowest, as shown in Table 3, still comprise a non-negligible percentage of the population. The only exception is the study by Frueh et al. (2009), in which the rate is extremely low, but, as the results show, studies a rarer type of PTSD. In response to the question of whether PTSD is associated with war with the three population groups selected, the results are in the affirmative to the question.

It is noteworthy from the research the finding that the connection of the disorder with the war is very likely, however the degree of prevalence and whether the war works as a factor of the disorder depend on other, many and different factors. The disorder may have appeared before the event of the war as a result of other environmental factors. Factors recorded were occupation (Abu-El-Noor, 2020a; 2020b), being a parent (Seino et al., 2008), location of the war, such as Syria and Vietnam, type of trauma, conscription (Betancourt et al., 2013), as was evident, at a young age, perhaps gender, income (Khaleel & Al-Doori, 2020), parental education (Khaleel & Al-Doori, 2020), social and cultural identity (Burri & Maercker, 2014; Shaar, 2013), mental health of relatives (Ovuga et al., 2008) and the place where the main war events take place (Goldberg et al., 2015 & Magruder et al., 2015).

6. Research Problems and Limitations

The paper aims to present the general conclusions to the reader, to help him in a first phase to discover the phenomenon of Post-Traumatic Stress Disorder, which is found in people in war situations. It therefore refers to data on the prevalence of the disorder, to the connection with the traumatic events of war, and does not present statistical conclusions and precise data.

A problem was the extensive literature on veterans and especially the United States, sidelining the general population, adults and children, who were at risk, became refugees or internally displaced. Therefore, the material was removed, as mentioned in the criteria, for the United States, Iraq and Afghanistan veterans.

Also, regarding to the general population, it was observed that most research concerns a small sample of individuals which cannot be a representative sample of the population groups. The limitations of the research include the exclusion criterion of research that required permission from the editors and authors to use each survey. It is therefore possible that there will be a sufficient number of studies of this type, which will add important data to the connection of PTSD and the experience of war. However, even this limitation, could be an idea for further research in the future.

References

- Abu-El-Noor, N. I., Aljeesh, Y. I., Radwan, A. S., Abu-El-Noor, M. K., Qddura, I. A., Khadoura, K. J., & Alnawajha, S. K. (2016). Post-Traumatic Stress Disorder Among Health Care Providers Following the Israeli Attacks Against Gaza Strip in 2014: A Call for Immediate Policy Actions. *Archives of psychiatric nursing, 30*(2), 185-191. <https://doi.org/10.1016/j.apnu.2015.08.010>
- Abu-El-Noor, N. I., Aljeesh, Y. I., Radwan, A. S., Abu-El-Noor, M. K., Oddura, I. A., Khadoura, K.J., & Alnawajha, S. K. (2018). Post-Traumatic Stress Disorder Among Health Care Providers Two Years Following the Israeli Attacks Against Gaza Strip in August 2014: Another Call for Policy Intervention. *Archives of Psychiatric nursing, 32*(2), 188-193. <https://doi.org/10.1016/j.apnu.2017.10.014>
- Betancourt, T. S., Newnham, E. A., McBain, R., & Brennan, R. T. (2013). Posttraumatic stress symptoms among former child soldiers in Sierra Leone: follow-up study. *The British journal of psychiatry : the journal of mental science, 203*(3), 196-202. <https://doi.org/10.1192/bjp.bp.112.113514>
- Bisson, J. I., Cosgrove, S., Lewis, C., & Robert, N. P. (2015). Post-traumatic stress disorder. *BMJ (Clinical research ed.)*, 351, h6161. <https://doi.org/10.1136/bmj.h6161>
- Bryant R. A. (2019). Post-traumatic stress disorder: a state-of-the-art review of evidence and challenges. *World psychiatry : official journal of the World Psychiatric Association (WPA)*, 18(3), 259-269. <https://doi.org/10.1002/wps.20656>

