Mental health consequences of war: a brief review of research findings

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Among the consequences of war, the impact on the mental health of the civilian population is one of the most significant. Studies of the general population show a definite increase in the incidence and prevalence of mental disorders. Women are more affected than men. Other vulnerable groups are children, the elderly and the disabled. Prevalence rates are associated with the degree of trauma, and the availability of physical and emotional support. The use of cultural and religious coping strategies is frequent in developing countries.

Key words: War, mental health, vulnerable groups, coping strategies

The year 2005 is significant in understanding the relationship between war and mental health. This is the 30th anniversary of the end of the Vietnam war and of the start of the war in Lebanon. Every day the media bring the horrors of the ongoing "war" situation in Iraq. Some recent quotations from the media depict the impact of war on mental health: "We are living in a state of constant fear" (in Iraq); "War takes a toll on Iraqi mental health"; "War trauma leaves physical mark"; "War is hell… it has an impact on the people who take part that never heals"; "War is terrible and beyond the understanding and experience of most people"; "A generation has grown up knowing only war".

Wars have had an important part in psychiatric history in a number of ways. It was the psychological impact of the world wars in the form of shell shock that supported the effectiveness of psychological interventions during the first half of the 20th century. It was the recognition of a proportion of the population not suitable for army recruitment during the Second World War that spurred the setting up of the National Institute of Mental Health in USA. The differences in the presentation of the psychological symptoms among the officers and the soldiers opened up new ways of understanding the psychiatric reactions to stress.

During the last year, a large number of books and documents have addressed the effects of war on mental health. They include the WPA book "Disasters and mental health" (1); the World Bank report "Mental health and conflicts – Conceptual framework and approaches" (2); the United Nations (UN) book "Trauma interventions in war and peace: prevention, practice and policy" (3); the United Nations Children's Fund (UNICEF) document "The state of the world's children – Childhood under threat" (4); the book "Trauma and the role of mental health in post-conflict recovery" (5) and a chapter on "War and mental health in Africa" in the WPA book "Essentials of clinical psychiatry for sub-Saharan Africa" (6).

Though there have not been any world wars since the Second World War, there have been wars and conflicts throughout the last 60 years. For example, in the 22 countries of the Eastern Mediterranean region of the World Health Organization (WHO), over 80% of the population either is in a conflict situation or has experienced such a situation in the last quarter of century (7).

War has a catastrophic effect on the health and well being of nations. Studies have shown that conflict situations cause more mortality and disability than any major disease. War destroys communities and families and often disrupts the development of the social and economic fabric of nations. The effects of war include long-term physical and psychological harm to children and adults, as well as reduction in material and human capital. Death as a result of wars is simply the "tip of the iceberg". Other consequences, besides death, are not well documented. They include endemic poverty, malnutrition, disability, economic/social decline and psychosocial illness, to mention only a few. Only through a greater understanding of conflicts and the myriad of mental health problems that arise from them, coherent and effective strategies for dealing with such problems can be developed.

The importance that the WHO attributes to dealing with the psychological traumas of war was highlighted by the resolution of the World Health Assembly in May 2005, which urged member states "to strengthen action to protect children from and in armed conflict" and the resolution of the WHO Executive Board in January 2005, which urged "support for implementation of programmes to repair the psychological damage of war, conflict and natural disasters" (8).

The WHO estimated that, in the situations of armed conflicts throughout the world, "10% of the people who experience traumatic events will have serious mental health problems and another 10% will develop behavior that will hinder their ability to function effectively. The most common conditions are depression, anxiety and psychosomatic problems such as insomnia, or back and stomach aches" (9).

This paper briefly reviews the evidence from published literature about

the impact of war on the mental health of the general population, the refugees, the soldiers and specific vulnerable groups. For the purpose of this paper, the term "war" is used to include both wars waged between countries (e.g., the Iraq-Kuwait war) and conflicts within countries (e.g., Sri Lanka). The review presents data concerning some major wars/conflicts (the countries involved are considered in alphabetic order) and then briefly outlines the risk factors emerging from the literature.

IMPACT OF WAR ON MENTAL HEALTH

Afghanistan

More than two decades of conflict have led to widespread human suffering and population displacement in Afghanistan. Two studies from this country are significant in terms of both their scope and their findings.