- Burri, A., & Maercker, A. (2014). Differences in prevalence rates of PTSD in various European countries explained by war exposure, other trauma and cultural value orientation. *BMC research notes*, 7, 407. <https://doi.org/10.1186/1756-0500-7-407>
- Frueh, B. C., Grubaugh, A. L., Yeager, D. E., & Magruder, K. M. (2009). Delayed-onset post-traumatic stress disorder among war veterans in primary care clinics. *The British journal of psychiatry : the journal of mental science*, 194(6), 515-520. <https://doi.org/10.1192/bjpp.bp.108.054700>
- Hoppen, T. H., & Morina, N. (2019). The prevalence of PTSD and major depression in the global population of adult war survivors: a meta-analytically informed estimate in absolute numbers. *European journal of psychotraumatology*, 10(1), 1578637. <https://doi.org/10.1080/20008198.2019.1578637>
- Hoppen, T. H., Priebe, S., Vetter, I., & Morina, N. (2021). Global burden of posttraumatic stress disorder and major depression in countries affected by war between 1989 and 2019: a systematic review and meta-analysis. *BMJ global health*, 6(7), e006303. <https://doi.org/10.1136/bmjgh-2021-006303>
- Jain, N., Prasad, S., Czárth, Z. C., Chodnekar, S. Y., Mohan, S., Savchenko, E., Panag, D. S., Tanasov, A., Betka, M. M., Platos, E., Świątek, D., Krygowska, A. M., Rozani, S., Srivastava, M., Evangelou, K., Gristina, K. L., Bordeniuc, A., Akbari, A. R., Jain, S., Kostiks, A., ... Reinis, A. (2022). War Psychiatry: Identifying and Managing the Neuropsychiatric Consequences of Armed Conflicts. *Journal of primary care & community health*, 13, 21501319221106625. <https://doi.org/10.1177/21501319221106625>
- Kakaje, A., Al Zohbi, R., Hosam Aldeen, O., Makki, L., Alyousbashi, A., & Alhaffar, M. B. A. (2021). Mental disorder and PTSD in Syria during wartime: a nationwide crisis. *BMC psychiatry*, 21(1), 2. <https://doi.org/10.1186/s12888-020-03002-3>
- Karatzias T, Shevlin M, ... Ben-Ezra M. (2023). War exposure, posttraumatic stress disorder, and complex posttraumatic stress disorder among parents living in Ukraine during the Russian war. *Acta Psychiatr Scand*, 1-10. <https://doi.org/10.1111/acps.13529>
- Kashdan, T. B., Morina, N., & Priebe, S. (2009). Post-traumatic stress disorder, social anxiety disorder, and depression in survivors of the Kosovo War: experiential avoidance as a contributor to distress and quality of life. *Journal of anxiety disorders*, 23(2), 185-196. <https://doi.org/10.1016/j.janxdis.2008.06.006>
- Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Benjet, C., Bromet, E. J., Cardoso, G., Degenhardt, L., de Girolamo, G., Dinolova, R. V., Ferry, F., Florescu, S., Gureje, O., Haro, J. M., Huang, Y., Karam, E. G., Kawakami, N., Lee, S., Lepine, J. P., Levinson, D., Navarro-Mateu, F., ... Koenen, K. C. (2017). Trauma and PTSD in the WHO World Mental Health Surveys. *European journal of psychotraumatology*, 8(sup5), 1353383. <https://doi.org/10.1080/20008198.2017.1353383>
- Khaleel, R. I., & Al-Doori, M. (2020). Prevalence of Post-Traumatic Stress Disorder among Adolescents in Mosul City after War. *International Journal of Psychosocial Rehabilitation*, 24(09).
- Lim, I. C. Z. Y., Tam, W. W. S., Chudzicka-Czupala, A., McIntyre, R. S., Teopiz, K. M., Ho, R. C., & Ho, C. S. H. (2022). Prevalence of depression, anxiety and posttraumatic stress in war- and conflict-afflicted areas: A meta-analysis. *Frontiers in psychiatry*, 13, 978703. <https://doi.org/10.3389/fpsy.2022.978703>
- Magruder, K., Serpi, T., Kimerling, R., Kilbourne, A. M., Collins, J. F., Cypel, Y., Frayne, S. M., Furey, J., Huang, G. D., Gleason, T., Reinhard, M. J., Spiro, A., & Kang, H. (2015). Prevalence of Posttraumatic Stress Disorder in Vietnam-Era Women Veterans: The Health of Vietnam-Era Women's Study (HealthVIEWS). *JAMA psychiatry*, 72(11), 1127-1134. <https://doi.org/10.1001/jamapsychiatry.2015.1786>
- Mousawi, A. A. (2017). War-related trauma and post-traumatic stress disorder prevalence among undergraduate students in Iraq in 2010. *Iraqi Journal of Public Health*, 1(2). <https://doi.org/10.22317/ijph.09201703>
- Mufti, K. A., Naeem, F., Chaudry, H. R., Haroon, A., Saifi, F., Qureshi, S. M., & Dagarwal, S. U. R. (2007). Post-traumatic stress disorder among Afghan refugees following war. *International psychiatry: bulletin of the Board of International Affairs of the Royal College of Psychiatrists*, 4(1), 7-9. <https://doi.org/10.1192/S1749367600005087>
- Ovuga, E., Oyok, T. O., & Moro, E. B. (2008). Post traumatic stress disorder among former child soldiers attending a rehabilitative service and primary school education in northern Uganda. *African health sciences*, 8(3), 136-141.

- Page MJ, Moher D, Bossuyt PM, Boutron I, Hoffmann TC, ... Mulrow CD. (2021). PRISMA 2020 explanation and elaboration: updated guidance and exemplars for reporting systematic reviews. *BMJ*, 372(160). <https://doi.org/10.1136/bmj.n160>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann T. C., ... Mulrow, C. D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*, 372(n71). <https://doi.org/10.1136/bmj.n71>
- Perkins, J. D., Ajeeb, M., Fadel, L., & Saleh, G. (2018). Mental health in Syrian children with a focus on post-traumatic stress: a cross-sectional study from Syrian schools. *Social psychiatry and psychiatric epidemiology*, 53(11), 1231-1239. <https://doi.org/10.1007/s00127-018-1573-3>
- Qi, W., Gevonden, M., & Shalev, A. (2016). Prevention of Post-Traumatic Stress Disorder After Trauma: Current Evidence and Future Directions. *Current psychiatry reports*, 18(2), 20. <https://doi.org/10.1007/s11920-015-0655-0>
- Richardson, L. K., Frueh, B. C., & Acierno, R. (2010). Prevalence estimates of combat-related post-traumatic stress disorder: critical review. *The Australian and New Zealand journal of psychiatry*, 44(1), 4-19. <https://doi.org/10.3109/00048670903393597>
- Rizzi, D., Ciuffo, G., Sandoli, G., Mangiagalli, M., de Angelis, P., Scavuzzo, G., Nych, M., Landoni, M., & Ionio, C. (2022). Running Away from the War in Ukraine: The Impact on Mental Health of Internally Displaced Persons (IDPs) and Refugees in Transit in Poland. *International journal of environmental research and public health*, 19(24), 16439. <https://doi.org/10.3390/ijerph192416439>
- Seino, K., Takano, T., Mashal, T., Hemat, S., & Nakamura, K. (2008). Prevalence of and factors influencing posttraumatic stress disorder among mothers of children under five in Kabul, Afghanistan, after decades of armed conflicts. *Health and quality of life outcomes*, 6, 29. <https://doi.org/10.1186/1477-7525-6-29>
- Shaar K. H. (2013). Post-traumatic stress disorder in adolescents in Lebanon as wars gained in ferocity: a systematic review. *Journal of public health research*, 2(2), e17. <https://doi.org/10.4081/jphr.2013.e17>
- Thompson, W.W., Gottesman, I.I., & Zalewski, C. (2006). Reconciling disparate prevalence rates of PTSD in large samples of US male Vietnam veterans and their controls. *BMC Psychiatry*, 6(19). <https://doi.org/10.1186/1471-244X-6-19>
- Wolf, E. J., Mitchell, K. S., Koenen, K. C., & Miller, M. W. (2014). Combat exposure severity as a moderator of genetic and environmental liability to post-traumatic stress disorder. *Psychological medicine*, 44(7), 1499-1509. <https://doi.org/10.1017/S0033291713002286>
- Yousef, L., Ebrahim, O., AlNahr, M. H., Mohsen, F., Ibrahim, N., & Sawaf, B. (2021). War-related trauma and post-traumatic stress disorder prevalence among Syrian university students. *European journal of psychotraumatology*, 12(1), 1954774. <https://doi.org/10.1080/20008198.2021.1954774>

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).