The first study (10) used a national multistage, cluster, population based survey including 799 adult household members aged 15 years and above. Sixty-two percent of respondents reported experiencing at least four trauma events during the previous ten years. Symptoms of depression were found in 67.7% of respondents, symptoms of anxiety in 72.2%, and post-traumatic stress disorder (PTSD) in 42%. The disabled and women had a poorer mental health status, and there was a significant relationship between the mental health status and traumatic events. Coping strategies included religious and spiritual practices.

The second study (11), using a cross-sectional multicluster sample, was conducted in the Nangarhar province of Afghanistan, to estimate the prevalence of psychiatric symptoms, identify resources used for emotional support and risk factors, and assess the present coverage of basic needs. About 1011 respondents aged 15 years and above formed the sample. Nearly half of the population had experienced traumatic events. Symptoms of depression were observed in 38.5% of respondents, symptoms of anxiety in 51.8% and PTSD in 20.4%. High rates of symptoms were associated with higher numbers of traumatic events experienced. Women had higher rates than men. The main sources of emotional support were religion and family.

The Balkans

The conflict in the Balkans is probably one of the most widely studied (12-14) in recent years. Mental health of survivors of both sides was examined (15).

An initial study (16) among Bosnian refugees demonstrated an association between psychiatric disorders (depression and PTSD) and disability. A three-year follow-up study on the same group concluded that former Bosnian refugees who remained living in the region continued to exhibit psychiatric disorders and disability after initial assessment (17).

A cross-sectional cluster sample survey among Kosovar Albanians aged 15 years or older found that 17.1 % (95% CI 13.2%-21.0%) reported symptoms of PTSD (18). There was a significant linear decrease in mental health status and social functioning with increasing amount of traumatic events in those aged 65 years or older, and with previous psychiatric illnesses or chronic health conditions. Internally displaced people were at increased risk of psychiatric morbidity. Men (89%) and women (90%) expressed strong feelings of hatred towards the Serbs, with 44% of men and 33% of women stating that they would act on these feelings.

In a study of the mental health and nutritional status among the Serbian ethnic minority in Kosovo, the General Health Questionnaire (GHQ)-28 scores in the subcategories of social dysfunction and severe depression were high, with women and those living alone or in small family units being more prone to psychiatric morbidity (19). In a community sample of 2,796 children aged between 9 and 14 years, high levels of post-traumatic symptoms and grief symptoms were reported (20). This was related to the amount and type of exposure. Girls reported more distress than boys.

Cambodia

Cambodia has had a long history of violence, highlighted by the civil war in the 1960s, culminating with the "Khmer Rouge" rule that destroyed the social fabric of the society. Studies have found that refugees had high levels of psychiatric symptomatology after 10 years (21).

A household survey of 993 adults from Site 2, the largest Cambodian displaced-persons camp on the Thailand-Cambodia border, found that more than 80% felt depressed and had a number of somatic complaints despite good access to medical services (22). Approximately 55% and 15% had symptom scores that correlated with Western criteria for depression and PTSD, respectively. However, despite high reported levels of trauma and symptoms, social and work functioning were well preserved in the majority of respondents. Cumulative trauma continued to affect psychiatric symptom levels a decade after the original trauma events (23). This study also reported that there was support for the diagnostic validity of PTSD criteria, with the notable exception of avoidance. The inclusion of dissociative symptoms increased the cultural sensitivity of PTSD. Psychiatric history and current physical illness were found to be risk factors for PTSD (24).

Changes in the structure of the society have led to a breakdown of the existing protective networks such as the village chief and the elders in the village, especially for women (25). Traditional healers (monks, mediums, traditional birth attendants), who played an important role in maintaining the mental health of communities in the past, have lost their designated positions in the community following the conflict (26).

Twenty-seven Cambodian young people, who were severely traumatized at ages 8 to 12, were followed up 3 years after a baseline evaluation. A

structured interview and self-rating scales showed that PTSD was still highly prevalent (48%) and that depression was present in 41% (27).

Chechnya

The human rights abuses in the Chechen population have been well documented (28). A report on a small number of Chechen asylum seekers in the UK adds to the evidence on the abuses and related psychological fallouts (29). Psychosocial issues were explored in a survey conducted in settlements housing displaced people (n=256) (30,31). Two thirds of respondents agreed with the statement that the conflict has triggered mental disturbance or feelings of being upset. Nearly all respondents indicated that they had family members having difficulty in coping with their disturbance or upset feelings. Coping strategies used were praying, talking, keeping busy, and seeking the support of family members.

Iraq

Iraq has been at war at numerous times in history: a series of coups in the 1960s, the Iran-Iraq war (1980-1988), the anti-Kurdish Al-Anfal campaign within the country (1986-1989), the Iraqi invasion of Kuwait resulting in the Gulf war (1991), and the conflict starting in 2003. The UN-imposed economic sanctions following the Gulf war have had a profound impact on the health of Iraqis. The human rights abuses have also been recorded (32).

There are few studies on the impact of these conflicts on mental health. A study on 45 Kurdish families in two camps reported that PTSD was present in 87% of children and 60% of their caregivers (33). A study on 84 Iraqi male refugees found that poor social support was a stronger predictor of depressive morbidity than trauma factors (34). During the last three years of occupation by foreign forces, there have been many news reports about the mental health of the population, but no systematic study.

Israel

Israel has been in a situation of conflict for over four decades. A large number of systematic studies have been undertaken in different population groups. A recent study (35) found that 76.7% of subjects exposed to war-related trauma had at least one traumatic stress-related symptom, while 9.4% met the criteria for acute stress disorder. The most common coping mechanisms were active information search about loved ones and social support. Another study (36) reported that, twenty years after the war with Lebanon, an initial combat stress reaction, PTSD-related chronic diseases and physical symptoms were associated with a greater engagement in risk behaviours.

Lebanon

Lebanon has been ravaged by a civil war (1975-1990) and by an Israeli invasion in 1978 and 1982. The mental health impact of these conflicts has been studied extensively.

A random sample of 658 people aged between 18 and 65 years was randomly selected from four Lebanese communities exposed to war (37). The lifetime prevalence of DSM-III-R major depression varied across the communities from 16.3% to 41.9%. Exposure to war and a prior history of major depression were the main predictors for current depression.

The correlation between mother's distress and child's mental health was explored in a study in Beirut (38). The level of perceived negative impact of war-related events was found to be strongly associated with higher levels of depressive symptomatology among mothers. The level of depressive symptomatology in the mother was found to be the best predictor of her child's reported morbidity. In a study carried out in 224 Lebanese children (10-16 years), the number of traumatic experiences related to war was positively correlated to PTSD symptoms, with various types of war traumas being differentially related to the symptoms (39).

A cross-sectional study conducted among 118 Lebanese hostages of war (40) found that psychological distress was present in 42.1% of the sample compared to 27.8% among the control group. Significant predictors for distress were years of education and increase in religiosity after release.

Palestine

During the last decade a large number of studies have reported high levels of psychosocial problems among children and adolescents, women, refugees and prisoners in Palestine.

A study conducted by the Gaza Community Mental Health Programme among children aged 10-19 years (41) revealed that 32.7% suffered from PTSD symptoms requiring psychological intervention, 49.2% from moderate PTSD symptoms, 15.6% from mild PTSD symptoms, and only 2.5% had no symptoms. Boys had higher rates (58%) than girls (42%), and children living in camps suffered more than children living in towns (84.1% and 15.8% respectively).

A study on Palestinian perceptions of their living conditions during the Second Intifada (42) found that 46% of parents reported aggressive behaviour among their children, 38% noted bad school results, 27% reported bed wetting, while 39% stated that their children suffered from nightmares. The study also revealed that more refugee (53%) than non-refugee (41%) children behaved aggressively. Thirty-eight percent of the respondents said that shooting was the main influence, 34% stated that it was violence on TV, 7% cited confinement at home and 11% reported that it was the arrest and beating of relatives and neighbours. Seventy percent of refugees and non-refugees stated that they had not received any psychological support for the problems of their children.

In a series of studies during the last 10 years from the Gaza Community Mental Health Centre (43), the most prevalent types of trauma exposure for children were witnessing funerals (95%), witness to shooting (83%), seeing injured or dead strangers (67%) and family mem-

ber injured or killed (62%). Among children living in the area of bombardments, 54% suffered from severe, 33.5% from moderate and 11% from mild or doubtful levels of PTSD. Girls were more vulnerable.

Rwanda

The physical and mental health problems of the survivors of the genocide in Rwanda have been well documented (44). In a recent community based study examining 2091 subjects (45), 24.8% met symptom criteria for PTSD, with the adjusted odds ratio of meeting PTSD symptom criteria for each additional traumatic event being 1.43. Respondents who met PTSD criteria were less likely to have positive attitudes towards the Rwandan national trials, suggesting that the effects of trauma need to be considered if reconciliation has to be successful. There have been reports on the state of health among the large numbers of refugees (500,000-800,000 in five days) who fled to Goma, Zaire following the capture of the capital Kigali, but none of them has considered the mental health dimension.

Sri Lanka

The conflict between the majority Sinhala and minority Tamil population in Sri Lanka has been ongoing for nearly 30 years. One of the first studies that looked into the psychological effects of the conflict on the civilian population was an epidemiological survey (46), which reported that only 6% of the study population had not experienced any war stresses. Psychosocial sequelae were seen in 64% of the population, including somatization (41%), PTSD (27%), anxiety disorder (26%), major depression (25%), alcohol and drug misuse (15%), and functional disability (18%). The breakdown of the Tamil society led to women taking on more responsibilities, which in turn made them more vulnerable to stress (47). Children and adolescents had higher mental health morbidity (48).

Somalia

A study carried out in ex-combatants in Somalia found high psychiatric morbidity and use of khat (49). A UNICEF study found evidence of psychological effects of the prolonged conflict situation in a high proportion of a sample of 10,000 children (50). There is near total disruption of the mental health services in the country.

Uganda

Sudanese refugees fled into northern Uganda in two major waves in 1988 and 1994. Symptoms of PTSD and depression were found to be highly prevalent among Sudanese children living in the refugee camps (51). Refugees had higher rates of individual psychopathology than the general population, and it was observed that the cumulative stress grew as the years in exile progressed. The consequences of long-term exile were still present 5-15 years later, with an increase in the rates of suicide and alcohol use.

RISK FACTORS

From the large amount of studies reviewed, some broad risk factors and associations can be drawn.

Women have an increased vulnerability to the psychological consequences of war. There is evidence of a high correlation between mothers' and children's distress in a war situation. It is now known that maternal depression in the prenatal and postnatal period predicts poorer growth in a community-based sample of infants. Social support and traditional birth attendants have a major role in promoting maternal psychosocial well being in war-affected regions. The association between gender-based violence and common mental disorders is well known. Despite their vulnerability, women's resilience under stress and its role in sustaining their families has been recognized.

There is consistent evidence of higher rates of trauma-related psychological problems in children. The most impressive reports are those from Palestine. Of the different age groups, the most vulnerable are the adolescents.

The direct correlation between the degree of trauma and the amount of the psychological problems is consistent across a number of studies. The greater the exposure to trauma – both physical and psychological – the more pronounced are the symptoms.

Subsequent life events and their association with the occurrence of psychiatric problems have important implications for fast and complete rehabilitation as a way of minimizing the ill effects of the conflict situations.

Studies are consistent in showing the value of both physical support and psychological support in minimizing the effects of war-related traumas, as well as the role of religion and cultural practices as ways of coping with the conflict situations.

CONCLUSIONS

The occurrence of a wide variety of psychological symptoms and syndromes in the populations in conflict situations is widely documented by available research. However, research also provides evidence about the resilience of more than half of the population in the face of the worst trauma in war situations. There is no doubt that the populations in war and conflict situations should receive mental health care as part of the total relief, rehabilitation and reconstruction processes. As happened in the first half of the 20th century, when war gave a big push to the developing concepts of mental health, the study of the psychological consequences of the wars of the current century could add new understandings and solutions to mental health problems of general populations.

A number of issues have emerged from the extensive literature on the prevalence and pattern of mental health effects of war and conflict situations. Are the psychological effects and their manifestation universal? What should be the definition of a case requiring interven-

tion? How should psychological effects be measured? What is the long-term course of stress-related symptoms and syndromes? (52). All these issues need to be addressed by future studies.

It is important to report that the WHO and some other UN-related bodies have recently created a task force to develop "mental health and psychosocial support in emergency settings" (53-55), which is expected to start its activity in one year.

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